

Review of the Balance of Competences between the United Kingdom and the European Union

ENERGY REPORT

Appendix: Evidence

Contents

Contents.....	2
Written and online evidence.....	7
BUSINESS.....	7
<i>BOC Ltd.....</i>	<i>7</i>
<i>BT.....</i>	<i>10</i>
<i>Calor Gas Ltd</i>	<i>12</i>
<i>Chell Instruments Ltd</i>	<i>16</i>
<i>Forth Energy</i>	<i>18</i>
<i>Renewable Energy Systems (RES).....</i>	<i>23</i>
<i>Scotch Whisky Association (SWA).....</i>	<i>35</i>
<i>Shell.....</i>	<i>38</i>
<i>Solutrans</i>	<i>40</i>
<i>Travis Perkins PLC</i>	<i>43</i>
<i>WolfeWare</i>	<i>44</i>
ENERGY INTENSIVE INDUSTRIES.....	46
<i>AB SUGAR.....</i>	<i>46</i>
<i>British Ceramic Confederation (BCC)</i>	<i>54</i>
<i>Confederation of Paper Industries (CPI)</i>	<i>62</i>
<i>Mineral Products Association.....</i>	<i>67</i>
ENERGY OPERATOR.....	74
<i>National Grid</i>	<i>74</i>
ENERGY SUPPLY COMPANIES	79
<i>Centrica</i>	<i>79</i>
<i>DONG Energy.....</i>	<i>84</i>
<i>E.On</i>	<i>86</i>
<i>EDF Energy</i>	<i>91</i>
<i>RWE</i>	<i>107</i>
CIVIL SOCIETY AND NGOS	114
<i>The Climate Parliament</i>	<i>114</i>
<i>Greenpeace</i>	<i>120</i>

<i>Jonathan Gaventa on behalf of E3G</i>	123
<i>RSPB</i>	126
<i>WWF</i>	140
DEVOLVED ADMINISTRATIONS	146
<i>Northern Ireland: Department of Environment Trade and Investment</i>	146
<i>Scottish Government</i>	149
<i>Welsh Government</i>	159
INDIVIDUALS	161
<i>Don Bailey</i>	161
<i>Shan Barclay</i>	164
<i>Brian RL Catt</i>	167
<i>Sandra Browne</i>	180
<i>Steve Browning</i>	182
<i>Tessa Burrington</i>	184
<i>Jim Dignan</i>	188
<i>Roger Hawkins</i>	191
<i>Alex Kenny</i>	192
<i>J. McShane</i>	194
<i>Dr Chris Robbins</i>	197
<i>Mrs Carole Sims</i>	200
<i>Andrew Smith</i>	202
LOCAL ENERGY INITIATIVES AND CONSULTANTS	204
<i>Bristol Power Co-operative</i>	204
<i>Building Energy Solutions</i>	208
<i>David Ward</i>	211
<i>EnergyELEPHANT.com</i>	213
<i>Energy Geoscience</i>	215
<i>Local Renewable Energy Groups</i>	218
<i>Rail and Environmental consultancy</i>	221
<i>The Walnut Bureau</i>	224
<i>TraderVick Limited</i>	228
POLITICAL GROUPS	231
<i>All Party Parliamentary Group on Modern Languages</i>	231
<i>Brussels & Europe Liberal Democrats</i>	238

<i>Fiona Hall MEP, Liberal Democrats' spokesperson on energy in the European Parliament</i>	<i>241</i>
<i>Giles Chichester and Vicky Ford, on behalf of Conservative MEPs.....</i>	<i>248</i>
PROFESSIONAL AND REPRESENTATIVE BODIES (INCLUDES TRADE ASSOCIATIONS).....	250
<i>Association for the Conservation of Energy.....</i>	<i>250</i>
<i>British Irish Chamber of Commerce</i>	<i>253</i>
<i>Carbon Capture and Storage Association (CCSA)</i>	<i>256</i>
<i>CIBSE.....</i>	<i>259</i>
<i>Combined Heat and Power Association (CHPA)</i>	<i>272</i>
<i>Confederation of UK Coal Producers (CoalPro)</i>	<i>278</i>
<i>Energy UK</i>	<i>281</i>
<i>Food and Drink Federation.....</i>	<i>292</i>
<i>Friends of the Supergrid</i>	<i>296</i>
<i>National Farmers' Union of England and Wales (NFU).....</i>	<i>300</i>
<i>Oil and Gas UK.....</i>	<i>304</i>
<i>Renewable Energy Association (REA)</i>	<i>307</i>
<i>Sustainable Energy Association.....</i>	<i>311</i>
<i>UK Green Business Council.....</i>	<i>317</i>
<i>UKLPG</i>	<i>325</i>
<i>UKPIA</i>	<i>329</i>
<i>Ulster Farmers Union.....</i>	<i>336</i>
REGULATOR	340
<i>Ofgem</i>	<i>340</i>
SCIENCE AND ACADEMIA AND THINK TANKS	344
<i>Cardiff University</i>	<i>344</i>
<i>Green Alliance.....</i>	<i>346</i>
<i>Centre for European Reform.....</i>	<i>347</i>
<i>Institute for European Environment Policy</i>	<i>351</i>
<i>National Nuclear Laboratory</i>	<i>360</i>
<i>Oxford Brookes University.....</i>	<i>367</i>
<i>University of Manchester</i>	<i>369</i>
TRADE UNIONS.....	370
<i>Prospect</i>	<i>370</i>
<i>TUC</i>	<i>383</i>

Workshops discussion notes	390
14 November 2013 – London: <i>Internal market, security of supply and EU – external energy relations.</i>	390
18 November 2013 - London: <i>General</i>	397
20 November 2013 - London: <i>Renewable energy; carbon capture and storage</i>	404
25 November 2013 – London: <i>General</i>	411
29 November 2013 - London: <i>Energy Efficiency</i>	418
3 December 2013 – Brussels: <i>General</i>	423
6 December 2013 – Glasgow: <i>General</i>	439
11 December 2013 – London: <i>Nuclear and Euratom</i>	441
7 January 2014 – Aberdeen: <i>General</i>	445
8 January 2014 – Cardiff: <i>General</i>	448
9 January 2014 – London: <i>Emerging Themes</i>	451
13 January 2014 – Belfast: <i>General</i>	464
21 January 2014 – London: <i>Horizontal Interest Groups (HIGs)</i>	469
<i>Sources and literature used in the report.</i>	471
<i>UK Parliament reports</i>	471
<i>European Commission</i>	471
LIST OF DOCUMENTS SUPPLIED BY THE COMMISSION AS OF JANUARY 2014.	471
<i>Legislative documents</i>	471
<i>Policy documents and reports</i>	475
<i>Financial instruments</i>	478
<i>Agencies</i>	478
Literature cited by stakeholders in their evidence	479
<i>Forth Energy</i>	479
<i>Renewable Energy Systems</i>	479
<i>EDF Energy</i>	481
<i>The Climate Parliament</i>	482
<i>Greenpeace</i>	483

RSPB.....	483
WWF.....	484
Brian RL Catt.....	485
Tessa Burrington	485
Fiona Hall MEP, Liberal Democrats' spokesperson on energy in the European Parliament	486
Friends of the Supergrid	487
Renewable Energy Association	487
UK Green Business Council.....	487
UKPIA	488
Centre for European Reform	488
Institute for European Environment Policy	489
Oxford Brookes University.....	490
Prospect	490
TUC	491
Other sources	492
IEA – Institute for Economic Affairs	492
Trade Policy Research Centre	492
European Policy Centre.....	492
Centre for European Policy Studies	492
Policy Exchange	493
IPPR - Institute for Public Policy Research.....	493
Acronyms.....	494

Written and online evidence

BUSINESS

BOC Ltd

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

EU action to create an internal energy market is hugely beneficial to the UK and should help even out some of the wholesale price imbalance which exists between the UK and the rest of Europe.

Interconnections with Europe should also enhance the security of supply for the UK so is also advantageous.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

No comment

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Unilateral action by the UK to 'lead' the climate change agenda, specifically with respect to the introduction of the Carbon Price Support tax creates an additional tax burden on the UK which is a significant disadvantage for carbon leakage exposed sectors competing within Europe.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

No comment

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Europe wide criteria for supporting and financing CCS project would be more beneficial if consistent with UK support. Recently different criteria were used which meant that the European 'winners' in the CCS competitions were different from the UK winners, meaning that project funding was diluted between projects.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

EU action to create an internal energy market is hugely beneficial to the UK and should help even out some of the wholesale price imbalance which exists between the UK and the rest of Europe.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Interconnections with Europe should also enhance the security of supply for the UK so is also advantageous.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

No comment

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU create additional, non-value adding, bureaucratic burdens on Energy Intensive Industry by implenting layer uopn layer of additional reporting requirements none of which help improve energy efficiency as they take up valuable resouce away from driving improvements to generating reports. The recent ESOS requirement proposed to audit energy efficiency is yet another waste of time for energy intensive industry where energy management is core competency and has been for decades due to the energy intensive nature of our businesses.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

It depends on the message! Allowing the EU to declare and commit to climate change measures unilaterally in a global arena is dangerous and rather than improve the climate change situation instead creates an environment where energy intensive sectors locate to a less taxed geography.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No comment

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

No comment

13. What would be the costs and benefits of facing these at an international, EU, or national level?

No comment

BT

In the response below we answer questions from the consultation document relevant to BT (questions 3, 4 and 9) and offer more general comment on those areas where we recommend the European Union focuses effort on the energy sector in future.

1. International Standards for Reporting: one of the most critical issues in carbon accounting remains confusion over divergent standards for reporting. Failure for national governments to adopt one standard international approach not only makes it difficult to compare performance, but creates mixed incentives around the purchase of renewable energy if grid average conversion factors must be utilised. BT fully supports work being undertaken by the World Resources Institute to revise guidelines for the GHG Protocol and recommends the dual reporting of contractual and location-based approaches to be adopted by all European Union member states. Standardised labelling of electricity products would further support transparent reporting.

2. Power Purchase Agreements: Contracts for Difference delivered under any electricity market reforms should enable the forming of long-term Power Purchase Agreements (PPAs). PPAs remain a useful instrument to guarantee the longevity of both demand and supply beyond stability otherwise delivered by the market.

3. EU Wide Grid: if there is the potential for increased EU-wide competitiveness from a better interconnected European grid then this should be progressed.

4. Consistent approach to environmental certificates: the UK has a part to play in deliver of EU carbon targets. Standardisation of renewable energy certificates and an open market within Europe enabling trade of these certificates would accelerate delivery of this goal.

Questions asked by DECC questionnaire (for reference)

1. To what extent does EU action in the energy field benefit / disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

2. Do you think the EU has introduced legislation which is proportionate / disproportionate to the issue it aims to address?

3. In what areas might the UK's interests be served better if action were to be taken at:
a. EU level
b. national, regional or international level.

4. How could the EU's current competence in energy be used more effectively?

5. What have been the benefits for the UK/your sector of the development of the internal energy market.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources?

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures – energy efficiency, renewable, low carbon energy?

What have been the impacts of these measures on other forms of energy generation and the internal market?

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy in international meetings rather than member states representing themselves?

10. To what extent does EU action under the Euratom Treaty contribute to / disadvantage the development of nuclear power in the UK/EU.

11. What implications will future challenges in the energy field have for the UK and EU (for example increasing demand for energy, rising global market prices and transition to low carbon) to meet climate change objectives?

12. What should be the costs/benefits of facing these at an international, EU or national level.

Calor Gas Ltd

The European Packaging Waste Directive

The European Packaging Waste Directive imposes a bureaucratic control to ensure that packaging waste is as far as possible recycled. However, the coverage of the Directive extends further than that which logic might dictate was “waste”. The example which negatively impinges on our business is the specific requirement that metal cylinders used to hold liquid gases should be classified as packaging waste. To us, such cylinders which are returnable and remain our property, have a significant value for reuse of about £50 per item and they have not fallen out of the cycle of utility. Once returned to us they are refilled and reused ideally for decades. We have every interest in maintaining them in the cycle of utility for as long as possible compatible with safety. If required the cylinders are refurbished at our specialist facility, and returned to the marketplace. At genuine end of life, all components are recycled via approved metal recycling routes.

The explanatory notes accompanying the subordinate legislation which implements the Directive in the UK blandly claim: “A full impact assessment has not been produced for these Regulations as no significant impact on the private, voluntary or public sectors is foreseen”. It is difficult to put a reliable figure of the possible cost to our industry because of the variability in the price of Product Recycling Notes (PRNs), but we would estimate that it would be at a minimum of around £75,000 annually and this could easily at least double. In fact the price of PRNs for steel has reached three figures in the recent past. It is clear that the costs we bear are very significant indeed. Moreover, these calculations do not include the additional costs involved with collating the required information and dealing with the considerable bureaucracy involved.

Section 2 subsection (i) of The Packaging (Essential Requirements) (Amendment) Regulations 2013 includes the following text: “Items shall be considered to be packaging if they fulfil the above definition without prejudice to other functions which the packaging might also perform, unless the item is an integral part of a product and it is necessary to contain, support or preserve that product throughout its lifetime...” This is precisely the position with our cylinders. The subsection, however, goes on to require a second element, “...and all elements are intended to be used, consumed or disposed of together”. Unfortunately, it is this rider, inserted under obscure logic, which appears to catch us within this bureaucratic net.

Request: European legislation to control wastes should not be allowed to extend to cover items which remain in the cycle of utility, and should be amended accordingly.

The Energy Performance of Buildings Directive

The Energy Performance of Buildings Directive (EPBD - 2010) was, in fact, doubly gold-plated by the former Government since it required Zero Carbon homes in the UK by 2016, with an interim step in 2013, whereas the EPBD only requires “low and **near zero** Energy buildings” by December 31st 2020, with an interim step in 2015. The gold-plating went beyond the requirements of the Directive in terms of degree and time. What is a “near zero

Energy building”? It is a building according to EU definition with a “very high energy performance”. The detailed application of this definition is the responsibility of the Member States. This definition appears to allow a welcome degree of flexibility.

In a recent Next Steps to Zero Carbon Homes consultation (2013) the Government wisely remarked that, “It is in no-one’s interest to ask house builders to deliver carbon savings at exorbitant costs”. The costs of this manic drive to zero carbon hitherto did indeed appear exorbitant with the DCLG itself reckoning that the resulting extra cost of constructing a home will rise as high as 66% and as high as £43,200. The premature drive to zero carbon was probably unattainable in the time frame in any case: in a 2012 survey only 6% of SME house builders surveyed thought that zero carbon standards were deliverable by 2016. It would be a pity we were left with exorbitant housing costs, a prostrate construction sector and a zero growth economy. Carbon savings must be delivered at proportionate cost. We suggest that the energy performance of buildings may as well be handed back to national governments given the latitude afforded within the scope of the Directive; and, we further suggest that any moves towards lower carbon emissions from homes should not be allowed to depress the house construction industry and any extra costs of house construction should be more than outweighed by the social cost of the carbon saved in the normal householder’s period of occupancy of that house with all the extra expense that he or she has incurred in the purchase.

Request: at the very least, the UK gold-plating of this Directive should be unwound. Ideally, controls over the trajectory of the energy performance of buildings should be a national competence.

Renewable Energy Targets

“Going, Going Gone”, a Report issued by the Policy Exchange in December 2013 makes this point about renewable energy targets: “The European Renewable Energy Directive requires that 15% of final energy demand for the UK – roughly 30-35% of electricity – is from renewable sources by 2020. Because emissions from the electricity sector are already capped by the European Emissions Trading System, the target saves no additional carbon – however, it does ensure that emissions reductions are achieved using more expensive technologies, wasting resources that could otherwise be more usefully deployed. While the renewable energy target exists, introducing effective means of competition, or of cost-control more broadly, is seen as impossible.”

This is not the only charge that can be levelled against EU imposed renewable energy targets. As Dieter Helm points out in his book, “Carbon Crunch”, Europe has been de-industrialising its own production – partly by pricing out its industry because of reliance on highly expensive renewables - whilst increasing its carbon consumption by importing massively goods manufactured under a fossil fuel regime in China. Britain’s carbon consumption rose 19% between 1990 and 2005 once imports are properly taken into account. The EU has been relocating its jobs and industries in more polluting countries. This trend risks continuing as vastly expensive strike prices for renewables in the UK are envisaged stretching away for decades. In December 2013, Jim Ratcliffe, whose company Ineos owns the Grangemouth plant in Scotland, claimed that UK manufacturers would find

the price guaranteed by the government for the Hinkley C nuclear generator unaffordable: "We've just done a deal with a nuclear power station in France and we're fixed at 45euros per Mwh...Forget it. Nobody in manufacturing is going to go near £95 per Mwh." The UK cannot afford to continue down the path of exporting its production (especially in energy intensive industries) abroad without any net carbon benefit.

The Directive is thus perverse in its outcomes. It is also perverse in its classification of biomass as a renewable technology. Even parts of the European bureaucracy are waking up to it (rather late): "Combustion of biomass has a higher GHG intensity than the one of fossil fuels (lower energy density, lower efficiency of conversion) and thus substituting fossil sources does not create an immediate beneficial effect but rather a debt...The concept that woody fuels are carbon neutral is acceptable only if the forest would grow so fast that the harvested wood would be replaced in one or a few years. However, this is not the case in any forest...The bioenergy system will actually release more CO₂ than the fossil fuel system and it will take several years, decades or even centuries before the advantages of using wood for bioenergy become apparent". In terms of policy options, "With proper carbon accounting, roundwood bioenergy would not contribute to the short-term policy objectives such as the EU 2020 targets...**A powerplant switching from coal to wood pellets increases its emissions considerably** but they are rewarded by not having to account for the part that comes from biomass" ("Bioenergy: A Carbon Debt", A Literature Review by the European Commission, Joint Research Centre, Institute for Energy and Transport, 2012). Besides, biomass has a dirty emissions profile of various pollutants, notably particulates. The Government's own Impact Assessment related to this technology effectively imputes a severe effect on mortality within the UK from burning biomass. £1399m worth of life years are being sacrificed to the carbon target at a time when carbon is killing no-one in the UK. Indeed, the disbenefits of biomass (vastly expensive subsidies, deforestation and conversion of land from food production, and dangerous emissions) parallel those of first biofuels which are now recognized – even by Al Gore – as a ghastly mistake.

The dash to decarbonise in the UK is producing other expensive absurdities. Heat pumps are being heavily subsidized by the taxpayer to encourage widespread deployment. In order to qualify as renewable they need to reach a technical Coefficient of Performance of 2.9. Firstly, even with CoPs of 2.9 the carbon footprint of heat pumps will be higher than the fossil fuel, natural gas, so the UK taxpayer will be paying to incentivise the expensive and disruptive installation of a technology that is more polluting than a widely used fossil fuel. It makes no sense at all. Secondly, in trial after trial, independent monitoring has proven that heat pumps, once installed, all too often fail to meet minimum CoP levels. . In fact doubts about the performance and durability of Air Source Heat Pumps in particular have led the Committee on Climate Change to state that lower deployment of heat pumps is desirable (December 2013). If lower deployment of heat pumps is desirable a lower subsidy is indicated.

The Green Alliance lobby in favour of heat pumps but even they have admitted, "Heat pumps have performed badly in the UK...UK heat pumps have suffered from poor quality technology...bad installation...incorrect use...high running costs...Despite poor installations, heat pump installers aren't being struck off for malpractice ("Switching the UK onto heat pumps", 29th May 2013)". Time after time heat pumps simply do not do what they say on the tin.

In setting our EU trajectory for decarbonisation certain simple common sense approaches appear desirable. A policy suite which ships jobs and production abroad with net carbon disbenefit is contraindicated. Labelling technologies such as biomass or heat pumps as always renewable is a demonstrable fallacy, and a dangerous and expensive one at that. We would also suggest that policies which cost more than the notional social cost of carbon they save are also perverse.

Request: the EU Renewable Energy Directive, whilst well intentioned, is producing perverse effects and should be repealed pending the construction of energy policies that meet a common sense test.

Fracking Controls

The European Union was founded on the principles of free trade and liberal capitalism. One might have hoped that EU institutions would have grasped with both hands the opportunities which fracking open to boost the EU economy and reindustrialise it just as the fracking boom in the USA has brought immense stimulus whilst also reducing carbon emissions. However, all the signs are that Big Green, lobby groups created and inflated on the back of immense subsidies to renewables, is campaigning vehemently to place such stringent rules on the industry that such beneficial investment will never take off. These concerns are shared by the Prime Minister who wrote to the President of the European Commission in December 2013: "I am not in favour of new legislation where the lengthy time-frames and significant uncertainty involved are major causes of concern. The industry has told us that new legislation would immediately delay imminent investment".

This is a clear and present danger to economic revival in the UK and in the EU. The Prime Minister said in the same letter that he was confident that fracking could be "regulated in a safe and sustainable manner" within the UK. Indeed, Public Health England produced a report in October 2013 on measures to protect the UK from any potential exposure to emissions arising from the fracking process. To repeat the process at EU level would be superfluous as well as bad for investment. Prima facie, there is a compelling case that power over regulating fracking should be firmly held at a national rather than supranational level.

Request: Environmental controls over fracking should remain a strictly national competence.

Chell Instruments Ltd

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Most of UK energy infrastructure is owned by EU or foreign corporations and/or governments. So it is important the UK remains part of the EU decision making process

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Proportionate, yes.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?
Pollution, Carbon trading and air quality legislation.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Distribution network needs to be vastly improved so regional level will have negligible impact apart from small scale energy production. Consideration needed for expanding distribution infrastructure to include Northern Europe for UK energy needs.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?
Abandoning green taxation and subsidies for renewable energy R&D is counter-productive and is taking only the short term view.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Shared market has benefit of increasing purchasing power for gas and oil, but the market needs to be more transparent as it is currently open to manipulation by speculators.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
Geographically speaking the UK is isolated so close integration with the EU market is important.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Shale gas is not an option, scraping the bottom and outside of the barrel for hydrocarbons. There needs to be serious investment (and mindset change) into green energy and H2 storage, not kicking the can further down the road.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? For inclement regions there should be more work done on improving insulation in homes and workspaces to cut heating requirements.

The UK should be working more closely with EU countries who have made advances in renewable energy technology (such as clean coal and CCS)

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Speaking with one voice is beneficial when it comes to international negotiation, whether they will welcome the UK into the EU consortium is doubtful considering the government's attitude to EU over the last 4 years.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Negligible because France is the only member with any meaningful control over nuclear energy development.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

It will force a need for greater EU co-operation.

13. What would be the costs and benefits of facing these at an international, EU, or national level? Don't know

Forth Energy

Forth Energy, a joint venture between Forth Ports Limited and SSE plc, plans to develop three high-efficiency, wood-fuelled biomass Combined Heat and Power (CHP) plants in Scotland. The plants will be situated at the Ports of Grangemouth, Dundee and Rosyth. Together they will have the capability to deliver 300 MW of reliable, controllable, renewable electricity to the national grid and up to 260 MW of renewable heat to neighbouring industrial and commercial users, and to new district heating networks. The combined output of the plants can deliver around 30% of the Scottish Government's 2020 renewable heat target and approximately 6% of the renewable electricity target and can contribute to the UK's target of providing 15% of its energy demand from renewable sources by 2020.

Forth Energy welcomes the opportunity to respond to DECC's 'Call for Evidence on the Government's Review of the Balance of Competences between the United Kingdom and the European Union: The Energy Review'. We make the following key points in respect of question 8 which concerns energy efficiency, renewable energy and sustainability:

- **Renewable energy produced by biomass CHP plants can make a key contribution towards the EU and UK Renewable Energy Directive targets.**
- **DECC's interpretation of the EU Energy Efficiency Directive and the consequent risk of reduced support under the CfD will significantly undermine the investment appetite for renewable CHP plants in the UK, curtailing their deployment and threatening the delivery of the UK's renewable heat target.**
- **The UK Government's unilateral approach towards biomass sustainability criteria is likely to disadvantage developers of biomass CHP plants in the UK relative to those elsewhere in the EU.**

We would be pleased to discuss any of the points raised in our response with DECC officials.

Question 8: How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

In responding to this Call for Evidence we have considered three case studies, illustrating specific areas where EU measures and policies (or lack thereof) have either helped or hindered the deployment in of new-build biomass CHP plants the UK. The 3 case studies relate to:

- The EU Renewable Energy Directive;
- The EU Energy Efficiency Directive; and
- Biomass sustainability criteria.

The EU Renewable Energy Directive

The EU Renewable Energy Directive¹ (RED) provides an example where EU and UK legislation and policies complement one another and facilitate the delivery of common objectives. The RED puts in place mandatory targets for renewable energy, requiring 20% of energy to come from renewable sources across the EU by 2020 and assigning an individual target of 15% to the UK. At the time the RED was agreed, the UK already had the Renewables Obligation (RO) in place to promote the deployment of renewable electricity capacity. However the requirement to meet the future RED target has provided assurance to developers and investors that UK policies and measures would remain supportive of new renewable energy generation in the long-term. In order to meet the RED target the UK Government has put in place a number of new renewable energy support schemes, including the Renewable Heat Incentive (RHI) and the Contract for Difference (CfD) which will replace the RO from Apr 2017.

At both European and a national level, it is recognised that **renewable energy produced by biomass CHP plants can make a key contribution towards the RED targets**. The EC's Renewable Energy Road Map² stated that :

“To meet the overall target in 2020, the contribution from renewables in the heating and cooling sector could more than double, compared with the current share of 9%. Most of the growth could come from biomass and will involve more efficient household systems and highly efficient biomass-fired combined heat and power stations.”

The UK Government also recognises the role biomass has to play and has set out policies to support its use in energy generation in The UK Bioenergy Strategy³. It states:

“It is widely recognised that bioenergy has an important role to play if the UK is to meet its low carbon objectives by 2050. Excluding biomass from the energy mix would significantly increase the cost of decarbonising our energy system – an increase estimated by recent analysis at £44 billion. As set out in the 2011 UK Renewable Energy Roadmap, bioenergy is also an important part of the Government’s plans to meet the Renewable Energy Directive objectives in 2020.”

“In the electricity sector, bioenergy offers dispatchable generation with benefits for managing the wider electricity system; in the heat sector it allows the generation of high grade heat that cannot be easily achieved through other low carbon sources...”

“Within the limits of sustainable supply, our analysis suggests the low-risk bioenergy pathways to 2030 are: Generation of heat and electricity through combined heat and power processes ...”

¹ EU (Apr 2009), Directive 2009/28/EC. Known as the “Renewable Energy Directive”.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=Oj:L:2009:140:0016:0062:en:PDF>

² EC (Jan 2007), Renewable Energy Road Map. Page 11.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0848:FIN:EN:PDF>

³ DECC (Apr 2012), UK Bioenergy Strategy. Pages 6, 14 and 40.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48337/5142-bioenergy-strategy-.pdf

Thus the EU RED provides developers and investors with long-term certainty of the UK Government's commitment to renewable energy deployment, and both the EC and UK Government recognise the importance of biomass CHP facilities in meeting the RED targets. This represents a good example of complementary EU and UK legislation and policy.

EU Energy Efficiency Directive

The EU Energy Efficiency Directive⁴ (EED) provides an example of well-intended EU legislation which seeks to support efficient CHP plants, but has the potential to undermine UK efforts to promote the use of biomass in CHP facilities. The issue arises from Article 14(11) of the EED which states:

"Member States shall ensure that any available support for cogeneration [i.e. CHP] is subject to the electricity produced originating from high-efficiency cogeneration ..."

High-efficiency cogeneration is defined in Annex II of the EED as plants which provide primary energy savings of at least 10%. Annex II also states that:

"Values used for calculation of efficiency of cogeneration and primary energy savings shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use."

It is important to note that in determining whether or not a CHP plant is high-efficiency cogeneration under the EED, there is: i) flexibility for member states to use either the expected or actual operation of the plant, and ii) a requirement for member states to base the calculation on normal conditions of use. Clearly the operational mode of a CHP plant under normal conditions of use is the delivery of both heat and power. Therefore calculations of efficiency and primary energy savings must be based on the delivery of both heat and power.

The UK's scheme for recognising high-efficiency CHP plants is the CHP Quality Assurance (CHPQA) programme. The Quality Index (QI) calculations set out in CHPQA Guidance Note 44 are designed to ensure that plants which achieve fully Good Quality CHP status (i.e. a QI greater than 100) deliver sufficient primary energy savings to comply with the definition of high-efficiency cogeneration in Annex II of the EED. It is therefore Forth Energy's view that a CHP plant which has historically achieved Good Quality status through the provision of both heat and power, and is maintained with the capability of doing so even if the demand for its heat falls, must be recognised as high-efficiency cogeneration under the EED. Accordingly it must be eligible for the available support for its electricity. In the UK this will be difference payments under the CfD.

However, DECC has adopted a different interpretation of Article 14(11) of the EED. In its consultation on the implementation of Electricity Market Reform⁵, DECC has proposed that support under the CfD for biomass CHP plants will be reduced for those not achieving fully Good Quality CHP status (i.e. not achieving a QI greater than 100) on an annual basis. Thus a CHP plant has to re-confirm its high-efficiency status, and hence eligibility for CfD difference payments, annually. DECC believes this re-confirmation of high-efficiency status is required in order to comply with the EED. The effect of DECC's proposal is that biomass CHP plants which lose their heat off take customer(s), through no fault of their own, will lose

⁴ EU (Oct 2012), Directive 2012/27/EU. Known as the "Energy Efficiency Directive"

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:315:0001:0056:EN:PDF>

⁵ DECC (Oct 2013), Electricity Market Reform: Consultation on Proposals for Implementation.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255254/emr_consultation_implementation_proposals.pdf

some, if not all, of the support under the CfD (in addition to the loss of RHI payments and heat sales).

Forth Energy believes that, in formulating its CfD proposals for biomass CHP, **DECC has not correctly interpreted the requirements of Article 14 (11) and Annex II of the EED. DECC's current interpretation and proposals will significantly undermine the investment appetite for renewable CHP plants in the UK, curtailing their deployment and threatening the delivery of the UK's renewable heat target.**

Biomass sustainability criteria

The development of biomass sustainability criteria demonstrates some of the issues that arise where the EU has been slow to implement legislation and the UK adopts a unilateral approach.

The environmental impact of the use of biomass for energy production has been considered at both a European and national level for several years⁶⁷. Both the EU and UK have sought to implement robust biomass sustainability criteria, seeking to ensure that its use contributes to a genuine long-term reduction in greenhouse gases and does not harm bio-diversity. Although EU sustainability criteria have been defined for biofuels and bioliquids (in Article 17 of the RED), the introduction of binding EU sustainability criteria for solid biomass has been frustrated by lack of agreement between Member States. Research undertaken by the European Commission⁸ highlights the problems this creates:

"The analysis carried out by the Commission indicates that in absence of a EU sustainability framework for biomass, Member States are increasingly adopting parallel (and potentially conflicting) national sustainability criteria. This in turn impacts negatively on biomass trade and distorts the internal market. It could also lead to public confusion, potentially undermining the wider public confidence and acceptance of biomass projects with possible negative impacts on the overall sector development."

In the absence of European-wide prescribed criteria, the UK Government is unilaterally introducing UK biomass sustainability criteria under the RO on a reporting basis from April 2014, with the intention that criteria will become mandatory from April 2015. Whilst Forth Energy supports the introduction of robust and measurable sustainability criteria, the UK's unilateral action risks fragmenting the international biomass market, as the maximum allowable carbon intensity within the UK is lower than that suggested by the EC.

Furthermore the UK Government has decided not to grandfather the UK criteria beyond 31st Mar 2027 (the date on which support for coal to biomass conversions ceases), creating an unnecessary and uncontrollable risk for developers and investors in new biomass CHP plants which will operate beyond this date. A more reasoned and productive approach would

⁶ EC (Feb 2010), Report from the Commission to the Council and the European Parliament on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0011:FIN:EN:PDF>

⁷ DECC (Aug 2013) Government Response to the consultation on proposals to enhance the sustainability criteria for the use of biomass feedstocks under the Renewable Obligation.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/231102/RO_Biomass_Sustainability_consultation_-_Government_Response_22_August_2013.pdf

⁸ EC (Apr 2013), Non-paper on biomass sustainability. Background document for the informal meeting with Member States. Page 2.

be to grandfather the prevailing sustainability criteria for the duration of support under the RO, CfD or RHI for each project. Forth Energy acknowledges that UK sustainability criteria may require amendments to comply with any future EU sustainability criteria. However changes at the EU level would impact equally on generators in all Member States, not just UK operators.

The UK Government's unilateral approach towards biomass sustainability criteria is therefore likely to disadvantage developers of biomass CHP plants in the UK relative to those elsewhere in the EU.

Renewable Energy Systems (RES)

RES is one of the world's leading renewable energy developers working across the globe to develop, construct and operate projects that contribute to our goal of a sustainable future. We have a portfolio of low carbon energy technologies and a range of services which together can meet demand from the industrial, public and commercial sectors on whatever scale. RES Group companies operate in six countries across the EU: the UK, Ireland, France, Sweden, Finland and Germany and employ over 700 skilled staff.

RES has been an established presence at the forefront of the wind energy industry for over three decades. Our core activity is the development, design, construction, financing and operation of wind farm projects worldwide. RES has developed or built almost 8GW of wind energy worldwide and we have several thousand megawatts under construction and in development, we continue to play a leading role in what is now the world's fastest growing energy sector. RES is also involved in the dedicated biomass, solar, offshore wind, wave and tidal sectors.

RES welcomes the opportunity to respond to the Call for Evidence on the Government's Review of the Balance of Competences between the United Kingdom and the European Union. We attach our response to the specific consultation questions and the key points to note in our response are outlined below:

1. EU policy on renewable energy, which flows from its leadership on climate change policy and targets for greenhouse gas emissions reduction, has been successful in delivering renewable energy generating capacity at a UK Member State and at a cumulative EU level. The 2020 energy and climate policy framework recognised Member States' different energy mixes, economic wealth and capacity to act and therefore included mechanisms to ensure a fair distribution of effort between them. A common EU-wide energy and climate change policy promotes competition and avoids distortions that might occur as a result of different national standards within the Member States of the EU.
2. EU policy on renewable energy has been beneficial to RES, our sector and the UK's economic growth and has made a significant contribution to reducing greenhouse gas emissions and mitigating climate change. A recent report undertaken in the UK found that "in 2010/11, the UK renewables industry was worth £12.5 billion and supported 110,000 jobs, with 400,000 in total required to meet the 2020 renewables targets". The report also revealed that the overall increase in market value from 2009/10 to 2010/11 was 11% -outstripping economic growth over the same period (1.4%) by a factor of eight"⁹. This is an example of how legislation to protect the environment can also serve the UK economy, it is complementary, not mutually exclusive and achieves other objectives such as reducing energy import dependence, improving the national trade imbalance and improving security of energy supply. Long term European renewable energy targets lead to increased renewable energy which will also protect consumers in the long term from rising fossil fuel prices"¹⁰

⁹ REA and Innovas, 23rd April 2012, www.r-e-a.net/news/report-on-employment-and-skills-in-the-uk-renewable-energy-sector to be launched with Greg Barker.

¹⁰ A recent report from the Committee on Climate Change in the UK concluded that international increases in the price of gas since 2004 has lead to an increase in household energy bills in the UK of 62%. Page 5, Energy prices and bills – impacts of meeting carbon budgets, Committee on Climate

3. Existing binding greenhouse gas emission reduction, renewable energy and energy saving targets have worked to date, RES supports the continuation of EU-level low carbon energy policy in the form of a 2030 climate package that specifically includes all three targets: greenhouse gas emissions, renewable energy and energy efficiency.
4. The UK as part of the EU will be able to support the EU taking a strong lead at international climate negotiations and send the right signals to other nations and increase the likelihood of a science-based agreement that would achieve the objective of limiting global temperature rise to 2 degrees, which would bring important economic and social, as well as environmental benefits. The UK has played a constructive role within the EU and is to be commended for setting a good example on climate legislation with the Climate Change Act, which has a world leading emissions reduction target of 80% by 2050.

RES are grateful for the opportunity to comment and look forward to the publication of the full review into the Government's review of the balance of competences between the United Kingdom and the European Union. We hope you take our comments on board and welcome any further contact in relation to this response.

CONSULTATION QUESTIONS

GENERAL

1. *To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?*

EU policy on renewable energy, which flows from its leadership on climate change policy and targets for greenhouse gas emissions reduction, has been successful in delivering renewable energy generating capacity at a UK Member State and at a cumulative EU level, formed from the individual Member State targets set under the burden-sharing agreement, which is designed to be a fair approach. It has therefore been beneficial to RES, our sector and the UK's economic growth and has made a significant contribution to reducing greenhouse gas emissions and mitigating climate change.

Action at EU level has been key to stimulating renewable energy deployment in the UK. In part as a result of the UK's historical dependency on its significant coal, oil and natural gas reserves, renewables were never seen as a priority. That era is now over, the UK has moved from being a net exporter of energy in 2004 to 43% dependent on imports in 2012¹¹. Whilst less dependent on imported energy than some other EU Member States, security of supply is rapidly becoming a key consideration for UK energy policy.

In the UK renewable electricity generation has increased from under 3% in 2001¹² to 11.3%

Change, December 2012, http://www.theccc.org.uk/wp-content/uploads/2012/12/1672_CCC_Energy-Bills_bookmarked.pdf

¹¹ DECC statistical press release, July 2013: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225043/statistics_press_notice_2013.pdf

¹² Page 52, Energy Trends, DECC, June 2012, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65908/5627-energy-trends-june-2012.pdf

in 2012¹³ since the introduction of the 2001 Renewables Directive. Furthermore, total renewable energy generation has increased from 2.4% in 2008 to 4.2% in 2012 since the introduction of the 2009 Renewable Energy Directive¹⁴. Additionally, within the 27 EU countries the share of renewable energy in gross final energy consumption increased from 9.6% in 2008 to 13% in 2012¹⁵.

Renewable energy provides jobs and economic growth to the UK. A report by RenewableUK concluded that £2.5 billion is invested in the wind industry each year, one of the biggest sources of UK investment¹⁶. Additionally, each megawatt of onshore wind is worth £700,000 to UK's economy, with £100,000+ for the local area¹⁷. Based on the results derived from the survey, the wind and marine energy sector in 2013 directly employed 18,465 FTE across the sector and had a turnover of £8.1bn in 2013 (predominantly in the more developed large onshore and offshore technologies). It is also estimated that the industries employed some 15,908 indirect FTE jobs. The 2010 survey reported employment of 10,579 FTE, meaning that employment in the sector has increased by 7,700 jobs (74%) over 2010–13. Turnover in the sector in 2010 was estimated to be around £2.8bn (indicating a near-trebling in the size of the sector in the last three years, by turnover). The new survey results imply a greater than 50% increase in labour productivity (as measured by turnover per worker)¹⁸.

As discussed above the 2020 energy and climate policy framework recognised Member States' different energy mixes, economic wealth and capacity to act and therefore included mechanisms to ensure a fair distribution of effort between them. A common EU-wide energy and climate change policy promotes competition and avoids distortions that might occur as a result of different national standards within the Member States of the EU. Setting the same overall targets at the EU level will align direction and help avoid fragmentation. It facilitates trade in green technologies and services within the internal market at the same time as achieving the European objective of cross-border environmental protection.

¹³ Page 45, Energy Trends, DECC, March 2013, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/170736/energy_trends_march_2013.PDF

¹⁴ Page 43, Energy Trends, DECC, December 2013, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266403/et_dec_13.pdf

¹⁵ Eurostat, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_31&plugin=1

¹⁶ RenewableUK State of the Industry report (October 2012) p14 ("UK Capital Investment") refers to a £1.05 billion in onshore wind from July 2011 to June 2012. The offshore figure is £1.5 billion for the same 12-month period. Together this makes wind energy a £2.5 billion per year investment. See: <http://www.renewableuk.com/en/publications/index.cfm/SOI2012>

¹⁷ This onshore wind report from RenewableUK / Biggar (May 2012) states that "Every megawatt of onshore wind energy we install is worth £700,000 to the UK's economy (with over £100,000 of that staying in the local authority area)". See: <http://www.renewableuk.com/en/news/press-releases.cfm/2012-05-01-new-research-proves-economic-benefit-of-onshore-wind> and <http://www.renewableuk.com/en/publications/reports.cfm/BiGGAR>

¹⁸ Page 9 & 10, Working for a Green Britain & Northern Ireland 2013-23, RenewableUK, 19 September 2013, <http://www.renewableuk.com/en/publications/reports.cfm/working-green-britain>

EU-level legally-binding targets have supported a stable investment environment by countering the political risk that can and does occur at a national level and which has been rising in many Member States. Political risk around renewable energy has grown in recent years. Enhanced investor confidence minimizes the risk premium for financial investors, thereby driving down costs. This is critical for capital intensive technologies such as wind energy. Reducing costs will also, of course, have important benefits for consumers. Targets are important in that they support the development of supply chains, skills, jobs and investor confidence but most importantly economic growth.

Another recent report undertaken in the UK found that “in 2010/11, the UK renewables industry was worth £12.5 billion and supported 110,000 jobs, with 400,000 in total required to meet the 2020 renewables targets”. The report also revealed that the overall increase in market value from 2009/10 to 2010/11 was 11% -outstripping economic growth over the same period (1.4%) by a factor of eight”¹⁹. Ed Davey the Secretary of State for Energy and Climate Change also recently stated in a speech that: “new research by my Department estimates that, since 2010, across the UK, over £29bn of private sector investment in renewables has been announced, supporting almost 30,000 jobs.”²⁰ This is an example of how legislation to protect the environment can also serve the UK economy, it is complementary, not mutually exclusive and achieves other objectives such as reducing energy import dependence, improving the national trade imbalance and improving security of energy supply.

Additionally, a report by Green Alliance²¹ identified that:

- “Markets for low carbon and resource efficient goods and services have outperformed the mainstream economy since the onset of the financial crisis, growing steadily to reach £3.4 trillion annually.”
- “Companies in green business sectors are major exporters, generating a surplus for the UK with every country we trade with.”
- “This success is spread across a range of companies active in low carbon, environmental and renewable energy sectors.” – £981m for wind, £701 for PV, £271 for biomass etc (2011-2012).
- “The £60 billion of low carbon projects listed in the Treasury’s infrastructure pipeline for the next two years would add at least 0.7% to GDP by 2015, if investors are convinced to back them.”
- “Just four clean energy technologies (offshore wind, marine energy, CCS and electricity storage) could contribute £89 billion to UK GDP between 2010-50, as part of a global market potentially worth £3.3 trillion over that period.”

Targets to date have lead to investments in R&D, innovation and large scale deployment in the sector, which have all contributed to reductions in the cost of renewable energy technologies. Stable and legally binding targets supported by stable regulatory frameworks

¹⁹ REA and Innovas, 23April 2012, <http://www.r-e-a.net/news/report-on-employment-and-skills-in-the-uk-renewable-energy-sector-to-be-launched-with-greg-barker>

²⁰ Ed Davey, DECC, 22May 2013, <https://www.gov.uk/government/speeches/edward-davey-address-to-the-all-energy-conference>

²¹ Green Alliance, The Global Green Race, 28 August 2013, http://www.green-alliance.org.uk/grea_p.aspx?id=7225

for renewables enhance investor confidence and minimise the risk premium for financial investors. This is critical for capital intensive technologies such as wind energy; investments enabled by stable frameworks will also help drive down capital costs of technologies and thereby improve Europe's competitiveness.

Long term targets have enabled quicker cost-reductions and reduced the need and level for support schemes or market incentives for renewables. For example in the UK, due to cost reductions in onshore wind the level of support provided to onshore wind generators from ROCs has been reduced from 1 ROC per MWh to 0.9 ROCs per MWh from April 2013²². The UK is also reducing the support level for offshore wind, "the Government has decided to set the level of support for offshore wind at 2 ROCs/MWh for new accreditations and additional capacity added in 2014/15, reducing to 1.9 ROCs/MWh for new accreditations and additional capacity added in 2015/16 and 1.8 ROCs/MWh for new accreditations and additional capacity added in 2016/17"²³. Also the support levels for solar PV have decreased across the EU since 2010 as the cost of the technology has decreased.

Because existing binding greenhouse gas emission reduction, renewable energy and energy saving targets have worked to date, RES supports the continuation of EU-level low carbon energy policy in the form of a 2030 climate package that specifically includes all three targets: greenhouse gas emissions, renewable energy and energy efficiency. A continuation of targets beyond 2020 is needed to tackle climate change and to help deliver the EU's goal of limiting global temperature rise to 2 degrees 16 . We must also stress that 2030 targets do not necessarily mean support for renewable energy technologies up to 2030 and that flexible, fit-for-purpose support mechanisms at national level will avoid over-compensation. Overall targets reduce the need for renewable energy support mechanisms. Cost reductions need economies of scale and that can only be achieved by developing a strong pipeline of projects within a clear and stable policy framework.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

We believe EU legislation has been proportionate to-date, particularly in relation to renewable energy and the 2020 targets as discussed in response to question one above. However, we have concerns over the recently proposed changes to the Environmental and Energy Aid Guidelines. Renewable energy support measures are covered by the EU Environmental and Energy Aid Guidelines and these are now being tightened to ensure that renewables are subjected to full market pressure and that support for the most cost-effective technologies is phased out over time. It is appropriate for state aid guidelines to operate at an EU level, so long as they are applied equitably across Member States. The on-going review is an opportunity to promote well-designed and stable support mechanisms for renewables thereby ensuring the cost-effective implementation of the 2020 renewable

²² Page 30, Government response to the consultation on proposals for the levels of banded support under the Renewables Obligation for the period 2013-17 and the Renewables Obligation Order 2012, DECC, July 2012, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42852/5936-renewables-obligation-consultationthegovernment.pdf

²³ Point 4.6, Page 33, Government response to the consultation on proposals for the levels of banded support under the Renewables Obligation for the period 2013-17 and the Renewables Obligation Order 2012, DECC, July 2012, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42852/5936-renewables-obligation-consultation-thegovernment.pdf¹⁶
<http://www.ourclimate.eu/ourclimate/euclimatepolicy.aspx>

energy targets. However, under the current version, the Guidelines would fail to create fair market conditions for renewables and require fundamental changes to national support mechanisms worsening the crisis currently experienced by the sector. We note also that the State aid competences are being separately examined in the 'Competition and Consumer Policy' Review.

3. *In what areas might the UK's interests be served better if action were to be taken at:*
- a. *EU level instead of national, regional or international level?*
 - b. *national, regional or international level instead of EU level?*

As discussed in response to question one above we are fully supportive of binding greenhouse gas emission, energy efficiency and renewable energy targets at an EU wide level up to 2020 and beyond to 2030. The 2020 energy and climate policy framework recognised Member States' different energy mixes, economic wealth and capacity to act and therefore included mechanisms to ensure a fair distribution of effort between them. A common EU-wide energy and climate change policy promotes competition and avoids distortions that might occur as a result of different national standards within the Member States of the EU.

As described above, UK renewable energy developers such as ourselves and the UK renewable energy sector as a whole, would benefit from the EU setting robust post-2020 climate and energy policies, including specific renewable energy targets. EU-level legally-binding targets have supported a stable investment environment by countering the political risk that can and does occur at a national level and which has been rising in many Member States. Political and therefore investor risk around renewable energy has grown in recent years. Enhanced investor confidence minimizes the risk premium for financial investors, thereby driving down costs. This is critical for capital intensive technologies such as wind energy. Reducing costs will also, of course, have important benefits for consumers. Targets are important in that they support the development of supply chains, skills, jobs and investor confidence but most importantly economic growth.

Additionally, as discussed further in response to question 9 below, the EU taking a strong lead at international climate negotiations would send the right signals to other nations and increase the likelihood of a science-based agreement that would achieve the objective of limiting global temperature rise to 2 degrees, which would bring important economic and social, as well as environmental benefits.

4. *How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?*

We believe the current consultation processes and development of new legislation and ultimate adoption into the UK is currently appropriate and effective.

THEMATIC AREAS

5. *What have been the benefits or disadvantages for the UK / your sector of the development of the **internal energy market**? Is further or deeper integration of EU*

energy markets desirable?

We welcome the ability for Member States to operate a joint renewable support mechanism within the EU when suitable. Member States already have the ability to meet their renewable energy target through a flexibility mechanism agreed with another Member State, either through a: statistical transfer, joint project or joint support scheme. For example Sweden and Norway has operated a successful joint support scheme since January 2012. We support the utilisation of these schemes if they increase the development of renewable energy capacity and welcome increased interconnection. Furthermore, the alignment of energy markets under the EU Target Model will enhance the potential for renewable energy flexibility mechanism. However, the flexibility mechanism should not undermine renewable energy developments in the procuring Member State as this will impact the development of supply chains, skills, jobs and investor confidence in that Member State. Flexibility mechanisms should provide a benefit to both Member States, as the bill payers of the procuring Member State will ultimately have to fund the renewable power generated by the other. Additionally, we welcome that Member States are not required to operate fully open renewable support mechanism but that each joint mechanism can be considered on its own merit.

We welcome the increased diversity which will be introduced to the UK by the adoption of the EU Internal Energy Market. A simplified consistent EU market should also facilitate new market entrants. The EU Target Model and clear 2030 targets will encourage more interconnection and successful utilisation and operation of cross border capability. A single consistent EU market will be simpler for new entrants to understand than multiple diverse individual markets. However, there is also a risk a simplified consistent EU market could lead to a limited number of big market participants throughout the whole of the EU as they out compete smaller market players.

The Internal Energy Market has not yet been fully introduced into the UK market, so all potential benefits and/or disadvantages have not yet been realised for example it is not currently clear how the EU Target Model will be fully implemented in GB and Northern Ireland. In theory the whole of the EU should benefit from a simplified consistent EU market which would lead to pooling of resources and facilitate new market entry. However, there are different market mechanisms throughout Europe which could reduce the ability for markets to compete on a level playing field, such as renewable support schemes and capacity mechanisms. Also for example the UK has the Carbon Price Floor.

Therefore, despite the EU Target Model's ambition to align trading arrangements the realities of trading incompatibilities will result in different trading patterns. There is much complexity in this approach to market integration, which will make it challenging especially when other political uncertainties are also considered. There are many scenarios and potential outcomes but without robust analysis by Ofgem and/or Government into the impact on the GB power market of all the potential changes to implement the EU Target Model they cannot be identified. The costs which build up the power price in each EU market and transmission costs need to be assessed. Only then can the ability for market coupling to occur be identified. The impact of changing the GB market to align with the EU Target Model should be considered against all other ongoing changes for example the EMR, electricity cash-out significant code review and liquidity review. The multitude of changes occurring in the GB market at present is bringing considerable market uncertainty.

Additionally, discussion on the how the EU Target Model will be implemented in Northern Ireland is also currently ongoing. The full implementation of the EU Target Model in the SEM is required by 31st December 2016. Workshops on the high level design have been taking place since October 2013 and a consultation on the integration of the EU Target Model into the SEM is expected in early 2014²⁴. The actual changes which will occur in the SEM market as a result of the EU Target Model have not yet been fully identified. For example the introduction of intraday auctions in the SEM is dependent on changes required to the intraday auctions in GB and the rest of the EU. There is also concern that changes will be required to the Capacity Mechanism in the SEM to comply with the EU Target Model. Therefore, the full impact is not yet known.

As part of the implementation of the EU Target Model we welcome the adoption of the continuous intra-day coupled market. The continuous intra-day coupled market is encouraging for intermittent forms of renewable energy generation as it could reduce curtailment issues by enabling wind to be exported as predicted generation is known more accurately closer to gate closure. Reducing curtailment will assist the UK and Europe in meeting their legally obligated renewable energy targets and reduce costs to consumers. Intra-day market coupling will prove essential with increased wind generation both onshore and offshore.

1. *To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase **security of supply and facilitate infrastructure development**?*

As discussed above the UK has benefitted significantly from EU renewable energy targets a renewable energy target is necessary to enable renewables to contribute to more indigenous energy sources within the EU, to reduce energy import dependence and improve security of supply. The more renewable energy generation there is within the EU the less need there is to import costly fossil fuels from potentially unstable areas of the world. There are both supply and cost risks from relying on energy imports from outside the EU.

A recent report by Cambridge Econometrics for the UK market concluded that: “compared to a future power system more heavily dependent on gas, large-scale investment in offshore wind would impact positively on UK GDP and employment. GDP would increase by 0.8% by 2030 and there would be over 100,000 additional jobs by 2025, falling to 70,000 additional jobs by 2030 under a large-scale investment in offshore wind scenario. The development of offshore wind capacity would stimulate construction and manufacturing demand over the period to 2030”²⁵. The drivers of energy costs will continue to be based on supply and demand. Due to economic decline and therefore demand in the EU in 2008 there was also a decline in energy costs. However, this short term decline was short lived; a recent report from the Committee on Climate Change in the UK concluded that international increases in

²⁴ http://www.allislandproject.org/en/TS_Current_Consultations.aspx?article=dac49400-fed7-41e7-ad9c-17c8ea4c65f4

²⁵ A Study into the Economics of Gas and Offshore Wind, *Cambridge Econometrics*, November 2012, http://assets.wwf.org.uk/downloads/a_study_into_the_economics_of_gas_and_offshore_wind_nov2012.pdf

the price of gas since 2004 has led to an increase in household energy bills in the UK of 62%²⁶. Statistics gathered by EWEA show also:

“According to the European Council in 2011, the EU imports 54% of its energy and this is set to increase to 70% by 2030. Europe is dependent on countries such as Russia, Algeria and Colombia for oil, gas and coal. In 2010 each person in the EU paid €706 to countries like Russia, Algeria and Colombia to import oil, gas and coal. Using an indigenous source of energy such as the wind helps the EU be more self-reliant, providing its own power. In 2012 avoided fuel costs from wind power production were €9.6 bn. This will rise to €22 -27 billion in 2020 and €47-51 billion in 2030.”²⁷

Furthermore, imported gas to the EU accounts for the majority of gas consumption in the EU²⁸. As discussed in response to question one above, the UK has moved from being a net exporter of energy in 2004 to 43% dependent on imports in 2012²⁹. Whilst less dependent on imported energy than some other EU Member States, security of supply is rapidly becoming a key consideration for UK energy policy. If the EU relies less on imported fossil fuels, it can also become more resilient to world trends in energy costs. Renewables can insulate the EU against the volatility of fossil fuel prices, which remain the main determinants of energy prices increases in most EU Member States. The merit order effect of renewables should be taken into account as increased renewables penetration reduces wholesale electricity market prices. A number of studies have been carried out on this issue and formed a consistent conclusion that increasing wind generation reduces electricity prices.

A study by Eirgrid into the Irish Market, illustrated the impact of wind on lowering electricity prices in Ireland outweighed the cost of subsidies in 2011³⁰. Another study by University of Seville, summarises the findings of other academic studies that examined the effect of wind penetration on electricity prices in six different European countries and one US state. These studies demonstrate a reduction in price of between €2 and €33/MWh³¹. Additionally, a report by the EWEA, explains how wind reduces power prices through the merit-order effect in multiple countries studied. The EWEA cite six studies from Germany and Belgium that

²⁶ Page 5, Energy prices and bills – impacts of meeting carbon budgets, *Committee on Climate Change*, December 2012,

http://www.theccc.org.uk/wp-content/uploads/2012/12/1672_CCC_Energy-Bills_bookmarked.pdf

²⁷ Does Wind Energy Reduce Fossil Fuel Imports?

<http://www.ewea.org/wind-energy-basics/faq/>

²⁸ Figure 1, Quarterly report on European Gas Markets Q1 2013, *European Commission*,

http://ec.europa.eu/energy/observatory/gas/doc/20130611_q1_quarterly_report_on_european_gas_markets.pdf

²⁹ DECC statistical press release, July 2013:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225043/statistics_press_notice_2013.pdf

³⁰ Impact of Wind Generation on Wholesale Electricity Costs in 2011, *Eirgrid*, February 2011

<http://www.eirgrid.com/media/ImpactofWind.pdf>

³¹ Large-scale wind power integration and wholesale electricity trading benefits: Estimation via an ex post approach, 2011,

<http://www.sciencedirect.com/science/article/pii/S0301421511009657>

show a reported reduction in price of between €3 and €23/MWh. This EWEA report also cites a study completed by Risø, the Danish Laboratory for Sustainable Energy that demonstrates the relationship between lower spot power prices and increased wind production in Denmark. They also demonstrate the impact of wind power on decreasing consumer prices. They conclude that from 2004-2007 the cost of electricity for consumers would have been approximately 4-12% higher in Denmark if wind power had not contributed to power production³².

The EU and the UK can further insulate itself from rising fossil fuel prices by being a leader in renewable energy. Without a global climate change agreement, fossil fuel prices will continue to increase; an ambitious 2030 framework including (efficiency and) renewables targets is therefore the best way to hedge against this. For example wind and solar energy can be more expensive than fossil fuels to install up front but once installed the operating costs are low, predictable and stable.

7. *What effect have EU measures had on the **development and exploitation of the UK's indigenous energy sources**? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?*

The Renewable Energy Directives (2001 and 2009) from the EU have been very support of the development and exploitation of the UK's indigenous renewable energy resources as discussed in response to question one above.

8. *How have measures and policies at an EU level helped or hindered the development and deployment of **sustainability measures -energy efficiency, renewable and low carbon energy**? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?*

The EU measures and policies have immensely helped the development and deployment of sustainability measures: energy efficiency, renewable and low carbon energy. The UK would not be in the position it is today without the adoption of the 2020 targets as discussed in response to question one above. The renewable energy generation with the associated jobs and economic benefit to the UK would not have occurred. The 2020 energy and climate policy framework recognised Member States' different energy mixes, economic wealth and capacity to act and therefore included mechanisms to ensure a fair distribution of effort between them. Now ambitious EU wide 2030 targets with corresponding Member State targets are now needed. Only an ambitious and binding 2030 target for renewable energy:

- Facilitates the achievement of the existing 2020 targets by signalling to investors that renewable energy is a long-term EU priority; changing the successful approach to date would undermine the 2020 targets, increasing the investment risk and cost of capital.
- Provides a more stable political and investment framework for renewable energy

³² The European Wind Energy Association, Wind Energy and Electricity Prices: Exploring the 'merit order effect', April 2010, http://www.ewea.org/fileadmin/ewea_documents/documents/publications/reports/MeritOrder.pdf

post-2020 by sending the necessary clear and long-term signal to investors.

- Supports innovation, research and development in renewables which will drive deployment and bring technology costs down, benefiting the consumer.
- Supports the development of supply chains, skills, jobs and investor confidence but most importantly economic growth.
- Ensures an increased share of renewable energy post 2020, to contribute to more indigenous energy sources within the EU which will reduce energy import dependence and improve security of supply.
- Avoids a fossil-fuel lock-in whereby new fossil fuel plants are built to reduce emissions in the short-term but, with the investment having been made, will continue to run and pollute for many years.
- Compensates for market distortions: fossil fuels and nuclear have been developed in protected markets with government subsidies and power markets and grids were designed for those technologies. A renewable energy target is needed in order to continue to steer the market and energy system to a level playing field.
- Sits alongside greenhouse gas and energy efficiency targets to more effectively achieve the overall objective, because what is required of each of them is clearly set out.

9. *To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater **external competence in the field of energy**, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?*

As mentioned above the EU taking a strong lead at international climate negotiations by setting strong renewable energy, greenhouse gas emissions and energy efficiency targets would send the right signals to other nations and increase the likelihood of a science-based agreement that would achieve the objective of limiting global temperature rise to 2 degrees, which would bring important economic and social, as well as environmental benefits. The EU has so far taken the leading role in seeking to reach a global agreement and will be a key player if a meaningful agreement is to be reached at the crucial 2015 IPCC summit.

The UK has played a constructive role within the EU and is to be commended for setting a good example on climate legislation with the Climate Change Act, which has a world leading emissions reduction target of 80% by 2050, and which can continue to drive growth in green technologies and renewable energy investment. For example, the UK is already established among the top ten global destinations for renewable energy investment³³. Separating the UK from the rest of the EU would send the wrong signal and would weaken the position of both the UK and the EU in promoting a common interest. The UK should work with the EU for a meaningful global climate agreement in 2015, which would further drive expansion of

³³ Pew Charitable Trusts, *Who's winning the clean energy race?* 2011 and 2012 editions.

markets for green goods and services.

10. To what extent does EU action under the **Euratom Treaty** (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do **Euratom measures in respect of non-nuclear activities** help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No comment.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

12. What would be the costs and benefits of facing these at an international, EU, or national level?

As discussed above, specifically in response to question eight above EU wide 2030 targets for energy efficiency, renewable energy and greenhouse gas emissions are needed. Please see responses to questions one and eight above.

Scotch Whisky Association (SWA)

BALANCE OF COMPETENCES BETWEEN THE UK AND THE EU CONSULTATION ON ENERGY REVIEW

Summary

The SWA supports the exercise of the energy competence at EU level. We would wish to see better designed national measures which complement EU rules as current UK rules generate complexity, unintended regulatory anomalies, and competitive distortion. We would also want EU rules to be applied consistently across EU member states. Finally, we believe that the 2030 targets, if set, must balance climate change requirements with the need to keep energy-intensive production within the EU.

Detail

The Scotch Whisky Association (SWA) welcomes this further opportunity to provide input to the UK government's Balance of Competences review.

The SWA is the industry's officially recognised representative body, responsible for protecting and promoting Scotch Whisky both at home and abroad.

In 2012, sales of Scotch Whisky within the then 27 EU Member States totalled more than half a billion bottles, or about 40% of the industry's volumes. Given the scale of this trade, the existence of the EU internal market, in which one set of common rules applies, makes life very much simpler than the alternative in which 28 different regulatory regimes would operate. EU rules, agreed with considerable and very helpful input from UK officials and MEPs, impact on almost every facet of manufacturing and trade in Scotch Whisky. These include: availability and quality of our raw materials including cereals, energy, glass and other packaging materials, health & safety and the environment, spirits definitions; protection of 'geographical indications' (such as Scotch Whisky); labelling; taxation; a standardised range of bottle sizes; holding and movement of excisable products; and energy and environmental issues.

While the internal market is not perfect, the existing arrangements permit the UK Government to help shape the rules which govern it; they also greatly facilitate the resolution of problems arising from the inappropriate application of EU rules. Securing and maintaining an optimal trading environment requires a strong UK presence when legislation is being prepared or amended.

Context: the Energy requirements of the Scotch Whisky industry

The majority of the industry's energy requirements are for heat (79%) while electricity makes up 21% of the industry's requirements. Access to secure energy supplies at an affordable price is a major issue for distillers.

Distillers in the Scotch Whisky industry launched an industry-wide Environmental Strategy (<http://www.scotch-whisky.org.uk/what-we-do/environmental-strategy/>) in 2009 – the first of its kind in Scotland and, to our knowledge the only one in line with EU ambitions. Energy forms a core plank of the industry's strategy and, amongst other targets, distillers have committed to increase energy efficiency in the distilling process through innovation and adoption of relevant technologies. This is having results: through their participation in the Spirits Energy Efficiency Company's (SEEC) Climate Change Agreement (CCA), distillers have improved energy efficiency by 25% between 1999 and 2010.

Distillers have also committed to sourcing 80% of their primary energy requirements from non-fossil fuel sources by 2050 with an interim target of 20% by 2020. By 2012, 16% of the industry's fuel use was from renewable sources and we are confident of beating our 2020 target.

While environmental factors are a key driver behind our goals, financial drivers (the high price of energy) are important too. A wish to reduce exposure and reliance on the global energy market is likely to make investments in alternative renewable energy supplies attractive, and generating and managing our own energy supplies can give the energy security distillers need when looking to the long-term as well as improve overall business competitiveness. As a result, despite the global economic downturn, distillers have continued to invest in renewables with over £160m invested since 2009 in renewable energy at five major distilling sites alone.

Within this context, we have three specific points we wish to raise.

1. Additional UK legislation generates complexity and competitive distortion

Much of this activity clearly sits within a policy framework determined at European level. The industry's concern is not so much with that framework – indeed, as the UK is a net importer of natural gas and the Scotch Whisky industry relies on gas for its baseload heat generation, we believe that EU action on energy is vital and benefits the UK. Our concern is more with the complexity and the burden generated by additional UK legislation over and above it. The UK Climate Change Levy (and associated CCA scheme) and the UK's CRC Energy Efficiency Scheme (quite apart from the EU ETS) create overlapping and complex regulatory requirements. These energy policies have grown in silos and create considerable duplication. Some businesses are covered by multiple policies, taxes and regulations, leading to significant extra administrative and cost burdens.

In our view, where the UK has gone beyond EU requirements on energy, however, there has been competitive distortion. For example, the rules of the current CCAs prevent the Scotch Whisky industry's large-scale stand-alone packaging sites from joining the scheme. As a result distillers pay an additional £0.5m each year in Climate Change Levy payments - £4.5m over the course of the first round of Climate Change Agreements. Other UK food and drink producers which operate integrated production, including packaging, facilities are eligible to join a CCA and thus receive the rebate from the Climate Change Levy throughout their entire operation. This anomaly has created a competitive distortion within the food and drink industry. Other bottled foodstuffs such as ketchup, beer, domestic spirits from an integrated distillery/bottling plant and fizzy soft drinks will have qualified for CCA relief and not be exposed to the additional costs our Members have been exposed to. Imported spirits too will have been made with no exposure to the climate change tax.

This distortion has resulted entirely as a result of the UK's own energy rules and indeed has been compounded by the application of the UK's CRC Energy Efficiency Scheme which has been linked to the CCA exemptions. The competitive distortion is set to widen in Phase 2 of the CRC scheme when the CCA exemptions are removed.

In short, we have no difficulty with competence for energy and climate change schemes sitting at EU level. Where this happens, for instance in the case of the EU Emissions Trading System, whatever its defects, we can be better assured of a level playing field. Additional UK policy measures put the Scotch Whisky industry at a competitive disadvantage because of charges and costs not faced by our global competitors.

2. EU rules need to be implemented fairly across the Union

Where rules are set at EU level, it is of course vital that they are fairly and consistently applied. A 'light touch', or lax approach to compliance with efficiency measures should be unacceptable. It is important that the UK Government continues to work to ensure that energy efficiency and climate change laws are applied fairly across member States. The provision of guidance on interpretation of EU legislation issued from Europe is helpful in order to prevent differential interpretations and implementation of EU legislation by Member States.

3. EU targets need to balance ambition and competitiveness

EU rules with respect to energy and carbon targets, for example the anticipated EU 2030 framework for climate and energy policies, should provide certainty for investors, businesses and citizens. That framework needs to achieve the right balance between setting an appropriate level of ambition to inspire other non-EU regions to adopt ambitious targets, and at the same time ensuring that EU industry remains competitive and that production stays within the EU. It is true that the production of many major brands is wedded to particular geographical areas (e.g. Cognac, Irish Whiskey, and Scotch Whisky) but many energy-intensive aspects of other spirits production (e.g. white spirit production and bottling) are mobile. The European Commission must recognise this and carefully consider this when reviewing the list of EU ETS sectors deemed to be at risk of carbon leakage.

Shell

Shell welcomes the opportunity to respond to the Balance of Competences on energy. The format of Shell's response has grouped together some of the key themes we feel to be of importance in the Balance of Competences discussion.

Shell sees the benefit of one European single market which gives cross border clarity and stability to investors and operations.

The energy sector is, by nature, a cross border business. Shell believes that having a single internal market with a consistent regulatory environment provides a stable investment climate for the energy sector where long term horizons are crucial to decision making. Therefore having a cross border (pan European) regulatory environment for all Member States (MS) is important.

Shell advocates a situation where the European Union (EU) sets the overall direction and goals for EU wide energy policy but leaves the implementation to MS – this enables a technology neutral approach allowing the market to dictate the most efficient outcome.

European targets should be set at a high level allowing MS and the market to define how targets should be met; the stipulation of high level targets within the 2020 framework is an example of this. A technology neutral approach is a more effective market based tool for allowing a cost effective approach by individual MS to select the most appropriate pathways for them to achieve targets. With a focus towards the 2030 climate and energy package, a single high level target would promote a technologically neutral approach.

Shell sees benefit to the UK being part of the EU trading bloc. The ability to leverage within larger government to government international agreements is far more beneficial from inside of the EU.

Globally there has been an increase in the number of government to government deals. These multisectoral deals offer packages on energy, infrastructure, finance etc. In many resource holding countries (for example, in Central Asia) the host government is keen to deal with a single entity, for example, for energy exports. Shell believes there could be benefit from a strong ability by the EU to represent commercial interests. Benefit from a European focus on Innovation and Technology leadership (including the pan EU funding programmes for energy) promotes knowledge sharing and contributes to the position of the EU as a world leader in specific areas of technology development, for example Carbon Capture and Storage (CCS).

For the UK extractives industry regulations are already in place at MS level. Regulations from the EU on Offshore/Unconventional oil and gas need to build on existing legislation and avoid unnecessary regulatory burden.

The UK oil and gas industry is very effectively regulated. We do not see the need for further EU level legislation as MS, with the experience and competence in this sector, can and have introduced any necessary new legislation in the most practicable and effective manner.

Shell also does not believe that further regulation at EU level is required. The current framework in place within the EU and MS is robust. It appropriately covers at least for current level of shale gas activities at Exploration and Appraisal (pilot) phases. For full scale development phase, further examination of this framework may be warranted, but we expect the need for amendments to be limited. Effective implementation of the existing framework is an important factor in reducing risk.

At a European regulatory level, Shell believes there needs to be an increased awareness of the sometimes unintended consequences and costs of legislation.

EU regulation needs to be mindful of the indirect implications of legislation on business. As an example, Shell supports the goals of the Fuel Quality Directive (FQD) to reduce greenhouse gas emission (GHG) from road transport fuels. However, implementing differentiated crude GHG intensities under FQD, rather than industry average crude intensities, can risk decreasing the net environmental benefit of the FQD, does not incentivize upstream improvements and could be costly and difficult to implement. Crudes subsequently risk being shuffled to less regulated markets and transportation routes sub optimized to avoid penalties resulting in an increase of emissions globally.

In terms of taking on new initiatives, Shell believes the EU should strive to play a leading role globally in promoting and supporting new and early technologies that support the achievement of climate change targets.

Europe should continue to position itself as a global leader in new technologies, such as CCS and advanced biofuels, with the necessary support and political framework to do so. Despite the efforts of the EU today there are, as far as we are aware, no CCS projects beyond very early stages of front end engineering and design that are likely to be operational before 2020 within the EU. Europe needs to reassert its commitment to ensure it doesn't fall behind in the global race to develop new technologies and equally in its efforts to achieve climate targets. Further support will benefit MS and also kick start the industry. As an example, CCS projects in Canada have been successful and commercially viable through robust government support for demonstration projects and via capital grants.

Solutrans

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Not sure but I would like to see less influence from the EU on energy matters and let the policymakers for the UK be the British Government.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Not sure.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

By negotiating supply contracts with non-EU energy suppliers that would benefit the whole of the EU - but these must be at better rates than individually negotiated by EU member countries.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

By developing a UK funded nuclear energy strategy and not by using foreign investment.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

By encouraging more UK funded initiatives and giving greater taxation relief on capital expenditure and profits retained within the UK.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Not sure if the end result from the Governments "green" initiatives justify the cost and this creates a false market and economic position to the detriment of the consumer.

I am in favour of the "fracking" process and the Government needs to do more to sell the benefits to the consumer and overcome the objections of the campaigners. All campaigners should be made to register on a national register before being able to campaign. Not registered - not a valid campaigner. Before being accepted on a

national register each campaigner would need to justify why they believed they have a right to campaign. This should stop the "rent a mob" campaigners who create a bad image.

If not already done so the Government should look at the "fracking model" currently employed in the US where it appears to be successful and bringing about a self sufficiency in oil & gas.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Not sure how the UK has benefited and I am sure the EU bureaucratic measures will have been a huge cost burden on strategy in the UK.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The Government needs to be more decisive and assist those UK companies willing to invest in the extraction of shale gas and oil by grants and taxation relief.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Not sure if or how policies at an EU level have helped or hindered the UK. The UK Government needs to concentrate on what is needed in the UK and pander to the EU policymakers.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Keep the EU out of UK affairs.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

British industry and the government is quite capable of developing a UK nuclear industry for the benefit of UK citizens to the point where we should be a net exporter of energy.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising

global market prices and the transition to a low carbon economy to meet climate change objectives?

The UK should help encourage domestic home owners, housing associations and industry to become more self sufficient by generating power on site. This to be done by way of funding development work, subsidising early stage manufacturing, taxation relief all on the condition that foreign based workers and immigrants are not employed. Users should be incentivised to install more efficient energy use devices and to install energy generating devices.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Who knows what the costs would be although I suggest these would be lower if managed at national level without the intervention/influence at international or EU level.

Travis Perkins PLC

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

This was most marked for us in the Solar PV market recently with the introduction or possible introduction of anti-dumping tariffs. It led to widespread confusion around pricing and a slump in demand in 2013

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Not sure as the legislation is so confusing and difficult to interpret. As a merchant business we take our messaging to customers very seriously. It can take a long time to be able to do this well and in a language which is understood by the end user and their tradesman

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Building regulations

4. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

More timely updates and more notice of change

5. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

More development of renewable resources so that the means to harness them are cost effective upfront rather than relying on downstream revenue eg FiTs

WolfeWare

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

In the most important aspect - the transition to a sustainable energy system - the EU has been a major driver, and this has been of great benefit to the UK, whose progress on its own has been very poor.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

EU legislation in this area has been proportionate and world class.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Competition - the UK energy market has become a cartel. Most European markets have far lower barriers to entry and more competition.

4. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

There would be advantages to greater electricity interconnectivity within Europe.

5. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK has failed to take advantage of European measures to give priority access for sustainable energy technologies. Many prospective renewables projects, especially solar and wind, are inhibited by an inability to connect.

6. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

No - just commit wholeheartedly to renewable energy - the only truly sustainable source.

7. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU has done a lot.

Again the UK has suffered from adopting EU directives only at the most modest levels.

8. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

In an international energy market dominated by large players, this would surely help.

9. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Nuclear power is an increasingly unsuitable source of power for the future. As the Germans have realised, its unresponsiveness is a poor match for an increasingly renewable baseload.

The fact that the UK has just agreed to a nuclear strike price above the current support for solar power, for example, shows how uncompetitive nuclear has become.

10. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

For a start we will have to get serious about energy efficiency - not just pay it lip service.

11. What would be the costs and benefits of facing these at an international, EU, or national level?

The costs will seem high in the context of a history where energy (including fossil and nuclear) has in recent decades been heavily subsidised and under-priced.

The benefits will be that energy is valued as the highly versatile and essential commodity that it is, and that preserving it will become paramount.

ENERGY INTENSIVE INDUSTRIES

AB SUGAR

Introduction to AB Sugar

- AB Sugar is a business segment of Associated British Foods plc (ABF) a diversified food, ingredients and retail group with 2013 sales of £13.3 billion and 113,000 employees in 47 countries. ABF has invested £2.1 billion globally in the last three years and has a primary relationship with the UK Government through the Strategic Relationship Management (SRM) initiative, for which its sponsor departments are DEFRA, BIS and UKTI.
- AB Sugar produces cane and beet sugar plus a wide range of associated products in 9 countries worldwide, two of which are located in the EU. It has invested £1.6 billion since 2005, of which over £340 million has been in Britain, much of which has been in renewable energy. The UK beet sugar industry is one of the most efficient sugar industries in Europe, makes an economic contribution of £1 billion per year and supports 13,000 jobs.
- British Sugar, which operates four sugar factories, is the UK business of AB Sugar. British Sugar has a significant exposure to the energy market in UK as it consumes approximately 120 million therms of gas, more than 13,000 tonnes of oil, more than 80,000 tonnes of anthracite and coal, and emits approximately 830,000 tonnes of CO₂. British Sugar in the UK operates high efficiency combined heat and power (CHP) plants from which it generates approximately 1,000 GWh of electricity of which approximately 700 GWh is sold into the distribution networks. At its factories in Newark and Bury St Edmunds, British Sugar collects biogas from the Anaerobic Digestion plants associated with its waste water treatment and uses this to supplement the boiler house fuel.
- At its Wissington plant in Norfolk, British Sugar operates the UK's first bioethanol facility which produces up to 55,000 tonnes of renewable transport fuel each year with associated production of high energy animal feed. Renewable CO₂ from the plant is captured for sale to the soft drinks sector. AB Sugar is also a joint venture partner in Viverno Fuels, a large stand-alone renewable transport fuel facility in Hull. This will produce up to 420 million litres of bioethanol and 500,000 tonnes of high protein animal feed each year.
- Azucarera, which operates four sugar factories in Spain, is a wholly owned subsidiary of AB Sugar.

For convenience we have retained the numbering system and section headings of the original consultation questions and these are reproduced in ***bold italic text*** whilst our response is in normal text:

GENERAL

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

We believe that EU action in the energy field has generally been of benefit to the UK, the Food Sector and AB Sugar. This is particularly the case for CHP and renewable transport fuel.

The Co-Generation Directive of 2004 gave much needed encouragement to the CHP sector but unfortunately did not go as far as to mandate a proportion of electricity to be generated from CHP and allowed for, nor did it mandate support schemes to be introduced.

The Biofuels Directive of 2003 gave an impetus to develop a renewable transport fuels industry in the UK. Directive 2003/30/EC set an indicative minimum percentage of biofuels to replace diesel or gasoline in transportation for 2005 and 2010. This was followed in 2009 by the Renewable Energy Directive, 2009/28/EC (repealing 2003/30/EC), which set a mandatory obligation on Member States to ensure that sales of renewable fuels reach 10% by energy by 2020. These two Directives allowed AB Sugar to invest in two significant projects:

- At our Wissington sugar factory in Norfolk we built the UK's first bioethanol facility which started operation in 2007. This plant produces up to 55,000 tonnes of renewable transport fuel each year with associated production of high energy animal feed. Renewable CO₂ from the plant is captured for sale to the soft drinks sector.
- We are also a joint venture partner in Vivergo Fuels, a large stand-alone renewable transport fuel facility in Hull which began construction in 2008. Vivergo Fuels will produce up to 420 million litres of bioethanol and 500,000 tonnes of high protein animal feed each year.

In addition the Renewable Energy Directive 2009 set a target for the UK to reach 15% energy from all renewable sources by 2020. This has enabled British Sugar to consider further investments into renewable energy to diversify our energy supply.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Yes, we believe that legislation is proportionate

3. In what areas might the UK's interests be served better if action were to be taken at: a. EU level instead of national, regional or international level?

We believe that interconnections of Gas networks across Member State borders and interconnections of Electricity networks across Member State borders will prove to be beneficial for improved security of energy supply. However, we are concerned that the consequential changes to electricity trading rules to allow cross border trading may disadvantage those industrial CHP plants that are embedded in national distribution networks. We are concerned that the desire of transmission system operators (TSOs) to control all aspects of the operation of all market players above a very small size (say 10MWe capacity) may be a significant disincentive to build new and to operate existing CHP.

b. National, regional or international level instead of EU level?

We believe that the current balance between Member State competence and EU competence is about right at the moment, however, the role of the EU should not be extended further so the status quo should be maintained.

4. How could the EU's current competence for energy be used more effectively?

For example, could more be done during the development stage of proposals and the preparation of impact assessments?

We feel that the Commission does not provide adequate data and analysis in its impact assessments and we would like to see this situation improved. We could then more effectively engage in the democratic process.

Are there alternatives to legislation?

In general we feel that mandated targets on Member State Governments are required to drive behaviour change and this will always require legislation.

And how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

In general we feel that regulatory stability is necessary to provide adequate certainty for investors. Most energy related projects have long lead times, significant build phases, extended payback periods and significant operational lifetimes. A multi million Euro energy project may take five years between initial outline and commissioning, followed by a further five years to pay back the capital with a further 10 to 15 year operational life thereafter. A process of continuous policy review is unacceptable to investors unless the policy can be grandfathered for each project timeline.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market?

The internal market has been promoted to provide a level playing field for energy trading and to increase security of supply. This promotion of improved security of supply is to be brought about through promotion of independent and unbundled energy markets, promotion of adequate electricity generation capacity, promotion of renewable energy sources and promotion of energy efficiency measures.

With regard to energy markets and trading we note that the UK had pre-empted much of the policy contained within the 3rd Energy Package by:

- Privatising the UK Natural Gas Supply Industry primarily through the Gas Act 1986
 - Including unbundling and removal of the opportunity for vertically integrated players (VIP).
- Privatising the UK Electricity Supply Industry primarily through the Electricity Act 1989
 - Including unbundling and removal of the opportunity for vertically integrated players (VIPs).
 - Unfortunately however, from about 1999 the UK weakened its position in energy markets by allowing the unrestricted acquisition of energy companies by large corporations which enabled them to develop into the 'Big Six' vertically integrated energy producers which control the market today.

- Providing a transition to a fully competitive wholesale electricity market in 1990 and a (phased in) transition to a fully competitive retail electricity market thereafter
- Providing an independent regulator for the gas market in 1986
- Providing an independent regulator for the electricity market in 1990

These liberalisations of the energy markets are said to have provided significant capital receipts for the Exchequer and lower cost gas and electricity for end users. However, we can expect this UK competitive advantage to be eroded as more Member States come into compliance with the 3rd Energy Package.

With regard to security of energy supply, the EU is heavily involved in the supply of natural gas and the supply of electricity through adequate interconnection of networks, the provision of natural gas and the adequate generation of electricity.

With regard to the generation of electricity we note that EU energy packages and particularly the EU 3rd Energy Package requires Member States (MSs) to ensure adequate generation margin in their electricity supply industries. It could be argued that the present and previous UK governments have failed to adequately comply with at least the spirit of this requirement. This can be seen by the early predictions of low capacity margins and increasing unserved demand by Redpoint (2006/2007) in their preparations for UK government energy white papers.

- We suggest that the UK Government should increase the security of electricity supply and provide adequate generation margin by bringing forward policies that:
 - Adopt a wide range of energy sources for generation.
 - Promote the highest energy conversion efficiencies, particularly focused on Primary Energy Savings (PES) as the metric.
 - Promote demand side reduction
 - Promote demand side flexibility to compliment intermittent electricity generation (e.g. wind, solar)
 - Treat embedded (distribution connected) generation as demand side for the purposes of policy development etc.
- We believe these issues to improve security of electricity supply and generation margin can best met by policies that encourage the deployment and use of industrial Combined Heat and Power (CHP):
 - Increasing the deployment and use of industrial CHP will increase the installed capacity of electricity generation in the UK. This increase in generation capacity will not necessarily require any additional capital to be spent by the hard pressed national and international energy supply industry but can be funded from the balance sheets of industry and commerce.
 - Increasing the deployment and use of industrial CHP will avoid, for the end user, electricity losses in the transmission and distribution system
 - CHP operates at an inherently higher efficiency than separate production of heat and electricity.
 - Increasing the deployment and use of industrial CHP will reduce fuel consumption in the electricity supply industry
 - Increasing the deployment and use of industrial CHP will reduce the carbon intensity of electricity generation
 - Increasing the deployment and use of industrial CHP will reduce the overall fuel consumption of the economy.
 - Increasing the deployment and use of industrial CHP will reduce the carbon emissions from the economy
 - Increasing the deployment and use of industrial CHP will increase the overall security of supply of the economy.

- Exploiting the potential flexibility of electricity output from industrial CHP can offset the problems of intermittency associated with some renewable generation such as from wind turbines and solar panels.

Is further or deeper integration of EU energy markets desirable?

We believe that interconnections of gas networks across Member State borders and interconnections of electricity networks across Member State borders will prove to be beneficial for improved security of energy supply. However, we are concerned that the consequential changes to electricity trading rules to allow cross border trading may disadvantage those industrial CHP plants that are embedded in national distribution networks. We are concerned that the desire of TSOs to control all aspects of the operation of all market players above a very small size (say 10MWe capacity) may be a significant disincentive to build new, and to operate existing, CHP.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

We believe that insofar as the Directives promoting renewable energy have diversified energy supply and that Directives promoting CHP have lowered primary energy demand and reduced strain on electricity networks and that Directives promoting energy efficiency have reduced energy demand, we can say that the UK security of supply has been positively affected.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources?

We believe that insofar as the Directives promoting renewable energy have allowed the UK to exploit home grown biomass for power generation and renewable transport fuel, these EU measures have had a positive effect on indigenous energy sources.

Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

We believe that the current balance between Member State competence and EU competence in this regard is about right at the moment so the status quo should not be changed.

8. How have measures and policies at an EU level helped or hindered the development and deployment of:

Sustainability measures?

We believe that it is very important to have robust sustainability measures in place to cover the use of renewable energy sources so as to correctly demonstrate their carbon saving benefits compared to the counterfactual fossil source. However, we are also convinced that sustainability rules should be created on a common basis for the same raw material irrespective of its final use (eg biomass for burning in boilers, burning in power generation plant, conversion to renewable transport fuel or conversion to biogas). It is also important to ensure that imported raw material is treated in the same way as indigenous material.

Energy efficiency?

We supported the COGEN Directive (subsequently repealed by the Energy Efficiency Directive) but regret that this did not include a mandated target for the take up of cogeneration either at EU Member State levels.

We support the concept of emissions trading, and the EU ETS is an energy efficiency measure. We believe that emissions trading is more efficient in driving behaviour than energy taxes, however we think that the EU ETS acts as a disincentive to CHP whereas the UK ETS did not dis-incentivise CHP.

We are unhappy that the UK Government has undermined the EU ETS by the unilateral imposition of the Carbon Price Floor (April 2013). This will increase the electricity price over and above the increase that would be the case from just the EU ETS alone. Whilst we are not in favour of the tax, we were further disappointed that the Government also failed to give an exemption to CHP plants which would have provided an incentive.

Insofar as the Energy Tax Directive (Energy Products Directive) is intended to be an energy efficiency measure we can say that we do NOT support energy taxes in general. However if energy taxes are in place then we suggest that targeted reliefs can be used to drive behaviour by improving project returns compared with the counterfactual (e.g. LECs for CHP, CPS relief for CHP, reduced rates of CCL in return for CCAs).

We support the Energy Efficiency Directive of 2012 and believe that this will be a positive driver for improved resource efficiency. However:

- We regret that there was not a mandated target for energy efficiency measures to be adopted either at EU or Member State levels.
- We regret that there is a focus on reduction of end use of energy rather than primary energy saving.
- We regret there was not a mandated target for the take up of cogeneration (CHP) either at EU or Member State level.
- We are concerned that the clauses which mandate energy audits may be transposed into UK law (ESOS) in an overly bureaucratic and expensive way.

Renewable and low carbon energy?

We support the general thrust of the current Renewable Energy Directive (RED) of 2009 and feel that this has positively helped the development of renewable energy:

- The 2020 targets within the Renewable Energy Directive can provide, if implemented correctly, a strong signal to support investment in renewable energy, to contribute to security of energy supply and economic growth through the development of new markets. This could result in the UK developing a strong position in renewable energy at decreasing costs of deployment as the market size increases. However, at present (2012 figures) the UK only provides 4.1% of its total energy needs from renewable sources. (ref. p 33 DECC "UK Energy in brief 2013" URN13D/220)
- The development of these new markets in the UK, across a range of technologies, could provide a pathway for the UK to meet its long term commitments under the Climate Change Act 2008 to reduce CO2 emissions by 80% by 2050 as well as creating new jobs and economic growth.
- The RED has been a tool to develop new markets and new technology. (e.g. the renewable transport fuel industry in UK).

- The RED has been a tool to allow the UK to move towards achieving the carbon budgets set out in the Climate Change Act 2008.
- We support a renewable target in general:
 - Whilst the UK has put in place a separate renewable target for transport it has not established a clear pathway to reach the sub target for 10% renewable energy in transport within the framework of the UK Renewable Transport Fuel Obligation (RTFO). However, at present (2012 figures) the UK only provides 3.2% of its transport energy needs from renewable sources. (ref. p 33 DECC “UK Energy in brief 2013” URN13D/220)
 - Having twice been revised downwards, the UK mandate under the RTFO is now set at 4.75% (by volume) without a trajectory to 2020. This reduced mandate and lack of a clear trajectory seriously undermines the business case for investing in sustainable bioethanol projects such as Vivergo Fuels. Vivergo Fuels will produce 420 million litres/year of renewable transport fuel with a carbon saving in excess of 50% compared to petrol and is compliant with the strict sustainability standards of the Renewable Energy Directive. It will also produce 500,000 tonnes/year of animal feed replacing imported soy and so helping to mitigate the EU's 70% import dependency for animal feed protein.

A clear trajectory to 2020 is needed to maximise the potential from such projects.

What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

We have no comment on this part of the question

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

We believe that the current balance between Member State competence and EU competence is about right at the moment and the role of the EU should not be extended further so the status quo should be maintained.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU?

We have no comment on this question

To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

We have no comment on this question

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The Commission is currently drafting a proposal for the 2030 climate and energy framework, with publication expected at the end of January 2014. We welcome this as it is an opportunity for the EU and Member States to put in place detailed policies to encourage investment in and take up of, low carbon technologies. This will give investors more certainty of a long term commitment to policy stability.

- We suggest that the 2030 framework includes a target for energy efficiency. Such a target should be measured by primary energy savings (not an end use measure).
- We suggest that the 2030 framework should include a target for the deployment of CHP (CHP is an energy efficiency technique that is independent of the fuel combusted (e.g. fossil or bio-based)).
- We suggest that the 2030 framework should include a target for renewable energy in transport and we further suggest that this should equate to 15% by energy.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

We have no comment on this question

British Ceramic Confederation (BCC)

The British Ceramic Confederation (BCC) is the trade association for the UK ceramic manufacturing industry, representing the common and collective interests of all sectors of the industry. Our 100 member companies comprise over 90% of the industry's manufacturing capacity and include manufacturers from the following industry sub-sectors:

With so many ongoing regulatory changes taking place and policy initiatives under implementation, now is an opportune time to take stock of the balance of competence between the United Kingdom (UK) and the European Union (EU) and we welcome the opportunity to respond to your consultation.

Although at first view it can appear that the balance of competence regarding energy is in some cases biased towards the EU, with deeper analysis it is apparent that there are a number of considerations that must be taken into account, including the UK Government's approach to the implementation of EU and UK policy and regulation. Therefore, within this consultation response we have raised a number of points relevant to both the EU and UK.

Outlined below are a number of overarching general comments, followed by responses to the questions posed in the consultation document, including examples where applicable.

General observations on the balance of competence between the EU and the UK:

1. Although in certain instances it could appear to be desirable to restore the balance of competence from the EU to the UK, a key concern is the level of UK resources (including financial and expertise), that would be available to implement this effectively.
2. There are cases where although it may not be appropriate for an EU competence to be transferred to the UK, there are issues with the approach of the EU which should be addressed in order to improve performance and outcomes. For example, the EU's stringent hazard based / precautionary approach to regulation can cause serious implementation problems for companies. In addition, the principle of proportionality often seems to be exceeded in the EU. Therefore, the EU should be encouraged to take a more balanced, risk-based approach to regulation.
3. There are a number of situations where it is correct that the balance of competence is with the EU, however it is critical that when implementing EU policy and regulation, the UK places a greater emphasis on ensuring that the UK's policy and legislative framework allows businesses to compete internationally and certainly within Europe, in particular:
 - There should be a more pragmatic UK transposition of Directives in line with their purpose, as is common in many other Member States rather than reliance on strict legal interpretation.
 - If the EU has exclusion clauses from Directives they should be implemented as a default in the UK unless there is good reason not to.
 - The implementation of national laws in the UK sometimes results in the UK manufacturing industry being at a competitive disadvantage to companies in the EU or further afield.
4. It is sensible that in areas of shared competence, such as energy, either the EU or Member States may take action, but the Member States may be prevented from acting once the EU has done so. We believe that the EU should exert its powers more consistently and

robustly where the UK (or other Member States) have taken action beyond EU requirements and where this is damaging competitiveness.

5. When the EU develops and implements new policy and regulation, it must take account of the cumulative regulatory burden in each Member State. It is vital that the EU takes the whole picture into account and makes allowances for those industries already impacted by national requirements.

6. When implementing new legislation the EU should carry out a full financial and economic impact analysis / assessment at an early stage and this should be updated on an on-going basis. This will help ensure decisions are made based on comprehensive and current information and that the legislation has the desired effect, without resulting in unforeseen adverse impacts.

7. The complexity of the UK legislative framework can mean that it is difficult for UK industry to gain applicable exemptions as working within the requirements of State Aid becomes too difficult. We therefore appeal to the UK Government to ensure that the UK legislative framework is kept simple and business- / growth-friendly.

8. Any targets introduced by the EU or UK need to reflect what is challenging yet achievable and there needs to be a greater commitment to supporting industry to accomplish such targets through the provision of adequate funding to adapt, develop and implement new technologies.

9. It is essential that UK Government represents the interests of all manufacturing industries and their associated jobs in supply chains, in discussions with the EU. The EU generally has a holistic approach that is potentially beneficial to all sectors rather than a handful of 'picked winners'.

Responses to Consultation Questions:

GENERAL

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

Whilst acknowledging that EU competence in the area of energy has led to tangible improvements such as the foundations of internal energy markets and technical industry codes to facilitate cross-border energy flows, there are a number of significant issues and challenges faced by the ceramic manufacturing sector in this area, some of which are due to the interaction between the EU and UK in policy making and regulation.

Due to these issues and challenges, in certain instances, it may be desirable to restore the balance of competence to the UK, however a key concern is the level of resources available to implement this effectively. The pooling of resources and expertise generally means that the EU is likely to have more resources to enable specialists to focus on defined topics / work areas than in the UK. If the balance of competence in an area were restored to the UK, resources would have to be allocated to ensure effective delivery. This would require increased budgets if it was to be effective.

Therefore, we believe that the shared competence in the area of energy should remain, but improvements in implementation need to be tackled by the UK as a matter of urgency in order to ensure that the UK ceramics industry is not disadvantaged.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

It makes sense that in areas of shared competence, such as energy, either the EU or the Member States may take action, but the EU needs to play a greater role in preventing additional Member State action that is detrimental to competitiveness. In the UK, specific energy-related regulation has undermined the competitive position of the ceramics industry with the rest of Europe and beyond (for example the introduction of the Carbon Price Floor to encourage renewable power generation). We believe that the EU should exert its powers more consistently and robustly where Member States have taken action beyond EU requirements and where this is damaging to international competitiveness.

When the EU develops and implements new energy policy and regulation, it must take account of the cumulative regulatory burden in each Member State. For example, changes to the EU Emissions Trading Scheme (EU ETS) at EU level will have less of an impact on manufacturing industry than the cumulative burden of EU ETS plus national taxes and charges. The EU must take the whole picture into account and make allowances for those industries already impacted by national requirements. In the case of the UK, there are a number of cumulative costs, particularly in relation to energy and climate change related taxes and levies and so when companies are making dispassionate decisions about where to invest in and outside Europe, this impacts the outcome of whether to invest in the UK. Equally, the UK Government has a responsibility to consider the cumulative impact of EU and national legislation when considering new UK regulation.

In addition, there appears to be limited understanding about the additional administrative burden that is created for industry and others (e.g. regulatory authorities) associated with the introduction of new EU legislation, leading to disproportionate costs.

When implementing new energy related legislation, it is imperative that the EU should carry out a full financial and economic impact analysis / assessment at an early stage, which is then updated and made public on an on-going basis (i.e. not just the cost of implementing the legislation, but wider economic costs such as job losses and the closing of UK manufacturing capacity). This will help ensure that the legislation has the desired outcome, without resulting in unforeseen impacts.

There also needs to be recognition in the EU and the UK that placing greater legislative requirements on business will not necessarily lead to the desired outcomes as there is only so much that industry can do with available technology and funds. It is important that the EU works to improve energy efficiency and develop renewable energy technologies, however there is a fine balance between incentivising investment and driving business elsewhere.

Another concern is the excessively hazard based / precautionary approach to regulation in the EU, rather than a more measured, risk-based approach. A more sensible approach here is for the UK and other Member States to encourage the EU to take a more balanced, risk-based approach and that all emerging proposals should be 'reality checked' with EU and national industry as part of the development process.

3. In what areas might the UK's interests be served better if action were to be taken at: a. EU level instead of national, regional or international level? b. national, regional or international level instead of EU level?

We agree with the current balance of decision making powers in the EU and UK as although it is very important that there are national decision making powers, it often makes sense for decisions to be made at an EU level, in order to help ensure consistency of approach across Europe. However, there are many instances where the desired uniformity is not achieved.

One way to promote consistency would be through the implementation of Regulations as opposed to Directives at the EU level, in order to enable standardised enactment. However, this would only be effective where Regulations are fully reviewed and evaluated prior to implementation in order to ensure that they are realistic and fit for purpose. There are also instances where, due to particular local sensitivities, flexibility in the implementation of Directives must be promoted, rather than a comprehensive and prescriptive approach by the Commission which may not cover or be necessary in all local situations.

The EU should also take a more active role in checking that Directives and Regulations are actually applied in each of the Member States. Otherwise, countries such as the UK which has a comprehensive and legalistic approach to implementation can be left at a competitive disadvantage.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

There are a number of instances where it is correct that the balance of competence is with the EU, however issues have arisen for the UK's ceramic sector due to the UK Government's approach to implementation of EU policy and regulation. It is critical that the UK places a greater emphasis on ensuring that the UK's policy and legislative framework allows businesses to compete internationally and certainly within Europe. In particular:

- There should be a more pragmatic UK transposition of Directives in line with the purpose of the Directives rather than reliance on strict legal interpretation. In addition, where existing UK legislation exists which meets the overall purpose of new EU legislation, there should be no need to enact new UK legislation. Examples include legislation relating to energy efficiency. This is consistent with the UK Government's pledge to 'remove red tape'.
- If the EU has exclusion clauses from Directives they should be implemented as a default in the UK unless there is good reason not to. For example, the Mineralogical Processing Exemption in the Energy Tax Directive was implemented in many Member States many years before it was in the UK. This has been to the advantage of EU businesses, but to the detriment of the UK ceramics industry.
- The implementation of national laws in the UK sometimes mean that UK manufacturing industry is at a competitive disadvantage to those in the EU or further afield. For example, although it is positive that the UK Government is taking steps to reduce carbon emissions, improve energy efficiency and promote renewables, strict targets in UK and extensive UK only taxes mean that the ability of UK ceramics companies to compete is reduced, thereby increasing the importation of goods and offshoring of manufacturing operations.

- The complexity of the UK legislative framework can mean that it is difficult for UK industry to gain applicable exemptions as working within the requirements of State Aid becomes too complex. We therefore appeal to the UK Government to ensure that the UK legislative framework is kept simple and business- / growth-friendly. This will improve the current complex situation where state aid issues are a major stumbling block to the implementation of exemptions. The complex array of climate related taxes on UK electricity bills (e.g. The Renewables Obligation, Feed-in Tariffs, Electricity Market Reform Contracts for Difference, Carbon Price Floor, Climate Change Levy, Carbon Reduction Commitment and EU ETS) provides a good example of where this issue is apparent. A number of these taxes have had to go through / are going through a complex procedure to partially exempt just a few ceramics companies from some of the charges. In addition, the plethora of taxes puts an enormous administrative burden on ceramics companies in the UK, made worse by the complex interactions between them e.g. CRC, EU ETS and CCA. In comparison, in Germany some competitor companies are able to gain free electricity transport charges and up to a 99% rebate on a significant (€55/ MWh) green tax.

Although it is important that policy and regulation is in place to encourage companies to take action on improving energy efficiency and decarbonising energy demand, for example by establishing challenging but achievable targets, there should be a greater emphasis on the 'carrot' as opposed to the 'stick'. Industry is often expected to find the solutions to energy issues and this is frequently achieved, however there must be greater recognition of the resource limitations that companies / sectors may have, particularly where the development of breakthrough technologies is required.

There needs to be a greater commitment to supporting industry to achieve such targets through the provision of adequate funding to adapt, develop and implement new technologies, particularly where market signals will not deliver. More public funds should be used to develop breakthrough technologies rather than just using taxation to reduce emissions. This approach could give a very positive result and drive technology innovation in the EU, which in turn could be a useful global export.

If legislative requirements are too burdensome (for example renewable electricity support schemes) thereby undermining business models, energy intensive companies are likely to relocate to places that are more conducive to business and which exhibit less stringent energy (and environmental) related regulation.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

There is undoubtedly a beneficial role for the EU in promoting, completing and regulating single European markets for electricity and gas. Truly competitive, pan-European energy markets could yield:

- Transparent markets, with fewer regulations and restrictions enabling greater participation of private entities and hence major investments in supply, generation and storage capacities.
- Reduced energy prices and increased competitiveness as a single market overcomes barriers to free trading and market coupling facilitates the more effective supply of gas and electricity.

- Improved security of supply by encouraging investment, increasing diversification of supply routes / energy sources and allowing access to gas storage facilities.

Effective, single markets are vital for the economic growth of the European economy and the competitiveness of its industrial energy consumers. In practice, the EU is still a long way from achieving its objective of a real internal market. Progress to date has not been fast enough. Therefore it is important that the third Energy Package is implemented as fast as possible as any delay will further weaken industry. However, the issue here is the timely implementation of existing legislation, rather than the extension of EU powers and responsibilities.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Secure energy supplies are a necessity for all industrial activity, especially energy intensive ceramic manufacturing. There is a potentially beneficial role for the EU in facilitating cross-border trade and promoting essential interconnection and storage infrastructure. However this should rarely be achieved from centralised, top-down interventions as Government, whether at EU or national level, is not placed to 'pick winners' on security of supply grounds. As a general rule, in order to improve security of supply, the primary focus must be on the market- and competition-based processes. However, EU interventions should be deployed as a measure of last resort to correct any market-based deficiencies (such as the lack of UK gas storage facilities).

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Natural gas represents approx. 85% of all energy consumed in the ceramics sector because it has proven to be the most suitable, energy efficient and economic fuel to achieve the high firing temperatures required to produce technically durable and aesthetically pleasing products. It is likely that gas will continue to be the dominant fuel in the ceramic sector for the foreseeable future due to the lack of guaranteed, sustainable feedstock to permit switching to renewable bioenergy and the high costs associated with electric firing. BCC consider the environmentally responsible development of unconventional gas resources (e.g. shale gas and coalbed methane) both on and offshore is vital for secure and competitive energy supplies. We welcome the UK Government's strong political support for the development of UK unconventional gas resources.

However, gas intensive industrial users are concerned by the proposal to implement a European regulatory framework that may stifle the development of unconventional gas resources at EU level. Environmental concerns have accompanied the growth in shale gas exploration and production in the US and coloured the argument about proceeding with exploration in UK and EU. However we believe the health, safety and environmental risks associated with exploration and production of unconventional resources can be managed effectively in the EU and UK as long as operational best practises are implemented and enforced through the strong current and appropriate regulation. Furthermore, we believe the development of national resources and the associated national energy mix should remain a matter for Member States (within the confines of an EU-wide carbon cap).

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon

energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

In recent decades, the UK ceramics industry has invested heavily in measures to improve energy efficiency (and to reduce associated emissions). This is mainly because, as an energy-intensive sector, energy costs represent a substantial part of the total production costs and therefore this naturally provides a large incentive to maximise the efficiency of operations. The more recent introduction of a plethora of climate change policies and taxation (e.g. UK Climate Change Levy /, EU Emissions Trading Scheme and EU Energy Efficiency Directive) has continued such efficiency improvements. However, the further introduction of additional measures (whether at EU or UK level) is not needed to drive efficiency improvements in this already congested regulatory arena.

Regarding the implementation of existing technologies to improve energy efficiency, feedback from our members indicates that the majority of measures which require little capital investment and / or exhibit commercially acceptable payback periods and where banks / boards are able to provide support have already been implemented. In several sectors, the implementation of proven, economically viable best practice technology is almost universal and consequently there are limited opportunities to make significant further reductions in energy consumption. Achieving substantial improvement in energy efficiencies now relies upon the development of breakthrough technologies. To develop such technologies will require significant additional UK / EU financial support to co-fund industrial research, development and demonstrator projects. The high risks associated with investing in unproven technologies mean individual companies are highly unlikely to act in isolation. Allowing viable technologies to remain undeveloped and languish, risks losing competitive advantage from the UK. Critical technologies for our sector include the development of kiln exhaust heat recovery and co-firing with renewable syngas or biogas.

As part of the Energy and Climate Change package, the EU and Member States have embraced ambitious targets for the development of renewable energy. BCC supports the use of competitive renewable energy to mitigate climate change and to reduce dependence on imported fossil fuel energy, providing security of supply is maintained and the costs do not endanger the global competitiveness of UK ceramic manufacturers. However, renewable electricity generation is increasingly associated with expensive financial support schemes which weaken the competitiveness of UK / EU manufacturers with respect to competitors inside and outside the EU. Reform is urgently needed if internationally competitive manufacturing industries are to be retained in the UK and EU. Until the costs of renewable electricity generation are competitive, the cost impact of support schemes should not jeopardise the global competitiveness of energy intensive companies. All companies operating electro-intensive processes must be exempted from these cost increases. Our sector, which includes some of the most electro-intensive installations in the UK is not benefitting to the extent of those in other sectors and remains largely uncompensated against EU / UK green taxes. No companies that produce heavy clay construction materials (e.g. bricks, roof tiles, drainage pipes) qualify using the UK criteria for Carbon Price Floor compensation whereas a number of competitors in Germany do receive the large % rebate on their electricity renewables tax – and are effectively paying less than half the price for electricity than UK companies. We clearly do not have a level playing field. Regarding renewable heat, one of the main problems inhibiting fuel switching to low carbon alternatives for the ceramics sector is feedstock availability. Bioenergy feedstock can be used to fulfil a multitude of potential uses, e.g. combustible fuel (for heat, electricity generation, CHP, transportation) as well as green chemicals manufacturing etc.) Given the range of competing demands and hence the sheer quantity of sustainable biomass required, it is clear that there will not be sufficient available to service demand. For large-scale deployment of bioenergy for industrial heat applications, a secure supply of competitively-priced feedstock is critical to securing the required investment. A regulatory framework needs to be established to: i)

encourage the production of purpose-grown crops for bioenergy feedstock and ii) ensure feedstock is efficiently and appropriately used. Currently the power sector is most incentivised to utilise feedstock since this has the fewest technical and regulatory barriers combined with the most financial support. This needs to be addressed to ensure feedstock is used in more efficient high temperature heat applications.

Furthermore, we do not believe it is appropriate for the EU to preferentially promote or suppress any technology specific source of energy. As stated above, the national energy mix should remain a national competence, albeit within the confines of an EU-wide carbon cap.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

EU energy policy has developed around a common objective of ensuring safe, secure, affordable and sustainable energy supplies. Delivering such an objective will require: i) an integrated internal energy market, ii) adequate infrastructure investments, iii) substantial energy savings and iv) clean technology innovation and deployment. None of these policies can be pursued without taking into account the energy scene beyond EU borders. The EU has a significant and important role to play when negotiating on a global scale, generally far more so than if the UK were to act independently. However, we believe that these matters should primarily remain a matter for individual Member States. However there may be benefit in collective representation, where Member States agree this to be beneficial. The UK may be able to play a greater role when influencing Commonwealth countries.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No comment.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

A number of issues have been raised in responses to previous questions, but a key challenge for the future is to achieve the right balance between economic growth / international competitiveness, security of energy supply and sustainability (energy efficiency and renewable energy).

12. What would be the costs and benefits of facing these at an international, EU, or national level?

This is about having a more balanced approach in the UK and the EU. If all industries were consulted and their views taken into account, it should ensure more sensible and efficient legislation at all levels. If this was achieved, it would lead to more effective and efficient use of time for the UK Government and businesses and should ultimately lead to a more positive outcome on energy matters.

Confederation of Paper Industries (CPI)

The Confederation of Paper Industries (CPI) welcomes the opportunity to contribute to the Call for Evidence. CPI represents the supply chain for paper, comprising recovered paper merchants, paper and board manufacturers and converters, corrugated packaging producers and makers of soft tissue papers. CPI represents 70 Member companies from an industry with an aggregate annual turnover of £5 billion, 25,000 direct and more than 100,000 indirect employees.

Paper manufacturing is inherently energy intensive, with energy generally being the highest manufacturing cost behind raw materials. Internationally competitive energy prices are critical to ensure a long term future for energy intensive industries in the UK.

While EU ETS and climate change policies were covered in a previous review, we note, however, that government invites evidence on 'cross-semester' competencies. Since Energy and Climate Change issues are inextricably linked, our introductory comments below cross between the two reviews.

The cumulative impact and cost of EU environment and climate change (ECC) policy has been a key factor in the stark reduction in Energy Intensive Industry (EII) production in the UK. Evidence of the significant burden of ECC legislation can be seen through comparison of the number of paper mills that signed up to the first phase of Climate Change Agreements (CCA) in 2001 and the number that signed up to the second phase in 2013. Over this period the number of paper mills has reduced from around 100 to around 50; glass factories down from 50 to 25, while there is now only one remaining aluminium smelter. Steel, cement and ceramics facilities have been similarly affected. The largest fall in manufacturing (as measured by % of GDP) occurred between 2000 and 2010 – down from 22% of GDP to 11%. In this context the renewed focus (both at UK and European level) on international competitiveness is very welcome.

Ownership of much of UK Paper Industry manufacturing is now overseas and has resulted in increased competition for investment capital. There is no intrinsic loyalty to 'UK PLC' on the part of a global industry, and to ensure commercial success, future capital must go where the best returns are to be made. If costs rise in the UK to a level which makes the UK uncompetitive then that capital will not come here – and neither will the R&D.

EU and UK policy does not take into account cumulative costs and their impact on investment cycles. Energy Intensive Industry investment cycles can be up 30 years. Many facilities were built before EU requirements were enacted. It has often proven too costly to retrofit installations to meet new limits or targets -meaning they close.

The focus on direct emissions through climate change policies, whilst neglecting emissions embedded in imported goods is a real issue, giving a misguided impression that Europe is actually reducing its contribution to climate change. The main impact of EU and UK policies has been to offshore carbon emissions, sending industry to countries outside the EU, where total carbon emissions can be higher. EU and UK ECC policy increase the risk of carbon leakage and this raises competitiveness issues at an international level.

Competence for action to combat climate change should be at an international level to maintain a level playing field and bring about global change. In the absence of global agreements, industry should be fully compensated for increases in costs. If that principle is accepted – along with a regime of derogations to suit investment cycles -then CPI does not object to EU legislation, providing that it is not "gold plated" either at EU level or when it is transposed into UK law. We also note the different approaches between Member State industrial support policies; Germany places a priority on supporting industry – the UK does

not. While not arguing for a direct link between these national policies and industrial success, we note a German papermaking industry four times the size of that in the UK.

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

In a number of areas an overall target has politically been set at European level, with little understanding of the overall cost in delivering the target in individual Member States.

A good illustration would be the Renewable Energy Directive, setting a target for the UK to reach 15% energy from renewable sources by 2020. Even with widespread concern that such a target is not realistic and cannot be met in a cost effective manner, the UK civil service has set about developing policies to deliver this target, irrespective of cost. By contrast the Co-Generation Directive gives encouragement to CHP, but left the detail of any support schemes to Member States; support in the UK has been insufficient to fully develop this opportunity.

The UK has also chosen to add legally binding de-carbonisation targets through the Climate Change Act, adding another layer of complexity and reducing the flexibility of the UK Government to respond to changes in the macro-environment. By contrast Japan and Germany have been able to make substantial changes to their energy policies in response to the Fukushima disaster – a policy response likely not possible in the UK. Likewise the development of shale gas in the UK could be constrained – at a time when low gas prices in North America are re-industrialising parts of their economy – some of this being investment lost to Europe.

Arising out of these de-carbonisation policies, the Carbon Floor Price (CPF) mechanism is an increasingly expensive measure having profound and adverse effects on the competitiveness of UK manufacturing – especially for the Energy Intensive Industries. Even though CPF is a UK only instrument, imposed by the UK Government, State Aid Approval (still not fully secured) is still required for a package of measures to offset the worse impacts on the most electrointensive installations. This is a good example of the confused situation frequently arising when competencies are shared.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Generally legislation is proportionate – but targets related to climate change issues must be set in an international context.

3. In what areas might the UK's interests be served better if action were to be taken at: a. EU level instead of national, regional or international level? b. National, regional or international level?

Policies to further develop interconnections of Gas and Electricity networks between Member States should help with security of supply and reinforce electricity networks as the use of intermittent renewables expands. In this context it is important that industrial auto-generation is protected and encouraged. The affordability of proposals should also be considered – the rapid growth in distribution costs is a real concern.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation? And how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Impact assessments require more rigour and (on occasion) it can feel they are written to support the policy. A stable regulatory environment is required to provide certainty for investors. We have previously highlighted the length of investment cycles, with considerable lead-in planning and development time.

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The EU has an important role in promoting and regulating more integration of European electricity and gas markets. The internal market should provide a level playing field for energy trading and increasing the security of supply. Interconnections of energy networks across Member State borders will prove to be beneficial for improved security of energy supply.

The UK has been at the forefront of these developments with gas and electricity production already fully privatised, though of course there is increasing concern over the vertical reintegration of suppliers and an overall lack of transparency.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

With a lack of transparent data it is not clear if the UK has benefited. Certainly in the gas market there has been historic concern that the price signal has not always resulted in expected market movements – suggesting non-market barriers still exist.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

This should be a matter wholly for the UK to resolve and regulate. It is not an issue where other Member States – possibly with a policy to not allow the development of unconventional gas – should be allowed to regulate and interfere with such developments in the UK. Low American energy prices are offering US based installations a massive competitive advantage over those based in the UK – this must be addressed urgently if European industry is not to suffer real damage.

An important and ongoing role for regulators is to protect consumers and ensure markets operate properly. In this context we draw attention to the linking of gas market prices to oil market prices – this is not justified and should be stamped out by regulation.

8. How have measures and policies at an EU level helped or hindered the development and deployment of: Sustainability measures? Energy efficiency? Renewables/low carbon?

While we support the principles of EU ETS, we would draw attention to the increasingly

pedantic regulation of the scheme, imposing considerable red tape and administrative costs on participants to increase the accuracy of reports by a vanishingly small amount. Any common sense review would see this as a nonsense, yet because the rules are laid down in a Directive (or potentially through Regulation) changes are not realistically possible. While the Regulators do not see this as an issue, it is an increasing source of frustration and cost to industry.

In the context of carbon emissions, it is a serious concern that EU ETS has been undermined through the unilateral imposition of the Carbon Price Floor. This can only serve to increase energy costs in the UK – the operation and impact of this policy should be urgently reviewed.

Industrial energy efficiency should be a matter for individual companies driven by commercial issues – punitive legislation is not simply required -yet we are poised for additional red tape as the Energy Efficiency Directive is implemented. Of course the EU has a role in specifying standards linked to the single market, but this should not extend to other areas. Because energy is such a key cost, energy intensive industries have commercial incentives to use energy efficiently and further carbon emissions regulated through EU ETS or (for smaller sites) national schemes.

The EU should also not interfere with the promotion of renewable or any other technology-specific source of industrial energy – the energy mix (within an EU-wide carbon cap) should remain a matter for member states.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

This is primarily a matter for member states, though there may be benefit in collective representation on major transnational energy projects, on a case by case basis, where member states agree this to be beneficial. However in relation to Climate Change issues it is critical the issue is addressed at a global level. In this context the UK must work through the EU rather than on its own.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No comment.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Europe is not an island economy, divorced from the rest of the world. It needs to compete on a level playing field with global competition. ECC legislative and regulatory regimes and compliance costs are now a significant factor in determining competitiveness. In this context there must be a legislative rebalancing to support European industry and reflecting its importance in job and wealth creation.

The EU has played a major part in creating a single market for goods and services across Europe and has undertaken some good work in developing universal standards but in assuming responsibility for setting climate change and environmental policy targets, without fully assessing the competitive implications for its manufacturing base, it has left European industry (especially Energy Intensive Industry) woefully exposed.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

No comment.

Mineral Products Association

The Mineral Products Association (MPA) is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries. With the recent addition of The British Precast Concrete Federation (BPCF) and the British Association of Reinforcement (BAR), it has a growing membership of 465 companies and is the sectoral voice for mineral products. MPA membership is made up of the vast majority of independent SME companies throughout the UK, as well as the 9 major international and global companies. It covers 100% of GB cement production, 90% of aggregates production, 95% of asphalt and ready-mixed concrete production and 70% of precast concrete production. Each year the industry supplies £9 billion of materials and services to the £120 billion construction and other sectors. Industry production represents the largest materials flow in the UK economy and is also one of the largest manufacturing sectors¹.

This response is written from the perspective of the cement and lime product groups within the MPA membership which are the most energy intensive operations within MPA and are therefore amongst the industrial sectors most affected by energy policy.

General

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

The shared competence in the area of energy has put the UK cement and lime manufacturing sectors at a competitive disadvantage within and outside the EU because UK consumers are subject to UK domestic legislation and indirect legislative costs not faced by other EU and non-EU competitors. For example, the direct costs associated with levies paid on the use of fossil fuel energy (Climate Change Levy) and schemes designed to encourage energy efficiency improvements (CRC Energy Efficiency Scheme). Mineral product producers also face large indirect costs of electricity market changes and renewable subsidies including Carbon Price Support, Renewables Obligation and Feed-in-Tariffs, while receiving no incentives themselves for use of renewable energy through schemes such as the Renewable Heat incentive (RHI).

MPA welcomed the announcement by the Chancellor in Budget 2013 to apply the mineralogical processes exemption set out in Article 2.4 of the Taxation of Energy Products Directive as has been taken up in other European countries. However, this is an example of where the UK has been quick to burden mineralogical processes such as cement and lime with the cost of energy taxes. The impact of these taxes have been identified to HM Government over many years but the implementation and delivery of exemptions afforded to non-UK operators have been slow and UK operators will only be able to recover their competitive position from April 2014 onwards.

The lack of harmonisation of energy legislation across the EU has allowed the UK Government to favour certain sectors of the economy with available incentives. UK Government policy to date has concentrated on giving power generators certainty so that they can carry out low risk investment in renewable energy with the assistance of guaranteed subsidies and cost pass-through opportunities. For more information visit: <http://www.mineralproducts.org/>

Mineral products industries like the cement and lime sectors are not afforded the same privilege of low risk investment and in addition are having to bear the ever increasing pass through costs from the power generators. MPA has calculated that the indirect cost of energy (and climate change) policies faced by the cement sector could reach €80m a year by 2020. This significant cost is further reducing the ability for industry to invest in renewable energy and low carbon technologies.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Energy intensive industries are facing increased EU legislation that is disproportionate to the issues it aims to address. An example of this is the Energy Efficiency Directive and in particular the Article 8 requirement that all Member States introduce a programme of regular energy audits for 'large enterprises'.

There is an argument that suggests that proportionally SME's have most to gain from energy efficiency measures. Many large enterprises are already captured by one or more of CCA, CRC or EU ETS. As a result large enterprises that are energy intensive are fully aware of their energy use and where savings can be made. For example, energy costs in cement manufacture account for 40% of the Gross Value Added of the sector. As a consequence any energy savings that can be made cost effectively have already been implemented.

Government should analyse where proportionally the greatest energy savings can occur because our belief is that energy intensive industries are already maximising their energy saving potential and this would suggest that some of the larger SME's should be captured by the scheme, particularly those with high energy bills.

Furthermore, energy covered by existing schemes such as EU ETS, CRC and CCA should be excluded from the Article 8 audit. This will ensure that there is no duplication of effort.

3. In what areas might the UK's interests be served better if action were to be taken at:
a. EU level instead of national, regional or international level?
b. national, regional or international level instead of EU level?

a. Harmonised legislation at EU level is only useful when accompanied with harmonised regulatory implementation. Too often EU legislation is inconsistently implemented in Member States leading to inconsistent treatment of operators and potential market distortions within sectors. Poor policy making can also provide distortions between sectors that either compete in the same product markets or compete for the same energy resources. For example, EU level legislation could be implemented that would ensure a balanced approach to incentivising renewable energy use across all sectors of the economy. In addition, a harmonised approach to legislation would mean UK industry is not unduly penalised by an ever accumulating burden of UK energy policies that are not faced by EU and non-EU competitors.

b. At EU level the cement and lime sectors did not meet the criteria to receive compensation for the indirect costs of the EU Emissions Trading System, although if the calculation had been applied at the UK level both sectors would have qualified for important compensation against rising costs. Removing the need to apply to the EU for state aid would ensure that the UK could target compensation schemes at those industries in the UK that need to be protected from the high costs of energy and climate change policies and not just those

determined by the EU to be at risk.

The EU and the UK have isolated themselves with national and regional policies on energy efficiency and renewables. All of these require global action and increased effort is required under international programmes like the UNFCCC to find a robust and globally harmonised solution to GHG emissions. This will ensure that EU and UK operators are not put at a competitive disadvantage in global markets because they are having to bear energy and climate change policy costs that are not faced by non-EU operators.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The fundamental flaw with most policy impact assessments (whether at EU or UK level) in this area is that they only assess the impact of the single policy or legislative proposal. In practice however, any new proposal adds to the array of energy policy and legislation already in place. As a result the cumulative burden of new policies within the current landscape is never assessed. A proposal that appears to be beneficial in isolation may add enough additional costs to the current burden on businesses and other energy consumers that any benefit is negated. All impact assessments should take account of the current cost burden of energy policy on consumers, and especially energy intensive industries.

Thematic Areas

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

In principle liberalisation of the energy market through the removal of national protectionist intervention can offer many benefits to the UK. However, the UK power market is very concentrated, it lacks competition and is too dependent on imports for these benefits to be fully realised.

A more competitive energy market could be achieved by introducing a greater choice of competing energy suppliers. This would provide greater liquidity and transparency in the wholesale market and ensure UK energy supplies are more competitively priced, particularly for energy intensive consumers.

Reducing reliance on imports is required to secure future supply and prevent wide spread blackouts. This will also ensure industry is not burdened with energy curfews that would reduce production and damage economic growth.

Industry is currently bearing the cost burden of decarbonising power generation, while domestic consumers are not taking on as much of the burden and are making slower progress in terms of improving energy efficiency compared to industrial consumers. This

imbalance needs to be addressed for the benefits of an internal energy market to be realised by all sectors.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Consumers will pay immediately for increased capacity that will be developed later. This time lag between the costs and the benefits means that consumers are disadvantaged in the short term.

Eligibility for the Electricity Market Reform cost exemption for energy intensive industries is tied to that for Carbon Price Support (CPS) compensation. Therefore those sectors, such as cement and lime, that are still waiting to hear if they are eligible for CPS compensation are disadvantaged and given no certainty of the level of future energy policy cost they will face.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The USA has benefited considerably from the development of shale gas. The high calcium lime sector is nearly 100% dependent on gas as a fuel source because only the cleanest, highest quality fuels can meet the high specification requirements for lime products that are used in pharmaceuticals and drinking water purification. In order to keep high calcium lime production in the UK and therefore ensure security of supply for industries such as steel manufacture, water treatment and pharmaceuticals, the development of indigenous unconventional sources of natural gas will need to be a key component of future UK energy supply.

It is also important to ensure that supply can meet periods of peak demand when, for example, the wind doesn't blow. Unconventional sources will bridge the gap between coal/natural gas and low carbon. Measures that enable the exploitation of unconventional sources will therefore need to be at the forefront of EU and UK energy legislation.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures-energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The lack of harmonisation of energy legislation across the EU has allowed the UK Government to favour certain sectors of the economy with available incentives.

One particular missed opportunity by the UK Government as far as cement manufacture is concerned is the Renewable Heat Incentive (RHI). RHI funds expensive technologies (e.g. small inefficient biomass boilers) for small energy users. Industry, which consumes energy on a large scale and more efficiently in directly fired operations rather than boilers, receives no incentive to use biomass.

The cement sector has the ability to significantly increase its use of biomass fuels. However, it is struggling to compete on the market because power generators are incentivised to use

biomass through the Renewables Obligation and smaller businesses are incentivised to install biomass boilers through the RHI. Directly fired operations such as cement clinker production, asphalt production and lime production fall within a 'policy incentive void' and are given no incentive to maximise the use of biomass.

Incentives have the potential to increase the market demand for biomass fuels and as a result their cost increases and the directly fired processes will become priced out of the market. This trend is already becoming apparent in the cement sector. Annex I shows the use of 100% biomass fuels in cement manufacture is levelling off while the use of part-biomass fuels (e.g. tyres), which are not incentivised elsewhere, is increasing. This is a missed opportunity for the UK as the cement sector, which requires around 24,000 TJ of fuel energy annually, could contribute significantly to UK renewable heat targets. The imbalanced targeting of sectors for renewable energy incentives is only going to result in a shift in the use of biomass from one sector to another rather than a net increase as is required to meet the targets set. **Annex II** illustrates this shift as a schematic.

The EU could do more to ensure that member states take a balanced approach to meeting renewable energy targets that incentivises all sectors of the economy.

The EU could also do more to ensure that member states take a pragmatic approach to the implementation of EU Directives that does not overly burden industry. Some flexibility is required to ensure operators are not unduly penalised. The feeling by UK operators is that the UK implements every Directive to the letter of the law (and sometimes more stringently). Evidence suggests that other countries seem to take a more 'industry friendly approach in both the timetable for implementation and the interpretation of conditions. In terms of the requirement in the Energy Efficiency Directive for all large enterprises to undertake an energy audit, it is hoped that the UK will take a pragmatic approach to this, particularly for energy intensive industries that are already regulated under schemes such as the Emissions Trading Scheme.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

To date the UNFCCC negotiations have failed to deliver an international agreement on climate change. Until there is an agreement EU industry is being placed at a disadvantage compared to non-EU competitors due to the increasing cost burden of EU climate change and energy policies. The EU should be pushing more for an international agreement, the lack of which shows a failure for the EU to negotiate either as a block or individually.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No comment.

Future Challenges and Opportunities

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The International Energy Agency has highlighted that emerging economies will account for more than 90% of net energy demand growth to 2035. This growth will create two significant problems for EU energy consumers:

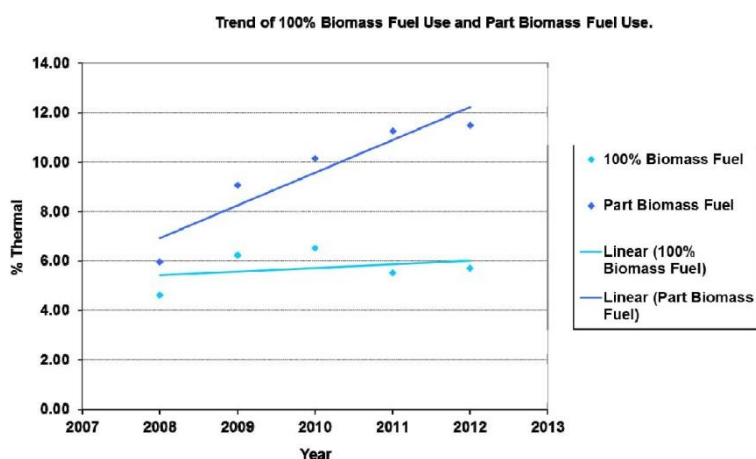
1. The reduced security of supply for existing developed economies.
2. Reduced effectiveness of EU climate change policies in tackling global warming.

Just this one statistic illustrates that the EU ETS cannot survive for too much longer in global isolation. As the energy demand of the emerging economies grows it follows that the effectiveness of the EU ETS, as an instrument to tackle climate change, diminishes. The EU needs to ensure there is a global approach to tackling climate change otherwise the EU contribution to emissions reduction will grow increasingly smaller and make little impact, while putting EU operators at a competitive disadvantage in global markets due to the additional burden of energy policy cost.

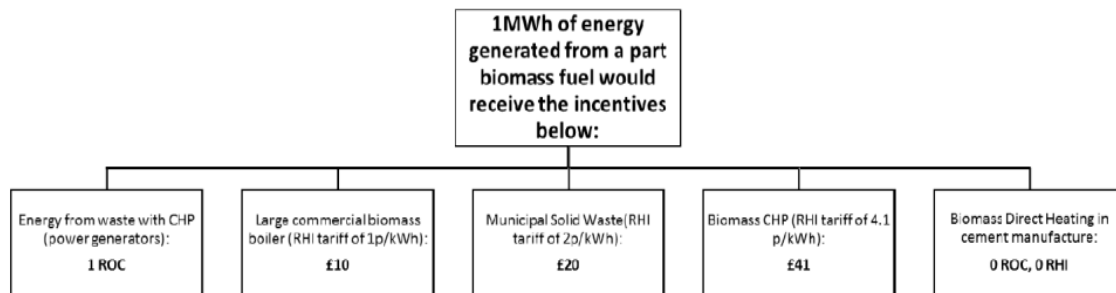
12. What would be the costs and benefits of facing these at an international, EU, or national level?

The Stern Review published in 2006 proposed that it is more cost effective to act to reduce global carbon emissions rather than not act. In particular the report noted that if nothing is done to reduce global carbon emissions, climate change could cost at least 5% of world GDP (an impact which the report stated could rise to 20%), while combating climate change would cost 1% of global GDP. This overly simplistic hypothesis does not take sufficient account of the time lag of upfront direct and indirect cost to consumers before the benefits of low carbon are realised.

This work should be updated taking into account the time lag between costs and benefits and also the impact of a global imbalance between those countries that are taking on the costs of tackling climate change now compared to those that are not.



Annex II: The biased support for renewable fuel that disadvantages renewable fuel use in directly fired processes e.g. cement, lime and asphalt



ENERGY OPERATOR

National Grid

Executive Summary

National Grid welcomes the opportunity to comment on the Review of the Balance of Competences between the UK and the EU.

National Grid follows closely the developments related to the EU's energy policy. We work jointly with our European partners on the drafting of network codes and long-term pan-European energy network development plans. We are also involved in several interconnector projects connecting the UK and other European countries, with some of these qualifying as EU 'Projects of Common Interest'.

We have set up our Brussels office in 2012 to strengthen our cooperation with industry stakeholders and the European institutions. National Grid also actively contributes to the work of several pan-European associations active in the field of energy, including ENTSOE, ENTSG, Gas Infrastructure Europe, Friends of the Supergrid, and the Renewable Grid Initiative.

In short, National Grid believes that action in the energy field at an EU level is appropriate and beneficial to the UK and to the energy sector at large. We see at present no need for a specific transfer of competence from the UK to the EU or from the EU back to national governments. We would however welcome a more coherent approach when it comes to the interaction between different pieces of EU legislation which sometimes sit in tension.

National Grid also supports an approach whereby EU legislation, and/or the implementation of EU legislation in UK law is carefully assessed to avoid unintended consequences.

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

National Grid believes that action in the energy field at an EU level is appropriate and beneficial to the UK and to the energy sector at large.

As many of the challenges faced by the energy sector are in effect European or global, a degree of EU action in the field of energy is desirable. EU coordination is in particular instrumental to build the internal energy market – from a technical perspective (e.g. network codes), regulatory aspects (e.g. fully unbundled model for Transmission System Operators) and also physically through the building of interconnectors. These will bring significant benefits to UK consumers and businesses alike, in the form of increased security of energy supply, economic benefits of increased competition, and the sustainability benefits of further integration of low-carbon energy sources.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Whilst there may be examples of where EU measures have been overly prescriptive, or conversely where UK implementation of EU measures has exceeded what is necessary, National Grid considers that legislation in the energy field has been mostly proportionate so far.

There are elements of legislation that have had adverse impacts from a UK perspective but we believe it is important not to focus on such issues in isolation but rather look more holistically on EU energy policy as a whole.

**3. In what areas might the UK's interests be served better if action were to be taken at:
a. EU level instead of national, regional or international level?**

As things stand, no 'transfer of competence' at an EU level seems necessary. However, EU support on a number of issues, such as energy infrastructure, the internal energy market, coordinated approach to energy policies, joint approach for a North Sea Grid, the establishment of the 2030 climate change and energy framework with a strong focus on infrastructure, continued support for Carbon Capture and Storage (CCS) or the creation of a fully-functioning ETS could be highly beneficial to the UK.

Another area where EU-facilitated action at a regional level might be appropriate would be in the design and implementation of the electricity "target model", and in the development of the regional "corridors" identified in the TEN-E Regulation. The Target Model concept was designed before the advent of large volumes of intermittent renewable energy were brought onto the system to meet EU imposed renewables targets and therefore its design may need to be enhanced to ensure that it is still fit for purpose. This may reveal conflicting priorities, for example between security of supply and integration of intermittent renewable energy sources, which may necessitate an update of EU legislation (e.g. congestion management guidelines). Similarly, development of the regional corridors (North Sea, Baltic Sea etc.) will necessitate the involvement of a number of Member States, and this might be best facilitated by the EU.

**3. In what areas might the UK's interests be served better if action were to be taken at:
b. national, regional or international level instead of EU level?**

We do not see any sector where a 're-nationalisation' of competences would be of interest at this stage. Similarly, action at an international level (e.g. worldwide agreement on greenhouse gas reduction) is of key importance but does not contradict action at an EU level.

When it comes to security of supply, we believe that it is important to account for the interactions between action at an EU level (for example to encourage greater interconnections or seek to ensure that internal market rules are implemented), and at a national level, where as per the existing EU Treaties the Member States are responsible for the "general structure of [their] energy supply".

Recent developments show that there may be a tension between EU-led objectives, typically renewable targets set out in the Renewable Energy Directive, and certain EU policies like the EU Emission Trading Scheme or the EU's internal market rules (State Aid). For instance, the lack of an 'investable' carbon price on the ETS has in effect pushed the EU Member States to set up nationally-based support schemes to meet their 2020 renewable targets (e.g. Contract for Difference in the UK). These national schemes are currently being scrutinised under the State Aid Control Procedure. In our view, it is important that internal market rules/State Aid are used in a pragmatic manner to mitigate the distortive effects of such policies rather than to seek a de facto harmonisation of these policies, which would create uncertainty and put the delivery of the targets at risk. It is important that such possible conflicts and interactions between different EU policies are fully recognised and taken into account in the future and their resolution clarified as soon as possible.

In the same idea, the development and implementation of the most appropriate UK solution for a capacity mechanism should not be hindered by an inappropriate desire for EU harmonisation that fails to account for Member States requirement to develop policy to deliver against the EU renewable target – rather, discussions at an EU level on this issue should rather focus on a pragmatic approach to mitigate any risks of market distortion.

In addition, whilst National Grid does not believe that any ‘transfer of competence’ is needed, we would like to stress the importance of assessing the risk of unintended consequences when designing legislation and/or implementing it into UK law.

Examples like the implementation of the PCI Regulation or discussions surrounding the review of the Environmental Impact Assessment Directive demonstrate the need to ensure that measures taken at EU level do not impose requirements on infrastructure development (e.g. in terms of timescales, consultation or assessment requirements) which are overly burdensome compared to those existing in Member States and therefore have the potential of hampering infrastructure development.

4. How could the EU’s current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

National Grid supports an approach whereby policy-makers regularly consult with all energy stakeholders (companies, industry and non-industry associations) prior to issuing legislation.

In this respect we believe that the ENTSOE and ENTSOG have key roles to play in shaping future EU energy policy ensuring that potential implications for transmission system operation and security of supply are fully considered at the early stages of policy development.

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

National Grid considers internal energy markets developments to be positive overall for the UK and for the energy sector as a whole:

- From a general standpoint the building of the internal energy market, in particular through interconnectors, may play a key role in enhancing the UK’s security of supply and bringing prices down for consumers;
- Regulatory measures (e.g. energy packages) and technical ones (network codes) are beneficial as they will facilitate seamless energy transmission and cross-border trade across Europe;
- As most EU countries face significant challenges with respect to security of supply and development of renewable energy, a pragmatic approach on the harmonisation of domestic energy policies is needed. Policies to mitigate the distortive effects of domestic energy policies on the internal energy market should be supported.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

As highlighted above, National Grid considers that the building of interconnections with neighbouring countries brings significant benefits in terms of security of supply. For instance,

the measures contained in the 'PCI Regulation', if implemented smoothly, have the potential of encouraging infrastructure investments and playing a beneficial role from a UK perspective – including in terms of access to cheaper generation.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The 2020 target for development of energy from renewable sources contained in the Renewable Energy Directive has led to an increase in exploitation of the UK's abundant potential for onshore and offshore wind energy. Given the UK's historic and present reliance on, largely indigenous, fossil fuels, it is possible that these could continue to form part of a low carbon energy mix if EU and Member State support of Carbon Capture and Storage technology were enhanced and appropriate levels of interconnection are delivered to provide access to cheaper sources of energy and increase security of supply.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

EU policies have globally supported cleaner form of sustainable technologies:

- The creation of 2020 EU-wide targets for greenhouse gas emissions, renewable energy and energy efficiency has played a key role in incentivising clean technologies;
- The EU Emission Trading Scheme has the potential to play a significant role to encourage the take-up of low-carbon technologies and reforms to achieve an investable carbon price should be supported; the EU could have done more and sooner to ensure that an 'investable' carbon price is reached;
- Individual policies, such as EU financial support for CCS, has played a key role in developing this technology, including in a UK context;
- At a global level the EU has also shown leadership on climate change matters and plays a pivotal role in global climate change negotiations. It is generally effective to have EU-wide objectives in terms of greenhouse gas emissions reduction – to avoid a situation where the UK would be isolated in making commitments.
- As highlighted above (question 3b), State aid measures could impact the delivery of EMR (and, therefore, the delivery of renewable targets), both in terms of timing and content.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

We do not have specific comments on this issue at this stage.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

We do not have specific comments on this issue at this stage but given the far reaching consequences of a nuclear incident it would appear appropriate for nuclear safety to be considered at an EU level.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The energy sector is/will be facing a number of key challenges in the coming years – such as ensuring security of supply as an increasing proportion of our energy needs are met through imports from outside the EU, rising energy prices and their impact on competitiveness, the transition to a low-carbon economy and further policies to combat climate change, emergence of new sources of generation and how these can be integrated with our existing indigenous sources, the creation of truly interconnected energy networks in Europe and beyond.

In short, competitiveness of our European economy is crucial – finding a way to decarbonise and take advantage of the creation of new jobs whilst keeping costs to business down is therefore the major challenge at present. These challenges will have significant implications for the future of UK and the EU energy policy.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

As expressed above, many of these issues will be international ones. We therefore believe that wherever possible, action at an international level is desirable. However, as identified above Europe has a clear role to play in creating a proper European energy market and developing a truly interconnected network; similarly action at a UK level will of course remain essential in the coming years.

As the global impact of US Shale gas exploitation and the impact of Fukushima have demonstrated it is important for Europe to have an eye on global developments and not set energy policy in isolation. From a UK perspective it is important that we are able to leverage the opportunities presented by participation in a wider EU environment to ensure our industry and economy remains globally competitive.

ENERGY SUPPLY COMPANIES

Centrica

Introduction

In recent years energy policy across Europe has had as its objectives to maintain security of supply, to meet environmental goals and to remain affordable. Co-operation between member states has been beneficial in making progress against all three of these objectives. However, there remains much to be done and the EU will need to continue to play an important role.

Centrica very much welcomes the opportunity to participate in this Call for Evidence and to contribute our experience and expertise in the energy sector. The Government's Review of the Balance of Competences is rightly rooted in the understanding that some issues are best approached at a national level, and that others will reflect collective challenges benefiting from action at the EU level.

The EU has, since the Treaty of Maastricht, recognised the principle of subsidiarity as one of its general principles of law. This important principle recognises the importance of decisions being taken "as closely as possible to the citizens" they affect, but there will be circumstances where there are "reasons for concluding that a Union objective can be better achieved at Union level".

In practice this means that policy in energy, as in other areas, will consist of EU instruments where there are common EU objectives, and national instruments where there are specific national issues or concerns to be addressed. Centrica would argue that, in general, EU competence should be framework setting, rather than determining the detail. For example, we believe it is right for the EU to agree a level of ambition on reducing carbon emissions, but right for member states to develop specific policies to meet those targets.

A further example of the principle of subsidiarity is the relative roles of suppliers and DNOs. Across the EU the role of distribution companies varies: in some countries these companies have direct relationships with domestic customers, whereas in others it is the supplier who holds the customer relationship. While it is appropriate for the EU to set policy objectives, it should be for member states to determine whether it is most appropriate for suppliers or DNOs to undertake the implementation.

Centrica welcomes the government's interest in seeking to examine how the competences to act in these areas work together and how this may be improved. Centrica has therefore considered the call for evidence in the energy sector and provided below some thoughts and evidence with regards to the balance of competences that we believe will in key areas enable the stated goals of energy policy to be achieved most efficiently.

Single market

In launching this Review of the Balance of Competences the Foreign Secretary wrote "The single market is one of the greatest forces for prosperity the continent has ever known and that is why we will continue to push an ambitious programme of deepening the single market". Centrica agrees and welcomes the efforts made by successive governments to

ensure that the benefits of the single market can be fully realised in the energy sector as they have been elsewhere.

Open, fair and competitive markets are a prerequisite to achieving the objectives of security of supply, decarbonisation and affordability.

Across Europe, member states are increasingly reliant upon imports for their energy needs. This makes fair and non-discriminatory access to networks ever more vital. In the UK liberalised, competitive markets have enabled us to build up a complex infrastructure to import gas by pipeline and ship to supplement our domestic production. Increased cross-border trade combined with properly enforced competition rules will ensure that consumers benefit from more secure energy supplies at the best possible price.

Centrica was a strong supporter of the EU's Third Package and has often been frustrated by the slow speed at which the European gas and electricity markets have become open to competition. We welcome the recent comments from Secretary of State Ed Davey that "across Europe we must fully implement the EU's energy liberalisation legislation by the end of next year... We must, for example, look again at the unbundling rules that are blocking investment from many major financial institutions... connecting the UK better into a better functioning European single energy market would spur greater competition in our electricity markets – and provide a real boost for consumers and industry."

In the UK, consumers have benefitted from strong competition, which in recent times has included the entry of around a dozen rapidly growing small suppliers and the emergence of some 11 independent switching sites. This has ensured that, against a backdrop of large increases in energy and decarbonisation costs, UK consumers benefit from some of the lowest retail energy prices in Europe.

A similar pattern of liberalisation and competition has not however been seen everywhere across Europe. Regulated prices are still present in several European countries with significant negative effects. The experience with regulated energy retail prices in Spain and Portugal points to the risk of tariff deficits (which reached EUR 26bn cumulative for Spain in 2013) that these countries are now having to address through painful reforms that, in turn, have weakened the energy and renewables players and meant increased costs for consumers and governments.

The UK government has recognised that more than £100bn of investment in the energy sector is required in the UK over the next decade. Open, liberalised markets and clarity over future policy are needed to ensure that investment on this scale comes forward. Centrica would urge the UK and EU to work together to ensure that the single market in energy is completed as soon as possible to give investors greater confidence.

State Aids

Making the single market in energy work requires the Commission to apply State aid rules in a thorough but proportionate way. Centrica supports the role of the EU Commission in ensuring that national governments do not act to give undue advantage to specific companies, particularly to companies that are themselves substantially Government owned.

There are, however, specific circumstances where government intervention is necessary to achieve well-defined policy objectives, such as security of supply in electricity. National governments should have the competence to determine such policy objectives, with the Commission having strong powers to ensure that such policy objectives are not smokescreens for state aid. The discussion below on capacity mechanisms provides a good illustration of the balance that is to be struck and the need for timely decision making.

Capacity Markets

The UK's security of supply rests heavily on investment in power generation as we currently have limited interconnection capability. The Government's EMR proposals recognised that 9.7GW of capacity has already closed since January 2012 and a further 4.1GW of additional closures are predicted before December 2016. To encourage the £110 billion of investment necessary to maintain UK electricity supply the UK Government developed the Electricity Market Reform package (included in the Energy Bill), which included a proposal to implement a Capacity Market to encourage investment in existing and new thermal plants. This is an appropriate solution, designed to ensure long term security of supply is maintained through a competitive auction which seeks out the lowest cost generation to meet the designated reliability standard. Centrica believes this is an essential measure as current economics for thermal plants are extremely challenging and would increasingly rely on very high prices for a few hours per year.

Centrica is encouraged that the Energy Bill received Royal Assent at the end of 2013 and we support the Government's proposals "to run the first Capacity Market auction in 2014 for delivery of capacity from the winter of 2018/19." However, the Capacity Market is subject to state aid clearance and Centrica believes it is vital that the state aid process does not interfere with the on-time delivery of capacity market auctions, which are vital for UK security of supply. It is normal that mechanisms such as this are subject to scrutiny by the EU to ensure they are consistent with the EU internal market and do not constitute hidden state aid. However equally it is important that the EU does not put at risk national security of supply through undue delay or blocking of appropriate national measures. In this case, the GB market requires speedy review and approval of its proposed capacity market scheme this year, so that contracts can be put in place to ensure sufficient generation capacity is available in the coming years.

While the EU has a role to play, due consideration must be given to national policy measures where the case adduced by the national government is well presented and does not unduly distort market outcomes. In addition the proposed capacity market has limited interaction with the functioning of the energy market and will not for instance disrupt the market coupling processes that are being implemented as part of the EU target model. Moving forward, it is essential that important UK measures to encourage investment in UK power generation, such as the Capacity Market, are able to be implemented by national Governments without delays at a European level, as highlighted earlier in this submission.

20-20-20 targets

Centrica was fully supportive of the Climate Change Act (2008) which set a legally binding target to reduce the UK's greenhouse gas emissions by 80% by 2050. We also supported the underpinning of that long-term target with five-yearly carbon budgets, to ensure that the

UK remains on course to meet its long-term target. They are, rightly in our view, technology and sector neutral, enabling the market and the government of the day to judge the most appropriate way to meet those budgets depending on the options available at the time.

In addition to these domestic carbon budgets, the UK has signed up to a number of supplementary targets, most notably the EU's 2020 targets. Under these, the UK is committed to supply 15% of its primary energy from renewable sources by 2020. This covers the electricity, transport and heat sectors. This is clearly a stretching target given that in 2012 renewables accounted for just over 4% of energy consumption in the UK.

Renewable energy has a major role to play in all pathways to the UK's carbon targets. For example, if the UK were to concentrate solely on the carbon budgets it would still meet the 15% renewables target, but slightly later than 2020. The UK has made good progress in delivering the renewables target to date, but reaching 2020 will be challenging. Between 2008 and 2012, annual deployment rates of renewables in the UK averaged some 6TWh. However, this deployment rate will need to increase more than threefold to 20TWh a year in order to meet DECC's target of 223TWh by 2020.

As well as the technical challenge of meeting this deployment trajectory, the focus on a sector-specific point-in-time target risks inflating supply chain costs and pushing overall costs up further.

A slight delay in achieving the target signals a commitment to renewables consistent with carbon budgets, but it could have a negative impact on confidence in the supply chain. Equally, though, delaying deployment might allow global economies of scale to reduce costs, which the UK could take advantage of – albeit at the possible expense of gaining an industry-leading position.

The UK is unlikely to be alone in finding the renewables target challenging. In March 2013, the European Commission published a report on member states' progress. It warned that the outlook for 2020 was not optimistic: "In many member states currently implemented policies [...] risk being insufficient to trigger the required renewable energy deployment to reach the 2020 targets. [...] The financial crisis also affects these developments."

Centrica believes the UK government should undertake a review of the 2020 targets to examine whether meeting these targets on time is consistent with the least-cost approach to decarbonisation.

2030 Renewables target

The EU is currently debating a renewable energy target for 2030. The UK government has been resistant to this and has argued: "We need a technology neutral approach to how individual countries meet their emissions targets. We want to maintain flexibility [...] a renewable energy target at an EU level is inflexible and unnecessary".

Centrica supports the approach the UK government has taken in Europe to the 2030 renewables target. Technology neutral carbon targets are a better way to ensure that decarbonisation of our economy happens in a least-cost manner. A specific EU competence to set technology specific targets in the energy sector is inappropriate and should be opposed by the UK government.

EU ETS

Centrica has repeatedly highlighted the importance of a credible carbon price signal. Coal to gas switching is one of the most economical ways of reducing carbon emissions and can deliver at greater scales than almost any other option. Our own analysis suggests that around 49MtCO₂ could be saved in 2030 from coal to gas switching at a fraction of the cost of some of the technologies currently being subsidised. An appropriate carbon price signal, such as through the carbon price floor or the EU Emissions Trading System (EU ETS), can help enable this.

Ideally, the carbon price signal would be set on a pan-European basis through the EU ETS, but the scheme currently faces challenges. Until these challenges are addressed, the UK should maintain the carbon price floor to provide an effective carbon price signal to support decarbonisation. It is important therefore that national governments retain the ability to supplement the EU ETS to provide a credible carbon price signal.

Environmental directives and Shale

Centrica believes the discovery of shale gas in the UK presents an opportunity to explore a new source of gas to help meet growing UK demand. For this reason we acquired a 25% stake in Cuadrilla's Bowland basin licence in June and initial data from a British Geological Survey study suggests that there could be 1,300 trillion cubic feet (TCF) of shale gas in Northern England and 200 TCF in the Bowland Basin.

In November 2013 the EU voted to introduce mandatory environmental impact assessments for unconventional drilling activities across Europe. The EU directive brings the rest of Europe to the high standards on show in the UK. Cuadrilla and Centrica intend to take a robust approach to EIA and will undertake EIAs for all planning applications which involve hydraulic fracturing. We do not believe the EU needs to introduce new regulations to cover shale gas drilling in the UK as the regulatory regime in place is extremely robust.

In 2012 the Government asked The Royal Society and Royal Academy of Engineering to review the risks of shale and whether these could be managed safely in the UK. The report found that "The health, safety and environmental risks can be managed effectively in the UK" and recommended a series of regulatory measures to implement. The Government announced in 2012 that it "accepts all the recommendations of the academies' report addressed to it" and published an updated regulatory roadmap for shale gas on 17th December 2013. This highlighted the 15 planning, permitting and approval stages companies need to go through before drilling highlighting the strength of the regulatory regime operating in the UK for unconventional drilling.

Centrica believes that the EU should not seek to regulate further in this area and should instead allow member states to determine the rules most appropriate for their own circumstances.

DONG Energy

Introduction to DONG Energy

DONG Energy's business is based on procuring, producing, distributing and trading in energy and related products in Northern Europe. DONG Energy has nearly 6,500 employees and is headquartered in Denmark. The Group generated £7.5 billion in revenue across its business units and markets in 2012.

DONG Energy is one of the leading energy groups in Northern Europe. Headquartered in Denmark, we have an interest in several European markets and cover a wide range of energy sector activities. In the UK, we are the market leading developer and operator of offshore wind farms. Together with our partners we have a current portfolio of 1.6 GW of operational projects, 700 MW of projects under construction, and a strong pipeline of future projects.

In addition to offshore wind interests in the UK, DONG Energy Sales supplies around 11.9% of the non-domestic gas market in the UK and has recently entered the non-domestic electricity market. DONG Energy is one of the largest acreage holders in the West of Shetland and we are a partner in the Laggan and Tormore gas discoveries and have a number of other West of Shetland developments in the pipeline.

General

As a European energy company, EU policy developments have a significant bearing on our business and future investment decisions. We are fortunate that the UK has been at the forefront of liberalising energy markets and the central to the debate on climate change, helping to set clear targets and understanding the objectives. The leadership demonstrated by the UK in opening up the energy markets has allowed similar moves to happen in other Member States. Furthermore, there is a clear advantage of collective action, particularly for issues such as climate change which cannot be tackled by individual Member States alone and need an EU, and subsequently a global, framework. We see that as an integrated single market, a common EU renewable energy policy is necessary to ensure a common goal and baseline for Member State activities and developments to ensure a competitive EU market.

Generally, we are supportive of the relevant overarching framework set by the EU, our particular concern is ensuring the appropriate guidance is published and that the legislation is transposed in a timely manner. At times, specific and prescriptive guidance are necessary to ensure the full economic benefit to both the EU and Member States is realised, for example in new product markets such as EU ETS and carbon pricing which need consistent application.

Another example, at a Group level, DONG Energy is impacted by the REMIT regulation. Clearly, this is an area where it would be helpful if the rules for implementation were detailed, consistent and specific across the EU as we develop group systems and processes. Whilst the EU is currently setting guidance, there appears to be room for each Member State to interpret this guidance differently. This leads to confusion for both energy users, generators and suppliers that operate across the EU.

However, we find that, at times, the EU can set inflexible rules which fail to recognise the individual characteristics of each Member State and rather than creating an effective single market it does little more than relegate each individual market to the lowest common denominator.

Security of energy supply is a fundamental necessity for the UK and we are increasingly dependent upon the EU for a greater security of supply through the development of interconnectors. This clearly has a bearing on consistent pricing and we must ensure that the guidelines are sufficiently clear to avoid an opportunity to arbitrage between Member States, yet to take account of the individual Member State.

In summary, we recognise that the UK clearly benefits from the EU energy policy as many of the issues are cross border. To take full economic advantage of being a member of the EU, we support appropriate guidance and timely transposition of relevant legislation.

E.On

General

Q1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

1. Delivering an optimum energy policy requires a pan European approach rather than on a country by country basis. This is even more relevant for the UK which is increasingly dependent on markets both within and outside the EU for key fuels such as gas.

Furthermore climate change policies are best achieved when there is close cooperation amongst groups of countries rather than the UK choosing to act alone, particularly where there may otherwise be a greater risk of carbon leakage. Indeed the recent unilateral decision by the UK government to impose a Carbon Price Floor illustrates the dangers of going alone.

2. Securing an internal energy market requires the member states to increasingly cooperate and for efficient implementation of EU directives and guidelines. A key concern is when EU directives are implemented half-heartedly by some member states, which then do not provide a clear signal to investors.

3. Overall, in our view, EU action in the energy field has benefitted the UK energy sector. In order to see continued benefits, further integration and development of the Single European Energy Market is essential.

Q2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

4. In order to reach the agreed Single European Energy Market, an equal, level playing field across the Member States has to be established by harmonising market rules which affect cross-border trade. Therefore, liberalisation and unbundling are proportionate measures designed to achieve the objective of competitive markets.

5. A good example of a policy which was aimed at addressing the European climate change objective without creating distortionary conditions for the industry was the introduction of the EU ETS. A series of national measures would in contrast distort the broader market and make it less likely in our view that such an objective could be delivered. Of course ensuring that the rules are designed effectively is key to ensuring the intended policy objective can be delivered. While EU ETS is a good example of the potential of coordinated European policy, in this case we agree that further reforms are necessary to realise the intended aims.

6. There are other areas where it is not a requirement for EU legislation to be introduced, and instead a role still exists for individual member states to determine the precise policy position. In

particular, this appears relevant in the context of support to encourage Research and Development and early stage technologies, as well as technical standards which do not affecting cross-border trading.

Q3. In what areas might the UK's interests be served better if action were to be taken at:

- a. EU level instead of national, regional or international level?**
- b. national, regional or international level instead of EU level?**

7. There are some areas as discussed above where there is merit in taking action at the EU level, such as in the context of climate change. However there are other areas where it is more questionable as to the merits of taking action at this level rather than at the national level. For example, whilst the EU has set a 2020 target for renewables, it is not clear that looking further ahead there is a sufficiently strong case for a new EU renewables target to be set for 2030. If delivering a lower carbon economy was a broad European objective, it should be left to the market to determine the appropriate mix of technologies rather than be centrally planned by the European Commission.

8. Security of supply is an example where it is challenging to set arrangements at the EU level at this time. Member states however should be encouraged to design policies in such a way that seek to accommodate capacity options from other markets, but there should also be a recognition that there may be some trade-offs which will need to be carefully explored and result at least in the short term with member states having to introduce their own set of measures to address specific issues affecting their own market. A way forward would be to allow member states to design their own policies in this area but to ensure there are sufficient review measures in place that could overtime allow greater cooperation across borders.

Q4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

9. One of the main forthcoming EU energy legislation projects is the 2030 package. This package should help to complete the internal energy market.

10. As this package is developed, it must be supported by an effective impact assessment process which enables interested stakeholders to comment on and via this process help to improve the policy design.

11. Whilst there may be some alternatives to legislation, ultimately to ensure that all member states abide by the rules, we do not believe in many cases that there is any real alternative. However we believe there is benefit in establishing some guiding principles, such as to ascertain whether legislation will help move the EU closer to completing the internal market and that all non-legislative options have been explored in the first instance.

THEMATIC AREAS

Q5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

12. A robust impact assessment should be the basis on which further or deeper integration of the EU energy market is desirable. But we believe that a liberalised energy market is likely to create greater efficiency gains and deliver energy at a lower cost to customers than would otherwise be the case. This is essential if Europe is to be able to compete effectively in globalized markets.

Q6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

13. During the last decade, there have been a number of development options around interconnection which have offered investors a larger market to provide cost effective solutions to customers, thus helping to secure supply for the UK. However the EU has not focussed much attention on security of supply until very late in the day, which in part explains why member states have responded with their own set of proposals to tackle this issue.

Q7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

14. The development of the EU ETS, and the EU's 20-20-20 package provided some support to the growth of the UK's indigenous lower carbon energy sources such as renewables. A further stimulation to renewables was provided following the signing of the Renewables Directive. To support the exploitation of unconventional sources as well as conventional sources of energy, a long term stable regulatory and policy framework is required, providing confidence to investors to sink considerable sums of capital into these technologies.

Q8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

15. Please see our response to the previous question.

16. In addition, it is important to strike the right balance and to set appropriate targets. This must be based on a clear evidence base impact assessment. There is a danger that too many targets are set rather than allowing the market to find the most cost effective way to deliver a policy goal. Therefore an important lesson to learn is that it is not necessary or desirable to have more than one 2030 target, which we believe should be focussed on carbon. Our experience of other markets in the EU is that policies have not considered the impact on other generation alternatives such as gas, which could still have a key role to play in a low carbon future. This has had a significant impact on investor confidence in those markets. This is a good example of the need to consider much wider the impact of a policy decision on the broader market which may create unintended consequences, and in doing so, weaken the operations of the internal market.

Q9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

17. The priority for the EU should be to complete the internal energy market. We accept however that there may some merit in negotiating trading arrangements. EU negotiation at the UNFCCC is a good example of the benefits of the EU negotiating as a bloc, achieving more than individual Members States would alone.

Q10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

18. No Comment

FUTURE CHALLENGES AND OPPORTUNITIES

Q11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

19. The cost of energy within the EU has been increasing over recent years. Whilst increases in UK wholesale prices have contributed to the increase at home, this is also due in part to the fact that a number of social and environmental policy costs are collected via the energy bill.

20. Within the context of the global economy, and therefore long term competitiveness, the most important thing to consider is the energy price differential between the EU and other regions. As was highlighted in the last World Energy Outlook by the IEA, the price differential between the EU and the US, Japan, China is already high and is likely to be maintained at this level for some time to come. Whilst Shale is clearly having a transformational impact on the US, Europe needs to ensure that cost effective climate change policies are implemented beyond 2020, and that these are sustainable. At the heart of the reforms should be a move to a single, affordable Greenhouse Gas emissions target for 2030, consistent with the EU's 2050 low carbon roadmap; with this in mind we support the UK's proposal for a 40% 2030 target. This should form the basis for negotiating a comprehensive international agreement to ensure the EU economies remain competitive globally. This would be good for the economies of the UK, EU and the World, and is essential for keeping the world on the right path to decarbonising over the coming decades.

Q12. What would be the costs and benefits of facing these at an international, EU, or national level?

21. If the EU wants to improve its competitive position, economic efficiency should be used as a guiding principle for implementing any new energy policy measure. It should explore options for simplifying the number of targets and instruments as well as pursuing stronger

cooperation between member states where there are clear benefits to customers and investors.

EDF Energy

The Energy Review: Call for Evidence on the Government's Review of the Balance of Competences between the United Kingdom and the European Union

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

We support the EU's long-term aspiration to reduce greenhouse gas emissions by 80-95% below 1990 levels by 2050 as part of the effort needed from developed countries. EDF Energy believes that action on climate change is an area that could be more efficient if tackled at a supranational level. We welcome the fact that the EU has taken a clear leadership position in setting the framework for reducing greenhouse gas emissions. In acting as a single entity, the EU is able to maximise the advantage of economy of scale and exert greater political influence. Working towards the same objectives could allow a common legislative framework to be developed at the EU level and this could help promote increased market integration and lead to commensurate benefits. Such an approach offers more scope for changing the energy system than is within any single Member State's individual capability.

EDF Energy recognises that a new EU 2030 framework for climate and energy policies could help ensure that the required pathway to 2050 is both realistic and deliverable, and so provide investors with greater confidence in the EU's commitment to a low carbon economy. However, we do not believe that such a framework should replicate the EU 2020 framework which includes specific targets for renewables and energy efficiency. We are concerned that a further target for renewable energy beyond 2020 will discriminate against other low carbon technologies, will further undermine the carbon market and is likely to entail permanent subsidy. This will raise costs for consumers and create market distortions.

It is for this reason that we support the UK Government in calling for an ambitious greenhouse gas emissions target for 2030, and one that is delivered in a technology neutral way so that all low carbon technologies are able to compete. This will lead to a diverse generation mix that will include renewables, nuclear and fossil fuel plant with carbon capture and storage (CCS).

EDF Energy believes that Member States should be free to meet any agreed EU greenhouse gas emissions reduction target at least cost to their consumers, and in a way that best suits their national circumstances, both politically and economically. This is consistent with Article 194 of the Lisbon Treaty, which makes it clear that Member States retain the right to determine the structure of their energy mix and the structure of their energy supply.

The advantage of an overarching decarbonisation target is that it will allow Member States the flexibility to create the market framework that they consider will best deliver low carbon investment, and it is reasonable to expect that these arrangements will differ from country to country. Such an approach does not undermine the single market as the purpose of a single market is to use trade to drive efficiency gains, and not to ensure that all goods are manufactured using identical processes.

We believe that there will continue to be a role for targeted national initiatives to complement EU initiatives as it should not be automatically assumed that a common EU approach will deliver transformation at the lowest cost. For example, Electricity Market Reform (EMR) in

the UK is supplementing EU climate change initiatives to reflect the particular circumstances of the UK electricity supply industry and the timing of opportunities to decarbonise through new investment.

It is important that any framework adopted at the EU level is capable of adapting to changing circumstances when necessary. We believe that the UK would benefit from an EU approach to developing legislation that is based more explicitly on guiding principles on competence. The EU should focus on overall outcomes rather than promote prescriptive solutions that may not be appropriate or workable at the local level.

Our detailed responses are set out in the attachment to this letter.

Yours sincerely,

EDF Energy

Attachment

The Energy Review: Call for Evidence on the Government's Review of the Balance of Competences between the United Kingdom and the European Union

EDF Energy's response to your questions

GENERAL

Q1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

EDF Energy believes that it is helpful that EU Member States are broadly aligned in terms of the long term energy policy objective of decarbonisation. We note that Member States are also concerned about security of supply and the affordability or competitiveness of energy supplies. However, it is not clear if there is a consensus on the relative scale of their importance and how any concerns should be addressed. More generally, it is recognised that the EU faces a significant challenge to secure the investment required to ensure that there is adequate capacity to meet future electricity needs while reducing emissions at least cost to consumers. Working towards the same objectives could allow a common legislative framework to be developed at the EU level and this could help promote increased market integration and lead to commensurate benefits.

We support the EU's long-term aspiration to reduce greenhouse gas emissions by 80-95% below 1990 levels by 2050 as part of the effort needed from developed countries. We welcome the fact that the EU has taken a clear leadership position in setting the framework for reducing greenhouse gas emissions. The mainstream consensus of the need for urgent action on climate change has not changed, and the importance of early and decisive action is as important as it has always been. The International Energy Agency (IEA) has recently warned that the world is not on track to limit global temperature increases to 2°C, and that

we are on a path more likely to result in a temperature increase of between 3.6°C and 5.3°C³⁴.

It is important that sight of the EU's long-term greenhouse gas emissions reduction target is not lost as Member States work towards the existing 2020 targets. We recognise that a new 2030 framework for climate and energy policies could help ensure that the required pathway to 2050 is both realistic and deliverable, and so provide investors with greater confidence in the EU's commitment to a low carbon economy. However, we do not believe that such a framework should replicate the EU 2020 framework which includes specific targets for renewables and energy efficiency.

The "20-20-20" package is recognised for putting renewable energy on the European agenda, and for kick starting the process for action by Member States. However, the EU has been correct to note recently that there have been a number of fundamental changes since the Climate and Energy Package was agreed in 2008/9. Even though the energy policy objectives remain the same, the new 2030 framework will need to reflect a very different and more challenging economic climate, as well as a different order of priorities. There is good reason to believe that the interacting nature of the 20-20-20 targets (including the unintended consequence of effectively undermining the carbon price) was not fully considered at the inception of the package. In addition, the requirement to meet the renewables energy target did not come with any regard to cost. This has often meant that technologies too far from commercial maturity are being supported in an inefficient and costly manner to the ultimate detriment of consumers.

We note that most Member States' efforts in terms of meeting the 2020 renewables energy target appear to have focused disproportionately on renewable electricity technologies at the expense of pursuing renewable heat (or even transport) options. EDF Energy has long supported early action on renewable heat, as we believe that this is a sector which can make a significant and cost effective contribution to the UK meeting its target, especially through the use of heat pumps.

In addition, the focus on renewables has also undermined the carbon price signal in the EU, and has held back investment in other low carbon technologies such as nuclear and fossil fuel plant with carbon capture and storage (CCS). We believe that these technologies will be essential components of the diverse energy mix required for the UK to meet its long-term decarbonisation targets.

Q2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

While we understand the motivation behind having a 2020 renewables target as part of the Climate and Energy Package 2008/9, our analysis leads us to believe that Europe should not set specific targets for particular technologies or renewables in the 2030 framework. If it does so, then it is our view that such legislation would represent disproportionate action. This is because the focus should solely be on total carbon emissions reductions.

³⁴ *International Energy Agency, Redrawing the Energy-Climate Map, June 2013*

We support the UK Government in calling for an ambitious greenhouse gas emissions target for 2030, and one that is delivered in a technology neutral way so that all low carbon technologies are able to compete. This will lead to a diverse generation mix that will include renewables, nuclear and fossil fuel plant with CCS. We agree that to achieve the EU's energy policy objectives will require an ambitious emissions reduction target in the region of at least 40% in 2030.

EDF Energy is concerned that a further target for renewable energy beyond 2020 will discriminate against other low carbon technologies, will further undermine the carbon market and is likely to entail permanent subsidy. This will raise costs for consumers and create market distortions. Although Europe remains on course to reduce its greenhouse gas emissions by 20% (with 2011 EU emissions down by 17.6% on 1990 levels), driven to a substantial degree by the economic downturn across the EU, there are good reasons for arguing that the 2020 targets have not been successful because they have resulted in subsidies to more expensive (and often commercially immature) generation at great cost to consumers. The renewables target has also undermined the carbon price which has meant that higher levels of subsidies have been needed to support renewables than otherwise would have been the case. Analysis from IHS CERA forecasts that support costs for renewable generation alone will reach "at least €50 billion by 2020, an increase of almost 70% over today's €30 billion"³⁵. It is important to highlight that while renewables will clearly play a key role in decarbonising the European economy, their deployment is only a means to an end, and not an end in itself. There is the risk that the long-term development of renewables will be jeopardised if they are seen to require permanently high levels of subsidy from consumers.

The current focus on competitiveness and affordability creates some uncertainty as to whether the 2020 renewables target will necessarily be met. The European Commission's Renewable energy progress report states that "there are reasons for concern about future progress"³⁶ and that 15 Member States failed to reach their indicative 2010 targets. We are concerned that an expected shortfall could lead to even higher subsidies simply to meet the target, and this would have cost impacts (in terms of final customer bills) and competitiveness implications. For example, we note that the UK's contribution to the 2020 renewables target requires it to secure a tenfold increase in renewable energy (compared to the 2005 baseline) compared with only a required, on average, doubling across Europe. The UK Government has forecast that the lifetime spend on the Renewables Obligation alone may total around £43 billion from 2013/14 to 2036/37 (discounted 2011/12 prices)^{37 38}.

³⁵ IHS CERA, The Energy Investment Imperative – Toward a Competitive and Consistent Policy Framework, February 2013

³⁶ European Commission, Renewable Energy Progress Report COM(2013) 175, 27 March 2013

³⁷ UK Department of Energy and Climate Change (DECC) presentation, Benchmarking the Renewable Energy Strategy: current matters in review, and issues of deployment, 8 May 2013

³⁸ While the Renewables Obligation closes to new generators in 2017, payments will be made up to 2036/37 as support is provided for 20 years under the scheme.

Q3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

b. national, regional or international level instead of EU level?

a) EDF Energy believes that an international approach is ultimately the most efficient means of tackling climate change and securing an international agreement should remain an ongoing priority. However, this should not preclude the implementation of national or regional initiatives as constructive steps towards this ultimate wider ambition.

We believe that the primary objective of the EU should be to secure by 2015 a global, legally binding agreement for a second commitment period (or successor) to the Kyoto Protocol involving the USA and China. The EU should continue to act by example to demonstrate that ambitious greenhouse gas reductions are achievable without compromising economic growth or global trade. We believe that the UK should continue to ensure that the EU remains committed to its decarbonisation aspirations by securing agreement on EU economy-wide greenhouse gas emissions reductions through to 2050.

For example, ahead of any global agreement, there may be substantial benefits from linkages between the EU ETS and other established schemes provided a suitably robust governance framework exists so that the integrity and credibility of the EU ETS is not undermined. However, it is vital that a lack of progress elsewhere should not undermine or impede the urgency of reforms required in the EU ETS (as highlighted in our response to the "Environment and Climate Change – Review of the Balance of Competences" Call for Evidence).

If there is a lack of progress outside Europe, then it will become important to have a strong and wide political consensus to support (i) the EU's climate change mitigation objectives (and especially the target emissions trajectory to 2050), and (ii) the role of the EU ETS in delivering that objective. The key challenge in obtaining such support is the concern that the EU economy will be put at a disadvantage if it acts unilaterally. The question of Border Adjustment Measures will need to be looked at carefully, including a detailed and objective assessment of its merits, drawbacks and impacts.

b) EDF Energy believes that Member States should be free to meet any agreed EU greenhouse gas emissions reduction target at least cost to their consumers, and in a way that best suits their national circumstances, both politically and economically. This is consistent with Article 194 of the Lisbon Treaty, which makes it clear that Member States retain the right to determine the structure of their energy mix and the structure of their energy supply.

The European Commission is right to acknowledge the diversity of geographical characteristics, natural resources and economic capability of Member States. Since differing circumstances have led to differing energy mixes and industrial structures, it is our view that a wholly unified energy policy across Europe would not be feasible. It should be left to Member States to develop their own energy policy options to match the relative availability and acceptability of different technologies. Member States should be held accountable for the costs of the energy policies they choose to pursue, and the arrangements should be transparent so that consumers are clear about what they are paying for.

The advantage of an overarching decarbonisation target is that it will allow Member States the flexibility to create the market framework that they consider will best deliver low carbon investment, and it is reasonable to expect that these arrangements will differ from country to country. Such an approach does not undermine the single market as the purpose of a single market is to use trade to drive efficiency gains, and not to ensure that all goods are manufactured using identical processes.

In summary, the UK would benefit from an EU approach to developing legislation that was based more explicitly on some guiding principles on competence. These principles would address the concerns set out in this response. For example:

The EU should focus on overall outcomes

- Member States should have maximum flexibility in selecting the detailed measures to achieve the outcomes
- For impacts at a global level such as greenhouse gas emissions, a single European mechanism may well be appropriate
- For impacts at a local level, or dependent on local circumstances, a prescriptive European approach is unlikely to be efficient or workable;

It is important that each Member State has sufficient discretion to effectively implement its energy policy choices

Overly prescriptive rules on harmonisation of markets may hinder the cost effective deployment of policy decisions and could increase overall costs for EU consumers.

We would welcome the opportunity to develop such a principled approach. If applied in practice, this should automatically identify when the UK or the EU should take more or less action on energy matters.

Q4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

In our response to Question 3, we have identified that there are circumstances where it is appropriate for action to be taken at the EU level as long as the frameworks adopted are capable of adapting to changing circumstances when necessary.

In our response to the "Environment and Climate Change – Review of the Balance of Competences" Call for Evidence we stated that EU legislation should focus on outcomes rather than specifying rigid routes for the delivery of those outcomes. We also highlighted that there have been a number of environmental Directives that have taken an extremely prescriptive approach without fully considering national or local conditions. This is inefficient

because it inevitably requires additional, complex derogations to provide the flexibility that is essential in practice at a national level. It would be far more efficient to include that flexibility in the main implementation of a Directive.

We believe it is critical that Member States should have the flexibility to implement national mechanisms that best suit their specific circumstances. We believe that there will continue to be a role for targeted national initiatives to complement EU initiatives. For example, Electricity Market Reform (EMR) in the UK is supplementing EU climate change initiatives to reflect the particular circumstances of the UK electricity supply industry and the timing of opportunities to decarbonise through new investment.

Even in cases where we believe the EU should have competence, there are examples of the inability of the EU to adapt effectively its policy approaches to changing circumstances. Looking at climate change policy, a shortcoming of the EU ETS is its inability to provide an effective supply side response and therefore the current surplus of carbon allowances, which is largely due to the economic recession, has meant that the EU ETS price is not providing the right signal for investment in low carbon generation plant.

The need for structural reform of the EU ETS is overwhelming, as potentially it remains the most efficient mechanism for European action on climate change. However, we are extremely concerned that even seemingly innocuous proposals are difficult to take forward at the EU level and slow to come to fruition. For example, the European Commission first announced its plans for backloading in spring 2012 but this is not likely to come into force until early 2014. This illustrates the point that while a broad European framework may be appropriate, it is important that these frameworks provide sufficient flexibility to deal with specific national circumstances. The European Commission should ensure that its frameworks are capable of adapting to changing circumstances.

It is important that the European Commission is able to learn lessons quickly from the schemes that it designs and implements. For example, it is widely accepted that the NER300 process (i.e. the funding programme to support innovative low carbon energy demonstration projects on a commercial scale) has failed in its original main aim of establishing a series of demonstration CCS projects across Europe. This was highlighted when no CCS projects were awarded funding in the first call for proposals in December 2012. Instead, the entire €1.2 billion funding of that round went to 23 renewable energy projects. While well-intentioned, the scheme simply became too convoluted and bureaucratic for CCS projects at various stages of development. The support became spread too thinly (a problem made more acute by the collapse of the carbon price), and eventually relied on matched funding from Member States. It transpired that some countries were either not willing (or able) to provide this, or were working on a different timescale that was not really compatible with the NER300 process.

Unfortunately, the prospects for CCS appear slim in the second round call for proposals as only one CCS project met the July 2013 deadline for funding. This could suggest that the European Commission does not have the necessary capability or expertise in this field and that better outcomes could potentially be achieved by the European Commission leaving the design of incentive mechanisms to Member States. For example, we note that the UK Government has recently allocated a CCS project funds under its £1 billion CCS Commercialisation Programme, and is in on course to do so for another project as well. We believe that it is crucial that the European Commission is able to adapt to changing circumstances, and that there is good cooperation and knowledge exchange between it and Member States.

We remain concerned that there appears to be a lack of real and transparent stakeholder engagement at the early stages of legislation. It is our experience that the European Commission prefers to develop proposals in isolation and then present a fairly well-developed proposition. The European Commission is then open to inputs from stakeholders, but by this stage it can be difficult to redirect legislation if, for example, a key issue has been overlooked. Electricity interconnection development is a key area where we believe the analysis supporting the Impact Assessments has been particularly disappointing.

In addition, we are also concerned that the economic assessment of costs and benefits in legislation impact assessments is not always comprehensive or robust. Member States may recognise this, but are frequently reluctant to challenge the details or feel that it is too late. The trend for outsourcing of impact assessments to consultants by the European Commission is a particular concern. This is because consultants are not always able to gain the necessary insight into sector circumstances and it also means that European Commission employees do not develop the level of understanding needed to make decisions on often complex matters. We believe that there are opportunities to draw upon wider resources in Member States if earlier engagement is made by the European Commission. It is crucial that costs and benefits are assessed by more transparent and technically robust methodologies.

THEMATIC AREAS

Q5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

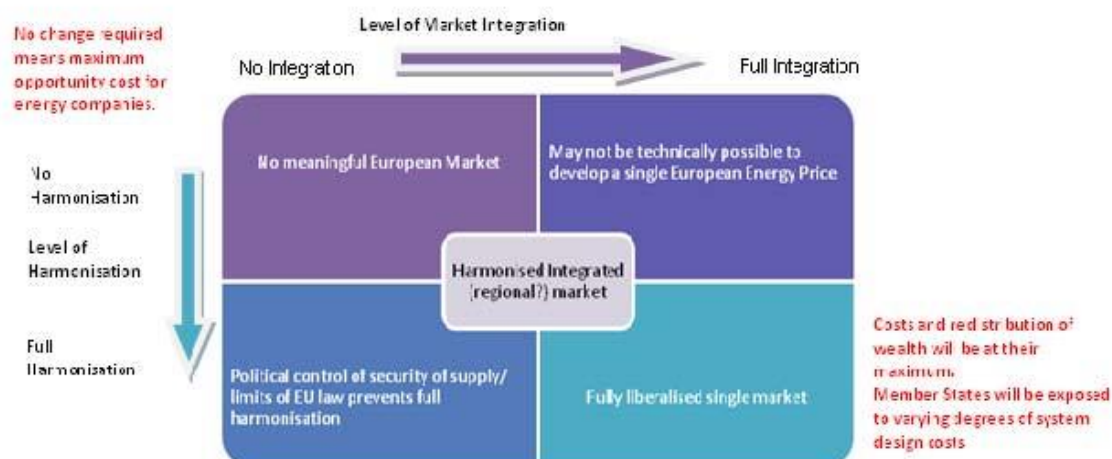
EDF Energy fully supports the development and objectives of the internal energy market, namely:

- facilitation of cross-border trade in energy
- to create more effective national regulators
- to promote cross-border collaboration and investment
- to create greater market transparency on network operation and supply
- increased solidarity among the EU countries

Two types of integration were observed during the development of the Third Package. Firstly, there were initiatives to enhance market integration i.e. the process of developing the rules for the trading of energy at the European level. We do not believe that there are any real disadvantages for the UK from this. Secondly, we observed market harmonisation. This refers to the process of changing national rules to a common European format, and has led the UK to experience some difficulties. Generally speaking, market integration is not costly to implement and the costs are spread across the industry with the benefits accruing to those who trade across borders. In contrast, the cost of harmonisation depends on the “gap” between the existing and proposed arrangements for each Member State (see Figure 1).

EDF Energy has tended to question issues associated with harmonisation where we do not share the rationale behind a proposed European change from a UK context. This is because EU policy has to align, and in fact create, policy for other Member States that, unlike the UK, are not fully liberalised. In these cases the EU's policies have had the effect of unnecessarily altering the UK's existing liberalised arrangements. This has led to increased costs without any commensurate increase in benefit.

Figure 1 Harmonisation vs. Market Integration



In practice we have also seen some European legislation and codes that have suffered from drafting issues as a result of trying to harmonise European diverse energy systems. Some of these are identified in Table 1.

Table 1 Selected Harmonisation Measures

EU Regulation	Assessment
<p>Regulation 838/2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging</p>	<p>This regulation states that in Ireland, Great Britain and Northern Ireland, annual average transmission charges (in this case known as TNUoS) paid by generators should not exceed €2.50/MWh.</p> <p>It states that connection charges are to be excluded from the charges being assessed. Unfortunately the regulation does not state what is meant by “connection charges” (excluded) or “system charges” (included). This has led to different interpretations by Member States and has led to uncertainty three years after the regulation took effect. Although this uncertainty is not currently having a material effect on generation, this may change from April 2015 when EC838/2010 becomes material.</p>
<p>Network Code on Load Frequency Control and Reserves (LFCR)</p>	<p>This code was introduced to reflect the local characteristics of the constituent parts of the European transmission systems areas. Some “initial default values” are defined by sections 1 to 3 in Article 19. They codify a requirement for each System Operator to maintain frequency quality but there is no penalty for non-compliance. We believe that the code is beneficial as the degradation of frequency quality is a key concern. However, we are concerned that there is a lack of clarity about the change process over time for the new European codes. We have been informed that they will be reviewed “once every five years” but this is quite a slow timeframe especially if a deficiency is identified in the first year after the last review.</p>
<p>Network Code on Operational Security</p>	<p>This does not clearly define what is meant by “significant demand”. Any demand-side response by “significant demand” has to be reported to the System Operator on a number of dimensions.</p>

Regulation 1227/2011 on wholesale energy market integrity and transparency (REMIT)	The objectives of REMIT should be welcomed. However, there have been problems in interpreting the regulations as well as issues with the drafting. As the regulations seem to be based on UK financial regulation it is difficult to ascertain what “extra” the regulation adds from a UK perspective.
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We believe that the deepening of markets will only work if specific national characteristics of energy systems, such as network density, can be taken into account during the drafting stage of legislation or network codes. Given the wide scope of the Third Package, we do not consider that the internal energy market needs to be deepened at this point in time as it already consists of a comprehensive set of measures.

Q6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

We believe that the work of completing the internal market in energy has meant a strong focus on transmission capacity to facilitate cross-border trade, and this has enhanced the scope for increased interconnection. This is reinforced by the institutional structure in which transmission companies are drafting the European network codes (i.e. ENTSO-E). The effect of investment will be to provide increased trading opportunities for all generators across European borders. However, we believe that interconnection only complements, rather than substitutes, for investment in low carbon generation assets or generation capacity adequacy. This is because it does not guarantee that there will be sufficient generation capacity to meet demand.

Relying solely on interconnection will not provide the UK Government or the EU with the ability to ensure its security of supply and control energy costs. We believe that this could expose consumers to high and volatile energy prices as studies indicate that countries relying heavily on interconnection to ensure their security of supply have much higher costs for energy. Investment in interconnection must be driven by market signals/price differentials between markets. Initiatives such as prescribing minimum levels of interconnection are likely to be less cost effective for consumers and businesses.

In particular, we strongly believe that transmission and interconnection charging policy must seek to recover revenues from those market participants that benefit from its use and must not seek to socialise the cost recovery for these investments. Socialisation of these costs distorts and unduly undermines the market price signal for demand side response and electricity storage. It is widely recognised that demand response and storage will be important components of our future electricity systems.

We also note that the European Commission has recently adopted 250 “projects of common interest” (PCI) that will benefit from accelerated licensing procedures and improved regulatory conditions. This will require Member States to have processes in place that will streamline the authorisation of such projects. However, the UK already has a relatively robust planning regime in place through the Planning Act 2008. It is therefore important that the regulations do not create an unnecessary and costly administrative burden for no additional benefit. For example, we note that the Planning Act 2008 does not have deadlines

for the pre-application process but this has not proved a barrier to the consent of nationally significant infrastructure projects.

With respect to broader security of supply concerns, there is general agreement in the electricity industry in the UK that a capacity market, as a complement to an “energy only” market, will have a key role to play in ensuring security of supply. It is a positive sign that similar mechanisms are also being explored by other Member States and that this fact has been recognised by the European Commission.

A well designed capacity market should deliver a given reliability standard in a sustainable and cost effective way, as the capacity payment will in effect make up for the absence of the scarcity premium in the energy price in an energy only market. A capacity mechanism will help ensure investment in generation capacity by providing a stable income stream to incentivise investment in reliable capacity. We welcome the fact that the European Commission is open to the possibility of the use of capacity mechanisms, albeit in defined circumstances, as a means to addressing generation adequacy.

In practical terms, a capacity mechanism in the UK may need to support the continued operation of existing fossil plant until the early 2020s (if this is cheaper than new build) as well as the introduction of new peaking capacity to replace it. Retaining existing assets in the mix has the advantage of preventing the ‘lock in’ of future carbon emissions from new assets. Any mechanism should enable developers within Member States make rational economic choices between peaking plant and other solutions, such as demand side response, storage and interconnection. It should also ensure security of supply in a cost-effective manner, and in a way that does not discourage participation by new market entrants.

Q7. What effect have EU measures had on the development and exploitation of the UK’s indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

EDF Energy believes that unabated gas fired generation, including that from shale gas, will play an important role in the transition towards a decarbonised power sector in the 2030s by providing the firm backup generation required for balancing the electricity system.

We would highlight that further investment in any unabated gas generation plant, beyond the minimum that is required to bridge the gap to the transition to low carbon technologies, would introduce significant challenges in meeting the UK’s legally-binding climate change objectives. Such investment substantially increases the risk that the UK’s long term emissions reduction targets will not be met, or at least not be met in a cost-effective manner. This is either because the carbon emissions from these new assets will be ‘locked in’ or, alternatively, because it increases the risk of stranded assets.

We therefore welcome the Secretary of State for Energy and Climate Change’s recent announcement that “we must not and will not allow shale gas production to compromise our focus on boosting renewables, nuclear and other low carbon technologies”³⁹. Shale gas should be considered as a complement, and not an alternative, to low carbon technologies such as renewables and nuclear.

³⁹ Davey: UK shale gas development will not be at expense of climate change targets’, DECC Press Release, 9 September 2013, <https://www.gov.uk/government/news/davey-uk-shale-gas-development-will-not-be-at-expense-of-climate-change-targets>

As per our response to Q3, we believe it is a legitimate right (as per the Lisbon Treaty) for Member States to be able to determine their own generation mix. This should include being able at least to investigate the potential for unconventional sources of gas, as long as this is carried out within an environmentally robust framework.

Despite carrying out analytical work since the end of 2011, we note that the European Commission has yet to take a clear policy line with regard to the exploitation of unconventional sources but we understand that it plans to do so later this month. There is a risk that, without further clarity on any proposed EU legislative framework or corresponding guidelines, this could lead to investor uncertainty. We do not believe that unnecessary delays at the EU level should hinder progress within Member States.

In this respect, EDF Energy supports the steps that the UK Government has taken so far to develop shale gas in the UK and its ambition to ensure that any debate is supported by evidence-based information. We welcome the establishment of the Office of Unconventional Gas and Oil (OUGO) and in particular its role in working with regulators and industry to ensure that the regulatory regime is clear, robust and protects the local environment. It is imperative that the environmental risks from drilling and hydraulic fracturing continue to be effectively managed. This will require the UK Government to establish a strong regulatory regime with the aim of reducing risk to as low a level as reasonably practicable to assuage public concerns over the environmental and safety aspects of shale gas operations.

Q8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

In terms of the implementation of the EU Energy Efficiency Directive, EDF Energy fully supports EU and UK Government objectives to reduce demand significantly for energy by stimulating consumer demand for energy efficiency measures. This is an important part of the low carbon economy and an issue that both EDF Energy in the UK and EDF Group are working on in many countries. We believe that, rather than adopting a prescriptive approach, the interests of consumers should be paramount in creating flexible solutions to energy efficiency and engaging users to achieve meaningful results on behaviour change.

While we have supported the intent of the Directive throughout its development, uncertainty on certain elements of interpretation presents concerns for implementation and compliance risks. For example, the articles in the Directive on metering and billing (9-11), where there are questions remaining as to the scope of the requirements and whether these are covered by existing licence conditions and other regulation. This has surfaced relatively late in the day to provide answers to inform transposition, which must be in place by June 2014. We have been working with colleagues in DECC to help provide a constructive view of the processes currently adopted for billing and metering to measure against the directive's requirements.

The Government's position throughout the development of the Directive was that the UK was in a good position to meet the requirements with existing legislation. Indeed, the UK has considerable experience of energy efficiency obligations, upon which some of the key parts of the Directive are based.

We understand that the UK Government, led by the Energy Efficiency Deployment Office (EEDO), has undertaken a gap analysis of policy proposals to meet the Directive's requirements throughout the year. However, we would welcome greater transparency as to the policies and assumptions which have fed into this work and the calculations demonstrating that the UK will meet the intended targets.

EDF Energy does not support an EU energy efficiency target for 2030, and for the future development of EU energy efficiency policy, we would like to ensure that any proposals do not seek to cap or ration the energy use of end users (for both domestic and non-domestic consumers). In addition, we would not support mandatory sector specific targets for energy efficiency. This could have unintended consequences, particularly for business and economic growth. While using energy more efficiently and reducing demand are important to achieve climate change objectives, this should be carried out in a way that is consistent with the structure of the UK competitive market and existing policies to reduce carbon emissions.

Consumer policy

There has been significant discussion of consumer energy policy at the EU level, with European Commission working groups stemming from the need to define vulnerable consumers in the Third Package. While we support work to protect vulnerable consumers, it is important that UK policies are not misinterpreted to create compliance risk and an additional layer of European policy.

Q9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

EDF Energy believes that action on climate change is an area that could be more efficient if tackled at a supranational level. The accepted consensus is that international agreements can avoid the associated problems of issues such as carbon leakage or national competitive disadvantage. In acting as a single entity, the EU is able to maximise the advantage of economy of scale and exert greater political influence. The EU combined is one of the largest economies in the world and should be able to leverage this in discussions and negotiations. Therefore, as a general principle, a greater role for the EU in international agreements should be beneficial.

A common European approach in a number of aspects of energy policy could lead to benefits arising from integrating energy markets. Such an approach offers more scope for changing the energy system than is within any single Member State's individual capability. Events such as the Russia-Ukraine dispute in 2009 demonstrate that matters of security of supply are strong drivers for co-ordinated action. Within the EU, the general trend is that energy source imports are increasing, while reserves are concentrated in a relatively small number of countries. As this is occurring in a global context, the unconstrained increase in worldwide energy demand will intensify the pressure on supply chains. In this respect, co-operation becomes all the more important as it enables a more balanced dialogue with energy suppliers.

However, we recognise that the divergent views of Member States may make it difficult to reach a consensus on future policy frameworks. This creates a significant risk that a compromise to accommodate these differences in the future may lead to policy frameworks

that fail to serve the best interests of consumers. It is important to remember that the availability of natural and renewable energy resources, and the associated costs, varies significantly across the EU. We would therefore once again reiterate that it should be left to individual Member States to develop their own energy policy options to match the relative availability and acceptability of different technologies, and more importantly the associated costs. It is our view that it should not be automatically assumed that a common EU approach will deliver transformation at the lowest cost.

Q10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The Euratom Treaty is one of the founding treaties of the EU and should remain as the frame of reference for nuclear policy. It provides the rationale for nuclear power development within the EU, while allowing Member States to decide whether or not the technology should feature in their energy policies. It also provides the basic framework for legislation with respect to the protection of the public and the environment, and for safeguarding nuclear materials. We believe that the Treaty has proven to be robust and legally sound and does not need to be changed.

EDF Energy notes that the European Commission appears to have drawn back from pursuing those aspects of the Treaty that are seen to be more controversial, including the active promotion of nuclear power developments. The policy work within DG Energy on nuclear matters is increasingly limited to nuclear safety and security, alongside the decommissioning of facilities and the management of radioactive waste. In particular, the failure of the European Commission to produce an up-to-date Illustrative Nuclear Programme ("PINC") is disappointing.

We believe that there is a tendency for the European Commission to extend its competence into areas of nuclear regulation that are better dealt with at the Member State level, or through existing international conventions and organisations. This includes the regulation of safety and security (including emergency planning and preparedness), which is properly the competence of national regulatory agencies. This scope creep needs to be kept in check unless there are clear efficiency benefits through greater harmonisation across the EU.

EU and national legislative requirements in the nuclear field tend to follow from guidelines produced by the International Atomic Energy Agency (IAEA). While this is a sensible process, it should not lead to a delay in IAEA guidelines becoming adopted into national legislation. It is therefore important that the UK Government engages directly with IAEA, and does not rely solely on the EU to represent its interests.

The European Commission has specific responsibilities under Articles 37 and 41 of the Euratom Treaty to consider proposals for radioactive waste disposal and discharges, and to consider investment proposals in the context of the Treaty. The procedures for discharging these responsibilities should be efficient and should not unnecessarily delay or introduce uncertainty into the programme for nuclear projects.

FUTURE CHALLENGES AND OPPORTUNITIES

Q11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

No further comment.

Q12. What would be the costs and benefits of facing these at an international, EU, or national level?

No further comment.

RWE is pleased to provide the following input into Government's review of the balance of competences - ENERGY. This response is on behalf of our companies in the UK which include RWE Generation SE, which pools RWE's generation assets and engineering expertise across Europe, RWE Innogy, one of the UK's leading renewable energy developers and RWE npower, the UK energy retail business.

GENERAL

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

Harmonisation of electricity and gas market rules across Europe will continue to provide significant benefits for the UK through access to a larger market. The liberalisation of the market has resulted in the rest of Europe progressively moving to the same standards as the UK. This has led to both opportunities for UK firms in Europe and also helped to deliver better security of supply and lower prices for UK customers.

For example, as gas networks have been opened, development of the European gas market has resulted in lower consumer prices following gradual de-linking of contracts between gas and oil prices. Integration of markets has reduced the chance of interruptions or cold winters threatening supplies of electricity and gas to consumers. In addition, liberalisation of European markets has increased import capacity into the UK again benefiting consumers. EU legislation has been flexible enough to encourage new infrastructure investment. For example the BritNed interconnector and BBL pipelines were granted exemption from EU third party access rules allowing the UK to gain from connection to wider EU markets. Increasing flexibility of European markets will continue to deliver benefits for the UK.

Likewise we also consider it beneficial for energy policy related to emission reduction to be conducted at EU level. It is clear that national efforts to reduce emissions do not add value unless these efforts are reproduced in other EU Member States. For example, currently national policies on renewable and low carbon generation are damaging the ETS as the main EU policy instrument and weakening efforts to reduce GHG emissions. It would be preferable to have greater EU scrutiny of all low carbon and renewable policies, including support mechanisms.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Electricity and gas market legislation has mostly been proportionate to the issues being addressed. For example, unbundling of networks from generation and supply businesses was only enforced after three sets of Directives and DG COMP's sector inquiry demonstrated the ongoing issues created through vertical integration. On the other hand the Commission has been rather flexible on DSO unbundling, reflecting the regime in the UK.

In other areas, legislation has possibly gone too far. While energy efficiency can be the cheapest method of meeting climate change obligations, it needs to be evaluated consistently against other GHG reducing measures. While the Energy Efficiency Directive 2012/27/EU sets targets for energy efficiency, existing standards across Member States vary significantly. For example there have been strict regulations on the efficiency of German

housing stock for many years which have resulted in high levels of insulation. In contrast, in the UK the standard of housing is much lower despite recent efforts.

While there is a need for competence on energy efficiency at the European level, this should be limited to setting minimum energy performance standards i.e. product standards and product labelling, to ensure a consistent approach across the EU.

To date the public has found the concept of energy efficiency unattractive despite the recent rises in fuel prices. It may be that there is a role for the EU in providing education including the requirements for energy performance certificates.

One advantage of a European approach is that it avoids the temptation by Member State politicians to manipulate targets for short term political gains. However where legislation is in force, Member States should have the freedom to interpret it to suit individual circumstances.

The provisions of Article 14 of the EED introduce the requirement to carry out Cost Benefit Analysis (CBA) for CHP when considering the development of new generation capacity. The high level principles of the CBA are sound providing there is no gold plating during transposition. In practice the commercial opportunities for CHP would be considered. It is also already part of the requirements under the UK's Environmental Permitting Regulations.

Likewise the Renewables Directive 2009/28/EC (the RED) although including the targets that were agreed in 2007, did not need to contain other requirements on priority dispatch or particular guarantees with respect to network access.

Similarly the EU ETS is the most appropriate mechanism for reducing emissions of greenhouse gases across the energy sector and we are supportive of structural reforms to ensure it remains a central policy mechanism.

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

b. national, regional or international level instead of EU level?

The EU Emissions Trading Scheme must remain the central policy to meet emissions reduction targets. Clearly this needs to be applied at the European level and any overlap with other policies at both European and national level should be minimised.

Decarbonisation of the electricity sector will require a mix of technologies which may require different levels of support, particularly for emerging technologies, before they are competitive in the market. However, we would expect Europe to have more oversight of national support schemes for low carbon technologies and help to ensure that these schemes are an efficient means of achieving decarbonisation targets.

In addition there are a number of areas in R&D, particular in demonstration of new technologies where there would be significant benefits from co-ordinated action at an EU level.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The process for developing, approving and modifying the network codes could be made more streamlined and could usefully involve industry participants to a greater extent. For example, many of the network codes set out a framework for the development of more detailed "methodologies" by TSOs, for approval by regulators. This mechanism has not yet been tested and it may be that more could be achieved; more quickly through informal structures such as the Florence \Madrid Fora. The GB CUSC Panel process is another possible alternative framework that could be used for developing network code rules rather than these coming top-down from TSOs, some of which are pushing a particular agenda.

The network code process could also benefit from more strategic\political decision making at the start of the process. Effective integration of neighbouring markets requires a commitment to a largely harmonised market design in terms of trading arrangements and the functions and relative responsibilities of market participants and system operators. Although the commitment to the "Target Model" has helped in this respect, too much discretion has been left to individual national regulators and TSOs meaning that integration efforts are not likely to be effective in some cases; for example between the GB and all-Ireland electricity markets that have radically different starting points.

ACER has not, as yet, been given sufficient responsibility or resources to resolve such differences. The coordination of energy regulators needs to be made more effective in order that initiatives can be implemented in a more timely and effective manner. REMIT is an example where ACER has been relatively successful in that the arrangements have been put in place reasonably quickly. However initial implementation was rather 'rough and ready'.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

As outlined above we believe there have been significant benefits both for the energy sector and customers from the development of the internal energy market. The UK was instrumental in developing liberalised markets and now benefits from being part of a larger market which helps to deliver lower energy costs across Europe and lead to more transparency. The UK energy industry has helped this process significantly for example by developing market structures that have assisted integration. The initiatives to set up N2EX and to move to Gregorian calendar trading are examples of this.

We support continued integration particularly where this can help to deliver benefits to customers. We would be concerned to see a move away from liberalised markets towards greater regulation by the UK, or any other Member States.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Security of supply has been improved through access to a wider market. A liberalised approach to markets and the regulatory framework has seen development of a significant amount of infrastructure that facilitates security of supply such as gas pipelines, LNG terminals and significant new generation capacity. These have clearly delivered benefits to customers. As already noted, the internal market legislation was flexible enough to allow for new pipelines and interconnectors to be constructed under a bespoke regulatory regime.

However there are a number of areas where EU measures (and national implementation of these) have the potential to undermine security of supply and investment in energy infrastructure. For example, the use of feed in tariffs and priority dispatch to support renewable energy, in many EU markets far beyond technical infancy, have distorted prices signals (for example leading to negative prices) and discouraged rational investment decisions. Greater coherence between policy mechanisms should be an objective for moving forwards together with decisions being made on deployment of technologies and transmission investment that ensure the most cost effective use of resources.

The proposed EU Commission guidelines for state intervention in electricity markets should provide a useful contribution by ensuring that renewable support is consistent with operation of the electricity market and ensure that new renewable capacity is exposed to the market. Likewise, we also consider that guidelines on introduction of non-discriminating and technology neutral capacity mechanisms will help to strengthen the internal energy market. In particular consistency around the rules for mechanisms across Europe will help facilitate achievement of energy security goals in the most cost-effective way for customers. There may be a need to see even further co-ordination across Europe to address security of supply.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The UK has some of the best natural resources for the development of renewable energy in Europe. DECC's own analysis suggests that the UK can remain the global leader in renewable generation in the foreseeable future and attract billions of pounds of investment and the associated jobs. In the longer term there are also significant opportunities to develop marine and tidal technologies around the UK's coast subject to there being sufficient support and long term commitment.

The RED requires EU member states to produce an agreed proportion of energy consumption from renewable sources. This has provided long term signals which have stimulated investment in renewable generation and encouraged the development of supply chains. This has been particularly successful in the UK where the proportion of renewables in the generation mix has lagged behind other member states. In the long term it will be important that there is greater coherence between policy mechanisms in future. A fully functioning EU ETS which is consistent with the European Commission's 2050 Low Carbon Roadmap should remain as the central policy mechanism.

At present renewable support and associated mechanisms is the competence of individual member states but subject to State Aid approval. The nature of these schemes varies considerably and can lead to potential developers cherry picking support mechanisms as countries strive to meet individual national targets. The result is a sub-optimal allocation of resources and additional cost to consumers. This can be avoided if, over time, the EU

encourages closer cooperation and convergence between renewable support schemes. This will result in more economic renewable development and more efficient use of resources. If this approach is supported by measures that encourage trading of renewables, it will play to the UK's resource advantages while at the same time providing the most economic solution for the EU.

As we noted in our response to the Balance of Competence consultation environment and climate change, proposals to introduce a UK 2030 decarbonisation target and an emission performance standard for the power sector will undermine measures at the EU level and are therefore not necessary.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

RWE supports and encourages the sustainable cultivation, production and use of biomass for energy purposes. We have a Code of Conduct in place and ensure that this is observed both for biomass purchased for our own use and that purchased for third parties.

Unfortunately the RED missed an opportunity in that it contained sustainability criteria for biofuels and bioliquids but not solid biomass. This has resulted in the UK developing its own criteria in isolation. This has proved more difficult than expected as standards across the world vary substantially. It has been further compounded as the EC has now begun work on developing its own approach.

We support the introduction of standardised sustainability criteria across the EU. This will ensure that a pan European biomass market can develop with buyers able to be confident that sustainability will be guaranteed across all member states and ensure the efficient allocation of a scarce resource.

RWE expects that in the long run CCS will be required across a number of sectors, possibly including the electricity generation sector, to meet the ambitious greenhouse gas mitigation roles set in Europe for 2050. In order to understand some of the technical issues with CCS technology, RWE already has pilot scale capture plant in operation in the UK and the Germany.

To date there have been parallel funding routes both within the UK and at the European level to stimulate investment in CCS technology development. However neither has resulted in large scale development to date. This is due both to the current economic situation, and the failure on the part of the funders to recognise the nature and timing of the financial risks associated with the development of CCS projects.

Some of the political urgency that was apparent with regard to energy sector CCS a few years ago has diminished as coal-fired power plant across Europe has either converted to biomass, closed or operates at lower load factors and as the economic situation has bitten. This is likely to be a temporary hiatus however as if the EU is to reach its low carbon goals for the energy sector based on intermittent renewable generation, gas plant will potentially have to fit CCS equipment at some stage. This will require full chain (generation, transmission and storage) energy sector CCS such as that proposed for investigation by the White Rose coal project and the Peterhead gas project.

Stimulating private sector investment in the development and eventual implementation of CCS projects that will be necessary to deliver a sustainable lower carbon infrastructure will require further UK and EU financial support, as well as certainty and consistency in both future UK and EU environmental policy. Within these financial and policy frameworks, a fully functioning EU-ETS scheme would undoubtedly support future investments.

Across Europe we have seen the impact of Member States decisions on the energy mix result in consequential impacts on the European energy market. In particular decisions in Germany on the closure of nuclear plant and renewable electricity support, have led to significant impacts in the market in neighbouring countries. There is a need to ensure consistency of individual Member States support schemes and ensure that any support for renewables is delivered in the most efficient manner. This would require European oversight of national schemes and greater harmonisation of support mechanisms across Europe

The UK has introduced a number of policies that overlap, and in some cases conflict, with EU level measures. This includes the carbon price floor, carbon reduction targets, emission performance standards for new electricity generation and the potential use of a carbon intensity target for decarbonisation of the electricity sector. Having policies set at an EU will deliver the necessary reductions in the most cost-effective way. Introduction of further policies at the UK level will undermine this efficiency and lead to higher costs for customers.

Finally both the EU and UK are guilty of introducing duplicate and sometimes conflicting measures on energy efficiency and demand response. It would be much simpler for consumers to act in response to prices in the market rather than the plethora of schemes and initiatives that dilute or offset each other. The poor results of the Green Deal and the unpopularity of the ECO scheme should be taken as a lesson to greater simplicity in terms of policy making at both UK and European level.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

Energy is not, in fact, an area where we would expect to see the need for Europe to speak with 'one voice' in terms of commercial relationships with upstream energy producing companies or countries. Likewise we would consider that the role of national governments should be restricted to one of facilitation of normal commercial relations. Wider diversity which will benefit security of supply is more likely to be delivered by commercial discipline rather than Member States or the EU pursuing political agreements. It is much better for contractual arrangements to be the subject of normal commercial processes between companies with minimal government involvement at either the national or European level.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

We have no comments on this question.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

We are seeing increasing differentials in energy prices across the world and expect this to continue. The underlying assumptions, particularly around future energy prices, used by the Commission and UK in developing the roadmap for energy and climate change could be subject to significant change. This will result from changes in levels of demand, new sources of energy and technology development which will continue to drive global energy markets.

At the same time different countries will have different levels of ambition to meet climate change objectives. Alignment between Europe and the rest of the world will become increasingly important and it is therefore important that the UK is both aligned with Europe and is able to influence Europe's position. Currently divergence between the tools used by the UK in its decarbonisation policy and that of the EU is not helpful in this respect

12. What would be the costs and benefits of facing these at an international, EU, or national level?

We would expect to see benefits from decarbonisation targets being agreed at an international level and delivered through policies at an EU level. Inconsistency between EU and UK policies will result in higher costs for UK consumers and businesses resulting in impacts on the UK's competitiveness.

In the face of higher energy costs in Europe than elsewhere in the world greater integration of EU energy markets will help minimise the impacts.

CIVIL SOCIETY AND NGOS

The Climate Parliament

Background

The increasing dependency of the UK economy on oil and gas imports, which remain price volatile, finite in supply, and dependent on the stability of foreign governments, as well as the need to decarbonise in the face of the serious challenges posed by climate change, makes it ever more imperative that the UK accelerate the transition from hydrocarbons towards renewable sources of power such as wind and solar. This submission of evidence is written with the need to switch to a largely renewable energy generated power supply as a given.

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Summary

In order for the UK to make the switch from fossil fuels to renewables *and* ensure a stable, cost-effective power supply, the UK needs become part of an integrated European energy system. The UK -and indeed most other EU Member States -do not have the variety of renewables to go it alone and guarantee a stable supply of energy as a freestanding energy system, but together Europe does. We need to capture renewable energy where it is most abundant and share it across the EU. In order to do this we need investment in long-distance electricity transmission interconnectors between the UK and neighbouring countries as part of an integrated European grid or 'supergrid' across the EU.

An integrated European grid or supergrid will:

- **Secure our energy supply** -by allowing the UK to develop and export the UK's 'home grown' renewables as opposed to imported fossil fuels (without any fear of the lights going out due to variability in supply) and by allowing the UK to import clean electricity from other parts of Western Europe rather than more unstable parts of the world.
- **Reduce energy prices** -by allowing UK energy markets access to the cheapest electricity in Europe at any one time.
- **Create a export market for the UK's electricity** -allowing the UK to export its rich wind, wave and tidal to other parts of Europe.

We need EU action in this field. The challenge of switching to renewable energy, where the supply is subject to local and seasonal variability, is more manageable if faced at EU level, compared with the UK trying to 'go it alone'. Variability in renewable energy sources means that a consistent, stable supply of energy cannot be achieved in a cost-effective way by harnessing the UK's renewable resources alone.

Creating an export market for UK electricity is a massive potential benefit to the UK. Exploiting the wealth of off-shore wind that surrounds the British Isles and selling it to mainland Europe could create a considerable source of export revenue, attract foreign direct investment, create jobs and drive the UK economy forward. The UK has one of the highest offshore wind resources in the world with over 33% of the total European potential⁴⁰.

Interconnections between the national grids of the EU's Member States do not necessarily *require* EU action, but in order to work towards a pan-European supergrid on the scale needed in the most efficient and least cost way, EU oversight and forward planning is essential.

Some interconnectors already link the UK to mainland Europe (IFA, with France, which runs through the Channel Tunnel; BritNed with the Netherlands, East-West with Ireland and, the Moyle Interconnector between Scotland and Northern Ireland), and several more are planned for the near future, but these are largely piecemeal commercial projects. Without strong support from the UK government, working in partnership the EU to plan and manage grid integration, it is likely that UK-EU energy interconnection will remain inefficient and insufficient.

3a. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level? And 3b. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

As above, the UK's interests with regards to reducing its CO2 emissions, reducing energy bills and securing its energy supply can be met more easily and cheaply if working at EU level.

⁴⁰ http://www.irena.org/DocumentDownloads/Publications/GWEC_UK.pdf

Nationally, the UK does not have enough of a 'spread' or variety in renewable energy sources in order to be able to cost-effectively guarantee a stable supply of electricity for the country at all times. Our natural resources and geographical landmass is too small in order to meet this challenge at a national level. That does not mean of course that there are countries around the world, such as the USA or China, which could meet the challenge nationally due to their varied portfolio of renewables, but this is not the case for the UK.

The Climate Parliament fully supports action at regional (sub-EU) level, such as the North Seas Countries Offshore Grid Initiative⁴¹, or a similar initiatives in other parts of Europe such as the South East Europe Grid Initiative⁴². However even an area as large as the North Seas, where the primary resource is wind, will have moments when there is a huge surplus of power (e.g. during high winds) and moments when it will struggle to meet the surrounding populations' energy needs (e.g. during calm weather). Therefore sub-EU regional initiatives, although valuable, do not meet the challenge of providing a stable, reliable supply of renewable electricity to meet that region's demand.

As regards action at an international level *above* that of EU level, the Climate Parliament would make three points. First, regarding nearby non-EU countries such as Norway and Iceland, due to their geographical location they should of course be included in any initiative, and indeed so far Norway, which has enough hydropower potential to single-handedly fulfil the UK's electricity needs for a month⁴³, has been well integrated into initiatives such as the North Sea Countries Offshore Grid Initiative. Second, there is a strong argument for action at an international level that goes beyond the EU to utilise the immense solar resources in North Africa⁴⁴.

Third, however, going one step further, action at the *global* or UN level is not currently of relevance, due to the current technological limits to transmitting electricity further than 25003000km. This is shown by current developments in China and Brazil, which are currently installing long-distance HVDC cables that are up to 2,500 km long. Swedish cable manufacturer ABB has just built a 6,400 MW ultra-high voltage DC transmission line from Xiangjiaba to Shanghai that is almost 2,000 km long⁴⁵. A second 2,090 km and

⁴¹ <http://www.benelux.int/NSCOGI/>

⁴² <http://www.climateparl.net/cp/352>

⁴³ Rough calculation as follows: Norway has approx. 85 TWh of hydro capacity. If the approx. 75 GW of UK installed capacity was running at 100% for a month that would be 75 GW x 24 hours x 30 days = 54,000 GWh = 54TWh = <85 TWh.

⁴⁴ An example is the Desertec initiative <http://www.dii-eumena.com/>

⁴⁵ ABB, "Xiangjiaba - Shanghai ±800 kV UHVDC transmission project", available on the Internet at <http://www.abb.com/industries/ap/db0003db004333/148bff3c00705c5ac125774900517d9d.aspx> (last accessed on 17 April 2012)

7,200 MW line is being planned from Jinping to Sunan⁴⁶, A 2,500 km Rio-Madeira HVDC link is currently under construction in Brazil.⁴⁷ The required distances in the Europe, Middle East and North Africa region are comparable: Tunis to Edinburgh is 2,350 km; Tunis to Warsaw is 2,242km. These distances are easily reachable with HVDC long-distance transmission cables.

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The Climate Parliament believes that the completion of the internal energy market, for the reasons described above, would benefit the UK and that further and deeper integration is desirable.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Due in large part to the fact that the UK is an island, the UK's level of electricity interconnection with other EU Member States and nearby non-EU countries is below that of many other EU Member States⁴⁸. Therefore the UK will benefit disproportionately from EU measures to facilitate infrastructure development, and targets in this area such as the March 2002 European Council target of reaching cross-border interconnection capacity equal to 10% of every Member State's generating capacity.

For example, the following interconnection projects have been identified as Projects of Common Interest⁴⁹ and could potentially benefit from EU funding: a number of potential new links between the UK and France, the UK-Norway NorthConnect project, the NEMO project between the UK and Belgium and a number of UK-Ireland projects, among others.

By extension, the UK has the potential to therefore benefit disproportionately from the

⁴⁶ ABB, "Jinping - Sunan 7 200 MW UHVDC transmission", available on the Internet at <http://www.abb.com/industries/ap/db0003db004333/545527721af2bf14c12578690049fea4.aspx> (last accessed on 17 April 2012)

⁴⁷ ABB, "Rio Madeira", available on the Internet at <http://www.abb.com/industries/ap/db0003db004333/137155e51dd72f1ec125774b004608ca.aspx> (last accessed on 17 April 2012)

⁴⁸ <http://www.publications.parliament.uk/pa/ld201213/ldselect/ldcom/161/161/16109.htm>

⁴⁹ http://ec.europa.eu/energy/infrastructure/pci/doc/2013_pci_projects_country.pdf

€5.8 billion in the Connecting Europe Facility budget that will be devoted to electricity interconnections from 2014-2020

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

This question is not relevant to the Climate Parliament's area of expertise, but it is important to note that at present EU treaties do not give the EU any competence over a country's energy mix.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

12. What would be the costs and benefits of facing these at an international, EU, or national level?

If the UK and the EU are to have the best chance of facing future energy challenges, including rising market prices for fossil fuels, increased political pressure to transition to cut carbon emissions, and rising demand, the most cost-effective way would be to establish a EU-wide supergrid of renewable energy, with the UK's considerable reserves of North Sea wind power plugged in.

Several different bodies have published estimates regarding the costs of such a scheme. According to a House of Commons report, the Department for Energy and Climate Change estimated that connecting the UK's North Sea wind resources to the national grid would be in the region of £15 – 20 billion between now and 2020.⁵⁰ Friends of the Supergrid estimate that an EU-connected North Sea supergrid would cost around €28 billion in infrastructure costs, while the European Commission has estimated that a North Sea and Baltic Sea supergrid would cost around €75 billion between now and 2030. More broadly, the Desertec Industrial Initiative has estimated that a EU-wide supergrid, linking North Sea wind with other EUMENA resources such as Italian, Spanish and North African solar power, would cost €350 billion between now and 2050.⁵¹

⁵⁰ <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1040/104008.htm#a14>

⁵¹ <http://www.dii-eumena.com/fileadmin/Daten/Downloads/Getting%20Started/03%20-%20Full%20Report%20%20English%20-%20250%20pages/Desert%20Power%20Getting%20Started-Full%20Report%20English-Screen.pdf>

The European Climate Foundation's Roadmap 2050 report⁵² found that a high interconnection and zero-carbon pathway to 2050 would ultimately cost the same as a high-carbon pathway. However, these costs would be structured differently: a supergrid development pathway features high up-front infrastructure costs, leading to long-term savings thanks to the elimination of fuel costs in the long-term.

This reflects a key feature of all renewable energy investment. Renewables tend to be characterised by a period of high up-front costs in the short term, followed by very low running costs thanks to the infinite supply of free fuel (sunshine, wind etc) and low operations and maintenance costs compared to traditional fossil-fired energy. Indeed, the Roadmap 2050 report actually found that switching to interconnected sources of clean, green energy could potentially save £1,300 per household by 2050, while, in a recent interview with the Independent, the UK Climate Change Secretary Ed Davey quoted predictions that such a network could reduce UK energy prices by more than 10%¹⁴.

Further benefits are likely to accrue from an integrated grid. Potential cost savings from optimal resource sharing are calculated to amount to up to €426 billion in the 2020-2030 timeframe, of which €291 billion come from optimisation of the system⁵³. The benefits of electricity grid integration due to market coupling will be of the order of €2.5bn to €4bn per year, or about €5 to €8 per capita per year according to the latest European Commission study⁵⁴.

Finally, the decarbonisation of the economy will lead to the creation of new employment opportunities to address the employment gap. The reduction of employment in the fossil fuel supply chain is more than compensated by increased employment in the renewables and energy efficiency sectors, with the net result estimated to amount to more than 160,000 additional jobs⁵⁵. In addition, electricity market integration will have a general macroeconomic benefit of 0.57% GDP after 5 years⁵⁶. Energy efficiency measures and renewables create jobs and develop EU industries and small businesses.

⁵² http://www.roadmap2050.eu/attachments/files/Volume1_ExecutiveSummary.pdf
<http://www.independent.co.uk/news/uk/politics/exclusive-a-giant-european-network-of-electricity-interconnectors-is-solution-to-high-energy-prices-says-climate-change-minister-9033129.html>

⁵³ European Climate Foundation "[Power Perspectives 2030: on the road to a decarbonised power sector](#)", November 2011.

⁵⁴ Nordic countries integrated markets demonstrate estimated annual savings of approximately €221 million, from Booz & Company et al "[Benefits of an integrated European energy market: report prepared for Directorate-General Energy, European Commission](#)", September 2013.

⁵⁵ European Climate Foundation "[Roadmap 2050: a practical guide to a prosperous, low carbon Europe](#)", April 2010

⁵⁶ European Commission "[Commission Staff Working Document - Impact Assessment accompanying the legislative](#)

Question 1: To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

EU action has been beneficial in key areas in delivering a more sustainable energy system. Sustainable system is a necessity given the threat that climate change poses to long-term well-being and security of UK citizens (witness recent very expensive floods) and there is little prospect of an effective international agreement on climate change mitigation without EU playing a leading role. Thus the safety and security of UK citizens is intimately connected with making EU energy system sustainable. Thus this needs to remain an objective of energy policy, alongside narrower conventional interpretations of UK 'security'.

We take it as axiomatic that the key to sustainability and energy autonomy in the long term is the development of efficient energy service provision and renewable energy, especially renewable power. In particular:

- a) Setting standards for efficiency performance in appliances, vehicles and buildings that are cost-effective for the UK economy and the consumer, but would likely not have been undertaken without a regulatory incentive
- b) Through driving better use of renewable energy resources, in particular UK's considerable resource in wind power which is the envy of many others in EU, but which prior to EU intervention in the 2020 energy package showed almost no sign of being developed by a UK only policy.
- c) Driving cost reductions in these technologies by providing a wider market than any individual MS could provide, such that the EU (and in some cases UK) are world leaders in areas such as low-energy building design and construction, low carbon and efficient vehicles, renewable energy technology manufacture. In most cases this is because EU has provided a market and through which MS have been able to stimulate nationally strong companies. The fact that UK has only been able to deliver strong companies to some extent in buildings and vehicles is more down to failure of UK policy than any fault in EU. This lead developed by UK companies could be lost by a failure in EU leadership on this agenda now. As a recent article in European Voice put it, about the lowering of ambition in the 2030 energy package:
*"Europe's competitors for low-carbon markets such as China, South Korea, and Mexico cannot believe their luck, and our lack of foresight, at potentially throwing away the EU's hard won dominance in green technology and market share. Timidity by European leaders on climate ambition would effectively waste the billions of investment by taxpayers which has supported European low-carbon industrial leadership."*⁵⁷
- d) A significant failure in delivery of long-term policy has been the sustainability standards set at EU level for biofuels and biomass, which have been far too weak but

⁵⁷ <http://www.europeanvoice.com/article/2013/december/low-carbon-leakage/79110.aspx>

precluded MS setting ones that would genuinely deliver good outcomes. The consequence has been a flow of destructive bioenergy into the EU.

Question 5: What have been the benefits or disadvantages for the UK/ your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The power market has obviously provided some security of supply through interconnection. Further development of an integrated EU power market should provide further benefits, and we believe DECC and National Grid are both currently undertaking research that demonstrates the cost advantages of so doing. Greater levels of interconnection through an EU market should provide consumer benefits, and facilitate balancing with greater penetration of renewable power that can be expected to 2020 and beyond.

The UK has been a huge advocate of liberalising trade across borders and there is no rationale for considering power provision to be better served by a UK-only approach. In fact the reverse is true. Whilst trade in food, fossil fuels and other commodities can be subject to gaming and hoarding, power generally requires immediate sale for value to be obtained, meaning a greater level of interconnection. This competency would best sit at an EU level delivering more physical infrastructure and common market rules.

Question 7: What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The results of the EU 2020 package, in particular the renewables target, has been to push the pace of renewable development in UK at a rate much faster than would have been the case in their absence. The most recent month of December saw a record 10% of UK power demand being met by wind power. In the absence of those targets, the vast majority of that power would have been delivered by imported fossil fuel. It can be anticipated that the development of indigenous sources of energy are being greatly facilitated by binding EU targets, which across EU have had the effect of lowering costs of onshore wind and utility scale solar to below that of nuclear. IT is extremely unlikely if these benefits – and further ones to come – would have materialised from domestic policy alone.

On fossil fuel extraction it is not unreasonable to expect common standards for exploitation given the possible polluting impacts on important resources like air, groundwater, surface water as well as the climate change impacts.

Question 8: How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures – energy efficiency, renewable and low-carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

See previous answers. The EU impact has up to now been positive and emphasises the importance of further collective & progressive action with respect to targets in the 2030 climate and energy package. There needs to be a common target of 55% GHG emissions

cut, a binding renewables target of 45% and a binding energy efficiency target too. Anything less would be a weakening of commitment to long-term security of UK & EU citizens because of climate change. The appropriate level of competency for this, and for the development of the internal market, is the EU.

Question 10: To what extent does EU action under the Euratom Treaty (for example , in relation to nuclear safety) contribute to/disadvantage the development of nuclear power in the UK and EU?

The frame of question 10 is simply wrong – the question should not be whether the EU helps development, but what the appropriate regulatory scrutiny should be. Given the extent to which nuclear incidents have the potential to be wide-ranging and cross-border (in a comparatively small region like EU), and given the continued determination to limit liability of operators for nuclear accidents, it is entirely appropriate that safety standards should be scrutinized at EU level. In practice they are not to any great extent. But should be.

Jonathan Gaventa on behalf of E3G

<http://greenallianceblog.org.uk/2013/10/18/why-the-uk-shouldnt-go-it-alone-the-benefits-of-a-common-european-energy-and-climate-policy/>

Why the UK shouldn't go it alone: the benefits of a common European energy and climate policy

This post is by Jonathan Gaventa, programme leader focusing on European energy infrastructure at E3G.

There is no security in separatism, no innovation in isolationism, and nothing to be gained from walking away from our seat at the European table.

Connection to Europe will protect our energy security

Protecting UK energy security in a carbon-constrained world critically depends on our relationship with Europe.

It is a sad irony that at the same time that warnings of blackouts and squeezed capacity margins return to UK headlines, power companies on the other side of the English Channel are shutting down brand new power stations due to massive over capacity. At one point this summer, wholesale power prices fell to negative €200/MWh in France due to low demand and high renewables output, yet the UK carried on burning imported coal and gas as we had insufficient grid connections to take advantage of the free power. In place of current government plans to force bill payers to subsidise white elephant fossil fuel plants in the UK, it would be far cheaper and more efficient to tap into existing power capacity elsewhere in Europe.

Participation in a European energy market offers massive economic benefits to the UK. Integrating markets across the EU could save European consumers €40 billion a year, with even greater cost savings if we located new electricity generation on an optimal basis. Studies show that UK consumers stand to disproportionately benefit from a better connected power system as they can access cheaper power from neighbouring countries.

The UK will be building out increasing quantities of wind, solar and marine energy in coming years to reduce our dependence on fossil fuel imports and meet climate change commitments. In this context, our ability to trade power within the EU becomes critical to controlling costs and protecting security, as interconnection is among the cheapest options for managing variability. We will need to export power at times of surplus, and will benefit from access to imported power when needed. This can only work in the context of a well-functioning European market and an integrated European grid system.

Low carbon energy security also depends on using energy more efficiently. This requires smarter energy use by lighting, cars, dishwashers and other consumer products. The EU is critical to making this happen. European efficiency standards set a global benchmark, and have forced a step change in the energy use of products, vehicles and industrial processes. Setting such standards, however, can only be done in the context of European co-operation, as it requires an economic weight that no individual country possess on its own.

Co-ordinated innovation is needed on a continental scale

Technology innovation is critical both for the UK's economic future and for tackling climate change. Innovation doesn't happen in isolation or by chance. It requires markets, capital, knowledge and choices to be organised on a continental scale. Cost reductions in key energy technologies will not happen in laboratories alone, they rely on co-ordinated deployment on a sufficiently large scale to enable learning-by-doing. This is a core element of European energy and climate strategy.

UK researchers currently benefit directly from EU research funding in areas such as advanced grid technologies, carbon capture, and marine renewables, and this will help give the UK a competitive advantage in such areas in future.

More fundamentally, however, we are benefiting now from the major cost reductions and technology innovations in wind, solar, waste management, industrial processes and electrical efficiency that have only been possible through co-ordinated deployment on a European scale over the course of a number of years. Since 2009, onshore wind costs have reduced by 30 per cent and solar PV costs are down by over 50 per cent. By comparison, UK gas prices have risen by 54 per cent over the same period. Without European collaboration, we would see massive duplication of efforts, with greatly diminished returns.

We influence the rules and can create the policies within the EU

A British exit from the EU would mean giving up our ability to influence the rules of the market in our own interest, as well as losing our political weight in international negotiations.

Eurosceptic commentators often paint a bleak picture of the UK blindly following rules invented on the whims of distant Brussels bureaucrats.

The reality is that the UK has not been a victim of European energy policies; it has created them. British voices are ubiquitous in Brussels meetings and negotiations. The core basis of European energy law – the three energy liberalisation packages – directly copied the model of UK power sector liberalisation from the 1990s. The EU Emissions Trading Scheme, the central plank of EU climate policy, was based on an approach dreamed up by a UK think tank, was fought for by UK ministers, and directly replicated a similar scheme that operated in the UK. The EU 2020 climate and energy package – which sets renewable, greenhouse gas and efficiency targets for Europe - was initiated in a UK-run European summit at Hampton Court. Its key proponent was not a faceless Eurocrat but Tony Blair.

The uncertainty about the UK's position in Europe is already diminishing this influence. Through threatening to leave the EU, we are at risk of giving up opportunities to protect our security, benefit our consumers, build our future economy and catalyse global action on climate change. This is in no one's interest.

Jonathan is one of twenty experts Green Alliance interviewed as part of our review of European climate and energy policy. We will be publishing our review next week.

RSPB

About us

The RSPB is a wildlife conservation charity with over 1 million members. We are Partners in the international BirdLife network of leading bird and wildlife conservation NGOs around the world, including in every EU Member State. We work on EU nature policy development and implementation in the UK, and at the European levels in partnership with BirdLife Europe.

We have many years of experience in working with EU nature conservation and environmental protection legislation and policy across the UK. We gather data on the spatial distribution and abundance of birds and other species, and make the case for their conservation through protected areas. We campaign for effective legislation to protect special places, and for improved EU sectoral policies that support biodiversity conservation in the wider environment. We promote action to reduce climate risks to wildlife, including sensitive deployment of renewable energy and energy infrastructure. Through strategic planning, we seek to integrate economic, social and environmental outcomes, to deliver the best outcomes for people and nature.

The RSPB also manages over 150,000 ha of land in the UK as nature reserves. Where this land is designated we are regulated by the appropriate statutory nature conservation agency, including major projects for habitat restoration or the enjoyment of visitors.

Summary

The RSPB considers that a strong EU energy policy framework and internal market, with active UK participation, are essential for global climate change mitigation, and to ensure the UK's consumers, economy and natural environment benefit from the low carbon energy transition. Our answers to the consultation questions below cover three main areas: decarbonisation, the internal energy market, and environmental sustainability.

1. Decarbonisation of energy supply to prevent dangerous climate change

- Climate change is a global problem requiring global solutions and strong leadership. The UK and Europe must be at the forefront, demonstrating the benefits of a rapid transition to a low carbon energy system. Piecemeal action by a few member states like the UK or Germany to create a low carbon energy system will not be enough. We need a unified, EU-wide approach to achieve real momentum towards decarbonisation across the Union and around the world.
- The EU's Energy Roadmap objective to cut emissions by 80-95% by 2050 must be achieved to prevent dangerous climate change, and would be less achievable without the UK's participation and leadership.
- The energy transition requires massive international investment in new renewable electricity generation capacity and in electricity network development to accommodate it.
- The Renewable Energy Directive is a powerful and progressive piece of legislation in dealing with climate change. It has driven investments, job creation and technology advancement and continues to do so.
- European legislation under TEN-E will help overcome bottlenecks in energy infrastructure investment in the UK and Europe, with benefits for UK energy security, climate change mitigation efforts, electricity trading and promoting competition for the benefit of consumers.
- Eurobarometer results from 2011 say EU citizens rank climate change as the second most important threat facing the world today, after hunger and lack of water. The UK

public is supportive of an EU-wide action in the field of energy security and climate change⁵⁸.

- Being part of the EU enables the UK to speak with louder and stronger voice on the international stage on energy and climate change.

2. Internal energy market-related benefits of EU policies and membership

- The UK is an important part of the Union, in particular in the energy field. For example the UK has led in shaping the internal energy market. The UK should not turn its back on the market based solutions it has championed in climate and energy policy.
- With its vast renewable energy resources, the UK is well placed to become a net renewable electricity exporter into European markets.
- Interconnection and free trade in electricity across EU borders is one of the lowest cost ways to enable integration of high shares of variable renewable electricity, keeping down the cost of the energy transition.
- Developing and participating in the internal energy market promotes competition and keeps prices down for UK businesses and consumers.
- Harmonised EU rules ensure a level playing field in competition terms across the Single Market. It is in the UK's interest that the level playing field of the single market is maintained.
- Common legislation across the EU allows UK companies to compete on the same terms with those of other member states, subject to the same level of regulation. Consistency of implementation is crucial for business certainty. In particular the EU needs harmonised regulations for the deployment of technologies that are potentially harmful to environment, such as shale gas exploration and extraction.

3. A sustainable energy transition

- Decarbonisation is essential. This requires bold policies and major investments. Keeping prices down, maintaining public support and protecting nature are all vital facets of creating a sustainable energy transition.
- European legislation promotes vital environmental safeguards, to the benefit of UK and EU citizens. Preservation and improvement of environment are embedded in the energy article in the Maastricht Treaty and therefore have to be considered when legislating in the energy field.
- EU-wide targets, incentives and regulations are needed to ensure both (i) effective and efficient deployment of renewables and energy infrastructure across Europe; and (ii) that these investments themselves do not add to biodiversity decline through direct impacts on species and habitats.
- EU regulation is crucial in ensuring both energy and biodiversity targets are met, and therefore achieving a sustainable energy transition.

To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

Benefits to the UK

Climate change is one of the greatest threats facing the world, with 20% of EU residents identifying it as the greatest threat⁵⁹. A 2012 Institute for Public Policy Research (IPPR)

⁵⁸ http://ec.europa.eu/public_opinion/archives/flash_arch_en.htm

⁵⁹ http://ec.europa.eu/public_opinion/archives/ebs/ebs_372_en.pdf

report⁶⁰ provides evidence that global issues such as energy security and climate change are policy areas where the UK public is more inclined to support closer cooperation with Europe⁶¹. Unless we urgently cut emissions, climate change will be devastating for UK and global wildlife and nature.

Climate change mitigation increasingly shapes energy policy, and must be expected to continue to do so as its impacts become obvious and more severe. In order to avoid dangerous climate change the world has to abandon its fossil fuel dependence and turn to renewable energy sources to sustain our future.

We need strong renewables and infrastructure investment and must simultaneously protect our environment and biodiversity. Climate change mitigation will be more environmentally and publicly acceptable if all players are working towards the achievement of both goals. The EU, as a bloc of 28 member states, is much better equipped to tackle this than individual nations, as greenhouse gases and many species do not respect national boundaries. The EU therefore needs the UK to continue working together with the Union on reconciling energy and biodiversity imperatives.

One of the most significant changes in energy policy direction has undoubtedly been the Renewable Energy Directive 2009 (RED). The RED has driven a change in the UK to take advantage of Britain's unparalleled home-grown clean energy resources, with the opportunity to move our economy away from an over-reliance upon imported gas and coal (see Box 1).

It was the UK that initiated the process of developing the RED, at a UK-run European summit at Hampton Court in October 2005. Three issues stood then as priorities and made it essential for the EU Member States to work towards common strategy in energy field. They are the same today – (i) addressing security of supply, (ii) a single energy market and (iii) climate change are the main challenges which need strong, unified EU-wide action. None of them can be addressed effectively by the single, separate member state.

Box 1: Renewable Energy Directive 2009

The 2009 Renewable Energy Directive has been a game changer in the delivery of renewable energy across Europe. By establishing shared, legally binding targets the Directive has prompted policy development across the Union to stimulate investments, and has given industry the confidence to invest. For example in the electricity sector, renewably generated power is now over 20% of total consumption and continues to grow despite EU wide economic recession in recent years (see Figure 1 below). Thanks to the RED, the UK shifted its focus from imported gas and oil towards new, clean energy and signed up to an ambitious renewable target of 15%.

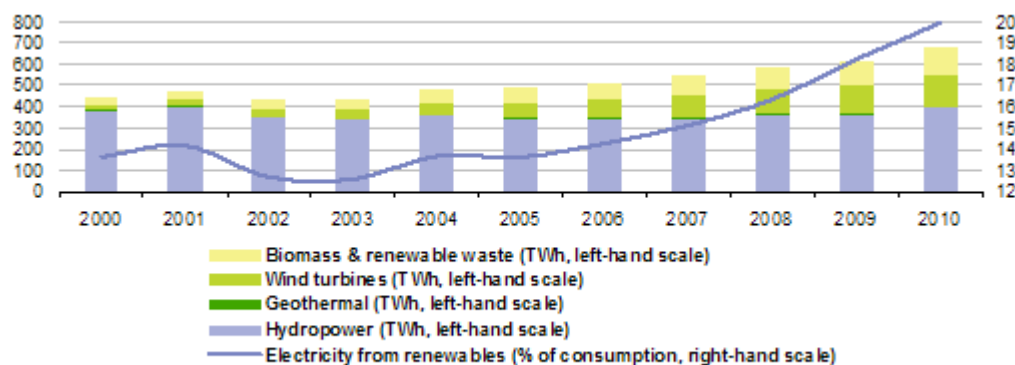
The RED clearly shows that what seemed almost impossible at the beginning had proved to be achievable with the change in energy policy direction. The Directive is part of the EU 2020 climate and energy package, which sets renewable, greenhouse gas and energy efficiency targets for Europe.

Figure 1 - Electricity generated from renewable energy sources, EU-27, 2000-2010

⁶⁰ 'Staying in: a reform plan for Britain and Europe'. IPPR, 2012.

<http://www.ippr.org/publication/55/9862/staying-in-a-reform-plan-for-britain-and-europe>

⁶¹ <http://blogs.lse.ac.uk/euoppblog/2012/11/19/eu-membership-uk-ippr-report/>,



Source: Eurostat (online data codes: nrg_105a and ts doc330)

There are several positive changes the RED brought about. It has been highly successful in spurring innovation and investment in renewable energy technologies. Technology innovation is critical both for the UK's economic future and for tackling climate change. Innovation, however, does not happen in isolation or by chance. It requires markets, capital, knowledge and choices to be organised on a continental scale. Cost reductions in key energy technologies will not happen in laboratories alone, they rely on co-ordinated deployment on a sufficiently large scale to enable learning-by-doing. This is a core element of European energy and climate strategy.

UK researchers currently benefit directly from EU research funding in areas such as advanced grid technologies, carbon capture, and marine renewables, and this will help give the UK a competitive advantage in such areas in future.

More fundamentally, however, we are benefiting now from the major cost reductions and technology innovations in wind, solar, waste management, industrial processes and electrical efficiency that have only been possible through co-ordinated deployment on a European scale over the course of a number of years.

Since 2009, onshore wind costs have reduced by 30 per cent and solar PV costs are down by over 50 per cent. By comparison, UK gas prices have risen by 54 per cent over the same period. Without European collaboration, we would see massive duplication of efforts, with greatly diminished returns.

By spurring innovation in renewable technologies, supporting research and exchange of information on European scale, the RED also helped significant job creation and provided security to investors. Currently, UK green energy sector directly employs over 18,000 people in wind, tidal and wave power and there are over 15,000 indirect green jobs⁶². The report from Renewable UK states that if the UK gets it right, there could be as many as 70,000 green jobs in wave, tidal and wind created by 2020⁶³. In addition, Renewable Energy Association estimates that if the overall renewables industry expands sufficiently to meet the UK's 2020 target, it will sustain 400,000 jobs across the supply chain⁶⁴.

The RED proved that mandatory targets for renewable energy development are achievable and can trigger the right development. Poor performance in achieving a voluntary target on energy efficiency shows that member states and investors need mandatory targets to kick start investment and innovation and provide business certainty.

⁶² <http://www.theguardian.com/environment/2013/sep/19/uk-green-energy-sector-jobs>,

⁶³ Ibid

⁶⁴ <http://www.renewableenergyfocus.com/view/33706/uk-off-track-for-2020-renewables-target/>,

UK consumers have also benefited from the EU energy policy and legislation. European standards for lightbulbs and cars, for example, have saved British consumers money and energy. Air pollution rules for cars and power stations have driven a move towards cleaning up the energy sector and making the air we breathe cleaner.

Finally, the UK also benefits from a variety of EU funding which can be used to support renewable energy deployment, research, climate change adaptation and mitigation.

Benefits for nature conservation

A coordinated, EU-wide approach to energy development brings many benefits to consumers and their environments, and for wildlife protection. Climate change has to be tackled on the global scale and therefore a common European strategy is essential. An EU-wide strategy and programme for renewables deployment is the most effective and environmentally sustainable way to achieve European decarbonisation of energy supplies.

The RSPB promotes sustainable renewables, and works to improve their public acceptability through messages to our members about their role in the fight against climate change as well as highlighting good practice in biodiversity-friendly renewables deployment. We are already using solar panels, wind turbines and bioenergy on our reserves.

Keeping costs down and ensuring strong environmental protection legislation are prerequisites for publicly acceptable renewables deployment. A competitive EU market, and a common EU strategy for energy and for environmental regulation, will help to achieve these goals and ensure a level playing field for investors across the Union.

The SEA and EIA Directives are the best tools to assess energy plans and projects from an environmental perspective and take their outcomes into consideration when approving them. Recent guidance on integration of climate change and biodiversity into SEA and EIA⁶⁵ procedures enables authorities and developers to give effective consideration to these crucial issues and to design mitigation measures. Good SEA and EIA processes should help ensure potential conflicts with environmental protection objectives are avoided altogether.

The Birds and Habitats Directives represent “an enlightened approach to dealing with environmental constraints, and one that is at the heart of sustainable development.”⁶⁶ If the Directives are applied in robust, systematic and transparent manner, they can ensure decisions whether to damage some of the Europe most important wildlife areas are taken in the genuine interest of the society as a whole. The success of wind energy development in Scotland clearly shows the benefits that EU policies have had for the UK both in promoting clean energy and in ensuring it is developed sensitively and with public support (Box 2).

Box 2: Wind energy in Scotland and the benefits of EU legislation for the sector

Renewable energy now generates the equivalent of 40 per cent of Scotland's electricity demand. UK efforts to comply with the EU Renewable Energy Directive and the specific targets set for the UK, with a high share derived from Scotland, have underpinned a series of supportive policy changes at both UK and Scottish levels and provided concrete assurance for investors.

As well as incentivising development through the RED, the processes established in the EIA

⁶⁵ <http://ec.europa.eu/environment/eia>

⁶⁶ *Sustainable development committee*, 2007, p.143

Directive, Birds and Habitats Directives have played a key role in realising Scotland's renewable energy potential by ensuring the right development in the right place. For example, the decision by Scottish Ministers in 2008 to refuse planning consent for Lewis Wind Farm, has been crucial in steering developers away from sensitive areas and was reached by applying the step by step procedures in the Conservation (Natural Habitats, &c.) Regulations 1994, which transposes the Habitats Directive into domestic law. This proposal was for a large wind farm largely sited on the Lewis Peatlands Special Protection Area (SPA), designated under the Wild Birds Directive and which must be protected under the Habitats Directive.

Ministers concluded that the development would have a significant adverse impact on the SPA and would adversely affect the integrity of the site. Ministers had to consider 'alternative options' to the proposal on a Scotland wide basis, and found that the development could take place in many other locations in Scotland without harm to a protected European site. These conclusions meant the development could not legally be approved without breaching European law and risking infraction proceedings.

This decision has been significant in facilitating the successful development of wind energy in Scotland in harmony with its important wildlife. It confirmed that designated areas are very unlikely to be appropriate for large wind energy developments and provided a steer to developers, who have since largely avoided advancing proposals within designated sites. It is worth emphasising that the public acceptability of the industry would likely be significantly lower if development had not largely avoided sensitive areas for wildlife.

Despite the success story so far, in order to meet the 2020 target for electricity production from renewable sources in Scotland, an additional 1.1 GW of renewable capacity will need to be installed annually up to 2020, much more than has been achieved historically. This needs to be achieved within environmental constraints, which is likely to become more challenging once developers look to move on beyond lower impact and lower cost sites, and into other areas including offshore wind. The tests created to afford protection for the environment under EU law are likely to become increasingly important for the sustainability of renewables development, and will be tested further in the coming years.

Disadvantages to the UK

As with any other area of EU policy competence, the variety of opinions and positions from Member States can lead to a very slow process, with attempts to block or water down good proposals (including the UK in case of blocking binding energy efficiency targets and watering down the Industrial Emissions Directive)⁶⁷. The Emissions Trading Scheme is, in principle, an ideal market based mechanism to promote cost efficient decarbonisation. However flaws in its design have enabled vested interests to undermine its functioning, to the disadvantage of the UK and all who aim to tackle climate risks (Box 3).

Box 3. The EU Emissions Trading Scheme (EU ETS)

The EU ETS was a radical piece of environmental legislation when introduced in 2005. It pioneered the concept of a cap and trade scheme for reducing carbon emissions and was not only the first but also by far the largest scheme in the World, and it still is, covering all large combustion plant yielding about 45% of all EU emissions. It should be the main plank in EU climate change policy.

⁶⁷ <http://www.greenalliance.org.uk/uploadedFiles/Publications/reports/What%20has%20EU%20climate%20and%20energy%20policy%20done%20for%20the%20UK.pdf>, p. 29

However, the EU ETS contained a number of flaws which detracted from the essentially very simple concept of a cap and trade scheme. Firstly, it allowed the use a potentially infinite number of uncapped carbon credits from the Kyoto Protocol's Clean Development Mechanism (CDM) generated by emission reduction projects in developing countries. This broke the first rule of any capped scheme, which is only to allow trading between capped participants – otherwise there are too many credits in the system, the cap inflates, and so the carbon price falls. Indeed, because projects in developing countries are cheaper, CDM credits are generally cheaper anyway.

The second major flaw was that allowances were initially issued to firms free of charge, rather than their having to purchase only those emission allowances that they think they might require. When coupled with special pleading by many companies and a tendency by governments to overestimate the number of allowances required, this led to too many allowances being issued and, again, a consequent decrease in the carbon price. This fault was realised and is gradually being fixed with an increasing number of allowances now being auctioned. Around 48% of allowances will be auctioned in the period 2013-20 but total auctioning is really required. A problem remains special pleading by some sectors which claim that having to pay for allowances would ruin their international competitiveness. This is generally nonsense although there are a few exceptions.

These factors, coupled with some others and especially the fact that the economic recession has reduced emissions along with industrial output, has led to a huge excess of allowances (2 billion including CDM credits) in the third phase of the EU ETS (2013-20). The carbon price has fallen to a few Euros, which is far too low to pay for meaningful change. This has been a major blow to many Member states, including the UK which was relying heavily on the EU ETS to deliver emission reductions.

The RSPB therefore supports the UK and the European Commission in seeking major structural reform of the EU ETS. The recent so-called “back-loading” of the third phase will achieve little or nothing over the entire period from 2013 to 2020. As a matter of urgency the EU should:

- Increase the EU's greenhouse gas emissions reduction target for 2020 from 20% to 30% below 1990 levels, at the same time revising the 1.74% annual reduction in the number of allowances to make it steeper;
- Retire a large number of phase three allowances permanently;
- Limit access to international credits;
- Introduce discretionary price management mechanisms such as a price management reserve.

There is also an implementation deficit at the Member State level in many areas of EU competence, for example in internal energy market reforms and in implementing nature protection legislation which is essential for ensuring deployment in harmony with nature.

There are two significant flaws within the EU's 2020 climate and energy package. The first is a lack of a binding target for energy efficiency. As a result, the EU is off track to meet its stated goals. This should be remedied in the next package, with a binding target to deliver a substantial reduction in primary energy demand by 2030. We welcome the EU Council's recent conclusion that there should be a boost to the financing of energy and resource efficiency alongside energy infrastructure and renewables¹⁰.

The second flaw in the package is the 10% sub-target for renewable energy in transport in the Renewable Energy Directive. This has led to massive expansion of the biofuels industry which, in the absence of robust sustainability standards in the legislation, has raised serious climate, food security and biodiversity concerns.

Environmental impacts from biofuels production can include biodiversity loss, land-use related greenhouse gas emissions, and impacts on water, soil and air quality⁶⁸. Social impacts can include land rights conflicts, land-grabbing, and degradation of the livelihoods of local communities and indigenous peoples. Competition for land is also leading to high food price volatility, undermining food security globally⁶⁹. This has led to one independent assessment to conclude that European biofuel targets are unethical, violate human rights and damage the environment⁷⁰. The OECD, World Bank, IMF, FAO have jointly called for “G20 governments [to] remove provisions of current national policies that subsidise (or mandate) biofuels production or consumption”⁷¹

In the light of these impacts, it is clear that an unconstrained global biofuels market has the potential to be highly damaging. The European Union therefore needs to reverse its current policy and act to limit unsustainable biofuels production by scrapping the 10% target and putting in place robust binding environmental and social safeguards that are harmonised across all countries. There is a clear role for the EU here in taking a harmonised approach: it is clear from the early years of the industry that Member States taking an ad-hoc approach to safeguards development helps neither the environment nor the industry. At the same time, Member States should be encouraged to focus greater efforts to reduce emissions from the transport sector through, for example, increased investment in vehicle efficiency and low carbon modes of transport.

A robust and harmonised approach to sustainability is also required for the biomass heat and power sector. Currently, the European Commission has only issued guidance to Member States resulting in disparate and inadequate separate sustainability schemes. It is essential that the biomass power industry does not acquire the same tarnished reputation as the biofuels industry arising from dramatic negative impacts on people and the environment. An EU-wide approach to robust sustainability standards could help mitigate this and support the development of a genuinely sustainable industry.

Do you think that the EU has introduced legislation that is proportionate/ disproportionate to the issue it aims to address?

The UK’s 2020 renewable energy target is proportionate although challenging. The UK is the only Member State that has failed to meet both its 2011 and 2012 indicative targets⁷² and there are serious concerns it will not reach 15% by 2020. This should encourage the current and future Government to increase its renewable energy support, and show clear political and financial commitment.

Europe’s ambition to reduce greenhouse gas emissions by 80-95% by 2050 is proportionate given the imperative to avoid dangerous climate change. The UK needs to maintain a strong voice in Europe pushing for binding and ambitious GHG targets to 2030 and 2050. The UK has showed its commitment by joining the progressive Green Growth group and proposing the most ambitious EU-wide GHG reduction target for 2030. However, this commitment will

⁶⁸ Howarth, R. W., Bringezub, S., Bekundac, M., De Fraiture, C. Maenee, L., and Salag, O. (2008) Rapid Assessment on Biofuels and the Environment: Overview and Key Findings

⁶⁹ FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTf (2011) Price Volatility in Food and Agricultural Markets: Policy Responses (p27)

⁷⁰ Nuffield Council on Bioethics (2011) Biofuels: ethical issues

⁷¹ FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTf (2011) Price Volatility in Food and Agricultural Markets: Policy Responses (p27)

⁷² <http://www.renewableenergyfocus.com/view/33706/uk-off-track-for-2020-renewables-target/>,

be significantly diminished if the UK will not agree to energy efficiency and renewable energy targets.

The failure of voluntary energy efficiency targets shows the need for ambitious, compulsory targets. The first step is to implement the Energy Efficiency Directive (EED). The UK's proposition of counting for early actions in the EED was rejected by a number of member states as "an absurd and unjustified accounting trick."⁷³ The UK's approach seems to have been predicated on the need to be compliant with the letter of the Directive, not the spirit of the Directive, i.e. avoiding infraction proceedings without actually delivering any genuine improvements in energy efficiency. This approach would mean that the UK would pay almost all the costs of implementation, without reaping any of the benefits that greater efficiency brings.

Having failed to make energy efficiency a cornerstone of its 2020 policy, the EU has to do so now and bring an ambitious proposal for 2030. Efficiency is the most cost effective way to cut emissions and as MEP Fiona Hall (Liberal Democrat) said "boosting energy efficiency could deliver energy savings of up to 40% by 2030."⁷⁴

Currently, the EU ETS is not proportionate in the sense that it is currently not working, for the reasons given earlier. Were it running according to plan and delivering the anticipated 1.74% emission reductions per year then it would be proportionate. It is thus important that structural reform of the EU ETS is conducted as a matter of urgency.

In what areas might the UK's interests be served better if action were to be taken at:
a. EU level instead of national, regional or international level?
b. national, regional or international level instead of EU level?

For tackling climate change, concerted international action is essential. A decrease in global emissions is required if the problem is to be solved. By the nature of international politics, the larger countries and blocs dominate and so, from a UK standpoint, being part of one of the largest, economically powerful blocs (the EU) allows us to influence matters far more than we could alone, on a par with the USA and China. The EU has long been the most ambitious developed countries bloc in the international climate negotiations and, both historically and currently, the UK has played a leading role for the EU (usually with Germany).

Taking a lead, however, depends in large part on having ambitious and credible climate and energy policies at home, in the EU as a whole rather than in any individual country. It is thus vital to have EU policies and measures in place on major areas on energy policy. The UK still plays a vital role in ensuring that EU 2030 climate and energy targets are progressive and adequate to achieve the UK's and Europe's 2050 goals in the future.

How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Impact Assessment of the EU's own policies and initiatives is an important tool for assessing the potential economic, social and environmental consequences these policies might have.

⁷³ <http://www.euractiv.com/energy-efficiency/battle-narratives-erupts-2020-en-news-528102>,

⁷⁴ <http://www.cospp.com/articles/2013/11/meps-supportive-of-2030-eu-energy-efficiency-target.html>,

However the RSPB and our European umbrella organisation Birdlife-Europe do not consider that the current Impact Assessment process, as set out in the Commission's guidelines⁷⁵, provides adequately strong requirements and incentives for European policy makers to consider the environmental and biodiversity impacts. The IA requirements are not legally binding, and therefore decisions supported by an IA cannot be overturned in the courts if environmental consequences have been addressed inadequately.

Although biodiversity impacts are covered in IAs, they are not always accorded adequate priority and too little effort is made to consider the real impacts on nature of the projects that make up European-level plans. For example, the IA of the TEN-E guidelines does not consider such impacts, despite the known risk to birds caused by power line development. The IA system enables impacts on nature to be traded off against economic and social gains, resulting in policies that fail to recognise the principles of 'no net loss' of biodiversity and wider environmental limits.

Because of these weaknesses, impact assessment's potential to help biodiversity protection is not always realised. Some unnecessarily environmentally damaging policies are adopted as a result, for example the 10 % biofuel target as part of the Renewable Energy Directive. One academic paper concludes the target was from the beginning built on "policy-based evidence" as opposed to "evidence-based policy"⁷⁶. Rigorous environmental assessments are needed to avoid such policy failures.

Many of the IA process' weaknesses in practice are a result of Directorates General (DGs) carrying them out 'in-house'. A much more rigorous independent assessment process is needed. We recommend⁷⁷ several steps to be taken to improve the IA process:

1. Define policy objectives in terms of EU-level sustainable development priorities.
2. Approach IA as an opportunity to integrate environmental (including biodiversity) considerations more fully into policy development and facilitate cross-DG working – start early and ensure ongoing dialogue between policy-makers, the IA authors and stakeholders.
3. Follow IA guidelines fully, and go beyond the minimum requirements where this will help avoid major significant impacts.
4. Consult biodiversity and environmental NGOs, including BirdLife Europe, and authorities in defining policy options and selecting assessment methodologies.
5. Proactively seek options that have positive attributes in social, economic and environmental terms simultaneously.
6. Take biodiversity and other environmental impacts seriously in refining and selecting the preferred option. Make real efforts to find necessary data and quantify environmental and biodiversity impacts wherever possible.

With regards to alternatives to legislation, there are market mechanisms and voluntary agreements used particularly in the energy field. However, given the failure of ETS and voluntary energy efficiency targets, their effectiveness is questionable. It is of paramount importance for EU energy legislation to stay up-to-date and fit for achieving the desired outcomes. Legislation should be reviewed if the desired aim is not being achieved.

⁷⁵ http://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/iaq_2009_en.pdf

⁷⁶ Sharman, A. and Holmes, J. (2010), Evidence-based policy or policy-based evidence gathering? Biofuels, the EU and the 10% target. *Env. Pol. Gov.*, **20**:309–321. doi:10.1002/eet.543

⁷⁷ <http://www.birdlife.org/europe/pdfs/BHDTF%202010%20position%20Environmental%20Assessment%20in%20the%20EU.pdf>

What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Connection to Europe's energy network can provide us with the access to variety of different energy sources. This is of utmost importance in the carbon-constrained world. In the summer of 2013 in France, low demand and high renewable electricity output led to significant drop in price and recently built power stations were taken off line. Meanwhile in the UK we kept burning imported coal and gas, as there is insufficient grid connection to allow us to benefit from cheap electricity imports from our neighbours. Infrastructure development on the European scale is therefore of paramount importance.

The UK will be building increasing quantities of wind, solar and marine energy in coming years to reduce dependence on fossil fuel imports and meet its climate change commitments. In this context, the UK's ability to trade electricity within the EU becomes critical to controlling costs and protecting security, as interconnection is among the cheapest options for managing variability. The UK grid will need to export power at times of surplus, and will benefit from access to imported power when needed. This can only work in the context of a well-functioning European market and an integrated European grid system.

In this context, the adoption of the TEN-E Regulation is a significant step towards the achievement of this goal. In addition, almost 6 billion Euros in the Connecting Europe Facility funds will help some developers to meet the cost of their projects. At least 12 projects on the TEN-E projects of common interest (PCI) list are expected to directly benefit the UK, including a major smart grid initiative between Ireland, the UK, and Northern Ireland, dubbed the 'North Atlantic Green Zone' project. This is one of only two smart grid projects on the whole list, which makes it even more significant.

Other PCI projects include a new 1.4GW interconnection between Norway and the UK, two offshore hubs in Belgium that would enable interconnections with the UK and France, and further cables to transmit electricity from France and Ireland to the UK.

Although the list does not contain many direct supergrid schemes, some PCIs can provide the building blocks of a future European supergrid, including those between Norway and the UK, Norway and Germany, and across the Pyrenees. The PCI list will be renewed every two years and it is in the UK's interest to propose good projects connecting the UK's and Europe's renewable energy sources.

What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

EU measures have undoubtedly promoted development and exploitation of the UK's wind and solar energy resources, both directly via UK policies and incentives, and indirectly through price reductions resulting from uptake across Europe. However given the second part of this question, we take 'indigenous energy sources' here to refer to coal, oil and gas. It is worth noting that the UK is a net importer of all of these fossil fuels, and that wind, solar, wave and tidal energy resources might better qualify for the label of indigenous resource.

Support for the exploitation of fossil energy sources in the UK is primarily through the availability of tax breaks. The Large Combustion Plant Directive has led to a reduction in

operating times, and the early closure, of the most polluting power stations in the UK where it didn't make financial sense to upgrade them to meet the requirements of this directive. This has primarily affected coal fired power plants. This, together with the new Emissions Performance Standard being introduced through the new UK Energy Bill, means we are unlikely to see new coal fired power plants built in the UK unless fitted with carbon capture and storage technology, which is currently unproven at a commercial scale. This reduction in demand for coal in the UK could lead to a consequent reduction in UK extraction. This will depend on global coal prices and whether it is commercially viable to extract it.

EU measures have contributed to the environmental framework within which proposals for the exploitation of indigenous energy sources have been assessed in the UK. For example, the SEA Directive (2001/42) applies to plans and programmes at a strategic level, and has been used to inform licensing rounds for both offshore energy and for onshore hydrocarbons. However, a lack of available data about the marine environment has meant that the SEA for offshore energy has not been as effective in steering development away from the most sensitive areas as we would have expected it to be.

The SEA for a forthcoming round of onshore hydrocarbon licensing has also not been used to its full extent to assess the significance of ecological impacts, due to the scale of the area intended to be offered for license. The Department of Energy and Climate Change concluded that it was not possible to assess the potential significance of the ecological impacts until specific sites had been identified by developers, hence deferring environmental assessment to the project level.

It remains to be seen whether EIA and project-level 'appropriate assessment' (under the Habitats Directive) will be adequate to ensure shale has development progresses without unacceptable and unnecessary impacts on species and habitats. In any case, the scope for this to be the case is reduced where strategic level assessments have not been robustly applied. EU policy on SEA should be implemented in the spirit intended, i.e. with a view to ensuring a high level of protection for the environment.

Shale gas

The RSPB is concerned that the current regulatory framework in the UK is not stringent enough to mitigate the potential ecological impacts from unconventional gas extraction, in particular the use of hydraulic fracturing for shale gas. A European Commission survey showed that nearly two-fifths of Europeans did not want shale gas developed at all in Europe, while a further 29 per cent said it should only be developed if the proper health and environmental safeguards were put in place.⁷⁸

We supported the European Parliament proposal to amend the EIA Directive so that EIA would be mandatory for all exploration and exploitation of non-conventional hydrocarbons. We also supported the development of an EU unconventional fuels framework directive, because it would provide ensure an appropriate and consistent regulatory framework was in place across the EU to deal with the potential environmental impacts of unconventional fuel exploitation, and that there is a level playing field across member states. The alternative, which is non-binding guidance, will fulfill neither of these objectives.

We would have welcome legislation that establishes rules for dealing with the risks of:

- Venting and flaring of greenhouse gases
- Seismic disturbances

⁷⁸ <http://www.businessgreen.com/bg/analysis/2302161/eu-prepping-safer-shale-gas-regulations>

- Groundwater contamination and management of the water supply and reserves
- Impacts on air quality, and noise emissions
- Associated infrastructural problems caused by heavy industrial activity

However, we believe that the EU should only establish the baseline approach to environmental regulation, and common rules should not be a barrier to individual Member States adopting higher standards if their particular national circumstances require this.

How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU has tried to promote energy efficiency, but the UK has so far not supported EU legislation or targets. As a result, EU targets are non-binding and likely to remain unattainable. The RSPB supports the introduction of ambitious and binding efficiency targets as part of the new EU climate and energy framework to 2030.

While the Renewable Energy Directive as a whole has been positive in driving forward renewable energy generation, the 10% sub-target for renewable energy in transport has driven the development of an unsustainable biofuels industry. It is not currently possible to meet this target sustainably, not least because sustainability criteria contained within the legislation are weak. Recent proposals to limit the worst types of biofuels (from food-based crops) have failed to reach political agreement. In addition, there are currently no EU-wide sustainability criteria for energy from biomass. These are urgently needed and must be robust enough to ensure that they deliver significant climate benefits and safeguard against social and environmental harm. Policies for biofuels and biomass should be aligned with other EU policies especially those on environmental protection, EU biodiversity targets for 2020, Natura 2000, Water Framework Directive.

What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

What would be the costs and benefits of facing these at an international, EU, or national level?

Actions and political commitments to decarbonise energy systems and address climate change continue to fall far short of what is needed. The most recent UNEP "gap report"⁷⁹ shows that countries' unconditional pledges to reduce GHG emissions, if fully implemented, will deliver no more than one third of what is needed by 2020 to prevent a dangerous 2° C rise in global mean temperature above pre-industrial levels. A recent World Bank report⁸⁰ predicts that even if these pledges are fulfilled there is a 20% likelihood that the globe will be on track for more than a 4oC temperature rise by 2100. This would be a more than fivefold increase compared to the rise in global temperature the world is experiencing today, with extremely severe risks for vital human support systems.

⁷⁹ <http://www.unep.org/publications/ebooks/emissionsgapreport/>

⁸⁰ <http://www.worldbank.org/en/news/feature/2012/11/18/Climate-change-report-warns-dramatically-warmer-world-this-century>

RSPB and our partners in BirdLife Europe agree with the European Commission's position articulated in the introduction to its Communication on The 2015 International Climate Change Agreement⁸¹ that, "only by acting collectively, and with greater urgency and ambition, can we avoid the worst consequences of a rapidly warming planet..."

It is clear that to really tackle climate change, some powerful policy mechanisms and major energy investments are unavoidable. The energy challenge in coming decades will increasingly revolve around two issues: achieving ever-deeper cuts in emissions and building or maintaining public support for the energy transition. Limiting direct impacts on nature and the environment in the development of new generation and transmission capacity is a crucial element in creating legitimacy for the robust policy measures and massive investments needed. Attempting to save money by weakening safeguards protecting the UK's natural environment would be short sighted, and would damage public support.

Simultaneously addressing the needs for (i) robust energy policy measures to cut emissions, (ii) massive investment in infrastructure, (ii) effective environmental and nature protection and (iv) maintaining public support will be a huge challenge. The UK needs the level playing field and market access created by EU membership to be able to achieve a successful energy transition at home.

⁸¹ http://ec.europa.eu/clima/policies/international/negotiations/future/docs/com_2013_167_en.pdf

Introduction

1. WWF-UK welcomes the opportunity to respond to this consultation. WWF-UK is strongly of the view that on balance, the European Union's competences with respect to energy and climate change matters improves the UK's ability to meet its current and future energy needs in a way that is more sustainable and cost-effective than what would otherwise be the case if the UK was acting alone.
2. Despite various setbacks and a current lack of long-term ambition for emission reductions beyond 2020, EU legislation has delivered significant achievements such as establishing the world's first emissions trading scheme and accelerating investments and cost reductions in several renewable energy technologies such as onshore wind and solar PV. The EU's share of competences on energy and climate change matters also allows the UK to punch above its weight in international climate change negotiations and going forward, could help significantly lower the costs of moving towards a secure and low-carbon energy system.
3. We have set out below our responses to the questions that are most relevant to the areas of policy in which we operate. These are mainly connected to the UK's transition towards a cost-effective and secure low-carbon power sector.

Response to selected questions

Question 1: To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

4. Despite some setbacks and some flaws in the design of some policies, it is our view that EU membership has, on balance, positively contributed to the development of three important factors:

- (i) the development of effective energy efficiency measures and standards;
- (ii) the accelerated deployment and cost reductions of renewable energy technologies in the EU; and
- (iii) the development of the world's first emissions trading scheme, which while flawed, has provided the EU with important lessons that can help it improve the effectiveness of the scheme in the future.

5. In addition to these three areas, which are addressed below in more detail, one should also note that the EU's competence on climate and energy matters has also allowed these issues to be taken into account in other policy areas where the EU has some degree of competence such as transport, marine policy, farming etc. This is important in order to ensure a joined-up approach to policy making on climate change and energy.

Energy Efficiency & standards

6. The EU is particularly well adapted to setting common binding product standards and labelling including those for vehicles, domestic appliances, building components and other

products which have a bearing on energy efficiency of the economy, on greenhouse gas emissions, on ensuring common standards across the Union and in easing the imports and exports of goods. Several measures are available to do this, including the Eco-design Directive and the Energy Performance of Buildings Directive (recast) that sets a trajectory for zero-energy buildings. The Energy Efficiency Directive also set out a flexible framework for member states to deliver 20% energy savings by 2020 thereby highlighting the importance of energy efficiency as the cornerstone of an effective energy system.

7. There is little commercial or practical sense in developing measures of this kind at a purely national level. Ideally, while the EU could certainly improve in the speed with which it responds to technological change and introduces new standards, EU standards should be a platform and a model for the introduction of global standards.

Renewable Energy Policy: Accelerated deployment and cost reductions

8. Renewable energy policy has exerted a major positive impact on the UK and most other EU Member States, as well as globally with emerging economies using European technology. It has led to a step change in the levels of investment in renewables and associated equipment, has accelerated cost reductions of new technologies and has delivered these achievements whilst working in association with domestic climate legislation. Whilst the financial crisis is having some impact and investments declined in 2012, the binding nature of the EU's renewables target (and the supportive national policies it created) has allowed the EU to witness a strong growth in renewable energy capacity since 2000, aided as well by the drop in costs of technologies like onshore wind and solar PV that a high and sustained demand for renewable energy has created. According to Bloomberg New Energy Finance, the costs of onshore wind turbines has fallen by 26% worldwide since the first half of 2009⁸², while the costs of solar PV installations are expected to reach grid parity in the UK by 2020 without subsidy⁸³.

9. Between 2000 and 2012, 51.2% of new power capacity in the EU has been in renewable energy, with in particular a growth of 96.7GW in wind power and 69GW in solar PV. New renewables and gas plant combined amount to 91.2% of all installed capacity in the EU between 2000 and 2012, with a sharp decline in carbon intensive plants such as coal (-12.7GW) and fuel oil power stations (-17.4GW).⁸⁴

10. If the UK were to withdraw from the EU or the EU's competences in the fields of climate change and energy were narrowed down, we assume national climate policies would remain. However, it is clear that the Renewable Energy Directive is a key driver of industry confidence and cost reductions, as evidenced by current concerns that there may no longer

⁸² <http://www.bloomberg.com/news/2013-12-17/wind-power-rivals-coal-with-1-billion-order-from-buffett.html>

⁸³ Ernst & Young, *UK Solar PV industry outlook*: <http://www.oursolarfuture.org.uk/wp-content/uploads/The-UK-50kW-to-5-MW-solar-PV-market-190611-Final.pdf>

⁸⁴ Wind in Power, 2012 European Statistics, EWEA, February 2013: <http://www.ewea.org/statistics/>

be an EU renewables target by 2030. Investor confidence relies on the combination of stable and long-term national and EU measures.

11. It should also be made clear here that addressing the challenge of moving towards a low-carbon economy within the next 20 years will be cheaper to address through European collaboration than in a scenario where each country was to work in national silos. For instance, there is considerable evidence showing that by increasing the UK's interconnection with Europe (which requires both physical links and regulatory harmonisation), the UK could substantially reduce the amount of back-up capacity required to keep the lights on when its renewable energy plant are providing smaller outputs of electricity. The European Climate Foundation's Roadmap 2050 report⁸⁵ found for instance that greater interconnection between European power grids could reduce the amount of back-up power stations required by 35% to 40% in a future European renewables system and a recent study published by DECC also argued that under some scenarios, greater interconnection with EU power grids could save UK consumers up to £9bn over the period to 2040⁸⁶.

12. Finally, it should be noted that the EU's renewables policy has also meant that greater focus has been put on delivering energy efficiency policies at the European level, which has the potential to provide a more consistent, bigger scale and more cost-effective approach to energy efficiency across the European Union.

The EU Emissions Trading Scheme

13. The UK has been a strong supporter of the EU ETS as a carbon pricing policy instrument since its inception and has shaped the instrument significantly to its advantage over time. In fact, the UK was one of the few Member States that supported the Commission in the initiation phase of the EU ETS⁸⁷. The UK's national experience with emissions trading was an important example for the development of the EU ETS. Although the initial design of the EU ETS was not fully in line with UK preferences due to differences with the UK system and the UK was overruled (as was Germany) by a qualified majority in the final vote on the introduction of the EU ETS, the EU ETS as a market based instrument has been very much in line with the UK's approach to the design of climate policy.

14. The EU ETS is designed to deliver greenhouse gas emission reductions at the lowest cost based on a technology neutral approach. It still has the potential to be a world-leading model for emissions reductions, and the centre of gravity of a more global market – which would only work at EU and not just UK scale. In practice, the performance of the EU ETS has been disappointing in terms of reducing emissions below business as usual. Substantial modifications are needed going forward both in terms of the need to set far more stringent emission reduction objectives out to 2030 with fewer offsets, and in terms of the need to fundamentally reform the scheme to prevent the various falls in the price of carbon that have been witnessed in recent years. However, this speaks for reforming the scheme at EU level, rather than putting an end to it or develop a UK-only approach.

Question 5: What have been the benefits or disadvantages for the UK/ your sector of

⁸⁵ European Climate Foundation, Roadmap 2050 Report, September 2011: <http://www.roadmap2050.eu/downloads>

⁸⁶ Department of Energy and Climate Change, December 2013: More interconnection – improving energy security and lowering bills.

⁸⁷ Skjærseth, J.B. & Wettestad, J. (2008) *EU Emissions Trading: Initiation, Decision-making and Implementation*. Aldershot, Ashgate.

the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

15. As explained in response to question 1, the development of a cost-effective and secure low-carbon power sector in the UK will be more easily achieved by co-operation at the European level rather than by acting in a national silo. For instance, increased interconnection between European grids is likely to improve the optimum sharing of renewable energy resources across Europe, reduce the costs of keeping the lights on at times of lower renewable energy output in the UK and could also create export opportunities for renewable electricity generated in the UK at times of surplus⁸⁸.

16. Therefore, the development of common market rules have from this perspective been helpful to the UK's transition to a cost-effective and secure low-carbon power sector. However, in order to create a well-functioning interconnected power grid across Europe and optimise the use of power resources across Europe, there needs to be a fully functioning day-ahead and intra-day cross-border energy market. Transparency in price setting and the development of clear price signals across the EU will be essential in order to guarantee an optimum cross-border flow of electricity.

Question 7: What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The development of the UK's renewable energy resources

17. EU measures have had a very positive impact on the development of the UK's indigenous renewable energy resources, as well as in accelerating the cost reduction of some new technologies like onshore wind and solar PV.

18. According to the latest renewable energy statistics published by DECC in December 2013, the share of renewables in the UK's electricity generation reached 13.2% in Q3 2013. In the same quarter, the UK's total renewable energy capacity increased to 19.1GW, some 28% higher than a year earlier⁸⁹. This takes place in a context where, as explained in answer to question 1, some 51.2% of all new power capacity added to EU power grids between 2000 and 2012 has been in the form of renewable energy, with an absolute decline in coal and oil-fired capacity over the same period.

19. Going forward, continued growth in the deployment of the UK's indigenous renewable resources is expected due to the need to meet the EU's 2020 renewables target. However, uncertainty as to the future market for renewable energy in both the UK and across the EU post 2020 combined with the hiatus caused by the passage of the Energy Act through the UK Parliament has resulted in several investment decisions being delayed.

20. Greater clarity on the minimum volume of renewable energy projects expected in the 2020s is urgently needed and the development of ambitious goals for renewable energy as part of the EU's 2030 climate and energy package will be essential here. It is important to remember the size of the opportunity for the UK here. DECC's own Offshore Valuation

⁸⁸ See for example the findings of the Offshore Valuation Report: www.offshorevaluation.org

⁸⁹ Department of Energy and Climate Change, Renewables Statistics, December 2013: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266415/renewables.pdf

Report⁹⁰ found for instance that the UK's practicable offshore renewable energy resources were equivalent to 6 times the levels of the UK's electricity demand in 2009 and could allow the UK to become a net exporter of electricity.

The EU's role in the regulation of shale gas extraction

21. Putting aside WWF's objection to the development of shale gas resources in the UK on grounds relating to climate change, it is clear that the process of shale gas extraction would give rise to various environmental issues which are covered by EU legislation and therefore require an EU-wide approach to regulation.

22. WWF urges policymakers in particular to consider potential gaps in current policies, which were formulated prior to the introduction of unconventional fossil fuel extraction technologies to ensure that the regulatory framework at EU and national level is adequate to monitor the different environmental impacts of shale gas extraction. A thorough evaluation, followed by a possible amendment, of the Environmental Impact Assessment Directive, the European Waste Directive, and the Environmental Liability Directive may prove necessary. In addition, the EU Effort Sharing Decision and the EU Emissions Trading Scheme should be examined in light of the concerns about the proper greenhouse gas accounting of methane emissions. EU water legislation (especially the Water Framework Directive and the Groundwater Directive) and Mining Waste Directive (which requires treatment of flow back water) provide a regulatory framework for water protection and need to be properly implemented and applied by EU Member States.

Question 8: How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures – energy efficiency, renewable and low-carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

23. See response to question 1. We believe that the EU's competences on matters relating to climate change and energy have greatly helped with the deployment and accelerated cost reductions of energy efficiency and renewable energy technologies and could help provide cost-effective solutions to the EU's electricity security challenge such as through the development of a more integrated European power grid.

24. It is also clear from over a decade long's involvement in the UNFCCC process that the UK's climate change diplomacy carries significantly more weight thanks to the EU's competences in this area and to the UK's membership of the EU than would be the case otherwise. The UK has delivered both significant issue expertise and political input that allows it to influence the voice of a 28-country block that is central to the negotiations, rather than standing alone. The European Commission also includes key civil servants from the UK, who bring their experience and perspective into the EC.

⁹⁰ DECC, Crown Estate and industry, The Offshore Valuation Report, July 2010: www.offshorevaluation.org

25. The importance of the EU's competences in the climate and energy area and of Britain's role within that, were well summarised in an interview last year⁹¹ by John Ashton, previously the UK's lead climate envoy:

"Europe has been a driving force in building the global response to climate change and Britain has been at the heart of that. We have a national interest in a successful response to climate change. A Europe in which Britain is semi-detached or worse in the process of leaving is not going to be a Europe doing the climate diplomacy that we need to secure our national interest."

Question 11: What implications will future challenges in the energy field have for the UK and EU, for example, the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

26. It is clear that the future global demand for energy, increased competition for energy resources and the need to tackle and adapt to climate change will represent significant challenges for the EU and the UK.

27. As made clear in the latest review of evidence on the Fourth Carbon Budget by the UK's Committee on Climate Change⁹², it seems clear that those economies that make an early transition to a low-carbon energy system will be the most competitive economies in a world that becomes gradually more carbon-constrained and will also be those that will be best able to export new low-carbon technologies to other parts of the world. Being part of a broader union can allow the UK to make such a transition more cost-effectively and to use the weight of the EU to increase the weight of its position in international climate change negotiations.

Question 12: What would be the costs and benefits of facing these at an international, EU or national level?

28. As made clear in answer to questions 1 and 5, we believe that the challenges of energy security and tackling climate change can be addressed more effectively and in a more cost-efficient way at the European level rather than through national silos.

⁹¹ RTCC News, David Cameron cannot opt out of EU Climate Policy, 18 January 2013: <http://www.rtcc.org/2013/01/18/david-cameron-cannot-opt-out-of-eu-climate-policy/>

⁹² Committee on Climate Change, Fourth Carbon Budget Review, December 2013: <http://www.theccc.org.uk/publication/fourth-carbon-budget-review/>

DEVOLVED ADMINISTRATIONS

Northern Ireland: Department of Environment Trade and Investment

Thank you for an opportunity to provide a response to the DECC call for evidence on the UK Government's Review of the Balance of Competences in relation to the energy sector. I hope that you found the recent workshop in Belfast useful, and I would make the following comments solely from this Department's experience in relation to the energy sector.

General Comments

The number of pieces of European energy legislation seems to be increasing and also the detail and complexity of the requirements. For example, implementation of the network codes associated with the EU Third Energy Package Gas and Electricity Regulations represents a significant and complex workload for Member States in ensuring compliance. The impact on Devolved Administrations is felt even more keenly and our resources are more limited, hence the sharing of implementation proposals and the policy and legal analysis of such proposals between DECC and DETI is essential to meet these tight timeframes. Officials in DETI Energy Division are therefore grateful for the very positive working relationships that we have with DECC colleagues across a range of issues referred to below, and we are keen to maintain and build on that, particularly in the context of the increasing influence of Europe on our various policy areas.

The Commission's drive to ensure consistency is understood, however this can lead to a "one-size-fits all" approach and in turn have disproportionate consequences, including costs, for our relatively small energy market in Northern Ireland. In effect, the cost of establishing new arrangements in such a small energy market has the potential to outweigh any benefits. At times, it can therefore appear uncertain if the EU fully assesses the likely impact of a policy or legal requirement before it comes into force.

There are also concerns in relation to communication from the European Commission where Member States have properly transposed Directives and where no further action is required, or where there have been Commission concerns about aspects of Directive transposition or Regulation compliance and where further action has been taken to ensure compliance. Our experience is that it can remain uncertain for some time whether the Commission is content or requires further action, and a more prompt and definitive response would be welcome.

Gas and Electricity Sectors

A recent experience in relation to a significant area of EU legislation was in respect of the transposition and outworking of the EU Third Energy Package (IME3) of measures to deliver further liberalisation of EU gas and electricity markets.

We agree that there must be benefits, both in terms of a level playing field for industry participants and for energy consumers, of having a consistent energy framework on key strategic issues across Europe, however for some aspects, benefits can be difficult to quantify. There must also be flexibility within that framework which respects the different arrangements in place in different Member States and within Member States. A positive example of this under the IME3 Gas and Electricity Directives was the provision allowing the Utility Regulator to be designated as the national regulatory authority (NRA) for Northern Ireland.

Some aspects of the IME3 Directives were quite prescriptive and we consider it preferable, where possible, for EU legislation to set a framework with flexibility regarding the means and extent of implementation. A practical example of this relates to the consumer protection arrangements required by IME3, for example, in relation to information on bills that must be provided to energy consumers. Having access to information is positive in that it ensures well informed consumers who may then better be able to exercise consumer choice with regard to switching etc. However, if consumers are overloaded with information in fulfilment of EU requirements, then that could potentially defeat the purpose and the central messages may be lost. Also, there should be consideration of the cost implications for energy suppliers and the scale of changes to the information that must be supplied, particularly in a small market such as Northern Ireland where significant new IT costs would have to be borne by a small customer base.

On occasions, separate Directives may require changes already implemented under previous Directives to be unpicked. For example, the IME3 Directives contained requirements in relation to billing and the information to be provided to customers and the subsequent Energy Efficiency Directive also contains requirements related to billing information. This could lead to a perception that the obligations being imposed in this piecemeal way are inconsistent or not fully considered. It also has resource implications, not only for the implementing Member State, but also for the energy industry, smaller energy suppliers in particular, and ultimately for consumer costs.

Security of Supply

The EU Regulations covering security of supply for gas and oil are broadly useful for improving the GB and NI resilience to international and national supply chain shocks. Some of this work was already progressing between GB/NI and NI/RoI but obligations have encouraged Regulators, Departments and key industry stakeholders to extend this work in respect of gas to Regional Preventative Action Plans and Emergency Plans and placing a timeline giving the work priority across all organisations. The approach to Strategic Fuel Stocking across Member States ensures that reserves held in other states will be released in the event of an international emergency improving the resilience of both GB and Northern Ireland. This has led to some good ideas on how the oil industry, which has the expertise on fuel logistics, should manage strategic oil stocking in future.

In respect of gas and electricity security of supply, there is an issue on the timing of the introduction of a range of Directive requirements and Regulations which appear to enforce a series of incremental changes which can overlap, create duplication in approaches, or even inconsistencies on intended outcomes. For example, the Industrial Emissions Directive (IED) requirements have potential to conflict with security of supply objectives, and are impacted by work on other areas such as capacity mechanisms. Consideration of the interdependencies across policy areas, and perhaps fewer Regulations with a longer timeframe for implementation, might result in a more streamlined process.

Energy Efficiency

While EU legislation on energy efficiency has been helpful in driving action it might be worth noting that on some occasions the need to demonstrate energy savings or information provision is not considered in the context of customer affordability or indeed actual impact on customer behaviour. The issue around billing information has been noted in more detail above. Also, just because a Member State has legislated for a scheme/framework does not necessarily mean implementation will be readily advanced on the ground by the industry. In certain circumstances, the ability to have flexibility in demonstrating compliance through non legislative means would be helpful.

Renewables

Increased renewable energy deployment ticks many of the boxes in relation to EU policies. We welcome the drive from Europe at present to seek a competitive approach to renewables deployment however this needs more flexibility to respond to regional issues and there may be valid reasons why a lower/higher target is more appropriate in particular regions.

Renewable energy trading is potentially a major change to this industry but also one which could have significant impacts on security of supply and job creation/economic benefits within and between regions. The recent work on renewable energy trading between GB and Ireland has demonstrated this. While many of the EU policies are more forward looking than domestic policies, sometimes it would be helpful if more of a framework could be established at the outset from Europe.

Infrastructure

The EU Infrastructure Regulation and ongoing outworking of arrangements for dealing with Projects of Common Interest is a good example of working co-operatively between DECC and the Devolved Regions in relation to delivering EU policy objectives. However, the EU “one-size-fits all” approach effects can be compounded as Northern Ireland has delegated energy and planning powers, creating a time consuming process to sort out who leads between DECC and DETI on Competent Authority responsibilities. While largely an internal issue, this adds to undue pressure to meet obligation timelines and we would suspect is perhaps not a problem which is unique to the UK.

It is also not clear that the EU fully appreciates the difficulties for Member States, or regions within a Member State such as Northern Ireland, to deliver major infrastructure projects which are essential to meet EU requirements. Public concerns about the environmental impacts of energy infrastructure can lead to much longer than expected delivery times for significant energy projects, and there is a need for the EU to ensure that other interim options are available. An example is the impact of the EU Emissions Directive in a small regional energy market such as in Northern Ireland, and the need to ensure continued security of energy supply when increased interconnection with other markets is proving difficult due to public concerns about the impacts of provision of new energy infrastructure.

Scottish Government

ENERGY

1. The Scottish Government welcomes the opportunity to contribute to this call for evidence. We were approached by the Department of Energy and Climate Change (DECC) prior to the launch of the call and have engaged throughout the process. DECC has also consulted Scottish stakeholders such as the Energy Technology Partnership, the Scottish Hydrogen and Fuel Cell Association, the European North Sea Energy Alliance, the Scottish Environment Protection Agency and the Royal Society for the Protection of Birds at a Scottish Government event in Glasgow, on 6 December 2013.

General

Scotland and the energy acquis

2. The Energy acquis is the basis for the EU's energy vision for 2020, which consists of three 'pillars': sustainability – to ensure that the EU addresses climate; security of supply – to minimise the EU's vulnerability concerning imports, shortfalls in supply, possible energy crises and uncertainty on future supply; and competitiveness – to ensure the effective implementation of the internal energy market.

3. Overall, the energy acquis works well for Scotland. Energy and climate change is one of the four key areas where Scotland's interests, expertise and potential converge with recognition at EU level of the importance of the issue at stake. The Scottish Government considers it beneficial for Scotland to support participation in the Europe 2020 growth strategy to promote renewable energy and the resource efficiency of economic activity towards a low-carbon economy. The EU 2020 renewables targets are fully supported by the Scottish Government, and have been a key driver for renewables investment in Scotland – giving the regulatory certainty to create investor confidence and unlock our massive offshore wind, wave and tidal resource for European benefit. Scotland is on track to meet its share of the UK's 15% EU renewable energy target for 2020, and has the EU's most ambitious renewable electricity target of 100% of demand by 2020. The EU 2020 Renewables target has helped Scotland to achieve these targets.

4. European actions in the field of energy have been perceived as having positive effects for research, development and demonstration of new technologies in Scotland. This is evidenced by an increased quantity of research, as a result of the EU 20-20-20 targets, in the areas of renewables and Carbon Capture and Storage (CCS). Areas that are less central to the targets, such as research on oil and gas, did not experience a similar increase. The

Scottish Government has worked closely with our allies in the UK, Irish and French governments to press the European Commission for greater financial support for demonstration of ocean energy technologies (wave and tidal) under the Strategic Energy Technology (SET) Plan. The scale of the commercialisation challenge to bring ocean energy onstream during the mid-2020s is one that Member States cannot meet in isolation, and EU action is essential. We welcome the recent support of the Commission for the sector, though it has taken a long time to secure this, in part due to misperceptions within the Commission on the future prospects for the sector. The NER300 awards to two Scottish tidal, and one Irish wave, projects have given greater confidence and should be backed by increased support under Horizon 2020 and the SET Plan, and in support for offshore grid development in the North Sea through the new Connecting Europe Facility projects of common interest.

5. Further, European initiatives to stimulate development of new technologies have positively impacted Scottish research and industry. The European Fuel Cells and Hydrogen Joint Undertaking has been crucial, for example, enabling the Aberdeen hydrogen-powered bus project that has been rewarded with €9.3 million of EU funding. This in turn has inspired a Scottish project to develop the world's first car and vehicle ferry powered by hydrogen fuel cells. More broadly, the Joint Undertaking has contributed to the understanding of the link between energy and transport in Scotland and has given Scottish stakeholders the opportunity to take part in and shape future policy on hydrogen and fuel cells.

6. More generally, the European market has underpinned the Scottish energy industry as it constitutes one of the largest markets for Scotland's export. Further, membership of the EU Single Market has played an important role in attracting foreign direct investment (FDI) to Scotland from outside the EU in recent years. Aberdeen is the Energy Capital of Europe and is recognised as a centre of excellence, particularly in subsea engineering and runs projects in Europe as well as globally.

7. Disadvantages of the existing European energy acquis that have been articulated relate to the lengthy processes that precede European legislation in general, the lack of European actions for certain energy issues and sometimes insufficient coherence across energy, climate and environmental policy that create uncertainty for industries. As an example, at times, there could be tension between EU market-based objectives such as the Emissions Trading Scheme and the development of the internal energy market, and those EU policies which seek to make specific interventions in support of specific technologies such as the Renewables Directive or the CCS Directive. The EU needs to ensure clarity for its policy going forward to give markets the certainty that they need to invest in new capacity and in support of decarbonisation – that is why the Scottish Government supports a strong 2030 climate and energy package with a 50% greenhouse gas target and a robust reform of the EU Emissions Trading Scheme (ETS).

Further development of the acquis

8. Generally speaking the Scottish Government would like to see European legislation in the field of energy further developed rather than reversed. The Scottish Government considers it beneficial for Scotland to support common actions on the global questions of energy security and climate change. We support the completion of the energy market envisaged by the European Commission in 2014 and welcome a strong 2030 framework for climate and energy policies which must include a legally binding greenhouse gas target, robust reform of the ETS, and measures to incentivise further investment in renewables and CCS.

9. A widely shared point regarding the future European actions is the need for greater EU policy coherence across energy, climate and environment policy. Investments tend to be drawn to technologies that are backed up by clear and binding legislation which gives long-term investor certainty. It will be important for the EU going forward to give greater coherence to these policies to ensure that their objectives are properly aligned to avoid unintended consequences that could destabilise other parts of the EU acquis. The importance of coherence between the Renewables and Habitat Directives has been underlined to ensure that the energy planning respects the protection of wildlife. Interest has also been expressed in seeing more synergies between the Trans-European Energy and Transport Networks (TEN-E and TEN-T) programmes, in the form of greater attention for sustainable transport. The development of the Northern Seas Offshore Grid should be a strategic project of common interest for the EU. The Scottish Government welcomes the support for offshore grid connections under the Connecting Europe Facility and TEN-E regulation, but this alone will not be enough to unlock the huge offshore renewables resource in the North and Irish seas. The Commission needs to bring forward more measures to incentivise multi-nodal offshore interconnections within and between Member States as part of the 2030 proposals.

10. Further, the Scottish Government sees a clear need for certain developing energy technologies to be addressed at a European level. These technologies include offshore wind, marine energy and energy storage. We would like to enable an EU-wide ramp-up of offshore wind technology development to accelerate increased investment and commercial success to meet the 2020 targets and beyond to 2030. We would like to see marine energy fully supported under the revised SET Plan, and incentivised by an EU 2030 climate and energy package. Finally, we would welcome European guidance on energy storage, including issues such as gas standards and the capacity of gas networks, given the increase of renewable energy in Europe and the related issue of balancing between supply and demand across Europe. In areas where there is no current regulation or the implementation of technology is completely new across the EU, we believe the European Commission adds significant value. The Commission has a key role to play in ensuring regulation is consistently applied across the EU.

Scottish involvement in influencing the acquis

11. Energy is a policy area for which competences are shared between the EU and the Member States. Subsidiarity and ensuring that decisions are taken at the right level is a key enabler of effective policy development and delivery. The Scottish Government is responsible for technology and market support, planning and consenting, but has no direct control over regulation, which is reserved to the UK Government.

12. The Scottish Government influences EU legislation through the UK Department of Energy and Climate Change. We have actively contributed to EU legislation in the areas of state aid, the ETS, CCS, offshore oil and gas, Renewable Energy, Trans-European Networks, and Energy Efficiency. We did so through early engagement with DECC during the legislative drafting phase and prior to Council meetings, where Scotland is represented by the UK. Continuing early upstream engagement from the UK Government to fully consult and involve the Scottish Government in the development of EU legislation is welcomed, and ensures effective implementation in the context of the devolution settlement, where many powers over renewables, energy efficiency, CCS and permitting are devolved to the Scottish Ministers.

13. With regard to the exploration of new energy issues outside Council meetings, the Scottish Government has contributed to informing EU policy-making through leading, in close consultation with the UK Government, in areas of its expertise such as ocean energy, regulation around grid interconnections, planning and public acceptance of offshore wind project, and CCS:

- Scottish efforts in partnership with the UK government, Irish government, six other Member States and the European Ocean Energy Association have secured EU support in the Strategic Energy Plan for the contribution that wave and tidal power can make to EU energy, climate and industrial policy;
- Our collaborative work with the Irish and Northern Irish governments on the ISLES project has provided the evidence base and regulatory framework for the development of the EU's North Sea Offshore Grid priority;
- We worked to help the EU to meet its renewable energy targets whilst continuing to meet its environmental protection legislation objectives through the Good Practice WIND project regarding the environmentally-sensitive wind farm construction. We are engaging as a partner in a successor project to continue this work;
- We worked with partners in the UK, Netherlands, Norway, Romania, Poland, France and the Global CCS Institute through projects such as the SITECHAR project to establish the business, environmental and regulatory case for Carbon Capture and Storage and the development of the Central North Sea as an EU CO₂ transport and storage hub which is a priority area for the European Commission.

14. More generally, Scotland has taken the lead in recent years in promoting European greenhouse gas emissions, renewable energy and energy efficiency targets for 2020. Through initiatives at government, industry as well as academic level, Scotland has acquired a reputation for high ambition and for the delivery of renewable energy objectives, which contribute substantially to the Scottish Government's objective for sustainable economic growth.

Thematic areas

Competitiveness, growth and infrastructure

15. The Third EU Energy Liberalisation Package came into force in 2009. The Package encompasses the “Electricity Directive” and “Gas Directive” and related regulations that: encourage the liberalisation and unbundling of European energy markets; facilitate cross-border energy exchanges; set common rules for the internal markets; and establish an Agency for the Co-operation of Energy Regulators. The Scottish Government supports the aims of the Third Package and believes that market competences are correctly situated at EU level.

16. Scotland has huge energy potential with the largest offshore renewable energy resources in the EU (25% of EU offshore wind; 25% of EU tidal; and 10% of EU wave power). Implementation of the Third Package by driving market integration, regulatory alignment, competition and trans-national interconnection will help Scotland to maximise its renewable energy potential, and help to meet targets elsewhere in the EU.

17. The Electricity Directive strengthens the roles of national regulatory authorities to facilitate access to the network for new generation capacity and electricity from renewable energy sources (RES), promotes the integration of RES and ensures transmission and distribution system operators are granted appropriate incentives to support the market integration of RES.

18. The Second Renewables Directive on the promotion of electricity produced from renewable energy sources in the internal electricity market states that: *“Member States shall ensure that transmission system operators and distribution system operators in their territory guarantee the transmission and distribution of electricity produced from renewable energy sources”* (2009/28/EC, art. 16). National Grid has a statutory duty to connect new power generation to the UK electricity network. However, there is no provision for priority connection for renewable energy projects, although the UK ‘connect and manage’ regime that allows National Grid to offer earlier grid access to new and existing generation projects is arguably in the spirit of this Directive.

19. Two potential outcomes of a joined-up electricity market in Europe are a more stable and secure supply and better competition amongst generators. These outcomes are dependent on enhancements in grid infrastructure – including, for example, offshore grid enhancements, and are addressed in the TEN-E regulation. Scotland wants to deliver the huge offshore wind, wave and tidal potential of the Atlantic coast to the heart of the EU market through enhanced interconnection and cross-border planning and regulation.

20. The EU has designated the North Sea as a priority corridor for energy infrastructure which will enhance Scotland's ability to export low carbon energy in the longer-term. The EU-led North Seas Countries' Offshore Grid Initiative (NSCOGI) is looking at ways to facilitate cross-border energy exchanges through flagship projects like the Irish-Scottish Links on Energy Study (ISLES), which is EU INTERREG funded. The first phase of the ISLES project raised issues of EU relevance and which require EU-wide solutions. The second phase of the project will assess the market and regulatory barriers to cross border trading in renewable energy in more detail.

21. Further, Scotland's unique one-stop-shop approach to marine licensing has already anticipated the EU TEN-E Regulation and will enable us to deliver greater interconnection of offshore wind to the core EU market through the North Seas Offshore Grid.

22. The Scottish Government believes that responsibility for / a focus upon a single market and related infrastructure is correctly situated at EU level. Delivering closer market integration and interconnection requires a strategic, co-ordinated and collaborative approach between countries, regions and Member States. The Scottish Government is pleased that the EU has now recognised these offshore grids as priority infrastructure projects, and will work with governments and industry to ensure deployment can take place rapidly over the next decade.

Security of energy supply

23. The Scottish Government recognises that much of the key legislative elements relating to the oil and gas industry are matters reserved to the UK Parliament. However, their impacts are very much felt in Scotland and elements of environmental legislation relating to the offshore industry are applied from Scotland. While we acknowledge the important role that the European Commission plays in proposing and implementing directives and regulations that ensure a level competitive playing field among EU Member States, it must always be borne in mind that there are some areas of industry that are of more importance to some Member States than others. This can lead to tensions when the Commission is proposing new legislative measures in industries like offshore oil and gas, where a one-size-fits-all method of regulation may not be appropriate.

24. A good example of this was the Commission proposal for a new regulation to centralise control of offshore health and safety and environmental protection in Europe, instead of the current situation where each national government is responsible for regulating offshore activities in their own waters. The Regulation would apply to all of the EU 27 Member States, as well as Norway, which is not a member of the EU. The UK position, which was fully backed by Scottish Ministers, was that a regulation would have been disastrous for an industry that was already leading the world in terms of safety. It took no account of the fact that a world-leading, robust regulatory system was already in place. The

UK, again with the backing by the Scottish Government, argued successfully for a Directive instead.

25. Competition law is an area of competence where the European Commission has a significant degree of control over Member States. In general terms, the ability to create a level competitive playing field for businesses across the European Union is to be welcomed and this applies equally to sectors such as coal. Scotland has a small, but economically important coal sector, which provides employment in areas of high unemployment. The previous State aid rules that governed competition in the coal industry were useful, particularly where they allowed aid to close uncompetitive mines. It is equally useful that the horizontal State aid rules can still be applied to undertakings in the coal sector, which allows aid to be provided in way that does not distort competition unduly. Overall, the Commission's ability to legislate in the area of competition law, in as far as it applies to undertakings in the coal sector (and indeed other energy sectors) has worked well.

Sustainability

Energy efficiency

26. The Scottish Government welcomes the indicative EU target is to reduce primary energy consumption by 20% by 2020. Scotland has its own Energy Efficiency Action Plan published in October 2010 which includes an ambitious headline target to reduce final energy end-use consumption by 12% by 2020 against a baseline averaged over the 3 years 2005 to 2007. As Scotland's target is calculated on reducing absolute energy consumption year on year against a baseline averaged over 2005 to 2007, it is at least as ambitious as the EU target. The Energy Efficiency Directive supports our own ambitions across a range of sectors, helping to inform the narrative on the importance of driving forward policies and programmes.

27. However, implementation of the Directive has been hampered by the fact that that policy officials and solicitors initially found it to be poorly drafted and failed to take account of fundamental issues such as the principles of subsidiarity, the cost effectiveness of what was being proposed or it was too prescriptive in the terms that were set out. This led to problems with definitions such as "central government estate" which is not a term that means the same across the EU and led to unnecessary additional work to determine which buildings were in scope.

28. The promotion of energy efficiency is a devolved issue, except through regulation or prohibition. However, due to resourcing issues we have sought to adopt a pragmatic approach to implementation, which in effect, has led to seeking UK-wide administrative solutions or transposition of individual Articles through UK-wide statutory instruments where possible. In effect, there has been no material difference in the UK and Scottish approaches to implementation.

29. There are a number of barriers to the take-up of energy efficiency, such as cost, other priorities, lack of understanding of the benefits of taking action etc. The aims and

objectives of the Energy Efficiency Directive are therefore very welcome (although they do not go far enough) in that they will support our policy aims in achieving our own ambitious final energy consumption target by 2020. In particular, it supports our aims in:

- Promoting resource efficiency by engaging with a larger number of businesses – e.g. through the requirement for large enterprises to undertake energy audits from 2015;
- The promotion of take up of smart meters and the requirement for actual meter readings for billing purposes;
- The requirement to have a national refurbishment strategy for renovation;
- Sustainable procurement of buildings and services;
- The need for “central” government to take a lead in achieving energy savings year on year.

Renewables

30. The Renewable Energy Directive and related targets were transposed by the UK Government through the UK national renewable energy action plan – known as the UK Renewables Roadmap. The Scottish Government’s own Renewables Routemap goes further than the UK Roadmap in its ambitious target to meet 30% of total energy demand from renewables by 2020, including the equivalent of 100% of electricity demand (the EU’s target for the UK is 15% of energy to be met from renewables). In this respect, the EU targets have provided a baseline but not a cap to Scottish ambitions.

31. The transposition of the EU Directive led to the UK Government’s creation of the Renewables Obligation, which placed an obligation on UK electricity suppliers to source an increasing proportion of the electricity they supply from renewable sources. This Obligation in turn has been vital for the development of the Scottish renewable energy sector.

32. There are two main issues arising from EU legislation which affect renewables deployment in Scotland: Firstly there is a tension between the environmental aims of EU policy as enshrined in legislation such as the Habitats and Wild Birds Directives, and the promotion of renewable energy through the Renewable Energy Directive. This tension has already been highlighted in the Scottish Government response to the Competencies Review with regard to environment and climate change, where research is cited which identified this tension in the case of wind farm development in the Western Isles. Further tensions may yet arise in the hydro sector between the Water Framework Directive (which has been partly transposed in Scotland through the Scottish Environmental Protection Agency’s Controlled Activity Regulations) and the aspirations of the industry to maximise renewables resource – particularly at a micro-hydro level. The Scottish Government also has high ambitions for deployment of offshore wind around Scotland’s coasts, linked to significant potential for economic benefit, and these aspirations, while in line with the EU Renewable Energy Directive, may yet face difficult challenges in terms of compatibility with the EU environmental directives above.

33. Secondly, there may be some uncertainty in the renewables sector from the lack of an EU renewables target beyond 2020. While the Scottish Government has not yet called for a binding renewable energy target post 2020, we believe that a successful EU 2030

package must include a legally binding greenhouse gas target and measures to ensure decarbonisation of the electricity sector which gives the renewables sector the necessary long-term stability it needs in order to make the level of investment in renewables that is required for the transition towards a low carbon energy system.

Carbon Capture and Storage

34. The Scottish Government has a clear vision on CCS. We are convinced conviction that CCS ongoing is the only technology available to mitigate greenhouse gas emissions from large-scale fossil-fuel and has vital role to play in the EU energy mix. We are committed to the development of CCS technology on a commercial scale. Scotland is well-placed to contribute to the development of a North Sea CO₂ transport and storage grid, building on our considerable offshore oil and gas infrastructure.

35. The CCS Directive (2009), which set out a regulatory framework for the development of CCS in Member States, has served to increase regulatory certainty at a time when significant private and public investment is needed to develop the industry – an industry that is currently in its very early stages. The UK (with Scotland laying its own specific regulations) was one of the first Member States to implement the Directive.

36. CCS is an example of an area where the implementation of technology is completely new across the EU. In these circumstances, we believe the European Commission adds significant value and has a key role to play in ensuring regulation is consistently applied across the EC. The Scottish Government also supports measures in the 2030 climate and energy package which will incentivise CCS to ensure decarbonisation of the electricity sector by 2030.

Nuclear, protection from the harmful effects of ionising radiation and Euratom

37. Overall the EU acquis in relation to civil nuclear safety works well for Scotland establishing a robust framework for ensuring high safety standards across the Scottish, and wider UK, civil nuclear plants. The Euratom Treaty is primarily aimed at promoting nuclear energy and establishing uniform safety standards for protection of workers and the general public. The current EU framework enforces minimum standards but allows individual Member States to regulate the nuclear industry in their states ensuring flexibility to accommodate specific UK and Scottish dimensions in nuclear safety matters and also allowing the UK nuclear industry to set standards which are in excess of the EU minimums if desired. Although Scotland has a policy against new nuclear power, it is clearly in our interest that there is an international legal framework ensuring the safety of new power stations in other countries.

38. At UK level, compliance with EU requirements is met through enforcement of a number of pieces of UK legislation - Health and Safety at Work Act 1974, Nuclear Installations Act 1965 (NIA), Ionising Radiations Regulations 1999 and the Nuclear

Industries Security Regulations 2003. Consistent legislation and regulation across the UK is advantageous for Scotland as it reduces the burdens on the nuclear operators and ensures a consistent response to nuclear emergencies by the UK national agencies and the nuclear industry.

39. The Scottish Government works well with regulators and the nuclear industry to engender a culture of continuous improvement in relation to safety and emergency response matters, including in response to incidents which have occurred internationally and to lessons identified as part of the rigorously regulated testing and exercise regime.”

40. An independent Scotland, free to negotiate in the Council of Ministers, will be a voice for high ambition on de-carbonisation of electricity through renewables and Carbon Capture and Storage, improved interconnection, and long term EU energy security through full exploitation of Scotland’s oil and gas and renewable resources. As an independent country, we would be able to influence the EU’s energy agenda in a more positive and greener fashion, by encouraging rather than resisting EU efforts to raise our ambition on using our huge renewable resources to guarantee EU energy security and by preventing measures that distort the workings of the internal energy market, such as subsidies for wasteful, insecure forms of energy like nuclear power.

Welsh Government

Alun Davies AC / AM,

Y Gweinidog Cyfoeth Naturiol a Bwyd

Minister for Natural Resources and Food

Thank you for your letter of 20 October on the Balance of Competence Review led by your Department.

Energy policy and energy security are currently reserved matters, therefore my response will be limited to the EU's influence on Welsh policies and activity surrounding energy generation.

The Welsh Government is committed to a transition to a low carbon economy, recognising the role of fossil fuels in the short to medium term. As a net exporter of electricity, energy generation is a large employer in Wales with some Welsh energy generating stations relying on imports from Europe. At times, the large flexible coal-fired power station at Aberthaw has utilised imports from across Europe to augment domestic fuel supplies.

We also recognise the contribution of energy intensive industries (EIs) to the economy of Wales. EIs manufacture the renewable energy generation products and components that aid the transition to a low carbon economy. EIs are also investing to develop new products that generate lower CO2 emissions through their life cycle.

A particular concern is that EIs in Europe face substantially higher electricity costs than their competitors in non-EU countries. It is important that they continue to be able to compete internationally and, in the absence of global agreements on climate change mitigation, EU energy and climate change policies do not adversely impact their ability to do this. We therefore welcomed the Commission's permission for Member States to grant state aid to certain energy intensive sectors most affected by the indirect costs of the EU Emissions Trading Scheme.

Interconnections to create 'supergrids' between EU member states will strengthen energy security in both the Union and the UK. The Welsh Government wishes to see energy projects, including energy infrastructure, contribute to the economy of Wales, its communities and the wellbeing of Welsh people rather than simply 'passing through'. I am currently in discussions with my officials on the implementation of the Trans-European Energy Networks (TEN -E) and the part Wales can play in the determination of those projects which are wholly or partly in the Welsh territory.

From January 2010 to December 2012 the Welsh Government was a partner of an EU funded project called the Renewable Energy Regions Network (RenRen). The purpose of the project was to improve regional frameworks for renewable energy expansion; explore ways to help the development and deployment of renewables and look at ways to support different renewable technologies. Twenty experts from nine European regions visited Wales on 23-25 May 2012. The visit focussed on marine energy research and development in

Wales and the potential for hydrogen as a fuel and energy storage to support the renewables agenda in Wales. Our participation in the Network allowed us not only to share and learn best practice in relevant fields but to promote Wales.

The marine energy resource off Wales can contribute significantly to a low carbon energy mix. I am pleased that through the efforts of the British Irish Council, the profile of marine energy has been raised amongst the European Commission and we now have a European Ocean Energy Forum. Wales has successfully used the EU Objective 1 and Convergence monies to support R&D of tidal stream technologies and we will continue to utilise this unique funding stream to support the establishment of marine energy in Wales.

The Strategic Environmental Assessment and Environmental Impact Assessment Directives require an environmental impact assessment to be undertaken before a plan or project is determined thereby allowing a robust and transparent assessment to be made on the likely significant effects on the environment of proposed plans and projects as a whole. The Directives, transposed into UK law by Regulations provide Government, consenting authorities and developers with a clear framework on how to assess and consider plans and projects – this universal approach to the identification, and mitigation of, potential impacts is needed.

I welcome the opportunity to comment on the Review and for the DECC stakeholder event in Cardiff to gather evidence from the energy sector in Wales.

INDIVIDUALS

Don Bailey

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The EU regulation on energy is rooted in the IPCC mantra that human activity drives climate

change by virtue of its CO₂ emissions. The claim that the science is settled is manifestly incorrect and their insistence on CO₂ emission targets with the primary focus on expensive and inefficient renewable sources of energy has resulted in the UK developing an energy policy that is not fit for purpose.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Completely disproportionate

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

There are no meaningful actions. The UK should be able to develop its own energy policy and it should NOT be driven by EU regulations.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

The UK should be free to determine how best to address climate change especially since it is far from clear that it is being driven by human activity and their CO₂ emissions.

The pointless imposition of targets for renewable sources of energy needs to be challenged since they have significantly undermined the competitiveness of the UK.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

It would be significantly better for the UK if the EU had no responsibility or impact whatsoever on the determination/definition for energy policy in the UK.

How the UK meets its energy requirement should be a matter for the UK only.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

There have only been disadvantages for the UK. The imposition of renewable sources of energy has led to the UK going down a path where the taxpayer/consumer subsidises the use of inefficient and uneconomic wind turbine and solar power energy systems. This has resulted in a significant number of people going into fuel poverty.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK has only been disadvantaged. The closure of efficiently operating fossil fuelled power stations under the Clean Air regulation and the shortfall in base load capacity met by the use of renewables has put the UK at a serious risk of power outages in the coming months.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The EU led drive to reduce CO₂ emissions has effectively reduced the UK's ability to exploit any of its fossil fuels be it shale gas or coal.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Everything the EU has done in the field of energy has been a hindrance for the UK. The constant pressure to reduce CO₂ emissions has been an expensive failure. If human activity was a serious driver of climate change developing strategies to live with the consequences would have been a better use of the vast amounts of money that have been wasted trying to stop it occurring.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

It would be of great benefit if the EU left the determination of energy strategy and policy to the UK. A solution that met the UK's needs could be developed rather than trying to comply with a one size fits all scenario.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or

hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The UK has a mature and well regulated nuclear industry with a good safety record. The EU and Euratom do not improve on the situation they just add another layer of pointless bureaucracy that has to be satisfied before the UK can make a decision.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Until the EU recognises that the climate changes because it can and that any drive to a low carbon economy are counterproductive, there will be next to no progress in stabilising the global energy demand and the attendant markets.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Unless it is recognised that spending vast amounts of money to try and reduce CO₂ emissions in order to try and stop or slow down the impact of climate change; there will be no benefits accruing to any country or organisation. In effect the third world are more likely to be even further damaged by the developed world pursuing what is obviously the wrong objective.

Shan Barclay

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?
As a rule the EU is ahead of the UK as regards renewable energy and other related issues although this is not universally the case

Insofar as that the EU is ahead this is beneficial to UK energy programmes

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The EU has a right to legislate where this is beneficial to all member states as in the case of promoting renewable and sustainable energy and power generation

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

The EU has the potential advantage of being able to draw upon a broader perspective of advice be it scientific or other and also take into account the interests of more people so there is an overall rather than narrowly nationalistic perspective to legislation

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Insofar as that the UK has distinctive needs and resources like other member states, national interests do also have relevance

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

If agreements are reached, especially binding ones that are in the interests of all these need to be adhered to often it is the implementation of these rather than endless changing of them that is the best policy

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

an internal market should be of benefit to all member states

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

any investment in sustainable, renewable and green energy across all member states of the EU is to the good security of supply is also important

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

As yet the UK has not taken full advantage of its potential under EU legislation ie investment in wind, solar and tidal also hydrogen for transport and domestic fuel. Shale gas is a very bad idea so I do not factor this in because it should be excluded

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing more to promote renewable energy within member states and helping out with implementation of such projects and also funding more research

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Insofar as that the EU can have a collective voice this could be useful in international negotiations

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Nuclear power is fundamentally dangerous and very highly polluting

The EU and UK should take a responsible line and set about reducing reliance on Nuclear power and replacing it with carbon free safe alternatives no further investment should be made in it and the EU can play a role in assisting in this process

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising

global market prices and the transition to a low carbon economy to meet climate change objectives?

First we need to set about reducing our energy requirements not increasing them this would make transition to carbon and nuclear free easier the EU can assist in this process and the UK and other member states' governments can do the same a collective effort would help

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Doing such things across the EU as a whole could actually save a lot of money

Brian RL Catt

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

1. EU action is ideology that must make all its own policy measures re electrical generation expensively worse by law. Creating less expensively rationed energy where cheaper more decarbonising energy is abundantly available by replacing coal with gas then nuclear, unsubsidised.

This is impoverishing households and slowing economic recovery because disposable income is simply being wasted paying to subsidise the generation of needlessly expensive energy, across the economy. The only beneficiaries are lobbyists, landowners, and public officials/MPs who wrote and now support the laws, at the cost of massive energy poverty, to no actual benefit to bill payers, or man made CO2 emissions versus optimising the use of what we had. Gas and nuclear, versus coal.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Neither. It's subsidised prescriptions are entirely and expensively regressive in their capability to deliver every measure of their own policy objectives versus what was available unsubsidised as a matter of clear fact, on the costed physics.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

None I am aware of.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

All areas would be better if the UK determined the best way to meet the objectives in forums where science, engineering and the dependent economics and environmental impact could be rationally considered. Away from politicians, lobbyists and their mandarin legislating agents. All non-expert outside interference we can't control is dangerous and usually leads to corrupt practices that benefit lobbyists and bureaucrats. As the UN Aarhus ruling on energy laws showed very conclusively, they/you/ can't be trusted and transparent scrutiny is essential, we have little enough in the UK process before it ever gets to Brussels.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Again I refer you to the UN Aarhus judgement. Don't let politicians legislate the laws of physics based on false ideological beliefs exploited by civil servants for lobbyist profit, as was done. The best way to actually deliver what policy claims is needed is to cut all subsidies and let the market take control, with the only exception that unscrubbed coal is discontinued ASAP, scrubbed coal discontinued as gas becomes available to replace it, and only CCS coal allowed thereafter. Everything else will be progressive, highly decarbonising, and push prices down. The more government meddles and distorts an energy economy which it overtly does not understand the basic physics and economics of, the more expensive and counterproductive the results will be.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

None, its manipulated by the generator oligopoly anyway, toothless time-serving buck-passing regulators like OFGEM civil servants are brushed aside and despised by those with the money and power, where they are not cosied up to the money (see also the FSA, EA, HSE, etc.). The only regulation that needs seriously enforcing is real competition, and removal of lobbyists from the process, including MPs like Yeo and Hendry sitting on beneficiary lobbyist's boards and Quangos promoting bogus policy with taxpayer's money..

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Disadvantaged. EU regulation is entirely regressive on all measures including security in particular, the wind is not secure, and promotes such non-solutions manufactured largely outside the UK.

The UK's Island economy has its own particular needs and resources, none of which are improved/enhanced by EU directives as passed into our demonstrably regressive energy law.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

They work against massively CO2 reducing nuclear and shale gas, both cheaper or on a par with onshore wind, which offers by far the most massively decarbonising option, 37 % of our 75% CO2 emissions from coal generation by simply replacing 150Twh of coal generation with gas on the existing grid. EC subsidies and bogus rhetoric support alternatives that use gas to support subsidy farms that "Offset" the 25% of emissions from gas generation 25% of the time and are in fact almost carbon neutral when spinning reserve is included, at 2 or 3 times the wholesale price, for example. Totally regressive.

Short term we need un-mothball the gas there is, deploy new CCGT gas ASAP, fuelled with imports while shale gas is extracted as a national priority using the safe proven technologies we already use in the 200 or so wells in the UK, and many more worldwide.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing less, because its measures are not designed to do what it claims for them. Capable Nuclear's developments of the inevitable energy source for those wishing to remain developed at the end of fossil have been inhibited by "not nuclear" Grün driven energy laws from the EU. Anti fossil propaganda has been used to prefer the incapable prescriptions of EU policy and oppose "fossil" gas which is 50% decarbonising and zero pollution versus coal, an utterly different fuel we have 40 years of. Nuclear is all that will be left that is energetic and controllable enough to power developed nations when the one time gift of fossil has gone, for the likely future of the planet there will be only nuclear energy for us to control.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

We should negotiate for ourselves internationally and have our own voice, not a shared one. The EU does not represent the UK, as our MPs don't represent the voters, they represent themselves and their party and require eternal vigilance to keep vaguely honest. None of the people who wrote the EC energy directives were overtly competent in energy delivery technology and economics on the obvious and inevitable technical and fiscal consequences of their measures, other than how to promote what is most costly, least efficient and inhibits decarbonisation.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

I am a former Radiation protection scientist of 12 years experience, NPL, RPS, NRPB. It is clear the protection regimes were set far too low based on the lack of information in those times and there IS a safe Threshold which has been clearly demonstrated by the science, for example people in SW France live in a background radiation of 80mSv pa, 4 times the level still used to justify draconian and unnecessary evacuations which kill many more people than the radiation is ever likely to. We evolved on a naturally radioactive planet, eat radioactive food and are bathed in radiation from Rocks, Cosmic Rays, the food we eat and our medical diagnostics, we have evolved in a radioactive environment and have immune

systems which can deal with moderate levels, as a comparison would be S the UV in sunlight. Safe and protective reactions to moderate levels, perhaps hormetic, dangerous at higher levels. We have harnessed fire and electricity which are both far more dangerous killers, we treat them with respect and protect from them, sensibly. .No radiation related deaths expected at Fukushima, as the levels are not near the threshold for later cancer damage, but over 1,000 killed by needless evacuations. Radiobiologist Oxford Prof Wade Allison's work refers, his book "Radiation and Reason" is worth reading, his short papers on his site are an intro.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

If we migrate to all you can eat sustainable nuclear generation through gas we will decarbonise fastest and cheapest. No subsidies required. With Alternatives and Renewable prescriptions we cannot, on the physics. These are woefully inadequate energy sources to power a developed economy at the 2-3 times level of electrical energy required then, say 1,000 TWh/1 PWh, so capable nuclear is the only base load option, zero carbon so all the weak and uncontrollably variable generation is pointlessly obsolete. The challenge is educating the public to the facts on nuclear, whose current generation technology is the safest form of electrical energy generation mankind has on the internationally accepted data, ideally suited to the grid distribution system of a developed economy, which when fossil has gone cannot survive as a developed economy or compete with its nuclear powered competition in Asia and Russia without nuclear power. We will have energy poverty in every respect if we rely on only the agrarian economy energy sources we had prior to the industrial revolution, which can only exist on the grid now by being parasitic on its gas host that provides 75% of the combinations output and is always there so the wind energy can push it off into spinning reserve at 2 or 3 times the price, in fact not alternative at all. "Renewables" we had to switch to coal burning for energy as the Forests were disappearing at the levels of use in 1800 BTW. 1850 in the USA.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Essential for over democratised 1st World. Anything is possible when you understand nothing. The politician's problem with energy law. Most of the developing world is going nuclear as fast as is practical as government strategy, mostly in countries where they can just do things and their leadership understands the technology basics, half the Chinese politburo have numerate first degrees, almost none of our soft degree PR men Ministers who are mainly qualified in arguing and what sounds best versus the hard realities of engineering delivery - China has nuclear as its core strategic energy source with Hydro as does France, and already has the world's largest build of multiple new nuclear plants based on proven US technologies, also Russian and French.

India, S.Korea, Vietnam, India, and Russia all know they must go nuclear end game over a century and this is where they plan to be, having exploited most of their fossil reserves to a level they wish to conserve what is left at.

The 1st Word is stalled by technological ignorance and uneducated fear promoted by arts graduate sensationalist media and a terribly biased and similarly arts graduate led DimbleBBC who don't even understand that if man made global warming is important it is not helped by wind farms that make CO2 emissions worse, versus burning fracked gas instead of coal, etc, etc., This irrational ill educated and unnecessary fear of the unknown is exploited by non nuclear energy suppliers, who in turn exploit the propaganda of the "don't like any sort of technology" Greenshirt Zealot hordes for their own profit. Big coal and gas in the USA is a classic example of this.

We need radiation effects to be properly explained, why reactors are so safe, and why there is no choice in the end, other than the grinding poverty of a return to manual labour, with electricity a privilege along with health care and education, etc. When fossil has gone, it's nuclear energy or back to the 3rd World future of inadequate windmills and watermills and perhaps a bit of solar. The return of the horse, etc. Totally avoidable if we build nuclear instead. All the regessively expensive alternatives and renewables will have been a massive waste of money decimating our best views and remote environments with their pathetically weak collectors destroying the lives of tens of thousands of affected people to no purpose except private profit, by law.

So Yup, telling people the truth in a concerted way at an international level would be good, actually it's essential.

It would give those who understand a relief from the embarrassment of UK Politicians lecturing foreigners on how to ensure decarbonised long term energy security, foreigners who actually understand the joined up economics and physics far better than UK politicians reciting their ideological dogma from dodgy officials or party central office, incapable of knowing the truth by their formation.

Dear Sir

I have little time so summarise what is now well documented below. I also attach a simple explanation of the massive deceit on the established facts of energy generation technologies and directly dependent costs that UK energy policy supports justified on bad EC law. I have also covered the points below with detailed evidence in three published submissions to the ECC Select `Committee, this evidence is also highly relevant and accessible through the links below, it also is more quantitative, although the below is self contained.

I wrote one reasonably well argued document for them last year, which is attached "New Energy Policy Required". Perhaps of all this best summarises the points with first level quantitative back up. The short term answer appears a picture at the end. It's called "Didcot B". My original one pager written at the request of my own MP is also attached.

•<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenergy/108/108vw25.htm>

•<http://www.publications.parliament.uk/pa/cm201213/cmselect/cmenergy/117/117vw02.htm>

•<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenergy/194/194vw70.htm>

1. IS THE EC COMPETENT TO PRESCRIBE ENERGY POLICY, and in particular the best way to reach its supposed policy objectives? I say clearly NO, on the simple facts and physics, unequivocally demonstrable.

SUMMARY RESPONSE: The EC Directives say we must decarbonise using their self anointed 100% or 200% subsidised "renewables", in technical fact green icons capturing weak variable energy sources that were inadequate to power the industrial revolution, but manufactured by continental European lobbyists. These reduce emissions very little while relying on exploiting our gas generation inefficiently to host their regressive modalities on the UK grid, versus the better alternative of using unsubsidised shale gas and later 100% sustainable and secure nuclear on the existing grid to replace coal directly. No subsidy required. This is massively MORE decarbonising, as attached. The EC want us to set ambitious targets to build more of their inadequately regressive prescriptions that makes security, decarbonisation, cost, sustainability and adequacy all worse, presumably to sell us more of what makes things worse (the French are totally hypocritical at 80% nuclear, 20% hydro and token whatever else).

This is utterly incompetent, as well as a deliberate deceit on the clear technical and economic facts. These are the consequences of an unaccountable EC Bureaucracy trying to legislate the laws of physics while exploiting ideology for profit at our expense. We should stop it, it's utterly incompetent and regressive on every measure of its own justification.

Some points and details arising.

2. INTERCONNECT : The latest and daftest fad. The money can be better spent building highly decarbonising gas or nuclear generation we control inside the UK. While beginning to acknowledge the laws of energy physics, Ed Davey also says European Interconnect is the answer. But he is a politician. Maybe it's OK on the continental land mass to save the EC from its own self inflicted mess, but relatively cheap and serviceable overhead power lines can't cross the channel, we don't need to include ourselves into the same over renewed mess Germany is getting the EC grid into anyway, and should actively avoid it at any

significant level of dependency to best ensure our energy security and future as a developed Island economy.

Cable interconnect under the sea is risky and limited in capacity, as well as insecure and inaccessible, and may not be there to offer energy security when needed, given it can fail in hard to repair places, as happened recently, as has a gas pipeline. OK as gap filler but avoidable and obviously wrong for substantive UK energy supply.

500KV cables carrying 1000 Amps under the salty aggressive sea make ABB a lot of money, *nearly as much as simply building a capable CCGT power station, on our grid at half the CO2 of coal*, burning our shale gas by the time it's running - just to plug into the EC's grid.

Efficient overhead high voltage interconnectivity may be OK on the continent - so French nuclear can power the rest when the sun don't shine and the wind don't blow - but already the Poles and Czechs are planning to close their grid to German dumping of unwanted renewable energy when not needed in Germany - for which they get paid Billions in subsidies by law, of course, while disrupting grid balancing. Do we want to be buying over subsidised inefficiently generated EC electrical energy over an expensive interconnect when we can decarbonise faster generating the energy from gas or nuclear we control in the UK? If so, why?

e.g. The Norwegians can buy unwanted wind energy from the Danes, store it in there limitless hydro facilities and sell it back at a much higher price when it's actually needed when the wind isn't blowing and the Danes don't have enough base load generation to meet demand, why Danish Wind powered energy prices are the highest in Europe. Simply self imposed, self harming, Vestas lobbied politically empowered stupidity by EC Directives.

BTW (By the way) in the end they all seem to depend on Polish lignite fired fossil power on the overhead grid, the dirtiest of all, for solid back up. And Russian gas.

NB: German Solar Output and sources, not there at night, mostly in Bavaria, way down South: <http://www.sma.de/en/company/pv-electricity-produced-in-germany.html>

More incompetent, insecure, expensive, unsustainable, carbon neutral or worse EC energy policy. An interwoven web open to collapse through complex interdependencies.

These are the consequences of an unaccountable EC Bureaucracy trying to legislate the laws of physics while exploiting ideology for profit.

Utterly incompetent and regressive on every measure of its own justification. We should stop it. There are much better ways to do what is wanted.

3. THERE ARE MUCH BETTER WAYS TO DELIVER ALL OF THE OVERT SHORT TERM OBJECTIVES OF ENERGY POLICY UNSUBSIDISED: I attach a one page example of a clearly better approach to maximising all the objectives of UK Energy Policy, without any renewables or alternatives, on the simple facts, as originally sent to Michael Fallon, also

Nigel Farage (because UKIP understand the basics and have real generating engineers as active party members).

It enumerates simply, from DECC figures, how unsubsidised gas replacing coal on existing grid connected coal fired sites, is by far the cheapest and quickly deployable solution to the problem of CO2 emissions, compared to expensively subsidised wind offsetting gas. 75% of our CO2 emissions halved, Just like that. Also new CCGT on old cleared coal fired sites that are still grid connected and vacant can take a lot more clean CCGT capacity per unit land area.

That's a real Pathway versus David MacKay's uncosted and consequence free models. We should be maxing out gas and nuclear investment until we can't do any more, on simple capital rationing ROI. Economics 101. What costs the most and is least efficient should come last, not first. Both gas and nuclear best maximise every criteria of energy policy while being totally secure, nuclear is totally alternative to fossil and can be 100% renewable. None of the EC's inadequate fossil dependent prescriptions are alternative or renewable to fossil base load supply, in substantive practical fact.

EC Energy Directives must make the objectives they are supposed to improve worse, on the proven costed physics. Except lobbyist's profits. Incompetent.

Obviously we have to bootstrap gas with imports from the US et al until we get the Bowland field's "40 Years of Gas" flowing. "Frack baby Frack" has to be a **UK** priority, well done Dave, its well proven and safe technology and FAR below water tables - as long as its properly regulated and conducted using the proven technology and experience available, as it has been in the UK for decades already. Also invisible once drilled and connected. CCGT gas can be much less environmentally damaging with its low profile closed circuit cooling arrays replacing cooling towers, and steam only emissions requiring much less dispersal = stack height.

4. AFTER FOSSIL ONLY NUCLEAR ENERGY IS INTENSE AND CONTROLLABLE

ENOUGH TO POWER OUR GRID: Equally important is using the time Shale Gas buys the UK to get a sensible market price for building solid proven nuclear, as the Treasury just failed to do, buying an overpriced French pig in a poke AREVA experiment in the knowledge of much more competitively priced and proven nuclear generation sold elsewhere. EDF had choices - that weren't French. Mrs T would handbag Osborne unconscious for that, maybe even the Alligator tank. Proven PWR trumps over complicated French Fils d'AGR every time. Ask the Chinese. Old lessons that have still not been learnt by politicians and academic advisors, neither have the necessary formation in the real world of cost effective delivery on the ground, so are not competent. Sorry academics, but its true! A fortiore Brussels bureaucrats. Technically incompetent on the clear facts of generation, and controlled by ideology and lobbyists in their ignorance. In - competent, on the facts.

Nuclear is obviously the **only** adequately intense and controllable energy source available for electrical generation we can control after fossil, saving massive hydro we can't have, and nuclear will need to replace remaining coal and newer gas on the grid before the shale has

gone. Alternatives and renewables depend almost entirely on fossil for backup and subsidy, and are insecurely obsolete without 100% duplicative fossil on the grid. Neither alternative nor sustainable, never mind decarbonising. Simple physics, and EC incompetence.

5. THE MONEY:

Nuclear Cost: IEA benchmark price appears to be around \$4.5B per GW in developed countries, \$3B 'ish in LDCs with fewer lawyers and democracy, energy cost about \$100 per MWh. Other figures welcome with citation, IEA is easy to find on Google.

The UK Treasury has reportedly "negotiated" the supply of Crinkley Point's 3.2GW at \$7B per GW and \$150/MWh, a great success. **Such** negotiating skills. We can do better, with a rational fact based plan replacing short term ideology and political convenience.

5.1 FISCAL SUPPORT: Loan guarantees are good and progressive, State guarantees the massive CAPEX risk, ROCs and strike price are bad and regressive, self evident. IMO.

Levelling the playing field upwards to overpay nuclear, as was just done, is anti-competitive. This is apparently designed to maintain expensive subsidy oxygen to help the regressive subsidised solutions survive when they would die in an efficient market that still met the objectives of policy. A regressive example of the strike price at work.

6. SUMMARY: To the key point, EC renewables Directives by the physics of their energy sources can only deliver rationed, inadequate, uncontrollable and overpriced electrical energy that simply inhibits us from using our scarce capital to build gas and nuclear fuelled generation that can massively reduce ALL emissions and best deliver all the other supposed objectives of policy -secure, adequate (in fact abundant),decarbonising, affordable, sustainable electrical energy. EC Directives do the opposite. Not competent.

In simple fact the prescriptions of EC directives are almost entirely regressive anti-nuclear Grün coalition ideology from Germany, exploited by regressive law for the political convenience of Germany and easy profit by EC energy lobbyists , that deliver **none** of the claimed benefits of EC Directives to UK energy users on the clear facts, only profit to landowners and lobbyists. EC energy directives make emissions and every other measure of policy worse for every pound we spend on them versus simply replacing unsubsidised coal with unsubsidised gas and nuclear, then building new nuclear on a much fattened grid to meet the 2 then 3 times electrical demand that the end of fossil will bring - for transport, heating and synthetic fuels, etc.

7. CONCLUSION: We should repatriate the competence to decide on the energy policy that best optimises the claimed objectives for our Island UK's energy economy, for the benefit of the mass of people of the UK. Also give it to competent people to implement, well qualified in the actual delivery of energy supplies, minimising political ideology and lobbyist influence. All of this area is inevitably regressive in our corrupt and PR versus fact led political system, so

awash with charlatans seeking to exploit political issues through unprincipled politicians like Huhne, Yeo and Hendry and their advisors - for easy profit at bill payers expense.

We should create our own approach to maximising decarbonisation, and the other more important in fact energy policy objectives, in particular survival as a developed economy which was built on and totally depends on adequate, affordable, sustainable energy supply for its continuity. We should implement this policy rigorously, respecting the established physics and economics of energy generation, versus the demonstrably fraudulent and regressive EC ideology legislated for lobbyist profit, and the political and economic convenience of Germany and Denmark in particular.

We should cancel all subsidies for demonstrably incapable EC political prescriptions, cut the Newspeak of Alternatives and Renewables that substantively are neither, and start telling the generators to mothball the gas fired power stations, build out CCGT as fast as possible, frack that gas, build CCGT ASAP, and get serious about reducing energy prices as gas prices fall, also building proven affordable nuclear for the longer term wherever possible. No more AREVAtech until its proven. Prefer what actually works on the facts.

While ensuring a viable future energy economy in this way, we will also maximise our reduction of our 2% of man made CO₂ emissions from combustion. Sadly no one will know, or care.

I would be happy to clarify and support any of the above as and where necessary with the relevant physics using official well respected DECC and other agency data. As well as the document for Michael Fallon and others I also attach a clip of a slide from my presentation on the legalised deceits of Energy Policy on physical and economic fact which is available in full at this URL.

<https://dl.dropboxusercontent.com/u/1976309/U3A%20Energy%20Presentation.ppt>

I have summarised this for some members of the ECC Select Committee and others I communicate with as per the list attached. I can present it to the DECC, if it can drop religious belief long enough to listen to fact based reason, science fact over science fiction.

Brian Catt CEng, CPhys, MBA, MCIM

A Simple Plan to Maximise CO₂ Emissions Reduction and Guarantee UK Lowest Cost, Sustainable, Adequate, Affordable Electrical Energy Supply

1. Subsidies are justified by CO₂ reductions to save us from climate disaster.

So what is the best way to reduce CO₂ emissions from generation on the facts?

2. Facts: In 2012 150TWh of UK electricity supply was coal fired and 100TWh gas fired (DECC), that's 3/2 in energy and 6/2 in CO₂ emissions, coal/gas. Because gas emits half the CO₂ of coal per unit electrical energy, that's 75% of our electrical generation CO₂

emissions from coal, 25% from gas.

NB: I discounted oddball "renewables" and EfW that policy claims produces different green CO2 molecules that trees apparently absorb differently from more efficiently produced brown CO2 molecules from cheaper gas burning.

3. So, if we simply use gas to replace coal on existing grid connected sites as at DIDCOT B we can reduce total 2012 CO2 generation emissions up to 37%, with no subsidy required, 50% greater thermal efficiency, and no extension of the grid.

NB: grid *capacity* increases are essential, a self-styled smart grid is not. A truly smart grid will continue the real time matching of demand with the cheapest and least emissive supply possible from gas, coal and nuclear. Technology that rations inadequate expensive alternatives and expensively stores already over expensive electrical energy from weak sources we didn't need to generate to start with is avoidably Dumb.

4. The "Alternative": If we use cheap gas to host wind farm's expensive subsidy habit the most they can "offset" is about 6% of emissions, 25% of the 25% of emissions on average, if wind could actually supply 12.5GW's of steady power at max rating (12,500 1MW wind mills, a 55x55 Mile array at 1/2mile spacing.

That's less than 6% CO2 reduction at most, after accounting for spinning reserve.

This "offset" is at double or treble the wholesale price, which adds around £2B pa in needless energy poverty from subsidies, while pointlessly vandalising the countryside.

6. Obsolescence: Alternative's weak and intermittent output is almost useless on a developed economy's real time grid when its fossil host has gone. Pointless eco junk.

7. A Plan: We have 40 years of shale gas to power our get out of jail card. Lets not waste it to profit foreign capitalists and offset general taxation, as with North Sea gas.

Wasting one penny on masses of inefficient and uneconomic wind power/alternatives required to "offset" a bit of gas is pointless on every energy policy measure.

We should build a ring fenced energy fund from shale gas taxes to guarantee an adequate electrical energy future is up and running from affordable and proven nuclear by the time our highly decarbonising, clean secure and affordable gas has gone, as Norway has built its sovereign reserve. China is doing all the work with a massive nuclear build of multiple technologies, based mainly on US experience, the best in the world and still 20% of US generation, being renewed. It's the chosen Chinese strategic end game, along with Hydro. They wannabe like France already is. The rest is short term, massive investment in coal fired generation, the wind is token (and useful off grid). etc.

To: Kwasi Kwarteng, MP Thursday, 19 July 2012 From: Brian RL Catt CEng, CPhys, MBA

The Key Facts on Wind Power V2

This summarises the requested physical and economic realities of wind farms, and other real time solar derived “alternatives”, all fundamentally inadequate in varying degrees, PV, Wave, etc.. FUNDAMENTALS: Energy use is 1:1 linked to GDP. If direct fossil use declines electricity supply must increase 2-3 times - to heat, cook, charge cars, synthesise fuels. Even the DECC says 2x. A few % of conservation is largely irrelevant in the end of fossil 2 or 3 times scenario. Our continued prosperity demands a true alternative to fossil powered generation that can replace intense fossil energy and is adequate, cheap, sustainable and ideally zero carbon. Wind Power isn't. Because:

Its Inadequate: Wind is a weak energy source offering unpredictable rationed energy

There isn't enough energy in real time solar derived sources such as wind and direct solar to power a developed economy. *Wind turbines are uncontrollably variable. Their output varies with the cube of wind speed. Mostly very little then unusable massive peaks making up their “average”. That's why we dumped them, and much better water mills, for intense and controllable coal power, to achieve developed status before the rest of the World and build an Empire - on plentiful, cheap energy - what our competition are now doing fossil intensively, while investing heavily in nuclear.*

Its Expensive: Too much expensive kit and connection in remote places

Because it's weak and remote, it must have lots of expensive collectors and infrastructure so costs 2-3 times current costs of nuclear, coal and gas to collect. Subsidies can't change these factors.

It Won't Get Cheaper: ROCs are 50 or 66% of the price to grid, fixed when commissioned

Wind generation costs 2-3 Times established fossil, nuclear and hydro power per kWh. Grid price is mainly from a surcharge fixed for 25 years by law. ROCs are unlikely to reduce in value.

It's Not Zero Carbon and Prolongs Fossil Emissions:

Alternatives require almost 100% hot idle fossil back, so together double up capacity and prolong fossil plant and its emissions for 20+ years, versus truly independent and zero carbon alternatives.

It's Not Sustainable: Without fossil backup wind farms are unusable. Obsolete w/o fossil.

It Doesn't fit on the Grid: The Grid balances intense controllable supply with demand

It can't handle aggregating multiple, remote sources of weak unpredictable energy. 10% maximum. The grid needs trebling in place just to meet future needs with intense sources, not expensive modifications to ration weak alternative's shortfalls. Storage on the grid doesn't make more energy, it spreads very expensive energy around even more expensively. An avoidably dumb grid.

It Isn't Alternative:

Alternatives are inadequate, expensive and obsolete w/o fossil backup - and prolong fossil use. Not alternative to fossil, and waste every £ spent on them in preference to gas and nuclear.

It's an Irresponsible Legalised Fraud:

Bad law ignoring the basic physics and economics is channelling scarce disposable income to generators, to no benefit to bill payers whilst increasingly jeopardising our economy. We can replace our entire fossil generation with nuclear and new gas at no premium and meet carbon targets fastest with new laws, saving the c.£100B we will waste to meet 2020 20% with wind. Legislaing inadequate sources to power current and future 2-3 times increased electrical energy demand is mad. We need more intense reliable sources at the grid's core, not less at the edges.

Example:

- Current unsubsidised base load electricity costs the grid £45/MWh, so £16 Billion for 350TWh pa
- Doubling* this to do 80% with wind would add £16B pa for 20 years, £320B wasted by law.

*Prices would >double with the expected mix of on and offshore wind at current subsidy levels to meet 80% plans. This would also require our entire 50GW of fossil to be maintained as backup. Madly undeliverable.

Sandra Browne

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The EU initiatives to reduce carbon emissions and move our energy providers towards renewable energy sources are helpful in addressing the general threat of the destabilised climate which will result from man-made climate change. They must therefore be of benefit to us all in whatever sector we operate in.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

It is certainly proportionate in addressing the real risks the country faces. There is a compelling argument to say that the legislation is not strong enough.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Since climate change has no regard to national boundaries, and since carbon emissions are not restricted to frontiers, all our interests will be served better if effective action is taken at EU level.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

See answer to 3a. Any action taken at whatever level must serve us well.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

As much as possible and practicable must be done by the EU through its existing legislative and regulatory framework to address the risks which are now acknowledged.

Generally speaking it is much more effective to change behaviour by positive incentives, so these should be introduced wherever possible.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Insufficient information/knowledge to respond to this question.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

See above

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Exploitation of shale gas will have negative environmental consequences, and will still be contributing to carbon emissions. The UK has unequalled wind power and tidal power. These resources should be developed urgently.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Insufficient information to answer this save to say that the EU should be doing everything possible to encourage sustainability.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Big voices are always likely to be heard better. The converse is to say that those countries and their lobbying groups who have a vested interest in not advancing measures to address climate change internationally will be happy to divide and rule unless we speak as one voice.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Insufficient information to answer this.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Insufficient knowledge to answer this.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

See above

Steve Browning

Thanks you for the opportunity to contribute to this discussion.

I spent many years in Generation and System Operations with over 20 years on the application of computer modelling techniques to generation scheduling; the difficult 'Mixed Integer-Linear' problem of 'fitting' Generation exactly into the demand curve to give the lowest cost solution.

Obviously we use @330TWh of Electricity and about twice that amount in primary energy to provide Heat, in a year. What we need is more efficient integrated production of both types of energy, together with affordable improvements to our building stock.

With proper co-ordination and control, CCHP plant with thermal storage can also participate in buffering variable and part unpredictable renewables. This is more feasible than the Big Nuclear, Big Wind and some CCS Coal/Gas strategy which may not be operationally viable. Unfortunately the studies to investigate the 2030/2050 position were fundamentally flawed (my specialist area). As I said 10 years ago, Big Wind needs Big Storage by direct or indirect means. Thus please see the strategy below as regards the more effective use of our existing massive Gas system (with its giant Internal and External storage) and production of methane.

Combined Heat and Power is not as popular in the UK as in colder countries. Note that the Danes installed large heat stores and are now realising that they need to integrate the operation of their embedded CHP and Wind with the rest of the Electrical system (Cell Controller Pilot Project and EU FP7 Ecogrid project <http://www.eu-ecogrid.net/>). Otherwise they end up with expensively generated electricity being sold cheap and getting charged high prices for short notice imports, in Nordpool. I think the Germans are experiencing the same issues with both Traded and Unscheduled Interconnection flows.

CHP in the UK is hampered by the Contract pricing mechanisms. Flat rate Electricity purchase/import prices cannot give an adequate spark spread (Elec vs Gas) to justify C(C)HP. However, as I said 10 years ago, if the developers and customers for CHP could actually handle time banded Electricity prices and use Thermal Storage (mature technology) to influence times of operation to maximise earnings and reduce payments. Simple time banding, with rates declared up front (Peak/Plateau/Trough, different Weekday/Weekend, changing Summer to Winter) could be handled as all premises with large building, neighbourhood, community or district CHP systems are/would be half hour metered anyway. Thus this more efficient mechanism to produce Power and Heat (and Cooling) can be encouraged.

Incentive payments for Generation from Renewables (just ROCs as FITs do not apply to half hourly metered premises) should also be time banded. The problem with time banding the relevant major tariff elements (Energy Purchase and profit, Transmission, Distribution and Balancing Use of System) may be the flexibility of the supplier billing systems.

As regards Gas, I am trying to help the group promoting the deployment of the Slagging Gasifier mechanism originally developed by BG. The machine eats Coal, Biomass and Trash and produces Syngas (Hydrogen) and then Methane. It has also the potential for Simple CCS at a fraction of the energy consumption of Power station post combustion capture.

The project got up to a full Production size facility but was cancelled in 1992 due to low (as it proved temporary) gas prices as against our drop mined Coal prices. The German version

got 'down' to 20% Coal input and was allowed to process notifiable wastes within the slagging mechanism.

With clever siting of installations, using old Power Station sites near to cities (as has been done with CCGTs) to limit movement of trash and with Import Transport links (sea) these part Carbon neutral part negative price fuel processing system would enable best use of our existing massive gas infrastructure. With onsite generation on the Syngas line and waste heat being usable by the local city (inc storage and time banded pricing), we have an efficient way of reducing emissions and buffering variable wind without excessive expenditure. The gasifier sites could also host wind buffering electrolyzers and incorporate the Hydrogen produced within the process cycle. Together with the in-feed from Shale and the better use of gas by CCHP we should be able to reduce our emissions impact and improve Energy security at a reasonable price. There is also a massive export potential with the Chinese trying to 'clean up' their huge 3bntpa Coal burn.

Coal is cheap, even though the world consumption at 6bntpa is about to overtake oil on an equivalent energy basis. We aren't going to get the world off Coal in a hurry so we need to promote better use of the fuel, and fast.

At the DG conference two years ago I noted that Distribution was going to have to get smarter and the developers/customers would need to be able to participate (albeit simply and automatically) in operations, both at Distribution level and, by aggregation, to the System operator. At last week's ENA DG event I see that that is happening. However, the time banding approach also needs to be applied, especially ROCs which are a blunt instrument in the sharpest Industry, which will indirectly enable more connection capability within distribution and transmission by rewarding running at high demand periods to compensate for curtailment at low demand periods.

My own analysis of Electricity Operations through to Future strategy is in my Future Power Systems documents, accessible via the trail from www.eleceffic.com. The salient points at the end of FPS 21 (the Smart Customer) are relevant to this argument.

In the long run we need to get off fossil, but that will need a breakthrough in Electricity Storage. I do have the papers on a rather 'dangerous' invention which can store vast amounts of charge!! But it needs 'taming'.

Tessa Burrington

1. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Please see general view points in supporting documents.

Scientists for Global Responsibility website article:

<http://www.sgr.org.uk/resources/fossil-fuels-more-we-can-safely-burn>

<http://www.foodandwaterwatch.org/water/fracking/>

<http://energydemocracyinitiative.org/transnational-institute-releases-report-on-fracking/>

<http://www.wdm.org.uk/climate-change/another-energy-future-possible>

http://www.tni.org/sites/www.tni.org/files/download/brave_new_atlantic_partnership.pdf

http://www.tni.org/sites/www.tni.org/files/download/executive_summary_clear.pdf

<http://corporateeurope.org/climate-and-energy/2013/04/eu-ets-myth-busting-why-it-can-t-be-reformed-and-shouldn-t-be-replicated>

<http://corporateeurope.org/climate-and-energy/2013/04/eu-ets-myth-busting-why-it-can-t-be-reformed-and-shouldn-t-be-replicated><http://corporateeurope.org/climate-and-energy/2013/04/eu-ets-myth-busting-why-it-can-t-be-reformed-and-shouldn-t-be-replicated>

http://www.iatp.org/files/2013_08_14_SustainabilityStandards.pdf

2. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? The following publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of The Corner House and can in no way be taken to reflect the views of the European Union.

<http://www.thecornerhouse.org.uk/resource/energy-security-whom-what>

I hope to provide details of community energy projects in due course.

3. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

General viewpoints:

http://www.i-sis.org.uk/UK_Governments_Great_Nuclear_Blunder.php

<http://www.ianfairlie.org/news/leukemias-near-nuclear-power-stations-new-study-by-bithell-et-al-september-2013/>

4. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Please see other answers.

<http://www.biofuelwatch.org.uk/>

World Development Movement

The UK finance sector is bankrolling climate change. Banks, pension funds and other finance companies are funding dirty energy projects that are destroying people's lives and pushing the planet to the brink of catastrophe. Yet millions of people have no access to electricity.

Across the world, people are resisting dirty fossil fuel projects affecting their communities, and looking for better ways to ensure people have access to energy. - See more at: <http://www.wdm.org.uk/carbon-capital#>

....The third powerful myth is that large-scale land deals are necessary to deal with scarcity – first food-scarcity and then oil-scarcity - which exploits environmental protection concerns in the context of climate change. Advocates stressed the need to develop alternative non-fossil fuel-derived, renewable energy sources that could overcome the problem of 'peak oil' to achieve higher levels of energy security, while still, at the same time, combat climate change through 'greener' fuels.

But both of these scarcity arguments oversimplify complex realities. They conveniently reduce the problem to mere supply, in order to make the 'solution' of increasing production through investment in unsustainable methods seem more acceptable. 'Food-scarcity' arguments in favour of large-scale land grabs fail under close examination. They fail to acknowledge that there is already more than enough food in the system to feed everyone, and that food security is undermined by costs, loss of harvests, waste and the diversion of land to production of non-food industrial products, such as feed and fuel (agrofuel), fibre, flowers and 'forests' – e.g., industrial tree plantations for pulp, timber, woodchips and rubber.

'Oil-scarcity' arguments likewise fail on two counts. First, they do not acknowledge serious inefficiencies in how the world's finite supply of fossil fuel is currently being used – such as a huge and growing global commercial transport sector that moves industrial food and non-food products over long distances across the globe. Second, they ignore the fact that industrial agriculture and industrial livestock production are major emitters of key greenhouse gases (carbon dioxide, nitrous oxide, and methane).....

<http://www.tni.org/primer/global-land-grab>

<http://www.thecornerhouse.org.uk/resources/results/taxonomy%3A22%2C53>

<http://www.redd-monitor.org/2013/04/25/oilwatch-california-dont-let-shell-roast-the-planet/#more-13796>

<http://www.redd-monitor.org/2013/09/10/hot-air-and-carbon-crooks-the-reality-of-carbon-trading/#more-14337>

<http://www.resilience.org/stories/2013-03-20/iraq-war-and-its-aftermath-failed-to-stop-the-beginning-of-peak-oil-in-2005>

http://www.grain.org/bulletin_board/entries/4842-agroecology-cools-down-the-earth

<http://www.iatp.org/issue/energy>

Trade Deals

During its financial crisis, and in response to public anger over rocketing charges, Argentina imposed a freeze on people's energy and water bills (does this sound familiar?). It was sued by the international utility companies whose vast bills had prompted the government to act. For this and other such crimes, it has been forced to pay out over a billion dollars in compensation. In El Salvador, local communities managed at great cost (three campaigners were murdered) to persuade the government to refuse permission for a vast gold mine which threatened to contaminate their water supplies. A victory for democracy? Not for long, perhaps. The Canadian company which sought to dig the mine is now suing El Salvador for

\$315m – for the loss of its anticipated future profits.....

<http://www.theguardian.com/commentisfree/2013/nov/04/us-trade-deal-full-frontal-assault-on-democracy>

Jim Dignan

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

EU action has a very valid part to play in encouraging member states to take more effective action to combat climate change and could potentially play a very helpful role in discouraging or preventing the dirtiest of fossil fuels e.g. the Canadian tar sands. Hopefully the same might also be true of fracking but it is too early to say whether EU action might help to forestall this particular threat to the already escalating climate catastrophe.

However, EU action to promote greater use of biofuels has on balance had an adverse effect since it has encouraged the growth of crops for fuel at the expense of food crops in some parts of the world.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The EU needs to take more effective action than it has so far to reduce the use of fossil fuels and to ban the use or exploitation of the most damaging fuels including tar sands and gas from fracking.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

The UK's interests might be served better if action were to be taken at EU level with regard to the importation of the most damaging forms of fossil fuels such as oil and gas derived from Canadian tar sands.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

At one time it looked as if the UK's interests in decarbonising the economy might be marginally better served by action taken at the national level in the areas of setting targets for the reduction of carbon emissions and legislating to secure their implementation. However, recent decisions taken by the UK government and, particularly the Treasury, with regard to the reduction of taxes on fracking activities and the threat of further back-sliding on its environmental commitments by the Conservative party suggests that the UK's interests might in future be better served if action in these areas were to be taken at EU level. However, much depends on the outcome of next year's EU elections since these are extremely worrying times for those who still hope - against the odds - for politicians to take effective action to combat the greatest threat to its survival that the human population currently faces.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

It would be extremely helpful if proposals relating to energy production and consumption could be presented for comment to leading climate scientists and

institutions for an assessment of their adequacy in combatting the challenge posed by climate change before they are developed and presented for approval.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The development of the internal UK energy market in many respects has been disastrous since it has resulted in a handful of cartels that exploit consumers by charging excessive prices for energy and advance the interests of shareholders at the expense of future generations who will suffer if effective action is not taken now to deal with runaway greenhouse gases. Further or deeper integration of EU energy markets would only be desirable if these could be made to operate strategically in reducing carbon emissions, encouraging reduced consumption and facilitating devolved production of renewable energy sources to reduce the stranglehold of monopoly privatised energy producers.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

EU measures have not been effective enough in discouraging the excessive use of fossil fuels. The only further measures needed in regard to the exploitation of unconventional sources such as shale gas are those that would prohibit them or, at the very least, make them subject to meaningful environmental impact assessments that take full account of the latest climate science.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing more to promote and encourage the development of renewable energy sources such as wind, hydro, tidal and solar while seeking to phase out the use of fossil fuel sources as soon as humanly possible. In the wake of the Fukushima disaster in Japan, the EU should also be following the lead of Germany and Italy which have decided to phase out this dangerous, costly and inefficient form of energy production.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

If the EU were to develop a coherent policy with regard to combatting climate change through the adoption of effective regulatory, legislative and fiscal initiatives, there could be a big advantage in allowing the EU to take on a greater role in representing a common European view in international meetings. In the absence of such a policy, however, it would not, sadly, be beneficial or disadvantageous for this to happen.

10. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

EU action under the Euratom Treaty does not go nearly far enough in reducing the risks to public safety that are inherent in the use of this highly dangerous and hugely costly form of energy.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The main challenges facing the transition to a low carbon economy and the meeting of climate change objectives (which are too modest by far) take the form of weak and self-interested politicians who show no concern for the future survival and well-being of their constituents and privatised utilities which primarily seek to protect the interests of their shareholders and bosses at the expense of consumers and ordinary citizens.

Roger Hawkins

1. There should be one or more nationalised producers and suppliers of electricity and gas to compete with the private energy companies.
2. If the EU involvement in the energy sector or the economy generally prohibits the existence of such companies , we should leave the EU.
3. We should leave the EU anyway.

Alex Kenny

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Not that I have discovered. However there is a far more efficient approach to energy production, distribution and end user connection in countries such as Denmark, Germany, Norway than here in the UK. Primarily because these countries are not weighed down with multiple layers of profit takers as the UK industry is.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Extremely proportionate but it is generally appreciated in the industry as a whole that the profit driven UK market is unable to integrate into the European one.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Adopt whole heartedly the European mind-set on the place of the energy producer in the general scheme of things.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Focus on how the Europeans do things and emulate these strategies.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Copy their methods to the letter!

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Definitely, we have to adopt the transparency and methodology that especially the Scandinavians and Germans are utilising.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development? Not disadvantaged at all, we need to learn from it and be guided by it. Simply put, it works.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Certain ring fencing may be required in the initial stages but once the resource is identified as viable then we adopt the European exploitation scenarios.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Not at all. We are lagging behind especially Germany in this regard.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

It would be extremely beneficial, we play to our strengths, the 380 Million Euro customers.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The French safety record is excellent, we need to learn, digest and copy their set up to the letter.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

We must decouple our links with Russian produced gas and later electrical supply. Europe has the combined resources to cater for all the future needs out to 2050.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

If we want to keep the lights on, we pay what it takes

J. McShane

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The targets set by the EU to reduce CO2 emissions will benefit the UK because they promote sustainability and make the UK less vulnerable to future changes/increases in the cost of resources.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

I think the legislation is proportionate. If we reduce the extent of the legislation, we will be more vulnerable in the future.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

The EU can analyse the requirements of agreements such as the Kyoto Protocol, then implement measures across the whole of the EU. If such measures were to be adopted by individual countries, they would be influenced by party politics.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

The UK government could work with the EU to determine which aspects of any agreements the EU enters into could be appropriate for the UK. It is important that all political parties and, more importantly, the electorate have a say in which aspects are accepted. This is to avoid party political bias.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

6. The EU simply needs to ensure that international obligations are met and the UK needs to work with that.

As an aside, it is very important that any materials and labour used to promote environmental sustainability are as local as possible. Across the EU, we are importing far too much from the Far East, which creates transportation pollution and puts people in the EU out of work. I would like to see more emphasis on the promotion of local products and local labour across all departments in the UK. Local authority procurement should set targets for local/UK products and local labour and the outcomes should be measured.

7. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

I don't believe that an internal market is necessary.

All UK energy should be provided by UK companies, which pay taxes in the UK. We should aim to import as little as possible, so UK renewables should be promoted.

The more we are reliant on foreign companies and foreign resources, the more vulnerable we are. The UK government also receives less tax and fewer people are employed in the UK.

8. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Any measures to increase security of supply and facilitate infrastructure development are simply making the UK less vulnerable. They make perfect sense.

9. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Shale gas is an abomination! It is very risky and can have a detrimental impact on water supplies. It will be useful to let other countries take the risk with shale gas. If it turns out to not be too problematic, then the UK can make use of shale gas with reduced risk. If problems develop, the UK would have nothing to worry about because it would have waited for an outcome. There is good reason that shale gas is extremely unpopular with the public!

Further measures are needed to explore renewable clean energy because this will reduce vulnerability. To mitigate any risk of renewables not providing enough energy, UK housing stock should also be upgraded using local labour and materials - this will promote employment, have a positive effect on local communities and increase income from taxation.

10. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing more to promote the manufacture of products within Europe that promote sustainable housing, transportation and energy. Setting EU carbon

reduction targets that encourage manufacturing outside of the EU is certainly counterproductive.

11. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

As long as all member countries agree, the EU can provide weight to any negotiations.

12. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

I don't know about this.

13. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The cost of resources is going to increase exponentially and there will be more conflict over resources. The UK/EU need to ensure that we are in a position whereby we don't need to import fuel.

14. What would be the costs and benefits of facing these at an international, EU, or national level?

For large scale projects, it would be useful to use larger companies from within the EU if UK companies cannot deliver. Under no circumstances should the UK be employing companies from outside the EU (this is in reference to George Osborne's desire to court Chinese investment).

Dr Chris Robbins

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Greatly.

Electricity prices.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Totally disproportionate as the legislation is aimed at an illusory problem that a) has not been proven

b) has still not been properly assessed.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

EU to leave it to individual members to assess their own situation in respect of:

- a) available resources
- b) demand and fluctuation
- c) balance of cost v 'engineering'

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Improved assessment of viabilities of alternatives

Prevention of 'ignorant' decision making by 3rd parties

Minimisation of undue 'pressure' from non-governmental bodies/companies.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

By ignoring it as it is based on totally unacceptable 'pseudo-science'.

NO DECISIONS should be taken at this time that cannot be readily reversed because there is insufficient justification for the current policies. HMG priority MUST be to ensure adequate economic energy availability now and for the near future; 'nice to haves' should be a secondary considerations (e.g. renewables).

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

There is no justification for the gross development of an internal energy market when it attracts rapidly increasing cost.

Further integration with EU markets will only go one way and that will not be UK favour, be assured!

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development? UK has been and continues to be very seriously disadvantaged by EU measures, particularly headed by France and Germany (neither of which recognises problems other than their own).

As EU expands, UK will be dragged into evermore spurious and irrational energy policies that will try to accommodate all member states, irrespective of economic circumstances.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Firstly, shale gas is NOT unconventional!!!

Windmills great for corn and small, isolated communities with low power demand. 60,000 windmills will create great employment for high risk work but sadly for little GWh reward.

EU measures have, sadly, encouraged UK development (or is that 'purchase'?) of wind turbine from....guess who! Whilst UK continues on this track, to the advantage of EU companies (but not UK), we will be supported. But, any attempt to diverge and take advantage of any indigenous resources (nuclear, gas, or non-EU imports) will be vigorously attacked. Germany is quite happy to develop lignin 'coals' (slightly better than peat!) but is aghast at us developing gas fields. UK should make its position quite clear and not debate the topic, just as Germany and France do!

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU measures have seriously helped development of renewables, to the exclusion of more important and valuable energy generators.

Fiddling while Rome freezes!

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

EU has already proven that it is 'incompetent' to speak on energy matters for no better reason than the continuing blind acceptance of unproven 'scientific opinion' and the variability in representing states. Therefore, EU should withdraw from this arena and allow individual states to voice their own individual circumstances and

concerns.

Neighbour agreements on energy exchanges may be subject to overview by EU but not interference.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Fortunately, this area is still largely within the province of competent personnel as it is 'too difficult' for mere politicians to understand, let alone get involved in. Therefore, EU 'action' is largely tempered by the presence within its ranks of knowledgeable personnel. This should ensure consistent and safe standards are maintained within all EU nuclear facilities.

Politicians keep out!

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

For UK, the main challenges for the future include:

- a) extraction of remnant N Sea resources, shale gas, nuclear etc i.e. to be as self-sufficient for as long as possible - tidal energy not wind?
- b) extracting ourselves from the 'climate change' mindset

The implications of demand and prices are two edged swords. They will act to stimulate self-sufficiency in all the various energy forms.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

UK can have little influence on international costs, and only modest influence on EU. Therefore, all primary efforts should be directed towards national costs and benefits.

Mrs Carole Sims

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The EU has too much control and influence on what the UK Government can and cannot do, and dictates too much on what happens in the ~UK we are not part of the European Continent, we are a separate island nation ruled by an elected government and Queen

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Too much legislation on energy issues and most other things, including the shape and size of fruit etc which results in an enormous amount of waste when half the world is starving

3. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

EVERYTHING

4. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Yes by letting national/ regional government make the decisions together for the nation and not an aloof parliament that wastes money, time and introduces unnecessary regulations

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

NONE I pay more now for my energy like most people and businesses than ever before. Why are so many office lights and heating left on overnight and weekends and in empty buildings wasting the energy that is produced????

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
- In all ways

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

~they get involved too much

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
Hindered

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
It won't benefit the UK

10. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?
No Idea what that even ins so obviously a waste of time and more unwarranted bureaucracy

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?
If we wasted less on the street / building level we would have more energy to use for longer and not have to worry about the rising cost or global energy and less carbon would be produced as well therefore reducing carbon emissions etc

12 What would be the costs and benefits of facing these at an international, EU, or national level?

NONE at EU level it is a puppet department that just wastes national time, money that could and should be better spent on more important UK issues

Andrew Smith

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

It appears to give the excuse to put up retail prices for energy in the UK. Not so long ago the energy suppliers were stating that gas and electricity were being aligned with the cost of Oil. Now that the cost of Oil is decreasing, the reason for increases in Gas and Electricity is being blamed on 'transport' 'green tax' rises and anything else they can think of. Next week it will probably go up because the CEO needs to change his socks..... Who actually believes the price rise is not about profit and 'Fat Cat' salaries.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

It seems that the EU cannot balance their books. So I believe we have people who not voted into power making decisions that they have no control over and have no idea what it means to poor 'Joe Public' as long as they get their overinflated salaries and 'gold plated' pensions.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

It will serve NO interest to the UK. It will just mean that UK citizens will pay even more for fuel..... for having the temerity to question anything the EU does.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

I'm all for national levels of agreements. Lets decide to open up more coal burning power stations. We have the technology to make the emissions so much less harmful than the old Coal Fired Power stations of the past.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

I'm not sure they have the intelligence for this. A good example of this is the 'Low Energy Light bulbs fiasco. Who in their right mind would ban a light bulb in preference to another so called low energy (higher manufacturing cost) option that cannot be disposed of safely.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

As most of the energy companies in the UK are owned by consortiums not based in the UK then we do not have an option but to pay higher prices.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
Again, there does not appear to be any benefit to the UK to have energy companies owned by non-UK companies to worry whether the 'lights stay on'. Short term profit seems to outweigh any long term benefit.
8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?
It appears that our main source of energy, Coal, has been totally disregarded and we have been made to look elsewhere for power. Even refineries are closing now..... We have to buy everything in. Not very good.
9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
Hindered everything in the UK to keep us as an independent nation (energy wise) as possible.
10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
Let them balance their books and get them passed by the auditors before any more legislation is passed.
11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?
The UK led the world on Nuclear power.....Now we have to look to others to develop our nuclear power stations.....Sad.
12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?
Prices will rise even further and those that cannot pay will not get energy.....
13. What would be the costs and benefits of facing these at an international, EU, or national level?
Until the EU gets its own budget under control, every citizen in Europe will have to pay more.....

LOCAL ENERGY INITIATIVES AND CONSULTANTS

Bristol Power Co-operative

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?
Our community energy initiative, Bristol Power Co-op was only formed after extensive research on renewables – focused mostly on Germany, initially around anaerobic digestion and then solar energy. This has included research trips, visits to the Hannover Energy Fair, and a Hannover-Bristol energy summit.

Why Germany – simply because they were well ahead of us and have at all times been practical and helpful. They have created their own renewable energy infrastructure while prices were still high, but this has given them prime-mover advantage, and a lead in renewable technologies.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?
The most significant factor in bootstrapping our own community energy initiative has been the Feed in Tariffs, which have guaranteed income and allowed us to source capital finance – even if not as easily as we'd have liked. As we grow in experience, efficiency and scale we expect to be able to transition to a viable business model that doesn't require FiTs, but the initial help has been crucial.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?
Our own analysis shows that solar could easily be the disruptive technology which changes everything. We see solar PV, preferably on rooftops, as increasingly viable, and are hugely surprised by the UK government's nuclear initiative. But we'd rather see the solar option win on the basis of common sense, better economics, reduced energy costs (as opposed to higher prices), resilience, longevity, flexibility and safety, than mandated by the EU. A dialogue and exploration and communication involving all parties works well...

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?
Some of the best results and most positive experiments are achieved by practical experimentation (as opposed to playing with policy) at the regional and local level. But this can often be best communicated from city to city by (for example) the Green Capital competition, and networking. In this case national policy and media can be enablers – or delayers. Smart grids for local energy balancing aren't yet well understood here, so we're still thinking about the national grid and nuclear, not local micro-generation and local smart grids.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how

feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

We should of course be looking at best practice in all areas and encouraging healthy competition and co-operation. What's happening is an energy revolution that is sufficiently complex that it has emergent, unanticipated properties. So it can't be driven by policy – so instead, policy should look to be as responsive as possible. New technology will enable a transition to local generation, networking and balancing, of renewables that cost less than energy manufactured on the industrial scale. This transition will take less than 15 years.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The step change from 70Mw of solar installed by 2010 to 100Mw installed at the end of 2011, was a pivotal catch-up, and growth to 1600Mw in 2012 shows geometric growth of 40-60%/year can be sustained, especially as costs fall and experience grows. We're still 10 or so years from the German point of wind+solar exceeding peak demand on many middays – but by the time we pass that point we'll need to really get to grips with what they are learning about storage, so the solar ecosystem provides low cost energy all year round.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The answer to the previous question anticipates this one. The great example and learning in Germany – which is after all no more blessed with sunshine than we are – increasingly shows that a low cost solar economy is possible. They are already well into converting spare electricity into gas for longer storage in the gas grid, and they are making some really great electric cars, as well as understanding smart grids. Just visit the Siemens Crystal in London to get the picture. It's a good thing we're co-operating with them, and not at war.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

It ought to be bloody obvious by now that measures like shale gas are at best short-term expedients, and at worst damaging to society, the economy and geology. Our best indigenous energy sources might be winds and tides, but already, and certainly ultimately, solar energy looks like the fastest and most efficient way to get to abundant cheap sustainable energy. The future is locally owned renewables. The old energy industry will have to somehow change or adapt – the option to stay in command, and to control won't last much longer.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The German example of shutting off the nuclear option is a bloody good one, taken by a chancellor who is also a physicist. Fusion is the better nuclear energy than fission, and the sun is already doing it, and en masse, at scale, and in sufficient

quantities for the energy needs of our entire solar system. All we have to do is pick up the energy wirelessly via the photovoltaic effect. Anything else would be pretty dumb. If Dave Cameron hasn't figured this out yet, then he is either dumber than we think, or DECC are advising him very badly. (Or lobbying from vested interests is way out of control).

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

In Bristol we are better represented by our own Mayor than by our national government, so I'd opt for more local options. The way we get international is that our Mayor is communicating our experiments in Bristol as a 'Laboratory for Change', and this will be showcased to the world in 2015 when Bristol is Green Capital. We don't need international agreements so much as to explore and share best practice with each other, and facilitate this emergent process.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The Nuclear Question, eh? Has no-one got it yet that brute-force-and-ignorance nuclear fission is not very high tech, not very sustainable, and not even very cheap, compared with the solar alternative. Never mind. JUST LOOK AT THE GEOMETRIC GROWTH OF SOLAR PV (c.f. Wikipedia on Photovoltaics) to see what the technology of choice for world energy will be by 2027. Let's put at least 50% of our energy and finance into developing the best candidate option, and stop wasting time and money on the nuclear option.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

A simple analysis (which I'm happy to share) suggests that 3.2 Gw/year of nuclear at Hinkley Point will cost £80Bn over 35 years at the agreed strike price, ensuring that we get very high priced electricity. The same £16Bn could put an equivalent amount of solar (24-30Gw) on 6 million roofs, and be paid for out of energy receipts of £20m – a quarter the price. The result? Electricity for half the price, not twice the price. As solar can grow 40%/year, rising demand is no problem, and it is emissions free, once the initial cost is paid off. QED.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Roughly the same. As long as every country / region / city / town has pretty much all its own micro generation capacity, we are sorted. No need for solar farms in the Sahara and the like, once solar is so cheap you smear it over every available roof-space, not just south facing. {Plus windows, building fascias, roadways and so on.

This kind of technology is all in the pipe, being developed in a huge international high-tech race. Governments should either help this or at least stop trying to preserve the energy market for the expired utilities.

Building Energy Solutions

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

EU action in the energy sector has been a benefit. It has helped promote energy efficiency, energy certification of buildings and more widely research programmes on low carbon built environment.

The Energy Performance of Buildings Directive was a positive step forward - unfortunately the UK government rolled back on Display Energy Certificates

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

As a leading expert in the energy efficient built environment I believe that EU legislation has been proportionate.

Unfortunately, UK implementation and policing has been poor.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

I would like to see more common standards for benchmarking energy performance of buildings and building energy certification being implemented right across Europe on a single common basis. This would promote energy efficiency comparisons across estates that are Europe wide and highlight countries that have poorly performing buildings.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Member states should take control of implementation and policing. i.e. The UK lags behind in policing the EPBD on the ground. Set common policy frameworks at EU level but supported by strong implementation at national level.

For example, levels of air conditioning inspection is woefully poor due to lack of policing.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The EU could provide the mechanism to highlight differences in energy performance between countries and to cross fertilise best practice to raise standards

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?
I don't support integration of MARKETS at all.
7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
No comment
8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?
No comment
9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
Generally the EU has played a positive part in promoting energy efficiency, low carbon approaches and renewables.
10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
I'm not convinced that the EU can provide a single international voice. Each government will have a different view. The EU should play a strong role in promoting and encouraging a low carbon economy but not in negotiating international agreements.
11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?
No comment
12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?
The UK needs to move to a low carbon economy through energy efficiency, renewables, CHP, District Heating. The UK carbon targets are continually looking harder to achieve. The EU should not impose this approach but should take the role of encouraging, supporting and promoting.
13. What would be the costs and benefits of facing these at an international, EU, or national level?

The UK should recognise that energy efficiency cuts costs and creates jobs faster than any supply side measures.

The changes that simple energy certification (DECs) can achieve are huge and highly cost effective compared to building new generation capacity. The job creation in refurbishing existing buildings for energy efficiency is huge.

David Ward

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?
The EPBD legislation is the reason we have a business
2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?
Proportionate
3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?
Active enforcement of the existing legislation in each member country
4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?
The UK government needs to actively enforce the legislation (as is effectively carried out in Northern Ireland) by ensuring local trading standards do their job properly. The government could also make enforcement part of OFSTED inspections a simple yes/no we have a valid Display Energy Certificate would be sufficient
5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?
EU legislation needs continuous review over a comparatively short time frame
6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?
As regards Energy Performance Certificates this has created some jobs but only for the hardy few prepared to discover a niche market. Often the sole benefactors have been the training companies. The Green Deal is massively over complicated and not fit for purpose. The government at an early stage were hijacked by all and sundry vested interests rather than target funding in a simple manner - you only have to look at the number of over-site bodies involved (more than 10) to realize this was never going to work.
7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?
Yes, production of shale gas must be exploited to the full potential. In this way the renewables tax administered by the energy companies which is being spectacularly misspent on blue sky or unproductive areas can be reduced.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? Energy efficiency and low carbon targets should not be treated as one. It is hard to believe the 2050 target will not be revised downwards and priority should go to energy efficiency and security.
9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
It is hard to see a co-ordinated European view being in line with the UK particularly with regards securing energy sources.
10. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?
Challenging, to ensure enough energy is supplied to the UK. Low carbon economy looks least priority. Nuclear power is a must, as is the development of shale gas - both of which will take 10 years to get going. I have little faith renewables will play a significant role until after this time and funding for developments has to be controlled carefully to avoid pouring money down the drain.

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Very much benefits both our sector and the UK in general through improved fuel security and driving energy innovation.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Proportionate but needs better enforcement throughout EU and UK. Climate Change legislation and in particular CO2 reduction legislation is vital.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Carbon emissions and interlinked energy markets with price transparency.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Local renewable energy and energy efficiency plans.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances? Faster movement and publication of enforcement actions with significant fines to ensure compliance!

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Benefits: More transparent pricing.

Disadvantages: increasing complexity and un-understandable (pardon the pun) technical wording.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Benefited. Stronger storage requirements and linking of markets with interconnectors.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Strong positive impact on developing local energy resources.

No further measures for shale gas or any other fossil fuels. Further focus on decarbonifying the energy mix.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? Helped. Including supporting initiatives such as www.EnergyELEPHANT.com
10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
Collective view much stronger when negotiating with Russia and other non-EU territories.
11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?
?
12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?
transition to a low carbon economy will bring huge opportunities for innovation and job creation and should be rapidly advanced.
13. What would be the costs and benefits of facing these at an international, EU, or national level?
EU level far stronger and allow for increased opportunities in overseas markets as well as non-EU markets with more specialised companies competing in niche areas.

Energy Geoscience

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Benefits:

- Access to EU research funding
- Access to EU knowledge base
- Limitations
- Lack of cohesion on long-term energy policy that takes into account new and innovative technologies such as CCS
- Lack of cohesion on implementation of policy that may act as a barrier to those who do implement policy (particularly emissions / waste)

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Introducing legislation? Possibly. Implementing these policies in a uniform and timely manner as not to disadvantage early adopters... debateable.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Climate change actions need to be transnational. Perhaps a n EU framework may make them more acceptable internationally as accord is a powerful tool. If considered as EU only actions then no.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

- CCS
- Pollution control
- Punitive taxation as a lever for action

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The EU has a tremendous knowledge asset, coupled with consensus within the EU on how to use it, and translate it to action, then EU actions would influence global policy. Unfortunately the EU is rarely in accord and rarely reaches consensus and the timescales (and costs) to leverage action are daunting.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development? In Carbon Storage, the UK has not been helped by decisions in the EU to curtail research and investment in industrial projects.

Having said that, the UK has a strong portfolio of projects for its own CCS programmes provide they are enacted.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

- The UK and EU need clear guidelines on the impacts on intergenerational equity regarding CCS, Shale Gas and nuclear.
- Reversals by Germany on nuclear power will retard consensus and formation of these guidelines.
- To engage public acceptance it is important that whatever economic and political block the UK is part of has consensus on these guidelines, regulations and how they are implemented.
- In the case of no consensus (which would be likely) then the UK would probably do better outside the EU.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? I think policies the EU level have generally been beneficial however application across the EU is uneven and this undermines any good work.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Until the EU can reach consensus and understanding on these issues very little real work can be achieved. New entrants such as Romania and Bulgaria need functioning infrastructure and enforceable regulation before the benefits of agreements can be achieved for all.

10. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

As a policy document I think it is very good, however public acceptance issues, especially agreement on Article 35 will be very hard to implement.

I see a lot of transferable knowledge and methodology from the Euratom Treaty that can be equally used to support shale gas exploitation and Carbon Storage.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

My personal concerns relate to long-term environmental monitoring for transition activities re. intergenerational equity and public acceptance.

I also see that the current distribution of externalities will geographically move closer to the user (re. shale gas) that in conjunction with rising prices will change UK energy user perceptions of the true social cost of energy regardless of its source.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

The costs would be high, possibly high enough to permanently change consumer energy use in the EU and OECD countries in general. This would have an impact on the revenue generation models currently used by energy providers and the concomitant tax revenue.

Benefits would depend on your perspective / epistemological position in society. Undeniably for the foreseeable future energy will cost more. Whether that enriches the poor of energy provider nations remains to be seen.

Local Renewable Energy Groups

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

All the world has to change from fossil fuel when possible and coal anyway. The process towards this is difficult to be totally renewable but the Government's action in FIT for renewables when they first start has been good and effective. It has caused business involvement, decrease in costs and decrease in FIT. Despite this there will be a period when renewables and zero carbon cannot be the supplier of all energy. During this period gas will be needed and nuclear will have to take over for a period. The UK depends on EU enforcement of certain policies throughout as otherwise each country will simply try to undercut the other. However certain heavy industries will require low energy prices as they compete internationally where the EU cannot enforce policies. The world is using the EU as guidance and it is a good idea.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The EU legislation seems proportionate and the UK's interpretation has been good. In fact the price for energy is too cheap to expect certain sections of the population to insulate their homes adequately or take out loans on the Green Deal at such a high interest rate. As such more complicated UK policies (e.g. house sale regulations, rented accommodation regulations) may be required and hoping that people do them for short term economy is not likely to win. This sort of policy may have to be in the UK rather than be derived from the EU.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

These are the factors that concern competition and potentially capital availability for renewable energy. The EU seems to act much slower than the UK Government can.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Areas where regulations for renting, selling or taking out mortgages may be required locally. This is because the UK has an old housing stock that has been mostly built in Victorian era and which requires large capital expenditure for insulation. Action taken internationally must involve competition for large industries to get power, at national levels must involve availability of low cost capital as part of the treasury. It may be required for national and regional decision to be taken to allow planning locally and avoid NIMBY problems. This may not be popular locally but nor were railways.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Guidance may be a good idea (green paper)

The value for the pound to modify the interpretation of the EU regulations.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The EU action has been excellent and the interpretations of the Government has been generally very good. Advantages: bringing in of FITs at just the right time, realising that the carbon release into the atmosphere may represent a problem and pushing this onto local Governments, which were largely ignoring it, funding large amounts of research, organising the export of information about how to go about specific changes. The disadvantage has been a UK Government tending to drag its feet rather than be more aggressive. The internal energy market seems to have done well and to have been formed at roughly the right time. It is very difficult to be sure when things are being done well but the low energy prices in the UK would suggest that it has been effective. It is, however very difficult for local energy producers to demand, and at a specific price the insertion of energy into the grid. This varies all over the UK and the UK Government simply allows local aspects of the sector to charge what they like!

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

It seems to have benefited:

1. Information, green papers, research
2. Demand for competition
3. Infrastructure has come about (wind turbines etc) that fit well into EU measures.

The only disadvantage that I can see is that heavy industries will tend to move abroad with high energy prices which are always compared with international prices.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

They seem to have done well.

The UK has amazing wind, and wave resources. Also it has an excellent grid with a good opportunity for a relatively low number of nuclear power stations. The gas supply is dropping locally and there is a large number of people that do not want fracking. However the EU does not seem to be preventing fracking.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU policies seem to have benefited local policies if only in getting them done at all.

The EU has probably done its bit now. Research in the UK concerning carbon capture, offshore wind, electric cars (which are going to be important) will turn out to be useful and the EU has large funds able to carry this out.

The EU can politically also be used to blame for various factors whereas the body seems to have been leading the world in this respect.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

I would guess that what they have done already should be carried out more aggressively and further action should be as Green Paper meantime.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

What appears to be happening is that the UK is carrying out many of the EU indications in terms of decreasing demand for energy (insulation etc), possibly an increase in carbon energy price, and allowing this to be ahead of international effects. As such global action can follow the EU and the UK in major activity. It is very difficult to get these factors to take place by international agreement but rather doing it by leading is often more effective.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

When the costs are considered in a long term way, it is clear that taking aggressive action may turn out to be more effective in improving economics. It is when these are considered in a short term manner that economic factors seem difficult. The dramatic expansion in fracking and decrease in US gas prices (which is not expected to last very long) will have a major effect over a short term in making it difficult to fund many energy costs that are much higher as such interaction at the international level must take place and not just through the EU.

Rail and Environmental consultancy

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Hugely benefits from my perspective I have extensive contacts in China and Japan and they look to the UK as the most accessible European destination for their Energy products.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Wholly proportionate I view it as essential to mitigate the 2050 targets and the probable £100 per gallon of petrol.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

English is the dominant language of global business - the EU Members have various internal strategy's to promote trade within their own internal market but will struggle globally due to the language barrier. They cannot compete on the ease and accessibility of the UK. So the fact that communication can be conducted in one language is of immense value to the UK. Global investors don't want to have to learn French, German, Italian etc just to get to the starting block to compete. However the UK provides an accessible route to global markets for the EU. However we do not have the economic value to effect global markets - as the natural spokesman for the EU we do.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

None - we are a small island - 60million people who depend on trade to survive. Adopting a national approach would result in our view being marginalised on the global stage.

Its comparable to the fate of the corner shop v the Tesco/Asda's of this world. The corner shop is friendlier and in-tune with its customers but declines because it cannot compete on choice quality, price, accessibility, economy and standardisation. Some may long for a return to our nation of shopkeepers and pride in our corner shop but its not going to happen in a world where so many societies have grown up and advanced.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Increase the use of "Crossrail" type traffic management projects across the EU without the nepotism timewasting tactics and plain ignorance that has thrust so much cost into a straightforward project.

Rather than subsidise households in fuel poverty , install a wind turbine or solar panels on their property so that this pays for their own fuel bills and can produce incentives of payback via the Fit system to the poverty stricken households. You don't have to tax the big 6 here in the UK - just incentivise other energy forms to mitigate the actions of the big 6. IT also has the added benefit of changing peoples outlook to renewables if they can see their efforts rewarded buy money in their pocket.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

It widens the access to funding to modernise the network. The great use of the capital employed results in a widening of the economy through incentivising businesses to supply the industry. Log term infrastructure projects are no longer damaged by the frivolous nature of ever-changing government ministers and their lobbyists.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development? Enormously - If we were on our own - energy barons in Russia/Saudi/US would soon have spotted an opportunity to exploit.

Given some of the nationalist view points frequently espoused in those countries - the opportunity to stick it to the country the "England" the country who has declared war on most of the Worlds countries at some stage another is highly likely. Its the sort of thing that is easily spun by nationalists. If we are inside the EU we cannot be picked off like that so easily.

8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Yes go for shale gas but understand the lack of knowledge that goes with it, and that it does little to alleviate global warming. People will still be using fossil fuel energy which carries a heavy carbon footprint.

Wind, Solar, Wave, Vibration, Geo thermal, Hydroelectric are all worthy of triple the investment we have right now.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

As a former railwayman, the promotion of HSR whilst being an appealing solution compared to airlines - it is a horrendous outputter of carbon - 2-3 times the current HST's. It is also a huge consumption of unsustainable resources and does not deliver on its costs.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

Clearly beneficial - without the EU we are the corner shop with the EU we have the clout of Walmart/Tesco.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Don't know enough about nuclear energy.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

If we do not do something about global warming the consequent rising sea level and temperature increases will (7degrees by 2027) render many existing sources of fossil fuel inaccessible. Thus the £100 per gallon will be with us by 2050 with its consequent impact of the economies.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

IT has to be done globally, we have a bigger voice as the EU - if India/China/Brazil wants to trade then they have the only viable markets is US or the EU - they will have to conform.

The Walnut Bureau

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

EU actions benefit consumers and citizens (theoretically, if not in practice) by preventing individual nation governments being lobbied by corporate interests (or offered incentives such as future jobs for themselves and family members) to unfairly subsidise some forms of energy generation such as nuclear, or fracking, or coal, at the expense of other more environmentally responsible and long term sustainable forms of energy generation such as wave power, anaerobic digestion or locally owned renewables.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Disproportionate, in the sense that climate change and carbon emission is such a serious problem affecting everyone through threats to business and the food chain, floods, droughts and extreme weather, that legislation limiting damaging emissions should be both tougher, urgent, and more wide ranging, bringing in other forms of pollution such as airline emissions, than it does at present. However this is probably politically unacceptable to sovereign nations seeking to protect their own narrow and short term interests at the expense of other nations, so although the EU targets are too low, they may still be achievable at present.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Pushing for world emissions legislation, in exchange for access to Europe, the world's largest marketplace, prevents the race to the bottom as sovereign nations try to undercut each other for costs and regulations, to attract investment and jobs. To make the legislation stronger carbon trading (especially betting by hedge funds and financial bodies) should be banned and replaced with real reduction targets, not notional ones achieved through dubious offsetting schemes, and all carbon emissions given a floor price of €100 a tonne, with no free permits for any industry, and import levies (into Europe) imposed on goods and services from any countries not applying similar carbon charges. European owned tax havens and profit shifting must also be abolished, so that appropriate tax revenues are gained from all companies operating within Europe (including those owned by foreign governments) so that national governments within Europe have a level playing field and sufficient revenues to address long term problems, rather than seeking short term popularity. In addition, nuclear waste must be addressed before any new nuclear plants are built in Europe, otherwise the true pollution costs are simply externalised onto the next generation of citizens (and the next, for a thousand years), while the risks of accident or sabotage are borne by all European citizens.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Any renewable energy subsidies should favour small scale and locally owned distributed generation, and decisions on what types of power to attract to a locality should be made at the local level, with no skewing by national governments to favour supranational corporations of heavily polluting sectors such as nuclear (waste) and oil and gas with subsidies. In the UK for instance, we have notional carbon reduction and energy reduction targets, backed by extra levies for eco schemes supposedly targeted at the poorest households, yet the more electricity or energy that people or companies use, the cheaper it becomes, due to the economy of bulk buying economies, and lower tariffs for major usage. Meanwhile the poorest pay the most for their energy per unit, due to standing charges. No-one can escape this (using the same argument as the justification for Obamacare) as all households and companies now need electricity and some form of heating and cooking. To rectify this, the government (or local authorities) could require that electricity tariffs are standardised by each company, offering one single charge per unit of power used, for all customers of all types (with an additional social charge that on request or for poorer households a prepayment meter, charging at the same cost, must be installed free where needed). This then would reduce bills for the poorest and load costs onto the richest households, and incentivise the energy intensive industries to reduce their electricity usage (at no extra cost at all to government or general taxpayers). We would then have a true market developing as electricity suppliers would choose to lower their single tariff to attract customers in areas where they had a market advantage.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Not my area of expertise.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The UK has tied itself to large scale electricity generation at the expense of national energy security, UK jobs, and spiralling future costs (which will largely fall on following generations of citizens). For instance if the UK were to favour nuclear as part of the energy mix, then small scale (and therefore safer, since if a reactor malfunctions it cools itself naturally) is much more attractive in the long term: Rolls Royce, although it doesn't particularly advertise it, has a long history of building small scale nuclear plants for submarines. These plants can be serially attached in groups of four or five to generate the same energy as a major nuclear station, with the added advantage that the first ones could be up and running quickly, generating funds to

build more, thus not requiring so much up-front investment . The jobs and expertise are British, the plants are safer and self cooling in a crisis, and when one needs to be taken off-line for maintenance, only a small part of the nation's power would be lost, increasing energy security. The costs for a major generating station would be perhaps twice the projected costs of a huge nuclear plant, however with cost overruns, the net result will almost certainly be the same.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development? Benefited, by being shamed into making carbon emission reduction promises, reducing the certain future costs from storm damage, floods, high winds, droughts and threats to our major cities, almost all of which lie at sea level and therefore are at imminent risk of having their underground sewage systems overtaken by sea level rise.
8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

We already know about more fossil fuels than we can afford to burn without risking the lives and life quality of future generations of citizens; unless carbon capture and storage is brought in (by putting a realistic floor price on carbon emissions immediately) then we cannot go on exploiting current fossil fuel reserves, let alone search for new ones. The US experience has been that gas prices have fallen due to their shale gas (with externalised costs in increased pollution), thereby undercutting the cost of coal, which has not been replaced but simply exported to developing countries instead. So shale gas has increased world carbon emissions by exactly the amount of emissions from the shale gas used.

9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing more. The major impact of carbon trading has been bankers and hedge funds creaming off funds and subsidies from taxpayers, not a reduction in actual carbon emissions.

10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view

(speaking with one voice) in international meetings rather than Member States representing themselves.

These negotiations can only be conducted at the international level, so the EU should take a much more robust position, in exchange for access to EU markets and EU expertise.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

Not my area of expertise, but nuclear safety is badly underrated, and nuclear waste is unfairly subsidised by the UK government and others at the expense of other truly sustainable forms of energy.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The UK will increasingly become energy insecure and unable to afford the infrastructure needed, household bills will rise if the current policies continue. However politicians and their families will continue to be offered lucrative jobs and incentives by the lobbyists in the energy industry, so not everyone will lose out.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

Not my area of expertise

TraderVick Limited

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

I am a consulting engineer working in the nuclear and electricity supply sector. The actions of the EU in placing obstacles in the way of nuclear new build in the UK is damaging the business of my clients.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Yes, most notably disproportionately in the policy of tackling greenhouse gas emissions by shackling member states to unrealistic targets that cannot be met other than by introducing immature and inappropriate technologies

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

If the EU were more outward looking, rather than seeking to micro-manage internal affairs, then it would serve member states better by international liaisons that provide forums for genuinely encouraging free and fair trade across the world.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

The disastrous energy policies driven by the EU should be managed wholly by individual member states.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The EU has shown no energy competence other than in jeopardising energy security across the continent. The policies have been hijacked by predatory suppliers of renewable energy. Witness the rising use of coal across Europe following the over-hasty deployment of intermittent renewables. The alternative to EU legislation is devolution to national governments since energy supply is a matter of national security for member states

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The internal energy market has been a unmitigated disaster. Attempts to manipulate the market are doomed to failure. They have also been disastrous for EU energy costs.

7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
The EU has done nothing to increase the UK security of supply. By forcing the premature closure of coal-fired stations and by appearing ambivalent on shale gas they are actively threatening the UK security of supply. This can now only be achieved by ignoring EU deadlines on closure. The closure of plants at Didcot and the conversion of large coal stations to biomass is wrong headed and loads costs onto UK consumers and businesses
8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?
The EU should not be involved in national decisions of this kind. Civil servants in Brussels are by and large misinformed and have political agendas at odds with the UK
9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
By forcing early decarbonisation strategies across the EU which its international competitors are not following, the EU has been instrumental in reducing the competitiveness of EO industries. Any significant carbon footprints are being exported to countries with less regard for the issue. Hence coal burning is rising across the globe
10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
The "EU" voice does not represent the EU member states. It represents that of an elite group whose political motivations are suspect. Member states should represent themselves in this area.
11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?
Euratom and the IAEA do great work in ensuring that international standards and best practices are agreed and spread across the world. By collating and circulating information they assist organisations within member states to take sound decisions.
12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

As long as the artificially derived "climate change objectives" are in place, then the EU and the UK will be disadvantaged. Nuclear fusion and tidal power options should be the focus of longer term goals - objectives up to 2050 should be reviewed and replaced with targets that reflect sound science and not politics. Without medium term energy security the EU states will be in no position to be masters of their own destinies

13. What would be the costs and benefits of facing these at an international, EU, or national level?

The EU can collate and provide data, member states make their own decisions. Their electorates should be trusted and not sidelined

POLITICAL GROUPS

All Party Parliamentary Group on Modern Languages

SUMMARY

1. The APPG on Modern Languages welcomes the opportunity to contribute to this review. Our response is general rather than specific, bringing together evidence from a range of sources to show that the UK is failing to derive the full economic, political and educational benefits from membership of the European Union, and international engagement more broadly, because of a lack of language skills.
2. We welcome moves by the Department for Business, Innovation and Skills to boost the uptake of languages in degree courses, and to bring forward new evidence⁹³ on the losses to the UK economy as a result of the inability to communicate freely with international partners acting as a 'tax on trade'. Similarly, we are pleased that the Department for Education has recognised the need to improve the national capacity in languages by making the study of a foreign language part of the new National Curriculum from age 7, and giving languages a certain prominence within school performance tables through the English Baccalaureate measure.

However, the need to value and develop language skills is a concern which affects **all** government departments and the review of the UK's relationship with the European Union provides an opportunity to raise awareness more widely of the need to boost Britain's linguistic capacity, in the interests of individuals' educational experience, the future competitiveness of the UK economy and our international standing and reputation.

BACKGROUND

3. The APPG was established in January 2008 and its terms of reference are to:
 - explore the educational, skills-related, employment, competitive and cultural benefits of learning and using modern languages throughout the United Kingdom;
 - provide a parliamentary forum for information exchange, discussion and consultation; and

⁹³ 'Research to quantify the costs to the UK of language deficiencies as a barrier to UK engagement in exporting' commissioned from Professor James Foreman-Peck, Director of the Welsh Institute for Research in Economics and Development at Cardiff University, and due to report on 31 January 2014.

- encourage and support policies and action to improve the take-up of modern languages in schools, further and higher education, in the workplace and in the community.
4. Over the last six years, the APPG has held regular meetings at which we have had the benefit of hearing from and questioning a wide range of experts. These have included employers and departmental officials, academics, researchers and policy advisers, professional and specialist bodies as well as teachers, head teachers and pupils.
 5. Recent compelling evidence shows that the UK's capacity in languages falls far below that required by business, government and third sector organisations in order to increase UK exports, attract inward investment, protect national interests in UK security and global influence, and facilitate knowledge transfer and innovation internationally⁹⁴.
 6. **Our overall conclusion is that the national deficit in languages is now so serious that it needs to be acknowledged and redressed by coordinated cross-government action across a range of departments including the FCO, BIS, the Home Office, the Treasury and the Department for Education.**

LANGUAGE SKILLS AND EXPORTS IN THE SINGLE MARKET

7. There is now a considerable body of evidence, both policy-oriented and academic, which shows that languages are linked to export growth. In the last year or so, both the CBI and the British Chambers of Commerce have published reports calling for improved language skills among British graduates and college leavers in order to boost export performance⁹⁵. Business leaders say that language availability, instead of market strategy, is driving exporting decisions, and that a lack language and cultural capability is a barrier for non-exporters who want to start trading internationally.
8. The econometrist Professor James Foreman-Peck has shown that market failure in language skills affects the UK disproportionately: whilst there is an inbuilt tendency for everyone to under-invest in language skills, patterns of world trade show that, allowing for other factors, the UK is more likely than other countries to gravitate towards trading partners which have a language in common⁹⁶. A pre-

⁹⁴ See in particular: British Council, 'Languages for the Future. Which languages the UK needs and why'. 2013 and British Academy, 'Languages, the State of the Nation'. 2013.

⁹⁵ CBI/Pearson, 'Changing the Pace. Education and Skills Survey 2013'. British Chambers of Commerce, 'Exporting is Good for Britain', 2012.

⁹⁶ James Foreman Peck, 'Costing_Babel. The Contribution of Language Skills to Exporting and Productivity'.

publication report on his latest research for BIS states that language deficiencies are costing the UK economy **£48 billion per year**, or 3.5% of GDP⁹⁷.

9. Lack of language skills acts as a barrier to the **free movement of services** across the EU, since effective communication is a key factor in service provision. However, service providers in other member states are currently at an advantage over Britain given that English is the first language taught in most other European countries, whereas British companies are at a relative disadvantage through not having access to the necessary language skills.
10. The CBI/Ernst and Young report 'Winning Overseas' makes it clear that the need to improve foreign language competence is not simply a question of communication skills to service existing or future markets, but about the **internationalisation of business outlook** and the rebranding of the UK as being 'open for business'.⁹⁸ Whether in agriculture, energy or information technology, the inability to move beyond English limits access to innovative practices and international networks for **knowledge transfer**.
11. The British Academy's report 'Languages, the State of the Nation' showed how a tendency for business and management to under-estimate the importance of foreign language skills – combined with the practice of recruiting foreign nationals with language skills, has the effect of depressing demand for languages and the motivation to study them within the UK population, creating a **vicious cycle of monolingualism**⁹⁹.
12. **We conclude that stimulating the acquisition and exploitation of language skills would bring important benefits to British export performance and would allow employers in a range of sectors to take greater advantage of the Single Market in goods and services.**

LANGUAGE SKILLS AND JOBS IN THE SINGLE MARKET

13. Poor or non-existent language skills impact on the opportunities for UK individuals to take advantage of **labour mobility** within the Single Market, whilst leaving them open to competition from incomers. Whilst UK employers are dissatisfied with the language skills of British graduates, they are enthusiastic recruiters of multilingual graduates from other EU countries. In a recent survey, nearly 57% of UK employers said they recruited from other EU countries, compared with a European average of 30%¹⁰⁰. Although this shows that the Single Market is working well in terms of the free movement of persons, British workers are limited in their ability to take advantage of this freedom in the opposite direction because of their lack of language skills.

⁹⁷ 'UK businesses are lost for words', *The Guardian*, 10 December 2013

⁹⁸ CBI/Ernst and Young, 'Winning Overseas : Boosting Business Export Performance', 2011.

⁹⁹ British Academy, 'Languages, the State of the Nation', 2013.

¹⁰⁰ Eurobarometer and European Commission, 'Employers' Perception of Graduate Employability Analytical Report, 2010.

14. The UK Treasury has noted that the UK's financial services sector benefits from the widespread use of English. Whilst this may be true, the British Academy's study of the labour market for languages¹⁰¹ shows that this and other highly globalised industries such as energy and IT also require skills in other languages. An over-reliance on English is already harming our international interests as UK monolinguals find themselves unable to compete for key jobs and this is harmful not only to the employment and career prospects of UK nationals, but to the UK's capacity for influence within these global companies.
15. The availability of language skills is one of the key factors for attracting **foreign direct investment**, as shown in the global property company Cushman and Wakefield's annual European Cities Monitor. London regularly performs well in this survey because of the diverse range of other languages spoken. In its 2011 report 'Making the UK the best place to invest', the CBI cited the English language as one of the UK's key strengths which is however offset by our relative inability to work in multiple languages¹⁰². Scotland recently lost the opportunity to attract the European sales headquarters of a major petrochemical company because of the inability to recruit staff with language skills¹⁰³.
16. The social and economic consequences of poor language skills are not evenly spread across the UK. Participation in language learning beyond the compulsory phase is strongly linked to social advantage and children in less developed and more deprived areas of the country are less likely to gain qualifications such as a GCSE or A level in a language¹⁰⁴. This adds to regional or local cycles of deprivation in terms of inward investment, unemployment rates and access to international opportunities.
17. **Improving Britons' language skills would enable individuals to take greater advantage of opportunities for employment within the Single Market, and be better equipped to compete for jobs at home. It would also ensure help attract inward investment, particularly in areas which are currently poorly supplied with language skills.**

LANGUAGES AND INTERNATIONAL INFLUENCE

18. The Foreign and Commonwealth Office has noted that a **shortage of British staff in international institutions** is detrimental to the national interest and undermines UK policy influence internationally. It highlighted that UK nationals make up only 5% of the European Civil Service, whilst accounting for more than 12% of the population of Europe. In 2011 only 2.6% of applicants were from the

¹⁰¹ Languages. The State of the Nation, 2013

¹⁰² CBI, 'Making the UK the best place to invest' 2011

¹⁰³ Grove, D., 'Talking the talk, so that Scotland can walk the walk. The case for improving language skills in the Scottish workforce'. 2011

¹⁰⁴ See Languages, the State of the Nation, op cit.

UK - fewer than from any other member state - and a key reason for this was that English-speaking applicants must offer either French or German as a second language¹⁰⁵. This situation is no doubt repeated in international organisations worldwide.

19. In recognition of the importance of languages as fundamental to effective diplomacy, the Foreign and Commonwealth Office has re-opened its language centre, and the Foreign Secretary William Hague has spoken eloquently of the way that language skills help to predict and influence behaviour in foreign cultures¹⁰⁶.
20. An enquiry last year by the British Academy showed that in a rapidly changing landscape for international engagement and diplomacy, languages skills are essential for **effective security and international influence**¹⁰⁷. The Rt Hon Richard Ottaway MP, Chair of the Foreign Affairs Select Committee, says that this issue has been highlighted in almost every enquiry he has undertaken since 2010.
21. **Improving Britain's language capacity would enable UK nationals to have greater influence in international organisations both within and beyond the European Union.**

LANGUAGES AND INVOLVEMENT IN EUROPEAN COOPERATION PROGRAMMES

22. UK participation in EU mobility programmes, which improve employability and equip individuals with skills and competences to work across borders, is a fraction of that of comparator countries such as France and Germany. This is a particular concern in the light of the new **Erasmus Plus programme** starting in January 2014 which will provide opportunities for 4 million Europeans to study, train, gain work experience or volunteer abroad.
23. In 2011, only 4,265 Britons took part in work experience placements in another European country under the Leonardo programme, compared to more than 10,000 French and nearly 15,000 Germans¹⁰⁸.

¹⁰⁵ Blog by David Lidington, Minister for Europe on FCO website accessed 13/8/12
<http://blogs.fco.gov.uk/davidlidington/2012/03/20/more-british-nationals-in-the-eu-civil-service-can-transfrom-our-influence/>

¹⁰⁶ <https://www.gov.uk/government/speeches/foreign-secretary-opens-foreign-office-language-school>

¹⁰⁷ British Academy, 'Lost for Words. The need for languages in UK diplomacy and security'. 2013.

¹⁰⁸ European Commission, Leonardo Da Vinci Mobility Figures by Country in the Years 2000 – 2011 (Number of All Individuals Who Went on Mobility to Another Country), 2011, mmxi, 2011. (Latest figures available)

24. UK participation in overseas university placements under the Erasmus programme is around one third that of France and Germany, with only 13,662 Britons benefitting in 2011/12 compared to more than 33,000 in both France and Germany and nearly 40,000 in Spain¹⁰⁹.
25. European Parliament research into take up of Erasmus placements, which interviewed students in 7 countries, found that lack of language skills was the major reason, after finance, why students were put off taking part. The deterrent effect of lack of foreign language skills was highest amongst UK students (62% compared to an average of 41% across all countries)¹¹⁰.
26. Organisations such as the CBI and the Council for Industry and Higher Education (CIHE) have stressed the importance of international experience for acquiring the language and cultural skills which are increasingly valued by employers¹¹¹, and the Department of Business, Innovation and Skills' Joint Steering Group on Outward Student Mobility has recommended that greater emphasis should be placed on language skills at primary, secondary and tertiary levels within the education system¹¹². The House of Lords EU Committee has also concluded that the UK's prevailing monoglot culture is a barrier to British students participating in Erasmus and other mobility schemes to the same extent as those of other member states¹¹³.
27. **Improving Britain's language capability would enable UK individuals to take greater advantage of the opportunities to participate in work experience and study placements offered through the new European Union programme Erasmus Plus.**

RECOMMENDATIONS

28. In order to ensure that the UK and its citizens derive the full economic, cultural and educational benefits from membership of the European Union, and to engage more effectively in international networks more generally, the APPG on Modern Languages urges Her Majesty's Government to implement the following:
 - **A national languages recovery programme** in education and training. This should include high quality language learning with ambitious targets in both primary and

¹⁰⁹ European Commission, Erasmus Figures 2010-11, 2011.

¹¹⁰ European Parliament, Improving the Participation in the Erasmus Programme, 2010.

¹¹¹ E.g. J Diamond, A, Walkely, L, Forbes, P, Hughes, T, Sheen, Global Graduates into Global Leaders (AGR/CIHE).

¹¹² Joint Steering Group on UK Outward Student Mobility, Recommendations to Support UK Outward Student Mobility Submitted to David Willetts by the Joint Steering Group on Outward Student Mobility, March 2012.

¹¹³ House of Lords European Union Committee, The Modernisation of Higher Education in Europe, 2012.

secondary schools up to school leaving age, as well as opportunities and encouragement for older students to continue with a language either as a specialist discipline or alongside other studies.

- Drawing on the resources of all government departments to **stimulate demand for language skills** through training and awareness-raising and to improve practices in the strategic management of language skills. This should include, for example, auditing the linguistic skills of existing employees, implementing training and recruitment policies which favour language skills, and improving understanding of how to use specialist language services including interpreting and translation services.
- Appointing a **single government minister** responsible for coordinating government policy on foreign languages across departments.

Baroness Coussins

Chair, All-Party Parliamentary Group on Modern Languages

January 2014

Brussels & Europe Liberal Democrats

GENERAL

To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

Climate Change: Climate Change is a global phenomenon and - to be effective - actions taken to combat Climate Change need to be taken on a regional basis. Thus EU actions on the Emissions Trading Scheme, Car Emissions Limits, Nuclear Energy (see following bullets), Green Energy Goals (statement by Ed Davey at the Warsaw meeting in November), etc., have been enormously beneficial to the UK.

Post Fukushima Stress Tests: All nuclear power plants in the EU underwent stress tests and peer reviews in 2011 and 2012. This rapid and coordinated response ability of the European Commission (under the Euratom Treaty) following the Fukushima disaster helped to ensure the confidence of the public in the nuclear industry. Many other countries and territories emulated this action and also conducted comprehensive nuclear risk and safety assessments, based on the EU stress-test model.

The Euratom Inspectorate: This was established under the Euratom Treaty (which among other areas is responsible for radioprotection, research, supply of nuclear materials, and international relations). The Inspectorate is responsible for Nuclear Safeguards and, for example, their 150 safeguards inspectors carried out more than 1400 inspections (with about 4000 person-days of inspection). The inspectors are supported by a technical support unit and a nuclear materials accountancy unit and operate jointly with the IAEA Inspectorate for certain installations in France and the UK. This safeguards work on a regional basis is unique in the world and is highly regarded.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The liberalisation of the EU energy market has been handled proportionately and there can be no doubt the Climate Change initiatives have been proportionate to the risks that Europe faces without effective action in this field.

3. In what areas might the UK's interests be served better if action were to be taken at:-

EU level instead of national, regional or international level?

Green Energy Promotion: Green energy promotion is bedevilled by a lack of clear analysis and the market is strongly distorted by Member State initiatives. Action at EU level would help to restore some logic to this industry and help to remove unhelpful market-distorting measures by Member States (witness the recent comments at EU level that some biofuels were worse than the conventional fuels that they were replacing in terms of Climate Change.) For an objective analysis see David MacKay *"Sustainable Energy – Without the Hot Air"*.

National, regional or international level instead of EU level?

None: In this field and at this time the EU level seems the most appropriate level.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Energy & Environmental Statistics: It is self-evident that energy policy should be evidence based. In the absence of a good and well-respected source of such evidence, vested interests can easily challenge policies. (Remember the enormous influence of Bjorn Lomborg with his book "The Sceptical Environmentalist".) The EU's Environmental Agency must be overhauled and redirected to provide such statistical evidence. Otherwise, new initiatives might be very wasteful and the effective revision of existing actions will be impossible.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

Benefits: This is partly explored in (1) above. However, a more direct benefit is in the broadening of the UK energy market with other suppliers such as EDF providing market competition in terms of both energy generation and supply.

Deeper Integration: This would definitely be beneficial for the reasons outlined above.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Security of Supply and Infrastructure: The UK has benefited. A clear example is the decision to build the Hinkley Point C nuclear power generators in Somerset.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

UK Indigenous Energy Sources: To our knowledge, little direct impact thus far. However, there are issues related to the risk assessment of shale gas that could and should be evaluated at EU level using, for example, the resources of the Joint Research Centre. Given the enormous potential benefit of shale gas, it is essential that it is properly evaluated at EU level.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Sustainability Measures: Analyses by the Joint Research Centre's Institute for Prospective Technological Studies have directly benefited the Member States and the Commission with respect to the policy choices in the energy sector (see:

<http://ipts.jrc.ec.europa.eu/activities/energy-and-transport/esea.cfm>). This activity should be built on to ensure that the low carbon energy sector support initiatives are logically based.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

EU Competence in the Energy Field: It is clear from the above responses that there would be considerable benefit in the EU speaking with one voice in this field. (We are all in the same "climate change boat" and decisions by individual Member States on, for example, alternative energy subsidies, brown coal or shale gas, affect us all.)

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

EURATOM Treaty: See (1) above: The UK benefits considerably from the Euratom Treaty. Article 1 of the Treaty is clear in this regard (*"It shall be the task of the Community to contribute to the raising of the standard of living in the Member States and to the development of relations with the other countries by creating the conditions necessary for the speedy establishment and growth of nuclear industries"*).

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Future Challenges and Opportunities: In the medium term, the challenge is to ensure a low carbon, sustainable, base-load energy supply which inevitably means increasing the UK's nuclear power generation (as demonstrated by the French). The current dependence on imported oil and gas is insecure. In the longer term the EU fusion project (ITER) offers the possibility of secure, sustainable, clean, low carbon, base-load electricity. This Euratom project seems to offer the best chance of long term security.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

Costs and Benefits: The benefits are argued above. The costs are beyond individual Member States. The EU form of risk-sharing, exemplified by the ITER project, should be of enormous benefit to the Member States BUT this requires high level collective management of the key energy projects. Commitment is the key to success.

Fiona Hall MEP, Liberal Democrats' spokesperson on energy in the European Parliament

Rationale for EU energy policy

The Treaty on the Functioning of the European Union (TFEU), and Article 194 thereof, gave the Union a shared competence in the area of energy policy for the first time in 2009. What is the rationale for this common approach to energy policy? And is this rationale also applicable for the UK interests?

First, energy generation and transmission have a direct impact on the environment because of greenhouse gas (GHG) emissions, the main contributor to man-made climate change. It is estimated that 40% of all EU GHG emissions originate from energy production in heating plants, power stations and refineries¹¹⁴. EU energy policy is thus closely linked with EU environment policy and cannot be seen in isolation from efforts to curb climate change. This is why Article 194 of the TFEU includes 'the need to preserve and improve the environment'¹¹⁵ as one of the two main justifications for establishing Union policy on energy.

Second, Union policy on energy was established in the interests of the functioning of the European internal market¹¹⁶. Many energy companies, in their business interests, operate across 28 Member States. It is therefore important to have a common set of rules - be they for state aid, investment in infrastructure, operational transparency or passing of costs to end-users - to ensure fair competition and a level playing field for business operating cross-border. It is also easier and cheaper for energy companies to expand when there is one set of rules across 28 Member States than having to comply with different policy frameworks that fragment the internal market.

Some energy policy actions are much more effective if applied Union-wide. For example Union's energy efficiency standards for electrical appliances (Eco-Design and Labelling legislation) and CO₂ limits for cars and vans are better applied at EU level as this means that common standards are applied across the single market. Energy savings are thereby maximised. For example, the first 13 measures under the EU Eco-Design legislation will result in electricity savings of 12% (below 2009 EU consumption levels) by 2020¹¹⁷,

¹¹⁴European Environment Agency, 'Annual European Union greenhouse gas inventory 1990–2010 and inventory report 2012' <http://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2012>

¹¹⁵Article 194 of the Treaty on the Functioning of the European Union, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12008E194:EN:HTML>

¹¹⁶Ibid.

¹¹⁷European Commission, Ecodesign: Your Future, http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/files/brochure_ecodesign_en.pdf

unparalleled by any national energy efficiency measure. National measures in such areas would fail to reap this potential because they would work in isolation and lack co-ordination.

Last but not least, coordination at EU level is also beneficial as regards infrastructure planning and investment. Looking at the EU as a whole will result in a better analysis of infrastructure needs taking into account shortfalls in one Member State and extra capacity in another. Such an approach results in more efficient and cost-effective solutions compared to each country existing as an energy island. Being well interconnected is also important for ensuring uninterrupted energy supply. Co-ordination at EU level can avoid the building of unnecessary power stations as it can be cheaper to interconnect cross-border and use extra capacity elsewhere instead. It has been estimated that fully integrating the EU energy market will deliver benefits in the range of €12.5bn to €40bn per year by 2030¹¹⁸.

Impact of EU energy policy on UK

Renewables

One of the key benefits of recent EU energy policy has been the major growth of renewable energy sources in UK electricity generation. The UK did not have any mandatory commitments on renewables in place before the EU policy framework on renewables was established. When the EU Renewable Energy Directive (RED) was introduced in 2008, the UK had one of the lowest shares of renewables in the EU, despite its vast wind energy resources. By 2012, the share of electricity produced from renewables increased to 10.8%¹¹⁹, from 5.4% in 2008, driven by the binding target under the RED which lays down that 15% of UK energy should come from renewable sources by 2020, and by the accompanying supporting measures contained in the RED. In one year alone, from 2011 to 2012, electricity generation from renewable sources grew by around one fifth (compared to overall capacity growth of one quarter over the same period)¹²⁰.

EU policy for the promotion of renewable energy sources has therefore stimulated growth of the UK renewable energy generation and industry as a result. According to RenewablesUK, the renewable energy sector now employs three times as many people as the UK coal industry, and could create up to 70,000 additional jobs over the next decade¹²¹.

¹¹⁸ European Commission, Benefits of an Integrated European Energy Market, http://ec.europa.eu/energy/infrastructure/studies/doc/20130902_energy_integration_benefits.pdf

¹¹⁹ DECC, National Renewables Statistics, <https://restats.decc.gov.uk/cms/national-renewables-statistics/>

¹²⁰ Ibid.

¹²¹ Out-Law, Pinsent Masons, <http://www.out-law.com/en/articles/2013/september/uk-renewables-could-create-another-70000-jobs-over-the-next-decade-according-to-industry-survey/>

Having renewables policy at EU level also allows for a more cost-effective and efficient integration of renewables into energy markets. Instead of each country developing its own infrastructure and resources nationally, better efficiencies can be achieved by integrating renewables across neighbouring Member States and making use of the comparative advantages of neighbouring countries.

In particular, one of the most cost-effective solutions to balancing variable renewables is through interconnection to other European countries. Such cross-border interconnection is best coordinated at EU level to ensure a comprehensive analysis of infrastructure needs and efficient use of funds to steer investments.

The UK is still virtually an energy island, with very limited links to the wider European electricity market - it has an interconnection capacity of only 3.5GW – less than 5 per cent of its installed capacity, despite being signed up to a European target of having interconnection equivalent to at least 10 per cent¹²². Interconnection to the wider European electricity market brings the immediate advantage of any market: the ability to buy and sell. More interconnection also increases access to hydro storage in such countries as Norway. Storage capacity can be further increased by building more pumped storage plants between existing hydro reservoirs, so that surplus electricity can be used to pump water uphill from a lower to a higher reservoir.

There are plans to establish a new commitment on electricity interconnection as part of the 2030 framework on climate and energy policies. Such a commitment could incentivise further UK cross-border interconnector agreements in addition to the ones already signed with Norway, Denmark and Iceland under the Coalition Government.

A coordinated energy infrastructure policy at EU level aimed at better interconnection would therefore allow the UK to better exploit its vast renewable energy resources and integrate them into the energy system more cost-effectively. For example, a 2011 report from WWF UK suggests that with 27 – 35 GW of interconnection the UK could supply 87 per cent of its electricity from renewables in 2030¹²³.

Equally, it has been estimated that a true common market for renewable energy as envisaged by the Renewables Directive would bring large economic gains of €16bn-

¹²² Department of Energy and Climate Change and the Office of the Gas and Electricity Markets (Ofgem), Statutory Security of Supply Report, <https://www.gov.uk/government/publications/statutory-security-of-supply-report-2012>

¹²³ WWF, Positive Energy: how renewable electricity can transform the UK by 2030, http://assets.wwf.org.uk/downloads/positive_energy_final_designed.pdf

€30bn¹²⁴. Better coordination and cooperation at EU level therefore makes it cheaper and easier for the UK, and Europe more widely, to deploy more renewables.

CCS

The UK is committed to developing Carbon Capture and Storage (CCS) as one of the solutions to decarbonise economy, and energy supply in particular. CCS remains a complex and expensive technology. There is a role for the EU to facilitate the feasibility and uptake of CCS. For example, EU funds such as the New Entrants Reserve (NER300) are instrumental in supporting research and development, whereas exchange of best practice and sharing of expertise and resources among EU countries can greatly enhance successful pilot projects. The UK is seen as the EU front runner in this area, especially given its North Sea basin that has large potential for storing CO₂. EU financial and policy support can complement the current efforts in the UK to get CCS off the ground.

Energy Efficiency

One of the cornerstones of the 2012 EU Energy Efficiency Directive (EED) is that energy suppliers are required, through energy efficiency measures, to achieve energy savings among their final customers. This requirement is closely modelled on the original UK supplier obligation scheme (CERT). The UK was one of the first EU countries to adopt such a policy and can rightly claim that it has influenced EU policy in this area.

R&D funding

The recently agreed EU research framework for 2014-2020, Horizon 2020, earmarks 85% of its energy research funds for sustainable energy technologies such as renewables, energy efficiency and smart grids. This funding will usefully complement national efforts to invest in the new technologies needed for the transition to a low carbon economy.

It is important to note that the UK has to date been very successful in obtaining EU research funds. European Commission data show that the UK receives more than 15% of the total funding of the current research programme (FP7), second only to Germany¹²⁵. This means that the UK stands a good chance to benefit from the energy research funds available for 2014-2020 and make the most of the synergies between research institutes and industry

¹²⁴ European Commission, Benefits of an Integrated European Energy Market, http://ec.europa.eu/energy/infrastructure/studies/doc/20130902_energy_integration_benefits.pdf

¹²⁵ Government Review of the Balance of Competences between the United Kingdom and the European Union: Call for Evidence: Research and Development, May 2013 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/199991/bis-13-866-balance-of-competences-review-research-and-development-call-for-evidence.pdf

supported at EU level. This will enhance innovation and speed up the roll-out of low carbon energy technologies nationally.

CEF

Similarly, the UK will be able to benefit from the recently agreed Connecting Europe Facility, aimed at supporting infrastructure projects in the areas of transport, energy and telecommunications. The energy budget of €5.12 billion¹²⁶ (for 2014-2020) will be used to finance cross-border projects of strategic importance for the EU as well as to modernise EU grids and enhance security of supply. Given the huge need for investment that the UK energy system is facing in the coming decade, this funding stream should be a welcome addition to national efforts.

ERDF

Low-carbon investments are one of the four priorities of the recently agreed European Regional Development Fund (ERDF). At least €23 billion will be ring-fenced for supporting the transition to a low carbon economy, mainly through financing local projects on energy efficiency and renewables¹²⁷. This extra stream of funding will support national measures aimed at the green transition.

Future challenges of EU energy policy

2030 climate and energy package

The Member States, the European Commission and the European Parliament are currently discussing what the future energy and climate policy framework should look like post-2020 (when the current framework of three targets on renewables, energy efficiency and GHG reduction expires). For the reasons already outlined above (the functioning of the internal market and action to fight climate change) such policy is more effectively done at EU level. The question is what targets, if any, should be established EU wide and what should be left to the Member States.

Both improvements in energy efficiency and increased deployment of renewables result in GHG savings. Equally, whether or not there are EU-wide targets on energy efficiency and renewables, Member States will continue to pursue national policies, not least because

¹²⁶ European Parliament, 'Connecting Europe: Trans-European Networks', <http://www.europarl.europa.eu/news/en/news-room/content/20131111BKG24353/html/Connecting-Europe-Trans-European-Networks>

¹²⁷ European Commission, 'Refocusing EU Cohesion Policy for Maximum Impact on Growth and Jobs: The Reform in 10 points', http://europa.eu/rapid/press-release_MEMO-13-1011_en.htm

energy efficiency and renewables policies exist not only for climate but also for economic and energy security reasons. However, without coordination at EU level it will be impossible to calculate how much in the way of GHG savings such national policies will result in. This risks undermining the main EU mechanism for driving down emissions, the EU Emissions Trading System (ETS) - an EU instrument the UK Government strongly supports. For the ETS to work it is necessary to have clear EU projections and coordination of renewables and energy efficiency policies in order to set the ETS cap correctly.

In practice, the three objectives – GHG reduction, renewable energy production and energy efficiency - are interlinked and should not be looked at in isolation from each other. The recent study by ISI Fraunhofer notably highlights that achieving a 40% cost-effective energy savings in the EU by 2030, would on its own, result in at least 50% GHG reduction and a 35% share of renewables¹²⁸. This is stark evidence that a failure to take into account the positive effects of energy efficiency gains could easily lead to a very under-ambitious target being set for GHG reduction – to the detriment of global action on climate change.

The Euratom Treaty

The Treaty Establishing the European Atomic Energy Community, or the Euratom Treaty, has not been significantly updated since it was agreed in 1957. It is high time this treaty is changed to adapt to new political and environmental realities. Significantly, the European Coal and Steel Community expired in 2002 and its renewal was not deemed necessary.

The Chernobyl and Fukushima disasters have highlighted the large cross-border impact of a nuclear accident and the inability of any country to cope with the consequences. Moreover, some EU Member States, notably Germany and Belgium, have decided to phase out nuclear power. All of this dictates the need to review the Euratom Treaty in order to make it more transparent and more relevant to the current challenges nuclear energy faces, such as safety, decommissioning, waste disposal, and liability.

In terms of fair competition and further liberalisation of the EU electricity market, it would be in the UK interest to support reform of the Euratom Treaty to make it fit for the 21st century. Reform is also needed to address the democratic deficit of the current Euratom Treaty, which operates by consultation of the European Parliament, not by co-decision - the ordinary legislative procedure under the Treaty of Lisbon.

EU Supergrid

The necessity for Union action to bring about an interconnected internal energy market is analysed above. However, the EU Member States are still far from completing their common energy market by the set date of 2014, and will fail to reap all the potential benefits and cost savings unless they step up action.

As regards interconnected energy infrastructure, of particular benefit to the UK would be the establishment of the so-called EU Supergrid. The Supergrid is defined as “a pan-European

¹²⁸ Fraunhofer ISI, Analysis of a European Reference Target System for 2030, http://energycoalition.eu/sites/default/files/Fraunhofer%20ISI_ReferenceTargetSystemReport.pdf

transmission network facilitating the integration of large-scale renewable energy and the balancing and transportation of electricity with the aim of improving the European market"¹²⁹. Such a pan-European high voltage network would not only facilitate integration of more renewables, but also help cope with their variability and transmission more effectively. The potential cost savings from the optimal resource sharing as a result of this project are calculated to amount to up to €426 billion in the 2020-2030 timeframe, of which €291 billion comes from optimisation (more efficient use) of the system¹³⁰.

Of particular relevance to the UK is one of the key parts of the EU Supergrid; the North Sea Offshore Grid. This integrated offshore grid would link wind farms across the Northern Sea and allow for the most cost-effective and efficient integration of the vast offshore wind resource in the area. According to National Grid, "an integrated network for the UK's offshore wind delivery could provide a 25% discount for the UK consumer on the capital cost compared to connecting each offshore wind farm with a dedicated radial connection"¹³¹.

Conclusion

Union competence in energy is in the interests of the UK. Legislation to date has led to the growth of the renewable energy sector, more funding and support for other CO2-cutting technologies such as CCS and a more interconnected national energy market. Action at EU level is often more cost-effective and will cushion against rising costs, making energy more affordable in the long run.

It is only through targeted legislation at EU level that Member States can overcome the barriers to the EU internal market, and avoid fragmentation along national borders and an anti-competitive race to the bottom. Harmonised action that is applied across 28 Member States ensures fair competition and a level playing field for EU industry as well as being a more effective way of achieving common goals of sustainable and smart growth.

¹²⁹ Friends of the Supergrid, <http://www.friendsofthesupergrid.eu/the-challenge/>

¹³⁰ European Climate Foundation, Power Perspectives 2030: on the road to a decarbonised power system, <http://www.roadmap2050.eu/project/power-perspective-2030>

¹³¹ Seventh Report of the Energy and Climate Change Committee, A European Supergrid, <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1040/104006.htm#a4>

Giles Chichester and Vicky Ford, on behalf of Conservative MEPs

Article 194(2) of the TFEU upholds a Member State's right to determine their own energy mix. This is however without prejudice to Article 192(2)(c), this was previously Article 175 TEC, that allows the Council to act unanimously to adopt "*measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply*".

In 2009 the then Labour UK Government agreed to the EU's 20-20-20 targets: A binding 20% cut in emissions of greenhouse gases by 2020, compared with 1990 levels; a binding 20% increase in the share of renewables in the energy mix; and an indicative 20% cut in energy consumption.

In terms of the renewable energy target and as part of the effort sharing nature of the proposal, the UK Government committed to increase its share of renewable energy in the energy mix from 3% in 2005 to 15% in 2020. This represented one of the most ambitious shifts amongst all EU Member States. Any future UK Government would remain bound by this decision.

Since this decision was taken, not only has the UK Government changed, but there have also been significant changes in both the UK's overall economic situation and also a dramatic rise in wholesale and subsequently retail energy prices. Given the large costs associated with renewable sources of energy relative to traditional sources such as gas, coal and nuclear, the binding 20% renewables target has severely restricted the new Government's ability to take into account, and adjust to, the change in circumstances. Taken in the context of the 20-20-20 Energy and Climate targets, the Government has also been restricted in choosing the most cost-effective pathway towards achieving the 20% emissions reduction target.

It is also worth considering that a renewables target drives investment into a specific area and discriminates against other forms of low emission energy technologies and hinders their further development, Carbon Capture and Storage (CCS) being the most prominent example.

This problem should also be considered in the context of the 2030 Energy and Climate Roadmap that is set to be discussed and agreed over the next two years. Any new commitments agreed in 2016-17 would still be binding on a future UK Government sitting in 2029. While we support the principle of investment certainty, it should not distort competition and restrict the ability of Governments to ensure the effective functioning of the energy markets and to adjust to changing circumstances. The right of a Member State to determine

their own energy mix is enshrined in the TFEU and furthermore the principle of subsidiarity was introduced to ensure that legislative decisions are taken by the most appropriate body. We therefore believe that there should be no derogation that allows the exact nature of the UK energy mix to be determined and bound by EU law.

The decision to build a new nuclear power station at Hinckley Point in Somerset, followed by one at Sizewell in Suffolk, is also impacted by the binding renewable energy target. In order to conclude the deal, the European Commission's competition authorities will investigate the financing arrangements to ensure that they comply with state aid rules. The proposed deal, between the UK Government and a consortium led by EDF, will be analysed against a number of factors of which one will be its impact on the renewable energy target. Furthermore, it is no secret that financing for renewables projects receive much more leeway from state aid rules than other low carbon energy technology projects such as nuclear or CCS. Were it not for the renewables target, it is likely that new nuclear projects would already be underway.

Nuclear energy in general has a slightly different position within the EU treaties, whereby the majority of nuclear legislation falls under a legal base from the EURATOM Treaty. Legislative proposals do not fall under the under co-decision procedure between Council and the European Parliament, meaning that the Council, and therefore Member States working together, retain decision making control over Union level policy in this area. Any future treaty change must retain the robust and established EURATOM framework in order to preserve national competence in this area. This is necessary in order to protect the UK's nuclear sector from the sudden knee-jerk reactions of other EU Member States and the dogmatic position often adopted by certain parties within the European Parliament.

Finally, when considering that the three pillars of energy policy are security, competitiveness and sustainability we believe that policy has focussed too much on sustainability, to the detriment of the two other pillars. We believe that energy policy must be rebalanced between the three but are fundamentally opposed to any EU targets in this regard. With these three pillars in mind we are increasingly concerned that the aims and ambitions of proposals from Commission's DG Environment and DG Climate Action are often in complete contradiction to the aims of DG Energy. For example the UK has expressed a desire to explore its shale gas reserves but potential investors cannot ignore the uncertainty that has been created by continued threats from DG Environment to further regulate the sector, even though their own internal studies have deemed the current legislation to be fit for purpose if implemented correctly.

PROFESSIONAL AND REPRESENTATIVE BODIES (INCLUDES TRADE ASSOCIATIONS)

Association for the Conservation of Energy

The Association for the Conservation of Energy aims to reduce overall energy demand to ensure a secure and sustainable energy future. Through our lobbying, campaigning and research we help to achieve sensible and consistent policy, legislation and targets. ACE works to raise a positive awareness of energy conservation and encourage increased investment in all energy-saving measures.

We welcome the opportunity to contribute our views to this consultation.

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK /your sector/stakeholders? Is there a sector where this is most marked?

So far as the energy efficiency industry is concerned, EU action in our policy area has been, and hopefully can remain, of extremely positive benefit. Without the various pertinent directives – currently the Energy Performance of Buildings directive, and the Energy Efficiency directive – the UK energy efficiency industry would be far less economically robust than it currently is. European legislation is vital to this industry's operation.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Yes. The checks and balances within the European policy making machinery ensures this proportionality occurs – very unlike the “elected dictatorship” arrangement in the UK, where the legislature is controlled by the executive.

That is precisely what the EC's mandatory impact assessment process for directives ensures.

3. In what areas might the UK's interests be served better if action were to be taken at: -EU level instead of national, regional or international level? - national, regional or international level instead of EU level?

The only way our sector have been disadvantaged has been the continuing failure by the UK government to ensure full compliance with the relevant directives. And by the negative approach almost invariably taken by UKREP regarding any proposals emanating from either the Commission or the Parliament.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

We do not accept that there is any good argument for the measures needed to assist our industry to be taken on a national rather than EU level; we have too much experience of gross inconsistency of national policy making on energy efficiency matters. Thank heavens that EU directives are so much more complex and difficult to mess around with.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

So far as the EPBD and EED cited in 1 are concerned, these directives are specifically designed to deliver results which can be measured. Which is rather more than can be said for most UK policy – how for instance are we to know when/if the Coalition flagship programme “Green Deal” has succeeded in achieving its objectives, as these have never been identified?

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

As your accompanying document makes clear, energy security is facilitated by the reduction of energy wastage. Without such purposeful EU policy, our economy would be far less energy efficient than it currently is.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

There is no need for EU measures to assist the exploitation of indigenous supply sources; rather its role should be to ensure there are no further “hidden” subsidies which favour investment in energy supply over than in energy saving.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU should be doing more to assist the development of a level playing field between the energy demand and supply side, by ensuring there are no more “hidden” subsidies for the supply side.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

We believe that the EU should have a greater role, as it can speak for a more powerful bloc.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The existence of the Euratom treaty distorts the marketplace in favour of nuclear power.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

This question is based on an inaccurate premise. The growing worldwide demand is for greater energy services; it is manifestly not for more kilowatt hours. Practically every service – light, heat, motive power – can be delivered effectively using a fraction of the energy currently squandered.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

The EU level provides a level playing field for our industry. More decisions should be taken on a pan-European basis. The costs would be minimal, the benefits considerable, of improving the efficiency with which we use fuel. To date the most effective legislation assisting this has been largely Europe-wide. Given the short term nature of so much decision making in the UK, it is vital that the EU continues to play a growing role in this policy area.

British Irish Chamber of Commerce

Overview: The British Irish Chamber of Commerce (Chamber) hosted a roundtable discussion on the advantages and disadvantages of the current division of competence over energy activities and operations between the UK and EU in accordance with the Call for Evidence: Trade and Investment. The Chamber, after considering the issues and questions raised within the above document, held a round table discussion with its senior policy group and representatives of the Chamber's Energy Policy Subcommittee. This group discussed the likely advantages and disadvantages of altering the current balance of competence; their key observations are reproduced below.

Key Points

- 1. The UK has been influential to the creation of energy policy at EU level. The UK has a significant wealth of experience in shaping future policy at European level.**
- 2. The design and creation of the single energy market will require significant oversight, regulation and leadership from the EU.**
- 3. Focus on sustainability has come at the expense of focus on security of supply and affordability and this has created tensions, both at a European level and in the UK's domestic energy market.**
- 4. The slowness of decision making at EU level has a relative advantage over national bodies in creating a greater degree of certainty, and therefore creating attractive investment conditions.**
- 5. The EU has a role to play in guaranteeing the security of energy supplies to its member states which it has not yet fully realised.**

Findings

1. Security of Supply

The group discussed the global dynamics underpinning the energy markets in Europe and the UK and noted that energy security is often taken for granted by investors and consumers alike. The importance of resource diversification and sources of supply was highlighted. The group reiterated the British Irish Chamber's Energy Policy 2013; energy policy should balance on three pillars of security of supply, sustainability and affordability. The EU's focus on sustainability should be rebalanced and greater focus given to the areas of security of supply and affordability. The group noted that the EU's lack of focus on affordability has been detrimental to the energy sector in the UK. A broader reimagining of policy along these three pillars more equally is recommended.

2. Energy as a Driver for Economic Growth

The group discussed the dynamics of policy making in the EU versus those dynamics which make energy policy at national level. Investment in the energy sector is vital to securing energy supply from a diverse range of sources, achieving the 20-20 targets and improving efficiency; and the required scale of investment will not be supported by the retail markets alone. Investment in the energy sector requires greater incentives, and the coordination of the development and regulation of these incentive structures is best carried out at EU level.

The size of the EU as a decision making bloc impacts the time scale along which policy can be made, the long term focus of policy at EU level gives certainty and stability to markets and investors. This contrasts decision making at national level which is made over much shorter policy cycles (usually parliamentary terms), and is prone to change, politicization and sentimentality. The group noted that the bulky decision making structure within the EU results in a longer term policy horizon, and while this is reassuring to investors, it means poor policies were difficult to correct.

The group noted that the successful liberalisation of the UK energy market is largely attributable to national policy making. The liberalisation of UK energy has been instrumental in driving the EU's policy agenda. However, the process of liberalising the EU energy market is incomplete and no longer has an underlying philosophy, the absence of which can undermine the investment climate. The group agreed that greater involvement was needed to clarify the philosophy of energy policy in the medium and long term on issues such as:

- Will the future energy market conditions will be regulated or competitive?
- Will the focus be on sustainability or affordability?

The absence of this underpinning philosophy is putting the UK and EU energy markets at a relative disadvantage to other energy trading blocs.

The role of the EU in a global energy context was considered, with particular reference to climate change. The group noted that increased investment in R&D was urgently required and the EU could take the lead as an advanced trading bloc by taking a greater involvement in the training and education systems of member states, ensuring a qualified work force equipped to carry out such R&D.

3. Sustainability

The group discussed the role of the EU in focusing attention on the issue of sustainability and noted that the introduction of renewables to the UK market is largely attributable to the EU directives.

The role of the EU in harmonizing energy policy between member states was noted and the group noted that while this is a largely positive endeavour, it is a project that is incomplete. The modest involvement of the EU in harmonizing policy across states in the energy bloc has led to uncertainty and complexity in the system. The group noted that the energy market needs to be regulated as a whole system and agreed that it is unfeasible to regulate parts of a market and not consider the impact on other parts of that same market.

4. Global Context

The group discussed the impact of UK withdrawal from the EU on security of energy supplies to Northern Ireland and noted that this issue had not been sufficiently researched by governments in the UK or Stormont. The group noted that a withdrawal from the EU could limit the investment potential of the UK and agreed that the current political uncertainty is not creating a climate that would attract investors.

The group discussed the UK's membership of an energy trading bloc and noted that countries within this trading bloc continue to build networks and develop the security of their own energy supplies, whilst also reaping the rewards of EU level negotiations. The group agreed that the EU has, to date, maximised its potential

as an energy trading bloc. That member states are pursuing bilateral energy strategies, at both national and through the EU, can cause confusion in the creation and execution of policy in the EU. The scale of the trading bloc means the EU has a significant negotiating advantage over the national governments acting independently, and this is an area in which the EU has yet to reach its full potential. The potential for EU action in developing the security of energy supplies to its member states creates an impetus for the UK to remain part of the trading bloc. The capacity of the EU to shape debate on energy policy across Eastern European countries could be advantageous to the UK and should be considered further.

Carbon Capture and Storage Association (CCSA)

Introduction

1. The Carbon Capture and Storage Association (CCSA) welcomes the opportunity to comment on this timely review of the balance of competences between the UK and EU.
2. The CCSA brings together a wide range of specialist companies across the spectrum of Carbon Capture and Storage (CCS) technology, as well as a variety of support services to the energy sector. The Association exists to represent the interests of its members in promoting the business of CCS and to assist policy developments in the UK and the EU towards a long term regulatory framework for CCS, as a means of abating carbon dioxide emissions.
3. The view expressed in this paper cannot be taken to represent the views of all members of the CCSA. However, they do reflect a general consensus within the Association.

European energy and climate policy

4. The CCSA supports the principle of competency for energy being shared between the EU and the UK. In our experience, we believe that EU interventions in the energy field have, in the majority of instances, been justified and represent an appropriate exercise of competence.
5. The CCSA supports the EU's aspirations to reduce carbon emissions and believes the EU has a major role to play in securing an international agreement on climate change. Despite this, there have been a number of initiatives developed at the European level which have, in our opinion, over-prioritised investment in renewables as the means of decarbonising the power sector, to the detriment of other low carbon technologies such as CCS. This has led to distorted national energy policies in favour of renewables (for example in the UK where aspects of the Electricity Market Reform programme have been introduced with the explicit aim of supporting progress towards a 2020 EU renewables target) and reduced the ability of Member States to decarbonise at lowest possible cost to their citizens.
6. We appreciate that the EU has an important role to play in leading strategic thinking on energy and climate policy but believe that Member States should retain the right to determine the relative structure of their energy mix in accordance with Article 194 of the Lisbon Treaty on the Functioning of the European Union (TFEU). In this regard, we support the UK's stance on the forthcoming 2030 package for energy and climate policies: we believe that the EU should provide leadership on climate change by introducing a single, ambitious decarbonisation target for Europe but should refrain from introducing further technology specific targets, such as a new renewables target to 2030.

The impact of EU intervention on CCS

7. In 2007, the EU set an ambition to have 12 large scale CCS demonstration projects up-and-running by 2015. So far, this ambition has yet to yield a single operating project in Europe.
8. We recognise that considerable investment has been made at the European level with the intention of stimulating the deployment of CCS. Initiatives such as the European Energy Programme for Recovery (EEPR) have been well received by the CCS industry but have not

stimulated the intended level of investment. Despite an apparent lack of progress since 2007, we believe that CCS has a critical role to play in the future decarbonisation of Europe's energy supply and would therefore support further interventions at the European level.

9. At this point in our response we feel it is important to differentiate between the appropriate exercise of competency and the ability with which that competency is exercised. We feel that, whilst the EU has largely acted within its competency and with the best of intentions, it has, on occasions, lacked the technical expertise to implement appropriate policy measures. As an example, we are concerned that a number of EU interventions on CCS have not achieved their intended outcomes. The CCS Directive and NER300 can be taken as examples of such policies, which have been designed with the best of intentions but implemented in such a way that they have either not led to the investment in CCS that was expected or had an unintended negative consequences.

(a) CCS Directive

It is commonly acknowledged that the introduction of the CCS Directive has had a detrimental impact on the development and deployment of CCS in Europe by imposing far too onerous liabilities on storage site operators. This has resulted in a lack of investment from developers. Despite the onerous liabilities imposed by the CCS Directive, the CCSA remain supportive of the principle of a CCS Directive and believe that the EU was acting within its competence by initiating its development.

(b) NER300

It could be argued that the NER300 scheme – designed to support CCS projects – has in fact caused significant harm to the industry: it has contributed towards the oversupply of ETS allowances and therefore the collapse of the carbon price; cost CCS developers substantial amounts of money in project development costs; and contributed to the perception that CCS is failing in Europe through the failure of the policy itself. Whilst the scheme was intended to stimulate investment in CCS, the considerable bureaucracy and eventual reliance on match-funding from Member States meant that in practice it wasn't an appropriate funding mechanism for the majority of CCS project developers. In our opinion, the EU could have achieved a more positive outcome by delegating the initiative to Member States and incentivising CCS deployment at the national level.

(c) EU ETS

The CCSA is supportive of the EU ETS as the most efficient mechanism for collective European action to reduce emissions. That said, there are major structural issues associated with the system (such as its inability to provide an effective supply side response) which have led to a collapse in price of ETS allowances. This in turn has meant that the system has not provided investors with sufficient signal to invest in low carbon generation.

The failure of the EU ETS to drive investment in low carbon generation is one of the fundamental barriers to CCS deployment within Europe. In the absence of a high carbon price, and robust long-term price signal, there is simply no business case for CCS without significant institutional support. The UK has gone some way to addressing this through the introduction of the Carbon Price Floor but this does not remove the need for urgent structural reform of the EU ETS.

We believe the EU has an important role to play in reforming the EU ETS and ensuring that it provides an appropriate market signal to drive investment into low carbon technologies.

Areas where competence could be exercised more effectively

10. We believe there are a number of areas where the UK's interests – from a CCS perspective – would be served better if action were to be taken at an EU level including:

- i. Investment in cross-border CO₂ transport infrastructure between Member States
- ii. Implementing common standards within the full CCS chain, e.g. in transport and storage of CO₂
- iii. Encouraging ratification of the London Protocol and enabling the cross-border transport of CO₂
- iv. Encouraging and facilitating knowledge sharing on CCS between Member States.

11. Within the European Commission, we believe the EU could more effectively exercise competence on energy by clarifying leadership on CCS. Currently, work on CCS is being led by DG RESEARCH whilst the CCS storage regulations sit under DG CLIMA. We believe that DG ENER should exercise principle oversight of CCS for strategic purposes and to maximise clarity for stakeholders.

12. In terms of future developments, we would encourage DECC to consider the impact of future EU measures on the development and exploitation of the UK's indigenous energy resources, particularly in the North Sea. In this regard, it is important to consider the wider impact of EU measures not only on indigenous oil and gas resources but also on the potential of the North Sea to become a strategic CO₂ storage site.

CIBSE

This response is submitted on behalf of the Chartered Institution of Building Services Engineers, a chartered engineering institution which exists to:

‘support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information’

CIBSE members are the engineers who design, install, operate, maintain and refurbish the energy using systems installed in buildings, including homes, and are specifically trained in the assessment of heat loss from building fabric and the design of energy using systems for the provision of heating and hot water, lighting, ventilation and cooling and small power distribution in homes.

As an Institution CIBSE publishes Guidance and Codes which provide best practice advice and are internationally recognised as authoritative. The CIBSE Knowledge Portal, makes our Guidance available online to all CIBSE members and is the leading systematic engineering resource for the building services sector. Over the last two years it has been accessed over 275,000 times on over 159,000 unique visits. It is used regularly by our members around the world to access the latest guidance material for the profession. Currently we have users in 182 countries, with a third located overseas, demonstrating the world leading position of UK engineering expertise in this field.

CIBSE is pleased to respond to DECC’s Energy Review consultation on the Balance of Competences between the United Kingdom and the European Union. Of the specific topics included within scope, CIBSE’s response focuses primarily on energy efficiency in relation to energy supply and use in buildings.

In preparing its response to DECC’s questions, and following attendance at the DECC workshops, CIBSE has noted various points which are related to, but go beyond, the specific questions posed in the DECC Consultation. We trust that these comments will be helpful to DECC in its further deliberations over the balance of competences between the EU and the UK in relation to energy efficiency.

To assist the Department in its consolidation and analysis of the responses CIBSE’s full response to the questions posed by the Department is set out below under “Response to DECC Questions”. What follows here are introductory remarks in response to DECC’s wider invitation to comment on any related energy issues which the set questions raise.

CIBSE is ready to meet with DECC officials to discuss its response further if this would be helpful.

Introductory Remarks

1. Energy Efficiency

1.1 CIBSE notes that energy efficiency is one of a number of sub-topics under the general heading of energy, alongside renewable energy and carbon capture and storage. However, despite the key role energy efficiency has in regard to wider energy and climate policy goals, it is still regarded by many as the “Cinderella” of energy, not in the same league as energy supply. This characterisation may in part be why the huge opportunities for energy and cost savings are often overlooked; and, therefore why the market view of energy efficiency needs to be tempered by well designed, well managed and well enforced public policy interventions in order to enable energy efficiency to play its full part in national economies.

1.2 We cannot afford the luxury of energy waste in an increasingly energy hungry world. Energy efficiency investment is key to achieving security of supply and rebuilding the capacity margin in the UK, and it is also an essential contributor to UK sustainability, affordability and competitiveness goals. It is the only class of measure which pays for itself, thereby returning the investment to the investor over time.

1.3 Although energy efficiency (through the journey from innovation through to deployment and management) has the potential to make a significant contribution to wider policy objectives, market forces and energy prices alone have been shown over the forty year period since the first major oil crisis in 1973 to be insufficient drivers of energy efficiency investment in buildings, be it in innovative energy efficient products, the design and deployment of building energy efficiency packages, or the management of energy efficient systems.

1.4 For these reasons, CIBSE thinks that a framework of consistent, long-term public policy measures, monitored over time and “tuned as necessary”, is essential to ensure that the full potential for energy efficiency can be realised. This policy framework derives from both national and EU policy considerations. It is therefore important that the balance of competences is well matched to the roles and responsibilities of the respective entities – ie the UK (both at UK and devolved administration levels) and the EU and the European Commission.

1.5 CIBSE’s main interest is in energy efficient design, installation and operation of energy using systems in buildings, widely known as “building services”. These include heating, ventilation and comfort cooling or air conditioning, lighting, lifts, provision of hot and cold water and sanitary services, and building control or building management systems. Energy efficiency, suitably incentivised, can contribute significantly towards energy affordability, energy security, and reducing CO2 emissions policy objectives.

1.6 In addition to national sustainability, affordability and security goals, there is another potential benefit of EU level action to improve energy efficiency. The global market for energy efficiency goods and services is huge, and the EU forms a significant proportion of that market. The opportunities for the UK to take full advantage of that market, not just in the UK, but across the EU as a whole, are there for the taking. The policy and regulatory framework to drive and increase energy efficiency investment would not only improve energy

efficiency here and stimulate economic activity in this sector, but would also put our energy efficiency goods and services sector in a better position to take advantage of opportunities in the EU market.

1.7 CIBSE considers that the EU has an important role to play to ensure there are recognised performance standards for energy efficient products and services, and that these are applied and enforced uniformly across the EU. This clearly falls within the competence of the EU. But it is important that national policy instruments should be internally consistent and also consistent with the EU policy framework and the direction of travel of energy efficiency policy at EU level. The EU's long term commitment to energy efficiency helps to ensure that any "waxing or waning" of policy interest anywhere in EU Member States can be ameliorated, thereby helping to give confidence to energy efficiency investors and goods and services providers that investment in energy efficiency is worthwhile.

2 Renewable Energy

2.1 Renewable energy sources contribute to UK grid energy supplies at scale. Localised and small scale renewable energy installations are also being installed in, on or near to buildings. CIBSE has no comment to make on large scale renewable energy generation and supply. However, it does consider that it is important when considering the application of renewable energy technologies for smaller scale, on-site or local energy supply to buildings that energy efficiency and renewable energy supply/use are considered holistically as a system. Therefore, legislation to encourage sensible use of renewable energy technologies on-site, or nearby, needs to be designed to be consistent with buildings energy efficiency legislation. This is valid whether the legislation is initiated by Member States or by the EU. Similar systems thinking should also be applied when considering the best use of the surplus renewable energy generated and how best to incentivise sensible use of that surplus.

2.2 Such a systematic approach acknowledges that it is more cost effective to avoid using, or wasting, energy than to generate energy from renewable resources to meet a specific demand. So installing, for example, photovoltaic systems on badly insulated buildings is not a rational policy. The holistic approach would first address the energy efficiency of the building, to reduce the energy demand, and only then consider meeting some of that demand through renewables. CIBSE is concerned that too often energy efficiency and renewable energy are seen as distinct, even competing, policy objectives, at both an EU and national level.

3. General comments on the balance of competences between the EU and the UK

3.1 So far, in CIBSE's view, and in respect of energy efficiency in buildings, EU initiatives have been beneficial; the balance of competences is broadly right; and the "strength" of EU

legislation is commensurate with the seriousness of the challenge – ie, energy efficiency can make a significant contribution towards affordability, security, and CO2 emissions reduction.

3.2 However, there is room for improved co-ordination of national and EU legislation. Energy efficiency is an issue where the European Commission has competence, but Member States have their own energy efficiency policy frameworks. There is clearly potential for confusion, duplication, overlap and wasted effort. Equally, there is the potential to establish a clear and effective hierarchy of policy instruments and actions at EU and Member State levels respectively so that EU and national policy initiatives can work effectively together. This hierarchy would help create the long term framework for action needed to change markets and achieve challenging goals to improve energy efficiency significantly across the whole EU.

3.3 Flowing from its competence, the European Commission is able to propose and put in place flexible public policy instruments and challenging EU level goals. These would serve to create a common playing field for Member States, a set of minimum standards for traded energy efficiency goods and services, and a minimum rate of progress towards agreed goals. The Commission also has the machinery in place to ensure that those goals are met, to offer guidance to those Member States who find it difficult to achieve them; and to penalise those Member States who consistently fail to comply with energy efficiency Directives and/or meet energy efficiency targets.

3.4 Within such a framework Member States may prepare and implement a complementary policy instruments, measures and action plans to meet their respective shares of the EU level goals, and to ensure compliance. Some Member States may choose to go further and faster than required to meet EU energy efficiency policy goals. As part of the effective consideration of the balance of competences, these and similar progressive initiatives should be encouraged by the European Commission with support as necessary. There needs to be clear early mover advantage for those Member States who choose to move faster than the wider EU. This means that they will need to be sure that any such initiatives will not be undermined by the future development of EU policy. If this occurs, then it will have the effect of discouraging Member States to move faster than the EU as a whole, which is likely to damage EU and national innovation and competitiveness.

3.5 As an example, the UK intends that from 2016 all new dwellings will be zero carbon in regulated energy use. Meanwhile, the recast EU Energy Performance of Buildings Directive requires “nearly zero energy buildings” by 2021. The UK has decided, for domestic political reasons, to move ahead of the EU on this policy. However, some concerns have emerged that the UK definition of “zero carbon” and the EU definition of “nearly zero energy” may be in conflict. This creates a question for policymakers: should the UK press ahead with its 2016 target or consider a delay until 2021? What would be unacceptable is for the UK to move ahead with its policy, only to find that the EU nearly zero energy policy requires major changes to the policy, imposing further compliance burdens on the UK house building industry.

3.6 CIBSE sees the balance of competences debate not in terms of whether Member States could do better, move faster, achieve more, etc. without EU level intervention; or vice versa. Rather, it sees the need for harmonised action across the EU underpinned by cooperative action between the European Commission and Member States to create a long term,

effective energy efficiency framework for action, closely linked to and consistent with policies at EU and Member State level on renewable energy. Only by setting up a harmonised policy framework, where national initiatives can be encouraged and successful ones codified into a library of best practice, will energy efficiency goals be achieved. And only by having a long-term harmonised policy framework will due priority be placed on energy efficiency as a powerful means whereby lower bills, greater security of supply and decarbonisation goals be kept to the fore and achieved across the EU.

3.7 The EU level framework should be flexible, non-prescriptive and ambitious. It should be designed to encourage best practice and incentivise compliance. It should set the long term direction of travel and strategic objectives or milestones, leaving Member States to prepare and implement plans to achieve those objectives/milestones. The European Commission would make periodic checks on progress, taking such action as necessary to ensure those EU level objectives are met.

3.8 Looking back over the last 10-15 years or so, the European Commission has been working hard to put energy efficiency higher up the energy agenda. This is against a background of changing national priorities over that period, and the consequential promotion or demotion of energy efficiency in the ranking order as a result. In CIBSE's view, there needs to be consistency and continuity of policy on energy efficiency. The respective roles of the EU in setting long term policy objectives, and that of Member States to devise and implement delivery plans, would strike about the right balance of competences between the EU and Member States.

3.9 Such a co-ordinated framework of the various EU and national energy efficiency policies would additionally form part of a powerful EU voice in international negotiations on climate change, based on a track record of successful policy delivery at regional and national level.

Responses to DECC Questions

Q1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

A1.1 Generally, EU action in the energy and energy efficiency fields has benefitted the buildings services sector by: keeping energy efficiency and the need to reduce carbon emissions higher up the policy agendas of Member States; setting clear objectives for emissions reduction, energy efficiency improvements etc; and by setting minimum performance standards for energy efficiency products which in turn creates market opportunities for the energy efficiency goods and services sector.

Q2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

A2.1 Given the importance of meeting energy security and carbon emissions reduction goals and stimulating growth by building and accelerating markets for energy efficiency goods and services, the EU's response has, in CIBSE's view, been the minimum meaningful and significant action required in relation to the scale of the challenge. And if the EU is to maintain secure, affordable and dependable energy systems in the future, CIBSE would argue that more needs to be done at both EU and national levels.

Q3. In what areas might the UK's interests be served better if action were to be taken at: (a) EU level instead of national, regional or international level? (b) national, regional or international level instead of EU level?

A3.1 It is generally accepted that market forces alone are insufficient to stimulate energy efficiency action on a scale commensurate with the scale of the energy affordability, security and carbon emissions reduction challenges we face. The past forty years have demonstrated that very clearly in the UK. Public policy instruments are therefore needed for the long-term, and their effectiveness and compliance must be monitored and enforced.

A3.2 However, CIBSE thinks the way in which the question is phrased is confusing. Given that energy efficiency and energy generally are matters where the European Commission has competency, there is a clear hierarchy of policy instruments and actions. The word "actions" would be better considered in two related parts, in CIBSE's view: (a) EU policy instruments, goals and milestones; and (b) national actions plans and programmes designed to achieve the policy goals and milestones by ways which are appropriate and sensible from each Member States perspective.

A3.3 CIBSE consider that, given the energy competence, it is for the EU to adopt public policy instruments and EU level goals etc; to monitor progress; and, where necessary, act to ensure the goals are met. It is then for Member States to implement packages of complementary enabling policy instruments and action plans to achieve, or if they wish, exceed, their respective shares of the EU level goals. Progress should be monitored by the European Commission against agreed national milestones and goals, which taken collectively should be consistent with the EU level milestones and goals.

A3.4 There are a number of reasons why EU level action could have advantages over action at national level. These include:

- (i) providing a longer term perspective and a clear direction of travel, thereby reducing the risk that political short termism edges out energy efficiency, providing investor certainty and therefore greater access to capital, and securing a better chance of meeting longer term goals;
- (ii) overcoming barriers to trade by setting common standards for energy efficiency goods and thereby promoting a competitive market. For example, the EU Appliance Labelling Directive made energy efficiency performance transparent, and subsequently set minimum standards for a range of common white goods, thereby giving more confidence to consumers. Within a few years of the implementation, leading white goods manufacturers were exploring with the European Commission the notion of an A+ category for their most energy efficient products. This development demonstrates how effective the Directive was in accelerating market transformation.
- (iii) to ensure a minimum level of response and progress by requiring action by those Member States who were, for whatever reason, slower to take action on energy efficiency. (It is worth noting that there appears to be no easily available evidence that spreading of good practice from faster moving Member States to slower ones has been encouraged by the European Commission. CIBSE takes the view that this should be explored by the European Commission as a means to achieve faster progress.)

A3.4 However, whether policies are set at national or EU level, policing of progress towards policy goals and compliance need to be essential parts of the policy framework, as should guidance for “slower moving” Member States and proportionate penalties for failure to comply.

Q4. How could the EU’s current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

A4.1 More effective use of the European Commission’s competence should be considered in the context of the scope, scale and urgency of the challenge. There needs to be a long term, consistent and progressive approach to securing energy efficiency objectives in the EU, as part of overall EU energy policy, and to ensure all Member States play their full part in achieving EU energy efficiency goals. Proposals for new measures should be shared with Member States early on so that the issues raised - for example, impact assessments and harmonisation with Member States’ own policies and measures - can be considered in good time to address them before proposals become more difficult to change.

A4.2 Where a Member State has taken an initiative which seeks to achieve goals which are at least the same as or consistent with EU level goals, this should not be adversely impacted by EU legislation. The UK Government’s policy to require all new homes built from 2016 onwards to be zero carbon in relation to regulated energy use in buildings is a case in point. The EU Energy Performance of Buildings Directive has a similar requirement which is

referred to as requiring “nearly zero-energy buildings” by 2021. It is not yet clear whether the definitions of “zero carbon” and “nearly zero” will be complementary, or conflicting.

A4.3 Alternatives to legislation, such as voluntary measures for example, can have advantages but on the basis of past experience in the energy efficiency field they have not been as effective as hoped. Consider boiler efficiencies standards, for example. A voluntary scheme to improve energy efficiency of boiler products would not require all manufacturers/stockists to comply. The market for more efficient boilers would not be secure and therefore there would be uncertainty over whether product manufacturers would be able to recoup development costs, or sell products carrying a capital cost premium (notwithstanding that running costs would be significant less). The EU Boiler Directive (1992) set a requirement for a minimum efficiency standard for liquid or gaseous fuel fired hot-water boilers with a rated output of between 4 kW and 400 kW and was instrumental in developing the market for high efficiency boilers and closing down the market for older design, inefficient boilers. Voluntary measures would not have achieved that result. Indeed, boiler manufacturers at the time had been given a four year derogation but even after this “adjustment” period were still making representations to Government to negotiate a longer derogation period with the European Commission so they could market their inefficient boilers.

A4.4 In some cases there might be greater benefit in the use of Regulations, rather than Directives. Directives create a requirement for all Member States to implement, whereas Regulations apply across the EU. Comparing the F-Gas Regulation covering controls of the emission of potentially ozone depleting refrigerant gases, for which there is a single EU regime, and, for example the Energy Performance of Buildings Directive, for which there are three distinct regimes in the UK alone, it is sometimes hard to see the merit of having over 40 different regimes, allowing for devolved government in at least the UK, Germany and Belgium, across the EU to implement one Directive.

Thematic Areas

Q5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

A5.1 The biggest disadvantage so far as CIBSE can see is that energy efficiency, demand side measures generally, and carbon emissions reduction targets appear to have been excluded from consideration in the development of the EU internal energy market (with the exception of the introduction of smart meters). Energy efficiency and demand side measures have the potential to reduce demand peaks and change the shape of the demand profile for energy. This in turn would impact positively on peak demand and reduce the difference between peaks and troughs in demand from day to day and season to season. This “smoothing” has a very beneficial impact on the total demand and supply. Energy supply strategies, the internal market mechanisms and rules, will need to be developed in order to meet these different demand profiles, current and future carbon emissions reduction targets, and new market entities be they energy suppliers or aggregators (acting as impartial intermediaries between groups of end users - eg a business park or a housing estate or a

collection of local consumers) and the supply side. Access to markets for new entrants is not as easy as it should be and the role of aggregators needs to be considered more than it appears to have been to date. These and other points could usefully be explored not just at national level but at EU level so that internal market mechanisms and rules are consistent across Member States.

Q6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

A6. CIBSE has no comment.

Q7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

A7. CIBSE has no comment.

Q8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

A8.1 Generally, EU policy interventions have helped drive the development and deployment of energy efficiency, renewables and low carbon energy. They have transcended the “ups and downs” of national energy efficiency and renewables development and deployment policy - for example, by setting the “20-20-20” targets (though in future, these targets need to be thought about more strategically to avoid unintended consequences, as suggested below). Also, by having specifically targeted Directives such as the Boiler Directive, old inefficient products have been taken out of the market and the standard of energy efficiency across the economy has been improved. On the other hand, whilst the Renewables Directive and the 20% EU target have pushed forward the incorporation of renewable capacity into the UK's clean energy mix, there is the potential for unintended consequences.

A8.2 For example, in order to have any chance of meeting the UK's allocated target that 15% of our total energy supplies are provided via renewable energy sources by 2020, offshore wind has to be deployed at a pace and at a scale hitherto never seen. However, we know that this technology is, relatively speaking, in its infancy compared with conventional forms of power generation. It is still high risk and convergence on an “industry standard” design for mass manufacture, deployment and use has yet to be achieved. The deployment

of current generation technology (which is itself emerging from onshore derivative designs) to meet a created target which has no relation to the maturity, or otherwise, of the technology runs the risk that that a whole generation of installed technology turns out to be not fit for purpose – eg systematic turbine failure, as has occurred in the past. That risk is compounded by the likelihood that lessons learnt during the early deployment period cannot be properly assimilated into successive designs because of time and budget constraints and focus on the target. This is an example of prescriptive targets set no doubt with the best of intentions but with the prospect that the lessons learnt would be expensive ones – more expensive than they otherwise might have been.

Q9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

A9.1 It depends on the specific subject matter. For example, agreeing an EU wide position on carbon emissions reduction targets to 2030 would, if it were ever possible, ensure that those countries responsible for a substantial source of global carbon emissions were “speaking with one voice”. On the other hand negotiating energy supplies and managing energy security risk would be seen as a matter for Member States to handle having regard to their own particular circumstances, rather than the EU negotiating on behalf of Member States – though the EU would have a role with respect to, for example, energy infrastructure between Member States, inter-connectors and storage to act as a buffer in the event of supply uncertainties or failures.

A9.2 CIBSE suggests that before considering any benefits from starting more initiatives, it would make more sense to think about making existing initiatives and policy instruments more effective. On energy efficiency specifically, providing guidance to help Member States comply with and properly enforce existing EU Directives, and to be vigilant with respect to enforcement and compliance would make the existing raft of measures more effective. Applying the measures we already have effectively is less burdensome than introducing more measures.

A9.3 On external representation, the competence question needs to be considered carefully and EU action should be taken only when competence has been established. For example, if the EU had a legitimate role in respect of encouraging Member States to deliver on their pledges to provide funds to bring forward, inter alia, low carbon technology development and transfer for developing countries under the auspices of the UN FCCC Conference of the Parties 15th meeting in Copenhagen in December 2009, this would be a worthwhile thing to do.

Q10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

A10. CIBSE has no comment.

Future Challenges and Opportunities

Q11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

A11.1 The implications for the UK and the EU respectively of the future challenges in the energy field are huge. Our environmental and economic way of life is dependent upon energy supplies being available reliably and at prices consumers are able (or willing) to pay. The UK, and Member States generally, are starting to make their respective transitions to their own low carbon economies – against the background of rising demand for energy and volatile, but ever-rising energy prices. Energy infrastructures at Member States' level will need major capital investment to ensure they are fit for purpose (eg low carbon, resilient to shock, affordable, etc). Security of supply, storage and transport are matters which should be considered both at national and EU levels to determine the most effective future policy.

A11.2 For example: how should the gas and electricity inter-connectors be designed, and to what standards; how, and by whom, should transport of gas/electricity be determined; could additional supply security be achieved through EU level infrastructure investment over and above what Member States could achieve via bilateral or multi-lateral collaboration; how should energy storage be managed; how can energy efficiency investment be accelerated in order to moderate the peaks/troughs of heat and power demand profiles (and thereby help meet security of supply, cost and decarbonisation objectives); how could energy technology innovation and deployment be accelerated; These are all questions which could be tackled at EU level or by Member States acting unilaterally or in partnership. Careful analysis beyond the scope of this consultation would be required to ascertain the relative advantages and disadvantages of each option. However, it is very likely that setting the right framework for long term, sustained action would need to be agreed at EU level, leaving Member States to set up their own delivery activities. Mechanisms for gathering examples of good practice, for monitoring progress and for enforcement would need to be developed and/or strengthened where necessary.

A11.3 On energy efficiency specifically, CIBSE can see advantages in strategic action at EU level. Creating the right climate for action to improve energy efficiency and increase demand for energy efficiency goods and services across the EU is best achieved at EU level. Only by building scale into what currently is, in the UK at least, a small, fragmented market for energy efficiency goods and services will there be the step changes on action on and

investment in energy efficiency advocated by the Committee on Climate Change and others. For example, without EU action to outlaw incandescent (GLS) light bulbs across the EU, each Member State would have had the opportunity to continue to provide access to these lamps to their markets. For traded energy efficiency goods and services, minimum standards would be better set at EU level in order to create a level playing field for suppliers. Policing these standards in order to enhance consumer confidence would be a natural role for the European Commission – though it should be said here that a good energy efficiency performance standard of a product such as a boiler or a lamp doesn't mean automatically that the system in which those components are placed would have been designed and operated to deliver maximum energy efficiency benefit.

Q12. What would be the costs and benefits of facing these at an international, EU, or national level?

A12.1 Within the scope of this consultation response, it is not possible to derive even an order of magnitude figure for the costs and benefits associated with the future challenges in the energy field. Suffice to say that they are huge, running into hundreds of billions of Euros. These challenges include: infrastructure design and operation, transition disruption (which should be temporary), reducing demand, integrating variable and predictable sources of power generation, and adapting to new systems and ways of working - for example, if there were to be a significant percentage of small scale, building integrated renewables capacity on the power system, these would need to be managed at site level and also at local and regional levels. How this capacity would be integrated into the national and EU level networks would need EU and possibly international level consideration.

A12.2 Similarly, the benefits will be hard to quantify. For energy efficiency in particular, these benefits support all the principal energy policy goals, ie: improving energy security by reducing demand, particularly peak demand, reducing costs to consumers, and reducing the carbon intensity of energy supplied. In addition, improving energy efficiency would have health benefits by, for example, reducing heat loss in so called hard to heat homes and thereby enabling occupants to afford to heat their homes and avoid hypothermia and respiratory illness.

A12.3 Because the costs and benefits are hard to quantify, there can be debate and dispute about whether the costs and the means justify the benefits and the outcomes. CIBSE is of the view that it would be helpful if Member States were to work with the European Commission to commission an ongoing initiative to establish (and periodically update) the range of costs and benefits of investing in energy efficiency as part of the energy transition which is beginning across the EU.

A12.4 Energy efficiency has tended to be seen as not being part of the supply story and, indeed by some as a “poor relation” to supply. It has to some extent been marginalised as a result. However, energy efficiency has a crucial role to play in the UK's transition to a low carbon energy economy. It will be unable to deliver to the full potential if it continues to be marginalised. At international, EU and national levels, energy efficiency needs to be “brought in from the cold” and treated on a par with supply side investment. With the advent of

smarter metering, and, in due course hopefully, really smart, inter-active metering; and if building integrated renewable energy technology becomes widespread, the lines between demand side and supply side will begin to blur. Given that different Member States are progressing at different speeds towards an energy efficient economy, CIBSE sees a key role for the EU, working with Member States, to create the policy and regulatory framework to encourage faster progress and to encourage slower moving Member States to apply themselves more diligently. Lack of progress, and therefore profligate energy consumption in one Member State, may well have impact on the security of supply in another.

Combined Heat and Power Association (CHPA)

The Combined Heat and Power Association (CHPA) and Cogen Europe welcome the opportunity to respond jointly to the Call for Evidence on the Government's "Review of the Balance of Competences between the United Kingdom and the European Union – Energy".

The CHPA and Cogen Europe are leading advocates of decentralised energy services, combined heat and power and district heating. The CHPA and Cogen Europe's members are active across a range of technologies and markets. Our members operate in the United Kingdom and across Europe, operating industrial facilities, selling and operating energy assets, and providing energy services. The EU is a large existing and potential market for these UK businesses.

Both the CHPA and Cogen Europe are active in supporting the development of UK energy policy by working with the Department for Energy and Climate Change and active in developing policy in the European Union.

Summary

The EU has an important role in co-ordinating action across EU member states to create a stable regulatory EU-wide environment in which the UK can move towards its own energy and climate goals.

Existing EU treaties which establish the proper area of responsibilities for the EU and for Member States are broadly appropriate for the global challenges which Europe faces as a whole today. When EU legislation fails it is because the legislation has overstepped the structure of a European framework and moved to overly prescriptive language on specific points.

The EU's current competence for energy is being exercised in a proportional and appropriate fashion. It could be used more effectively by improving the process of impact evaluation and assessment in advance of the introduction of the proposal allowing time for further input from stakeholders. We have outlined some ways to achieve this in our response.

EU measures on energy efficiency positively advance the policy focus of energy efficiency, and therefore sustainability. The Renewables Directive has improved sustainability, security of supply and lowered CO₂, benefits which would not have occurred under a business as usual scenario. The EU ETS is a key tool to price the social cost of carbon in the European market, and we support actions which drive a strong EU-wide carbon price.

Questions

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The EU has an important role in co-ordinating action across EU member states to create a stable regulatory EU wide environment in which the UK can move towards its own energy and climate goals.

On balance the EU action benefits for the following reasons:

- Creating a Europe wide market for products and services
- Establishing a cross-border market in electricity and supporting enabling network developments
- Establishes uniform standards and measures for energy efficiency performance which encouraging sales of products across Europe.

The European market is integral to UK industrial sector, including UK energy goods and service providers. Historically, managing the 27 different national requirements added to final product cost and discouraged innovation. An EU-wide framework for climate change and other environmental legislation establishes a more level playing field, lowers product cost and reduces innovation risk.

The Energy Efficiency Directive, for example, will help create an EU-wide market for energy efficiency measures and establishes valuable principles across all 27 member states. These shared measures enable UK companies to prosper and benefit the UK through exports. Similarly, the Cogeneration Directive, now replaced by the Energy Efficiency Directive, has ensured that the UK is able to support combined heat and power within the European Union's State Aid constraints.

Therefore, we strongly encourage the Government to:

- Maintain EU competence to set a framework for energy and climate policy within the structure of the European Union; and,
- Consider how existing climate change policies could limit existing imbalance between the UK and other Member States.

2. Do you think the EU has introduced legislation that is proportionate/disproportionate to the issue it aims to address?

EU legislation is in large part proportionate in addressing relevant energy issues. Existing EU treaties which establish the proper area of responsibilities for the EU and for Member States are broadly appropriate for the global challenges which Europe faces as a whole today.

When EU legislation fails it is because the legislation has overstepped the structure of a European framework and moved to overly prescriptive language on specific points.

A European framework is necessary to provide standards and common themes facilitating cross-EU trade and innovation to increase competition and cut costs. Local implementation ensures that national or regional culture, climate and resources can be understood and utilised effectively. Alternative approaches either stifle innovation through a one size fits all approach (due to the effect of EU-wide detailed regulation) or inhibit free trade and competition (due to the lack of an EU-wide framework). The challenge for industry and policy makers is to determine where the boundaries between frameworks and regulations exist.

For example, Article 14 of the Energy Efficiency Directive's European-wide framework for the support of highly-efficient CHP has encouraged and driven support for this technology. However, its detailed requirements can, in some instances, be overly restrictive and prevent the successful deployment of the technology, contrary to legislative intention. Subsidiarity is central to these treaties and it is important that in transposing the contents of EU legislation that each member state, including the UK, uses subsidiarity to reflect its particular national interests, keeping in mind the spirit of the legislation when considering the text.

3. In what areas might the UK's interests be served better if action were to be taken at: a. EU level instead of national, regional or international level?

Carbon Price Floor

The EU Emissions Trading Scheme (EU ETS) is a key tool to price the social cost of carbon within the European energy market and is best addressed at the European level, not by individual Member States.

A vast majority of CHP capacity is based on energy-intensive industrial sites, for which energy costs can often be a determining factor for where they locate. The decision by the UK Government to create a UK-specific Carbon Price Floor policy has had a negative effect on UK companies' ability to compete across Europe and risks discouraging UK investment opportunities.

In addition, the emissions benefits from the Carbon Price Floor policy risks driving down EU ETS price across the rest of Europe, potentially offsetting any UK emissions benefit.

For these reasons, carbon pricing is best placed at a European level, ensuring equality and fairness across the European market. The CHPA supports a strong EU wide carbon price and in achieving such a signal, the need for the Carbon Price Floor policy would fall away.

b. National, regional or international level instead of EU level? Distributed/decentralised generation

European energy policy is directed at national policymaking, and therefore can overlook elements of energy policy which are inherently local or regional, such as CHP and other forms of decentralised generation.

The EU can only instruct European or national level bodies to act. In the case of the electricity system, this is national transmission system operators. Therefore any action on distributed generation within the EU network must have a strong local and regional element. At a practical level, distributed generators are often unable to resource EU level engagement compared to network companies with large regulatory teams. However, they are able to engage at a regional or national level within a properly constructed framework.

It is vital the European Union's efforts to harmonise transmission system operator regulations across Member States and implement the internal energy market improve competition do not favour one form or scale of operation over another through over prescriptive technical and regulatory requirements on small generators and participants. **For** example, The European Network Code Development process is developing grid codes at the European level which will likely create detailed new requirements for embedded generators, risking reducing the value of decentralised energy investments.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible/practical is it to have continuous review mechanisms to ensure legislations remains fit for purpose in light of changing circumstances?

The EU's current competence for energy is being exercised in a proportional and appropriate fashion. It could be used more effectively by improving the process of impact evaluation and assessment in advance of the introduction of the proposal allowing time for further input from stakeholders. We have outlined some ways to achieve this below:

- Requiring European Commission policy to published impact assessments at the time of consultation, not at final legislation. This would allow both the European

Commission and Member States to better understand the effect of EU policy from the start of the process, ensuring that overly-ambitious or strict targets are not agreed before their effects are fully understood.

- Require all legislation to have clear timescales and transparent review processes, increasing policy development transparency. This would allow Member States and industry to have a full understanding of the opportunities to affect and change legislation, potentially making the policy development process less cumbersome and less volatile.
- Absolute limits for targets and goals under energy and environmental legislation should be considered, using rigorous tests to ensure those goals and targets are achievable and realistic. This would help avoid circumstances such as the Industrial Energy Directive legislation's targets for NOX emissions, where the chosen limits are not accompanied by acceptable justification and remain a significant issue under the current review.

Due to the long lead times for the construction of larger energy generation projects, a process of continuous policy review risks having a negative impact on the ability for investors to move forward with capital investment, unless there are strong, long-term grandfathering principles extended for all projects under development or already built.

5. What have been the benefits or disadvantages for the UK/your sector of the development of the internal energy market? Is further or deeper integration of EU Energy markets desirable?

In general, the introduction of the internal energy market has been positive up to this point. However the next steps of harmonisation of network connection codes requires the avoidance of overly prescriptive language, in parallel with action at national level to enable the full participation of distributed generation operators and the distribution network operators (See answer to Question 3b).

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK has benefited through a significant increase in renewable generation which in turn provides security of supply. This would not have occurred without policy intervention. The UK has also benefited in its ambitions on GHG reduction, through measureable reduction of CO2 emissions in the electricity generation sector directly as a result of EU policy.

Directives promoting renewable energy have driven an increase in the deployment of renewable generation, reduced carbon emissions and diversified UK energy supply. Directives promoting energy efficiency and CHP have enabled member states to reduce primary energy demand, improve industrial competitiveness and improve security of supply by reducing demand for imported fuel for use in energy generation.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas.

We have no comment.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures – energy efficiency, renewable and low-carbon energy? What have been the impacts of these measures on

other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU measures in energy efficiency positively advance the policy focus on energy efficiency and hence sustainability. The Renewables Directive has improved sustainability security of supply and lowered CO2 which would not have happened in a business as usual scenario. The EU ETS is a key tool to price the social cost of carbon in the European market, and we support actions which drive a strong EU wide carbon price.

We support the role of the EU ETS in driving energy efficiency by pricing the social cost of carbon. However, because the EU ETS does not apply evenly across the economy and across electricity and heat, it does not always serve as an effective driver for energy efficiency and specifically district heating and CHP. For example, individual gas boilers located in domestic homes are not subject to EU ETS, while district heating delivering heat to individual domestic homes, is subject to EU ETS, discouraging the uptake of a more energy efficient solution.

The Energy Efficiency Directive should therefore provide a positive additional impact on the implementation of energy efficiency measures. Unfortunately, the Directive does not include mandated targets for Energy efficiency measures to be taken up at either the EU or Member State levels. Significant numbers of governmental and academic research shows that energy efficiency measures, with significant emissions benefits, are economic but do not happen due to other market barriers. Therefore, there is a need for a strong regulatory driver, through a mandated target, to bring these energy efficiency investments forward.

The existing renewable energy targets have provided a strong signal to support renewable energy, contributing to security of supply, economic growth and emissions reductions. However, European-wide renewable energy targets risks driving member states to take up less cost-effective solutions for emission reduction due to the pre-eminence of the RES target. We therefore do not support new European renewable energy targets in the absence of a target on Energy Efficiency.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

The EU represents a significant economic bloc. By speaking with one voice the EU could have the potential to drive more effective climate negotiations reducing the potential economic cost and risks associated with the EU and member states 'going alone' on emissions abatement.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to/disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures or procedures?

We have no comment.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low-carbon economy to meet climate change objectives?

The EU has an important role in co-ordinating action across EU member states to create a stable regulatory environment in which the UK can move towards its own energy and climate goals.

The key future challenges in the energy field will be a result of increasing international demand for energy. The EU is likely to see and an increased import dependency, which is likely to result in rising energy costs. These economic drivers will impact fuel poverty, standards of living, and industrial competitiveness. These economic challenges must be addressed alongside the ongoing necessity to reduce carbon emissions to meet climate change commitments, creating political friction.

For European Union policy, the response to these challenges must be an increased focus on implementing legislation and mechanisms which facilitate consumer participation and cost-effective carbon emissions reduction through energy efficiency and local energy use. The European Union's response will also require strong frameworks for climate change policy within the structure of the European Union, while also providing Member States with significant flexibility in how those frameworks are achieved.

12. What would be the costs and benefits of facing these at an international, EU or national level?

Please see answer to Question 2.

Confederation of UK Coal Producers (CoalPro)

Submitted online Director General, Confederation of UK Coal Producers (CoalPro)

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The attempt to create an integrated market and distribution network for electricity is a potential benefit for the UK in that the free flow of traded electricity through interconnectors would be delivered rather than this being determined by price. It would also ensure that any distortion of competition in the EU by energy prices was minimised. The ability for Member states to recognise and use indigenous resource as the basis for their generating systems is constrained by EU target setting for certain types of generation (Renewables).

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The EU Legislation introduced so far is proportionate to the issues it wishes to address, but are the issues it is addressing in context with the economic and social needs of the EU? Energy policy is inextricably intertwined with climate change issues and the affordability, practicality and security of supply of energy are not within the scope of the legislation in terms of binding targets for those aspects of Energy provision.

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?
Actions taken at EU level which might provide greater benefit for the UK could be if there was more of a focus on improvement versus specific targets of efficiency, costs or emissions rather than setting standards that all have to attain.
4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

Actions at international level on climate change and actions at UK level on target setting for emissions reduction rather than the ill-conceived 2020 EU target which dictates an unevaluated proportion of renewables in terms of cost and resilience.

5. How could the EU's current competence for energy be used more effectively? For example could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?
When developing new technologies, techniques or systems the EU should have a greater role in sponsoring the most appropriate locations where the opportunities for gain for all Member states can be most quickly realised. The rotating Presidency and the concept of ensuring harmony by not alienating by spreading the allocation of project funding sometimes inhibits the best value solution from being achieved.

6. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?
The development of the internal energy market has opened the trading of both fuels and power across traditionally solid barriers, the negative aspect is that in the event of any prospective supply deficiency, the fall-back position for all Member states appears to be the nearest available interconnector regardless of whether there will be surplus power available from that source.
7. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?
Neutral.
8. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?
EU measures have had little or no effect on the UK's indigenous resource exploitation so far, with the exception of my industry (the coal industry), which has been defamed by politicians both at an EU level and at National level with no regard for the role it currently plays in the energy provision throughout the EU or the role it will play in the transition to a low carbon generation mix or the long term role after CCS becomes a commercial reality. This has resulted in a lack of investment across the UK, and if not addressed will result in the disappearance of an industry which still employs around 5,000 people directly with an estimated GVA to the UK economy of around £60,000 per employee.
9. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
EU 2020 targets have kick-started the renewables industry but have deterred investors from any sizeable projects in conventional generation plant. Energy saving has not progressed and savings in usage are largely attributable to the general economic situation rather than any innovative techniques. EU research funding for step change in power consumption with no decrease in product performance would be a good use of funds.
10. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
The EU should be driving the level of agreement but not promising to lead the world in terms of emissions reductions rather demonstrating by analysis the need for all to participate.

11. To what extent does EU action under the Euratom Treaty (e.g. in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

No response, I have insufficient knowledge of Euratom.

12. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Affordable, secure supplies of energy have to be the underpin to the future ability of the UK and the EU to compete in the global market. Careful evaluation of the expected costs of meeting any climate change objectives and transparency of those costs will be essential. International agreements which impose approximately the same costs on each global trading nation/zone are the only foundation for this, as any nation or zone attempting to do more than others will lose its ability to compete in any energy intensive areas.

13. What would be the costs and benefits of facing these at an international, EU, or national level?

The only correct level to face the challenges posed by mitigation of climate change whether or not it is man made has to be global. Emissions are not confined to their point of origin and nor are their consequences or effects.

Energy UK

Introduction

Energy UK is the Trade Association for the energy industry. Energy UK has over 80 companies as members that together cover the broad range of energy providers and suppliers and include companies of all sizes working in all forms of gas and electricity supply and energy networks. Energy UK members generate more than 90% of UK electricity, provide light and heat to some 26 million homes and invested over £11 billion in the British economy in 2012.

Summary

In the current state of development of energy markets, Energy UK urges that there should be better clarity in the balance of energy competences, between that which is for the EU and that which is the responsibility of national Governments. Below, we set out what we consider to be the key points and key criteria for effective energy market decision making in future.

► EU decisions on energy should aim to set a framework and to avoid unnecessary prescription:

- Member States should as far as possible be given flexibility in how to implement decisions taken at EU level.
- Significant care is essential to ensure that national initiatives do not cut across or duplicate decisions taken at European level; EU decisions must fully take into account national priorities, specificities and economic pressures.

► All EU proposals and in particular any targets should be evidence-based and underpinned by a comprehensive regulatory impact assessment (RIA). This should involve a systematic assessment of costs, benefits and impacts on the sector and its customers, both from a stand-alone and from a cumulative perspective.

► All EU proposals should be considered through the lens of energy security, regional and international competitiveness and affordability to consumers; and the affordability of all proposals should be considered both on an individual and cumulative basis.

► Efforts should be made to reduce “red tape”, by minimising detailed prescription and devolving the responsibility for meeting the desired policy outcomes to national governments.

► Energy UK believes that climate change is best tackled at European level and that the EU should continue to push for an international agreement on greenhouse gases (GHGs).

► The EU cannot afford to “go it alone” on climate change and so it is all the more important that policy should be cost-effective and avoid damage to competitiveness both regional and international.

► Energy UK considers it essential that there should be a more holistic approach to energy policy from the Commission, with greater recognition of the interaction between environmental regulation and national energy policy.

► Energy UK takes the view that the primary responsibility for security of supply should remain with Member States and supports the maintenance of Art. 194.2 of the Treaty, allowing Member States flexibility to determine their own energy mix. As the European

energy system becomes more integrated, there will be an increased rationale for cooperation and policy convergence within the EU on security of supply.

- ▶ Energy UK is not convinced of the need to set European energy efficiency targets or harmonise national policies on energy efficiency.
- ▶ Most Energy UK members do not see the need for binding EU renewable targets beyond 2020, but it is recognised that measures will be necessary to ensure continued development of renewables, particularly in relation to immature technologies.
- ▶ Additional efforts will be needed at EU and national level to drive innovation in energy technologies. Public support should focus on the research, development and demonstration of immature technologies rather than on bringing unproven or high cost technologies to market early and subsidising their operation.
- ▶ The single market agenda should recognise that EU climate and renewable policy may require governments to take specific measures to promote low-carbon energies and ensure security of supply, e.g. long-term contracts and capacity mechanisms. Such measures should be carefully designed to minimise market distortions. However, it is for national governments to decide how to achieve the necessary outcomes, within a broad framework set by the EU.
- ▶ A single European market benefits UK customers and the energy industry alike by promoting competition, providing access to a wider market and enhancing security of supply. These benefits are likely to increase as the market becomes more integrated and more physically interconnected.
- ▶ Further EU market integration would be desirable. However this cannot take place without fully integrating renewable energy effectively into wholesale markets.
- ▶ It is important that the EU Network Codes should tackle truly cross-border issues and strike a balance between ensuring a level playing field and prescribing requirements which could be dealt with at national level
- ▶ There should be a greater emphasis on enforcement of existing legislation, particularly on the single market, and EU measures should allow adequate time for national transposition
- ▶ Energy UK considers that the UK Government should avoid “goldplating” of EU legislation and should pay particular attention to costs and burdens on business when going beyond agreed EU policies.
- ▶ A key point for energy companies is that, at whatever level political decisions are taken, they should be clear and consistent, and provide for a stable long-term investment framework.

General

Energy UK welcomes the opportunity to respond to this call for evidence on the balance of competences in energy. Although the Energy Chapter in the Treaty is relatively recent, EU policy and legislation has been having an increasing impact on the UK energy sector as a result of European single market and environmental initiatives. It is thus timely to look at how competences are exercised, particularly at a time of rapid change in the energy markets.

At present energy is a “shared competence” with European activity focussing on the development of a single energy market and on environmental issues, particularly climate change (which have a major influence on energy policy). Member States continue to have considerable autonomy to determine their own energy policy, particularly in relation to security of supply and the fuel mix, and this is reflected in very different policies across Europe. In the current state of development of energy markets, Energy UK does not see the need for a shift in the balance of competences on energy, whether from national to EU or EU to national level. However, we do consider that there needs to be better clarity of responsibilities, the avoidance of unnecessary prescription at EU level and a focus on costs and impacts of proposals.

A key point for the energy sector is that, at whatever level political decisions are taken, they should be clear and consistent, and provide for a stable long-term investment framework. Where decisions are taken at EU level, unnecessary prescription should be avoided and sufficient flexibility should be allowed for implementation across all Member States. On the other hand, national initiatives should not take a “short-termist” approach or cut across decisions taken at European level.

A major concern about EU policy in recent years is that sustainability issues have tended to take priority over cost and security of supply. Energy UK accepts the importance of the low-carbon agenda, but energy prices and reliability of supply are key elements in European competitiveness. The policy framework must therefore be affordable for EU customers and not put European industry at an undue competitive disadvantage relative to other trading blocs.

Energy UK would like to see a more holistic approach to energy policy from the Commission, and in particular a greater recognition of the interaction between environmental regulation and national energy policy. Environmental measures such as the Large Combustion Plant and Industrial Emissions Directives have had (or will have) a major impact on generation capacity in the UK and it is not clear that the security of supply implications were considered in sufficient depth. Moreover, there are tensions between the market-driven approach to energy liberalisation and to EU ETS and the various sectoral targets in renewables, energy efficiency etc being promoted by the Commission. These tensions need to be resolved before the EU adopts a framework for energy and climate policy post-2020.

Energy UK would like to see a greater emphasis on enforcement of existing legislation, particularly on the single market. The Commission should in our view focus its effort on major rather than procedural infringements. For instance, it should be looking to promote retail competition and to remove price controls which distort competition in some Member States, particularly those which are set below cost. We are less convinced of the value of extensive proceedings for non-notification, which seem likely to take up enforcement resources without necessarily contributing much to liberalising energy markets.

It is essential that EU legislation contains adequate time for national transposition, in particular where it requires investment by companies, e.g. in IT systems. As the EU legislative process generally takes longer than expected, there is a temptation to save time by telescoping the implementation period. This can be extremely costly if, for instance, all companies within a sector are required to purchase IT systems and services from a limited number of vendors at the same time

Specific Questions

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

A single European market in electricity and gas is bringing benefits to the UK through greater competition, more efficient resource use and the economies of scale of a larger market. Stronger energy infrastructure and the convergence of market arrangements will further facilitate cross-border trade, which should also enhance UK security of supply. Although the UK thus far has limited interconnection, gas trade with the Continent has been developing rapidly, and a number of electricity interconnectors are likely to be built in the medium term. Interconnection and market integration will also play an important role in allowing greater use of renewable energy, which should benefit the UK, given its significant renewables resource.

It is worth noting the successful development of the Single Electricity Market (SEM), which has brought significant progress in integrating the Irish and Northern Irish wholesale markets. The introduction of common EU rules through the Network Codes should help to integrate the Irish and UK markets further, though some market and policy design issues will need to be tackled.

Environmental and in particular climate change policy has become a major element in energy policy. Energy UK considers that there are benefits in tackling climate change at European and indeed international level and believes that the EU should continue to push for an international agreement on greenhouse gases (GHGs) by 2015. We see the EU Emissions Trading System (EU ETS) as the most cost-effective means to achieve GHG reductions in the traded sector: ETS is technology neutral, carbon markets are the cost-effective way to drive investment choice in GHG reduction and the ETS is fully compatible with the Internal Energy Market.

Disadvantages have tended to arise when EU legislation adopts an inflexible and prescriptive approach to regulation. The uncoordinated political agreement of renewable and energy efficiency targets has had the unintended consequence of undermining the carbon price (though we accept that the recession has had the greatest impact), so that more cost-effective carbon abatement measures have been postponed. The EU institutions should now give due consideration to the interactions between EU targets in the upcoming 2030 Climate and Energy Package. Most Energy UK members take the view that a strong carbon price should drive much increased investment in renewables and energy efficiency, thus reducing the need for specific targets. In general, we would like to see a greater focus on outcomes rather than prescription in European policy.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

It has taken a considerable time to liberalise the EU's electricity and gas markets – the original Directives were proposed over twenty years ago and the impact of competition has only started to be felt in some national markets over the last few years. This is an indication that legislation on the single market has not been disproportionate – and arguably that a more prescriptive approach and stronger enforcement could have been beneficial.

With the advent of the Network Codes, the EU has started to produce more detailed technical rules for electricity and gas markets. It is important that these Codes tackle truly cross-border issues and strike a balance between ensuring a level playing field and prescribing requirements which could be dealt with at national level. Energy UK's major concern with the Codes so far relates to the draft Requirements for Generators Code, which brings very small generation into the scope of regulation (units as small as 800 W, e.g. a small solar panel.) Such units are in our view not of cross-border significance and it is disproportionate to include them in a European Code of this type. Energy UK also takes the view that stakeholders need to be more closely involved in the preparation of Network Codes.

**3. In what areas might the UK's interests be served better if action were to be taken at:
a) EU level instead of national, regional or international level?**

Energy UK believes that there should be greater clarity about the balance of competences in energy and that it would be helpful to set out some guiding principles on competence. In the current state of development of energy markets, Energy UK does not see the need for policy decisions to be shifted to EU level. As energy markets become more integrated across Europe, there will probably be a need for greater coordination among national governments but this can be handled within the existing split of competences.

It is worth noting that the UK Government has tended in some areas to go beyond EU requirements, particularly in the area of climate change policy, e.g. the adoption of an emissions performance standard for fossil plant. This form of "goldplating" could disadvantage UK industry relative to EU competitors. In general, Energy UK believes that the UK Government should pay particular attention to costs and burdens on business when going beyond agreed EU policies. On a wider scale, EU competitiveness could also become a concern if the rest of the world does not follow the EU lead on climate action and no international agreement is reached.

b) National, regional or international level instead of EU level?

In general terms, Energy UK does not see any need to shift existing European competences to national or regional level. By definition, the rules for a European energy market cannot be agreed at national level and we do not believe that bilateral negotiation would be a feasible option for integrating 28+ national markets.

Energy UK believes that climate change objectives are best handled at European level and that EU ETS should remain the key mechanism for delivering GHG reductions in the traded sector. However, beyond that there should be flexibility for Member States to meet targets in the most cost-effective way. This could be through energy efficiency, renewables or other low-carbon technologies. Member States should take care to ensure that their policy measures do not unduly distort the energy market or cut across mechanisms such as EU ETS.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Energy UK believes that the process of developing EU energy legislation could be improved. EU policies and in particular any targets put in place should be evidence-based and underpinned by a comprehensive regulatory impact assessment (RIA) covering affordability, competitiveness and security of supply as well as sustainability. The models used for analysing data at EU level should also be open and transparent to allow robust scrutiny by stakeholders.

We welcome the fact that all proposals for EU legislation must now be supported by an RIA, as this mechanism provides an opportunity to take account of the wider economic interests of Member States. However, the reliability and relevance to individual Member States of RIAs carried out at EU level can be questionable as it is very difficult to represent accurately

the circumstances of 28 individual countries. There are some signs that the quality of impact assessment is improving, though RIAs sometimes appear to be undertaken to justify decisions rather than serving to evaluate policy alternatives.

Commission proposals are often significantly modified by the Council and Parliament during the negotiation process, but these changes are not subject to any impact assessment. An example would be the three-week limit for customer switching which was included as a late amendment in the Third Package, but whose costs were never assessed. This appears to be an important gap in the EU process which Energy UK would like to see addressed.

The EU has an important role as a forum for discussion on energy issues, tackling emergency issues such as the Russia/Ukraine crisis and more general coordination of policies. Voluntary agreements and best-practice guidelines have a role to play in some policy areas and the need for some EU measures could be questioned, e.g. the 2003 Electricity Security Directive which followed on from the Italian blackout. However, there does not appear to be an alternative to most European legislation on energy, as it either relates to market rules or imposes costs, making non-compliance an attractive option unless the measures are compulsory.

Energy UK believes that a greater effort could be made to avoid “red tape” in EU legislation. Most existing EU legislation has a review clause but succeeding versions tend to become more onerous without notable efforts to lighten the regulatory burden.

Adequate time needs to be allowed for the implementation of EU legislation and the sequencing of requirements needs to be carefully determined during the legislative process. For instance, in the case of REMIT, the prohibition on insider trading was introduced before there was any clarity about reporting requirements or any agreed routes for publishing the data. This resulted in significant regulatory uncertainty which could have been avoided.

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

A single market with stronger interconnection will benefit UK customers and the energy industry alike by promoting competition, providing access to a wider market and enhancing security of supply. It will also help to accommodate a higher share of renewable energy by using available resource more efficiently.

Energy UK supports the efforts to achieve further integration of the EU electricity and gas markets and accepts that some detailed rules will be needed to align wholesale market arrangements. It is important in our view that the Network Codes focus particularly on overcoming barriers to trade and do not impose unnecessary costs. This is particularly important for a mature competitive market such as the UK, where costly system changes could be required without major benefit in terms of promoting cross-border competition. This underlines the need to provide thorough impact assessment of EU regulatory measures.

The single market agenda should recognise that EU climate and renewable policy may require governments to take specific measures to promote low-carbon energies and ensure security of supply, e.g. long-term contracts and capacity mechanisms. The UK faces a particular challenge in the period to 2020, as a significant proportion of current generating capacity is expected to close. Consequently, the UK has introduced an Electricity Market Reform package (EMR) in order to bring forward the investment needed in low-carbon generation. This is consistent with the EU's long-term energy and climate ambitions and should be recognised as such.

The EU renewable targets have resulted in a much greater development of intermittent renewables sources than was envisaged when the EU target model for wholesale markets was established. Consequently the UK and several other governments are proposing to introduce capacity mechanisms to safeguard generation adequacy. Such measures should be carefully designed to minimise market distortions, but it is for national governments to decide how to achieve the necessary outcomes, Energy UK agrees that the EU should set high-level guidelines for capacity mechanisms to ensure that there is no discrimination between technology types or age of plant, and that undue distortions to trade are avoided.

Market integration of renewable energies is essential if the single energy market is to be completed (see our response to Q.8 below).

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Legislation such as the Electricity Security Directive, Gas Security Directive and Regulation on Trans-European Energy Networks has not required major changes to arrangements in the UK. To the extent that the Directives provide a common framework and minimum standards for network operation, emergency plans etc which all Member States have to meet, they could be viewed as beneficial.

A Regulation on Energy Infrastructure which seeks to remove barriers to the development of electricity and gas interconnectors has recently been agreed. Energy UK supports this measure, which aims to ensure greater coordination among regulators and speedier authorisation of projects. We would also support the provision of limited EU funding for energy infrastructure on the basis that it can have security of supply or other benefits which the market alone would not provide. However, Energy UK believes that network infrastructure should generally be funded through the tariff mechanism (with costs borne by the beneficiaries) and that interconnectors should predominantly be built where cost-effective.

Interconnection is likely to become increasingly important for an island system such as the UK. However, it must be stressed that interconnectors are not a panacea and that the European power system requires not only a strong grid but also adequate local and regional generation capacity. Interconnection on its own does not guarantee that there will be sufficient capacity to meet demand. Energy UK would not support the establishment of targets for interconnection, as have sometimes been proposed: undersea DC interconnectors such as those required for island markets such as GB are significantly more costly than conventional AC interconnection, so a one-size-fits-all EU approach is not appropriate. In general, infrastructure should be built on the basis of need evidenced by market appetite rather than arbitrary targets. It is also important to ensure that interconnection charging principles do not undermine the potential development of storage and demand-side response measures.

One concern of Energy UK is that the Commission applies to be applying increasingly stringent criteria to the authorisation of merchant interconnectors. Energy UK accepts that most interconnection will be built through the regulated route, but it is important that the merchant option (which has been used for most existing UK interconnection) remains open.

Energy UK takes the view that the primary responsibility for security of supply should remain with Member States. The availability and public acceptability of different energy sources and technologies varies across Europe and so a wholly unified policy is unfeasible. National Governments should be accountable to their electorates for the policies they pursue and for

the associated costs. Furthermore, the arrangements should be transparent, so that customers are clear about what they are paying for.

As the European energy system becomes more integrated, policy decisions by individual Member States will have an increasing impact on their neighbours. This is already visible in, for instance, the German decision to phase out nuclear energy which has had both cost and operational impacts on other Member States. It follows that the European Union should act as a proactive forum for discussion on energy issues and should where appropriate help coordinate energy security policies.

Europe needs to maintain a diversified mix of fuels and technologies to ensure security of supply and minimise costs. However, the current picture is not encouraging with several Member States effectively banning the development of nuclear energy, carbon capture & storage (CCS) and shale gas, all of which have a potential role to play in ensuring reliable low-carbon energy provision. Similarly, some renewable sources of energy are facing increasing planning and other barriers. It is important that the Commission and European policy-makers collectively work to keep energy options open rather than closing them down.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The development of indigenous renewable energies such as wind, solar and biomass has been accelerated by European policy (see our response to Q.8 below). Utilisation of UK coal resources and UK coal generation has certainly been adversely affected by EU policy on climate change (EU ETS etc) and on power station emissions (LCPD and IED). However, it could be argued that domestic policy decisions have had the greater impact, e.g. liberalisation of the UK power market, the Climate Change Act and carbon floor price.

In Energy UK's view, national and EU policy-makers should promote a diversified fuel mix and should help ensure that potential new energy resources including shale gas are exploited where environmentally acceptable and cost-effective. Energy UK takes the view that national competent authorities should be responsible for assessing and monitoring the environmental impacts of shale gas extraction and does not see the need for EU-wide legislation at this juncture.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Energy Efficiency

The EU has a role to play in certain aspects of energy efficiency policy, notably the setting of appliance efficiency standards, which has played a major role in reducing the energy consumption in the household sector. Energy labelling of traded goods is also best tackled at European level and Energy UK believes that there is a role for the Commission in disseminating best practice and promoting technology innovation. Encouraging research and development into home energy management systems and smart appliances should help to accelerate the production of white label goods that can be purchased by consumers to assist with the adoption of smart grid technologies. There also needs to be greater recognition by national regulators of the value of smart grid technologies in lowering electricity consumption at peak periods and overall. To date Ofgem has, to our knowledge, been the only regulator

to introduce specific initiatives to reward network companies for innovative use of smart grid technology.

However, Energy UK is much less convinced of the need to set European energy efficiency targets or harmonise national policies. EU Member States differ considerably in terms of climate, geography, industrial development, housing stock, generation mix etc and use a variety of policy instruments to promote energy efficiency (taxes, supplier obligations etc). The Commission has tended in our view to take an over-prescriptive approach to regulation, including the recent attempt in the Energy Efficiency Directive to impose CHP for all new fossil plant (though this was not included in the final text).

Most Energy UK members believe that it would be preferable to set a target for greenhouse gas reduction and to allow Member States flexibility in the extent to which they achieve this through energy efficiency or through other measures.

Renewables

The 2009 Renewables Directive has had a major positive impact on the development of renewables in the UK. It is very unlikely that such an ambitious target would have been adopted without the Directive. This has had a number of benefits in terms of contributing to the low-carbon transition, promoting technology development and employment and reducing dependency on fossil fuels. On the other hand, the UK has accepted a considerably tougher target than other Member States (effectively a tenfold increase compared to a doubling in most Member States), which inevitably has cost implications.

Energy UK members agree that the development of renewables must continue into the 2020s and there will still be a need for dedicated support, particularly for immature technologies that require assistance to achieve commercialisation. This type of support is likely to be technology specific, with deployment concentrated at the most suitable sites. For these reasons, specific support for certain technologies should remain a decision taken at the Member State level.

In future, greater cooperation among Member States is likely to be needed to develop some renewable energies, in particular offshore wind and marine technologies. It will be important to have a supportive and consistent regulatory framework for such technologies and Energy UK welcomes, for instance, the work being done in the North Seas Grid initiative in this respect. This is particularly relevant to the UK, given its large renewable resource. There is also a case for cooperation on storage and demand-side response issues – market-based solutions should be implemented in these areas.

A future priority should be to ensure that renewable energy production across Europe is integrated with the market in terms of selling power into the wholesale market, balancing responsibility and non-discriminatory network charges.

Carbon Capture & Storage (CCS)

The CCS Directive establishes a regulatory framework for carbon capture and storage and the EU has also been active in trying to develop a demonstration programme for CCS. The demonstration programme has encountered a number of setbacks and progress has been much slower than expected. Elements of the CCS Directive, e.g. the financial security requirements could be viewed as too onerous, but are not in our view a major factor in delaying the development of CCS. The impacts of the financial crisis, e.g. decreased energy demand, low carbon prices and reduced investment funds available to major utilities are likely to be the major factors. In the case of the demonstration programme, a major lesson is

the importance of coordinating EU and national funding schemes and avoiding over-rigid deadlines.

It remains important in Energy UK's view to demonstrate CCS at industrial scale if Europe's longer term carbon objectives are to be met. The EU and Member States should work together to bring forward a demonstration programme and address any regulatory barriers to CCS.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

At a time of increased competition for energy resources, Energy UK believes that there are benefits in the EU taking a coordinated approach to discussions with the major energy-producing countries. Nevertheless, it must be recognised that Member States will sometimes have competing interests and that a collective view will not always be reached. We would envisage the European Commission taking a high-level facilitation role rather than becoming directly involved in commercial negotiation. Energy UK supports the role which the EU has played in the UNFCCC discussions on GHG emission reductions and stresses the importance of the ongoing negotiations around a global agreement to succeed the Kyoto Protocol. The UK has more influence with UNFCCC and other countries by working through the EU than it would have on its own.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The Euratom Treaty provides an appropriate framework for the development of nuclear energy in Europe while leaving the decision on whether to deploy the technology to each Member State. Energy UK does not see any need to change this framework at present.

National nuclear safety regulators should continue to have the primary responsibility for overseeing the safety and security of nuclear installations. Energy UK welcomes the closer cooperation between national regulators that has been developed in recent years. Any action at EU level should not encroach on the competence or credibility of national safety regulators and should complement the requirements of the relevant international conventions and IAEA Guidelines.

Nuclear energy is an important element in a diversified fuel mix, which can help to reduce Europe's import dependency as well as reducing carbon emissions. The Commission should ensure that nuclear energy is able to compete on a level playing field with other decarbonisation options and should promote a dispassionate debate on energy provision.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Europe faces considerable future challenges in energy, notably in respect of industrial competitiveness and meeting its longer-term GHG targets. Europe currently has energy

prices which are significantly higher than those in the US in particular and it is vital that the competitiveness of EU industry is safeguarded. Europe's energy import dependency is also continuing to increase. If these challenges are to be met, Europe and national governments must implement cost-effective and market-based policies, promote a diversified fuel mix and focus on improving energy efficiency.

A particularly significant future challenge is to achieve the European Council goal of an economy-wide 80 to 95% reduction in GHG emissions by 2050. To meet this level of ambition, the electricity generation sector will have to be essentially decarbonised and electricity will increasingly be used to decarbonise the heating and transport sectors. If the transition to a low-carbon generating portfolio is to be made successfully, energy and environmental legislation will have to be carefully coordinated to ensure that secure and affordable energy provision can be maintained.

Major investment will be needed to achieve this transition and policy-makers must therefore provide an attractive climate for investment within the EU. Energy is a capital-intensive sector with long asset lifetimes and clear visibility of policy objectives is essential. Clear greenhouse gas reduction targets need to be set for 2030 and 2050 and a credible policy framework must be established. Improvements will be needed to strengthen the EU ETS given that the current carbon price is insufficient to incentivise investment in low-carbon generation or energy efficiency. Energy UK advocates the early structural reform of EU ETS and notably a revision of the annual linear factor.

The EU cannot afford to "go it alone" on climate change and so it is all the more important that policy should be cost-effective and avoid damage to competitiveness. Europe should continue to prioritise the establishment of an international agreement on climate change and maintain efforts to link the EU ETS with other trading schemes.

Additional efforts will also be needed at EU and national level to drive innovation in energy technologies. In particular, greater investment should be focused on research, development and demonstration to ensure that the most effective technologies are deployed at scale. This can be best achieved by ensuring that policy at an EU and nation state level is coordinated, so that funding sources can be aligned in terms of both objectives and timing.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

Climate change is a global problem which is best tackled at the international level, with strong coordination within the major economic regions such as the EU. Energy UK believes that an international agreement on climate change should remain a key EU objective, as otherwise Europe and the UK could be placed at a serious competitive disadvantage.

As the European energy market becomes more integrated, there will be an increased rationale for cooperation and policy convergence within the EU to ensure secure and affordable energy supplies. For the foreseeable future, energy policy will require a mix of actions at EU and national level. This requires flexibility in how legislation is both set and implemented. It is important that EU measures are not over-prescriptive and equally that action at the UK level does not undermine EU mechanisms.

Food and Drink Federation

This submission is made by the Food and Drink Federation, the trade association for food and drink manufacturing. Food and drink manufacturing is one of the UK's business success stories. We are the country's largest manufacturing sector. The food and non-alcoholic drink sectors represented by FDF turnover £78.7bn and generate GVA of £20bn, accounting for 15% of the total manufacturing sector by turnover and provides employment for up to 400,000 people. Despite an intensely competitive global market the industry has posted strong export growth figures for the first half of 2013 and our exports are now worth more than £12bn a year to the UK economy.

The food and drink manufacturing sector used 36TWh of energy in 2012 at cost of £1.5bn. Access to secure and affordable energy is therefore a very important issue for our sector.

Energy supply and pricing have a substantial global component, from which it follows that a common EU voice is likely to carry more weight in international discussions than a range of different national points of view.

But the key issue when addressing where the balance of competence on energy issues should lie is the extent to which it is necessary to legislate at EU level in order to ensure coherence and provide a level playing field for companies competing both within the Single Market and more globally. There is no simple answer to this. Even within a harmonised system, it is important to maintain a degree of flexibility to respond to national circumstances with respect to energy supplies and markets. A UK perspective will not necessarily be shared by a majority of EU Member States particularly given UK indigenous energy supplies and that fact that the UK acted early to liberalise its energy markets.

As a general observation we believe the current balance of competence between the EU and the UK is broadly appropriate. Regarding energy markets and security of supply, the focus of EU measures, since the 2009 TFEU and the 2009 Third Energy Package, has been towards market functioning, regulation and liberalisation. However, the UK liberalised its energy markets ahead this - notably through the Gas Act 1986, the Electricity Act 1989, competitive wholesale markets in 1990, an independent regulator in 1990 and full market competition in the 90's. Subsequent developments at EU level have reflected these changes and helped deliver the benefits we believe liberalisation has to offer in terms of both price and security of supply.

In the light of these considerations we have the following specific responses to the consultation questions:

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

We believe that EU action in the energy field has generally been of benefit to the UK, the UK food and drink manufacturing sector - particularly in the promotion of liberalised markets, Combined Heat and Power and energy efficiency.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Yes, we believe that legislation is proportionate

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

Action to further develop both gas and electricity interconnections will have security of supply benefits for the UK.

b. National, regional or international level instead of EU level?

We believe that the current balance between Member State competence and EU competence is about right. We do not, at present, see benefits of extending EU competence further other than to ensure that the requirements of the Third Energy Package are fully implemented across the EU.

4. How could the EU's current competence for energy be used more effectively?

For example, could more be done during the development stage of proposals and the preparation of impact assessments?

Are there alternatives to legislation?

In the areas where the EU has legislated on energy market issues we feel the mandated obligations on Member State Governments have been necessary to deliver more competitive and transparent energy markets and drive behaviour change. A Voluntary approach would not necessarily have worked as effectively.

And how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Regulatory stability and market structure stability is critical to enable the long term investment needed to secure energy supplies, energy generation and distribution.

Continuous review of the energy market legislative framework would undermine confidence to attract the necessary investment and be counterproductive towards achieving the objectives of EU and UK energy policy.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market?

Please see our introductory comments.

Is further or deeper integration of EU energy markets desirable?

The development of further interconnections in both gas and electricity networks across Europe will clearly benefit security of supply. This should not require further extension of EU competence beyond that currently exercised.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

Directives and Regulations promoting market deregulation, improved market interconnectivity, renewable energy, energy efficiency and the deployment of Combined Heat and Power have all benefited EU and UK security of supply – noting this needs to be viewed alongside the importance of UK domestic action on future electricity and gas security of supply.

8. How have measures and policies at an EU level helped or hindered the development and deployment of: sustainability measures? Energy efficiency?

We note that the introductory paragraph on Energy Efficiency on p12 of the consultation document is an excellent articulation of the case for robust energy efficiency action whether driven by the EU or the UK!

With the exception of the 2004 Cogen Directive, until the introduction of the 2012 Energy Efficiency Directive most energy efficiency regulation impacting our sector has been from the UK – most notably Climate Change Agreements.

FDF argued against mandatory energy efficiency audits under the Energy Efficiency Directive because we believed they duplicated actions already being taken by companies as they were aimed at the same goals as other measures such as CCAs and the EUETS which

drive energy efficiency improvements. Noting that these audits are now mandatory and will be implemented in the UK via the ESOS it is imperative that they are implemented in a pragmatic manner to avoid undue additional cost and administrative burden on industry

Renewable and low carbon energy?

We support the objectives of the current Renewable Energy Directive (RED) 2009 and believe this has been beneficial in promoting renewable energy which delivers enhanced security of supply and supports greenhouse gas emission reductions.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

To reiterate the point made in our introduction: Energy supply and pricing have a substantial global component, from which it follows that a common EU voice is likely to carry more weight in international discussions than a range of different national points of view.

Friends of the Supergrid

About Friends of the Supergrid

Friends of the Supergrid (FOSG), founded in 2008, is a European Industrial Alliance that advocates for the creation of a pan-European, integrated high-voltage direct current electricity network. The organisation represents a group of companies from across the electricity generation and transmission value chain. Members of the Friends include some of the world's leading clean energy companies, many of which have extensive UK operations, such as Siemens, ABB, Mainstream Renewable Power, DONG Energy, and National Grid. We share a common conviction that a fully integrated European electricity network is fundamental to ensuring a transition to a secure, affordable and low-carbon electricity system.

Executive Summary

Friends of the Supergrid (FOSG) welcomes the possibility to comment on the energy component of the UK's Review of the Balance of Competences between the United Kingdom and the European Union. Our response will focus primarily on EU competence in the area of cross-border electricity infrastructure and the creation of a single EU energy market. Our main points are as follows:

- EU competence over energy has been critical in driving energy policy at the member state level, which have been effective in increasing the use of low-carbon energy sources, such as renewables
- Legislation to create a single European energy market and increase interconnection is best placed where it currently is, at the EU level
- EU competence could be expanded in this area to hasten the development of physical interconnection projects, as electricity flows between many member states are still minimal
- Further integration of European energy markets is desirable for the UK and all member states as it will help deliver more secure, affordable and low-carbon sources of energy
 - It will also allow the UK to exploit more of its own renewable energy sources of energy, which it can consume domestically or export to Continental Europe

Consultation Questions

GENERAL

- To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

FOSG represents a range of companies that supply equipment, services and solutions for a pan-European, HVDC electricity transmission grid. Given our perspective, FOSG believes EU actions to develop a single energy market have been beneficial for its members and for member states' efforts to provide affordable, secure and low-carbon energy to consumers, including the UK.

Specific EU-level policies, including the Energy Strategy, with its triple target of 20% carbon emissions reductions, 20% renewable energy and 20% increases in energy efficiency by 2020, have heavily influenced subsequent energy policy at the EU and Member State level alike. EU regulations, particularly the TEN-E infrastructure regulations in the Third Energy Package to develop a pan-European electricity grid, and funding programmes, such as the Connecting Europe Facility, were created with these targets in mind. They are also essential in laying the foundation for the European Supergrid. Additionally, the Renewable Energy Directive of 2009 set a 2020 target requiring 20% of energy to come from renewable energy sources. Although Member States determine their own individual targets depending on the existing level of renewable energy capacity installed, the Directive has played an unmistakable role in driving renewable energy development across Europe. These policies and regulations have resulted in increasing levels of renewable energy capacity and should soon bring forward a number of cross-border electricity interconnectors, which benefits those in the clean energy generation and electricity transmission infrastructure sector.

- Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

With respect to creating a single energy market in Europe and linking up all Member States through physical electricity interconnectors, we believe EU action has been proportionate. For obvious reasons, these policy goals are best served by legislation and coordination at the EU level, as opposed to a more piece-meal approach laid out by individual member states. We applaud the EU's existing efforts to achieve these goals through new TEN-E regulations that support cross-border electricity interconnection projects – Projects of Common Interest (PCIs). Regulations require Member States to expedite permitting and planning approval for these projects (the final list of eligible projects was published in autumn 2013). The Connecting Europe Facility (CEF) and the Horizon 2020 research and innovation funding programmes have also been created that will provide financial support for pre-commercial technology and beneficial, although not yet commercially-viable, interconnection projects.

Progress towards the creation of the single, interconnected European energy market has been disappointingly slow. There are still too many “electrical islands” – regions with isolated grid systems that are separated from Continental Europe. This holds true for island states, like the UK, but also occurs in regions that share land borders. For example, interconnected capacity between the Iberian Peninsula and France barely exceeds 1 GW. In the case of the UK, to date, there are only 4 interconnectors with 4GW transmission capacity. The European Network of Transmission Operators for Electricity (ENTSO-E) estimates that 45,300 km of new transmission lines is required for Europe to meet its renewable energy targets alone, much of which must be cross-border, and another 18,200 km and 21,900 km for internal market integration and security of supply respectively.¹³² An efficient, interconnected network should also include nodal connections, i.e. transmission networks that split off to connect into multiple jurisdictions, which it currently lacks. We believe the EU could reasonably take more action to hasten the development of the single market and construction of physical interconnector projects. One way it could do this, as we have proposed in previous consultations, is to set an interconnection target that would sit alongside targets for carbon emissions reductions, and renewable energy and energy efficiency if they are set for 2030.

¹³² Energy Ireland (26 September 2013), Developing the Super-grid, Available at: <http://www.energyireland.ie/developing-the-super-grid/>

This would require member states to source certain percentages of their electricity demand with power generated in other EU countries.

THEMATIC AREAS

- What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

FOSG, unsurprisingly, believes that deeper integration of EU energy markets is desirable. A single, interconnected European energy market will deliver energy more efficiently and at a lower cost. It will also help Member States achieve their 20-20-20 climate targets. For the UK specifically, which is for the most part an energy island (particularly for electricity as only 4GW of capacity is available from the existing 4 interconnectors), completion of an internal energy market has multiple benefits, as identified in a recent Cost Benefit Analysis undertaken by FOSG. It will lower energy bills for consumers by allowing the UK to buy from cheaper sources, thereby increasing competition in the market and more efficiently allocating electricity resources to areas where demand is highest. It will also enable the UK to expand renewable energy development while avoiding higher curtailment and network costs. Excess renewable energy supply that can't be used in the UK can be sent through interconnectors to where it's needed and the need for back-up power supply to balance out the variability of renewables will diminish. Excess capacity is abundant across Europe and goes wasted. Allowing it to be sent to states with capacity scarcity will reduce costs for Member States as it would reduce the need to provide domestically-based back-up capacity, through such mechanisms as the Capacity Market in the UK.

- To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The EU TEN-E regulations on trans-European energy infrastructure (Regulation (EU) 347/2013), which came into force in May 2013, will benefit the UK in the coming years by expanding its access to electricity through Projects of Common Interest that link the UK to other Member States. PCIs will allow the UK to purchase electricity from other states when it is more affordable, thereby reducing energy bills for consumers and industry. It will also allow for the more efficient use and integration of renewable energy by reducing costs associated with balancing the system and providing back-up capacity in times when power demand and supply are out of synch. This will expand the scope for renewable energy generation and well as reducing its costs.

- What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

EU regulations for energy infrastructure will increase the UK's ability to exploit its abundant indigenous renewable energy resources. This is particularly true for offshore wind, which is estimated to have a total practical potential of 116GW from fixed turbines and 350GW if floating turbine technology is commercialised.¹³³ The UK is the world leader in installed

¹³³ The Offshore Valuation Group (2010). The Offshore Valuation. Available at: http://offshorevaluation.org/downloads/offshore_valuation_full.pdf.

offshore wind capacity and has the highest offshore wind resource potential in Europe. This energy can be fed into European grids and used wherever there is insufficient electricity supply and where the price is competitive. Current interconnection capacity is low in the UK, but eligible PCIs for the North Seas Corridor, (of which there are 20 eligible projects), if completed, could dramatically increase the UK's capacity to exploit indigenous renewable energy resources of all types.

- How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

There is general consensus in the area of renewable energy sector, EU targets have been instrumental in the rapid development of renewable energy capacity across the EU. The Second Renewables Directive (Directive 2009/28/EC) is credited with the growth of renewables capacity. Since 2009, when the Directive was passed, the share of renewable energy in the energy mix in Europe has grown from 9.2% to 13% in 2011.¹³⁴ Wind power capacity in Europe grew from in 2009, to 106GW by the end of 2012. In the UK, the Renewables Obligation stimulated a growth in operational wind power capacity from just over 4GW in 2009 to over 10.5GW by mid-2013 (onshore and offshore).¹³⁵

Some argue the EU's decision to set technology-specific targets has diminished prospects for other low-carbon technologies, such as nuclear, carbon capture and storage. While we do not wish to comment on this view as an organisation, we would suggest that EU low-carbon targets could be improved in their next iteration in the 2030 Framework on energy and climate change. For example, we believe renewable energy plant have sometimes been developed inefficiently. Member States, in order to meet their national renewable energy targets, have sometimes built plant where production capacity is relatively low compared to other areas in Europe. For example, solar PV installations in Northern Europe make much less sense than solar in southern Europe. Renewable energy installations should be located where resources are strongest and then fed into HVDC grids and transmitted across Europe to demand centres. We believe that if the EU chooses to set a renewable energy target again for 2030, the target should be set at an EU-wide level, as opposed to the Member State level. Renewable energy installations will then be developed in areas where it makes the most sense and a European Supergrid will enable this new approach to take place.

¹³⁴ European Commission (2013). EU energy in figures, Statistical Pocketbook 2013. Available at: http://ec.europa.eu/energy/publications/doc/2013_pocketbook.pdf

¹³⁵ DECC (2013). Renewable Energy Roadmap: 2013 Update.

National Farmers' Union of England and Wales (NFU)

The National Farmers' Union of England and Wales (NFU) represents 47,000 farm businesses throughout England and Wales. In addition we have about 40,000 countryside members with an interest in farming and the countryside. The NFU has responded to a number of previous calls for evidence on the Balance of Competences, and these can be viewed [here](http://www.nfuonline.com/business/better-regulation/review-of-the-balance-of-competences) (<http://www.nfuonline.com/business/better-regulation/review-of-the-balance-of-competences>).

With 75 per cent of national land area in the agricultural sector, NFU members are well-placed to capture renewable natural energy flows and help to mitigate climate change, contributing to both energy security and food security as well as the delivery of other environmental and land management services.

The NFU believes that domestic land-based renewable energy can deliver up to a quarter of UK clean energy needs by 2020, faster and cheaper than many other low-carbon energy options. This message is consistent with our vision for farming delivering a wide variety of goods and services to the UK economy, centred upon but not limited to food production.

The NFU is engaged with DECC, Defra, DfT and other government departments and advisers in directing climate change and renewable energy policy into real economic opportunities for rural diversification and job creation. Agriculture and horticulture can help to mitigate climate change, while contributing to both energy security and food security. The NFU works closely with other trade associations and non-government organisations with an interest in renewable energy, including the Renewable Energy Association (of which we are associate members), the Solar Trade Association, RenewableUK (representing the wind power industry) and the Anaerobic Digestion and Biogas Association.

Deployment of renewable energy goes way beyond just managing UK carbon emissions -the land-based sector, in particular, will contribute to domestic supply chain development for a wide range of renewable energy technologies, supporting rural diversification and job creation, and will also help with environmentally-sound management and utilisation of organic wastes, co-products and nutrients (manures, crop discards, agricultural residues, food processing and packing waste). The NFU is especially supportive of farmer-owned small and medium scale renewables projects, particularly those schemes which help farmers to achieve local environmental objectives (e.g. resource protection, biodiversity).

Like other trade associations, the NFU recognises that over the past 25 years the UK has led the EU agenda on liberalisation of energy markets. However, the UK has also become a net energy importer within the past decade, and is increasingly subject to the same energy insecurity as many other Member States. The UK government should be satisfied with the overall balance of competence between the UK and the EU with regard to renewable energy policy and wider energy policy.

The NFU agrees with other UK trade bodies, as well as a number of European bodies, in supporting the adoption of a legally binding 2030 target for renewable energy in the EU. Following earlier non-binding directives on renewable electricity and fuels (2001, 2003), the legally binding Renewable Energy Directive (2009/28/EC) has proved to be a success story for 'green growth' in the UK and across Europe, with the emergence of robust supply chains for manufacture, project development and deployment of a wide range of renewable energy technologies: its replication for 2030 is increasingly supported from many quarters.

Consultation questions

The NFU would like to submit responses to selected questions posed in this Consultation, in addition to the comments made above on the wider policy context.

GENERAL

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

The EU Renewable Energy Directive has clearly benefited British farmers through its translation into UK policy. Setting challenging targets for renewable energy across Europe has created opportunities for UK players to benefit from specific technologies developed and deployed in other Member States, and the latest estimate is that 38% of all farmers are engaged in some kind of renewable energy production and use.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

It is our view that EU renewable energy legislation is not only proportionate but also very timely. Introduced on an effort-sharing basis across Member States according to their respective starting points and available resources, it is providing all Member States with a long-term target that engenders long-term stability in energy policy. National renewable energy action plans demonstrate how these targets will be delivered, subject to biennial reporting against these plans. This certainty has most probably lowered the cost of capital investment in renewables in all Member States, delivering a reduction in the overall cost of an inevitable transition to a low-carbon economy.

3. In what areas might the UK's interests be served better if action were to be taken at: a. EU level instead of national, regional or international level? b. national, regional or international level instead of EU level?

(a) at EU level, setting of a comprehensive and coherent "climate package" for 2030, including binding targets for greenhouse gas emissions reduction, renewable energy and energy efficiency.

(b) at national level, determining the optimum balance of the various renewable energy technologies across power generation, heating and transport, and the corresponding role of other low-carbon energy technologies in each of these sectors.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

EU competence in energy would be more effective if it avoided conflicting policy measures (within the energy sector or elsewhere) which damage the policy certainty it provides otherwise. For example, the European Commission's proposals on limiting the use of first-generation biofuels threaten to slow investment that would lead to the development of next-generation advanced biofuels. EU criticism of the UK's setting of reduced-rate VAT on insulation and other energy saving products, and the antidumping tariffs levied on Chinese

solar PV equipment, are further examples of European legislation which acts against the interest of British farmers investing in low-carbon energy. Notwithstanding these departures from effective policy making, the overall balance of competence is about right, and should be maintained.

THEMATIC AREAS

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Exploitation of the UK's indigenous renewable resources has been greatly assisted by EU measures. The NFU sees only limited opportunities for farmers and landowners to benefit from the exploitation of shale gas (since mineral rights remain with the Crown), and does not believe that additional measures are required to support unconventional fossil fuel production, which is already being promoted by a range of national government policy instruments.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures -energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

As one part of the 2020 EU climate package, the Renewable Energy Directive has worked alongside targets for greenhouse gas reduction and energy efficiency, with any improvements in energy efficiency making it easier to achieve the renewables targets. Common standards have been set for bioenergy sustainability and heat pump performance, while leaving the details of their implementation to Member States. It is important to capture the same simplicity, coherence and clarity of ambition in designing policies for 2030, most likely by the EU maintaining headline targets for the same three subjects; greenhouse gas emissions reduction, renewable energy and energy efficiency.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

The NFU agrees with other trade associations that energy policy is inextricably linked to climate policy. The EU has played a leading role in international climate talks, following the lead taken by the UK in unilaterally setting stretching greenhouse gas reduction targets. This suggests that the balance of competences here is about right, but there needs to be alignment between the EU negotiating position on greenhouse gas emissions reduction (40% or 50% by 2030) and its setting of a 2030 renewable energy goal (at least 30%).

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The NFU believes it is inevitable that the price of energy will rise, but that business input costs can be managed through a combination of more energy efficient farm production technologies and an increasing degree of energy self-sufficiency from a variety of renewables, both of which are consistent with a low-carbon economic transition. We anticipate continued growth in the contribution of land-based renewables to national energy supply. As has been recognised recently by DECC, increased interconnection of electricity grids between EU Member States (also EEA countries), possibly in the form of an HVDC 'supergrid', will improve efficiency of grid operation and enable high penetration of renewables across a wider geographical area. This is a key area for the exercise of EU competence.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

While there may be short-term imbalances in energy costs compared with our competitors (which may be best addressed by concerted EU and international action), the long-term benefits of the expected low-carbon transition are a much greater degree of energy independence and energy security, as well as a more stable worldwide environment and economy. Maintaining the present balance of competence between the UK, EU and international agreements will be critically important in moving

Oil and Gas UK

Introduction

Oil & Gas UK welcomes the opportunity to respond to the call for evidence on the government's review of the balance of competences in the energy sector.

Oil & Gas UK is the main industry association representing producers of oil and gas on the UK continental shelf (UKCS) and service companies supplying both the domestic offshore industry and export markets. The comments below reflect this upstream orientation of Oil & Gas UK but include also our assessment on EU regulation of UK-based markets in oil and gas on which our producing members depend for the marketing of their output.

Rather than answer the specific questions in the consultation document, we have set out our evidence based on our recent experience in five main areas:

- EU energy policy objectives
- Offshore safety
- Completion of the internal market in gas and electricity
- The proposed extension of financial sector regulation to traded energy markets
- The Energy Efficiency Directive.

Re-balancing of EU energy objectives. Oil & Gas UK endorses the UK government's commitment to progressive de-carbonisation of the UK economy but believes that much of the energy and climate legislation emanating from the EU since 2007 has impaired the search for a least-cost route to decarbonisation and undermined public acceptability of climate change policy. In particular, the EU's '20-20-20' energy targets decided in 2007-08 lacked coherence and imposed additional costs unnecessarily on consumers. We welcome the determination of the government to restrict the EU framework for 2030 to a single GHG target and to place greater emphasis on international competitiveness and the structural reform of the ETS in future EU energy and climate policy.

Retention of UK discretion. Oil & Gas UK remains concerned about the growing volume and complexity of European legislation in the upstream sector and in wholesale energy markets. At a time of rising upstream costs in a mature producing basin like the UKCS, it is essential that the UK retains discretion in the setting of industry standards in safety and the environment in order to avoid unnecessary or disproportionate costs. This concern is magnified in areas of shared competence where many EU institutions lack industry expertise in offshore operations. We suggest that the field of energy policy is one area in which the UK government might seek to clarify the areas of competence between member states and the EU in order to secure an appropriate, wider degree of national discretion. We view such a widening of UK policy discretion as both desirable and necessary if the UK is to maximise the economic recovery of the remaining hydrocarbon reserves from the UKCS and to pursue a least-cost path to de-carbonisation as set out in the Climate Change Act 2008.

Avoidance of excessive legislation and regulation. In our view, any legislative proposal should take full account at its inception of the existing body of EU and national law. There has been a tendency at EU level in recent years to bring forward new legislative proposals, ostensibly to address safety or local environmental concerns, rather than to seek enforcement of existing EU laws. This unwelcome tendency was evident in the EU proposals in 2013 over shale gas. We would welcome a much more rigorous approach by the

Commission in the exercise of its powers to initiate EU legislation to avoid instances of duplicative legislation.

Flexibility in de-carbonisation. Both EU and UK legislation in energy are becoming increasingly complex as new instruments are being introduced to promote long-term de-carbonisation. If the UK is to avoid excessive costs in its path towards decarbonisation, it is essential to ensure that EU legislation sets high-level objectives and allows members states as much discretion as possible in meeting those objectives. We welcome the approach taken by DECC in the negotiation of the EU 2030 climate and energy package and its efforts to avoid a repeat of the distortions and excessive costs arising from the binding 2020 renewable target.

Recognition of national expertise in upstream oil and gas. The UK is one of very few EU member states with extensive industry and policy experience in upstream oil and gas. Unsurprisingly, many EU legislative institutions lack such expertise and experience. Even if competence in this area remains shared, we recommend that DECC always engages extensively with EU institutions at an early stage of legislation to avert unnecessary duplication of existing UK legislation/regulation and to prevent the adoption of poorly-designed EU legislative proposals in the offshore sector.

Offshore safety directive. The response in EU institutions to the Macondo tragedy and its environmental consequences provides a useful example of the inappropriate exercise of EU competence in a field in which many of those involved in the legislative process lacked the expertise to ensure proportionate, cost-effective EU legislation. As a result, the UK upstream industry was forced to spend an inordinate amount of time and effort between 2010 and 2013 ensuring that the proposed EU offshore safety regulation was appropriately amended. This involved explaining that the application of existing EU law and existing UK regulations had already created a world-leading safety regime and that misguided amendments would almost certainly make the UKCS a less safe place to work. In the end, the EU regulation was amended to a directive and a more moderate approach was finally approved. During this time-consuming process, resources were diverted away from addressing other industry issues such as asset integrity on the UKCS.

Completing the internal market. The Third Energy Package agreed in 2009 marked a satisfactory culmination of almost 20 years of efforts to liberalise EU gas and electricity markets. However, it is evident already that the process of implementation will be highly disruptive in UK gas markets and will entail unnecessary costs to both consumers and producers, even though the UK already has the most liberalised gas market in the EU. We attribute this to the prescriptive nature of much of the network codes (which enter EU law automatically), the mistaken emphasis in ‘comitology’ on strict harmonisation regardless of national infrastructural differences and the failure to consider the knock-on effects on UK upstream producers. The Commission’s aim to complete the internal market by 2014 is proving far too optimistic; a more realistic timetable which allows proper consideration of the complex national issues raised by the network codes is now essential.

Extension of financial regulation into energy markets. At the same time as the network codes are being adopted to promote cross-border trade and hub trading, efforts are being made to bring energy market trading within the scope of EU financial regulation. If this were to occur, it would significantly raise the costs of marketing of oil and gas for UKCS producers

and would tend to suppress trading activity. The adoption of REMIT in 2011 addressed possible market abuse and transparency but the persistent effort since then to drag physical forward energy contracts within the scope of the Markets in Financial Instruments Directive (MiFID 2) has been thoroughly misplaced since, in our view, it threatens liquidity and competition in wholesale markets through its unintended consequences. As with offshore safety, it is a matter of regret to Oil & Gas UK that the UK's expertise in traded energy markets and financial regulation has been largely overlooked in developing EU legislative proposals such as MiFID 2.

Energy efficiency directive. Improving energy efficiency is a laudable aim but it is a means to an end, not an end in itself. This has not been recognised in the recent Energy Efficiency Directive which for heavy industrial energy users interacts with the existing Industrial Emissions Directive and the EU Emissions Trading Scheme (ETS). Little consideration seems to have been given to these interactions either at EU level or in DECC's implementation under the Energy Savings Opportunity Scheme. For heavy industry, investment cycles are measured in decades. Once an investment has been made, there is little that can be done to alter the underlying performance of industrial plant, except through mid-life re-investment or at inordinate cost. This highlights the lack of flexibility in the implementation of EU legislation by member states to take proper account of either existing legislation or the feasibility of implementation.

Renewable Energy Association (REA)

The REA welcomes the opportunity to submit a response to DECC's call for evidence on the EU balance of competences in the energy sector. The REA represents a wide variety of organisations involved in renewable energy in the UK, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are over 950 corporate members of the REA, making it the largest renewable energy trade association in the UK. The REA's main objective is to secure the best legislative and regulatory framework for expanding renewable energy production in the UK. The Solar Trade Association is affiliated to the REA.

Energy in an EU context

Energy has always been and remains vital to the health of the economy. The European Union as a whole is becoming increasingly dependent on energy imports and, since 2004, the UK has become a net importer of energy. It is therefore understandable that energy should feature very prominently in the European policy agenda. Developing an EU internal energy market lowers costs by promoting competition and removing barriers to trade. Physically connecting energy markets between Member States increases the resilience of the EU's energy system. For two decades the UK has been at the forefront of energy market liberalisation and has helped to set the EU agenda in this area.

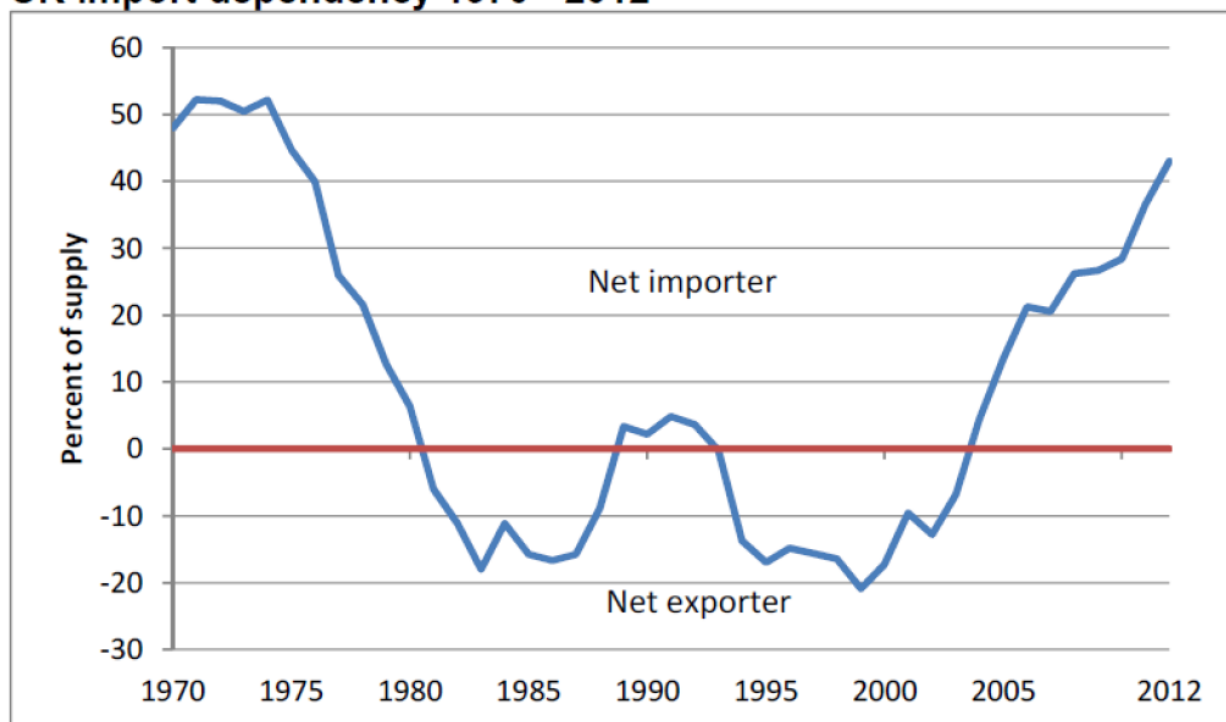
Climate change is now a primary consideration for energy policy and any agreement to mitigate greenhouse gas emissions can only be achieved at an international level. It is therefore essential for the EU to agree a common approach to greenhouse gas mitigation, preferably with binding targets. The EU has so far taken the leading role in seeking to reach a global agreement and will be a key player if a meaningful agreement is to be reached at the crucial 2015 IPCC summit. Energy policy is therefore inextricably linked to climate policy.

Where does renewable energy fit in?

Whilst a range of options exist to reduce greenhouse gas emissions, renewable energy provides one of the most attractive, for multiple reasons: very diverse resources, inexhaustible supply, potential for domestic economic growth and employment, ability to deploy rapidly, improved security of supply, growing world market with export potential and considerably lower environmental impact than other supply technologies. Furthermore as conventional energy costs rise, renewable energy sources will gradually become the most cost-effective, and therefore the default, supply options.

Action at EU level has been key to stimulating renewables deployment in the UK. In part this is because the UK has depended historically on its significant coal, oil and natural gas reserves, so renewables were never seen as a priority. That era is now over, with the UK moving from being a net exporter to a net importer of energy in 2004 (and was 43% dependent on imports in 2012 - see the graph below). Whilst less dependent on imported energy than some other EU Member States, security of supply is rapidly becoming a key consideration for UK energy policy.

UK import dependency 1970 - 2012



Graph is taken from DECC statistical press release, July 2013:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225043/statistics_press_notice_2013.pdf

Until recently the UK has not had a strong incentive to deploy its abundant renewable energy resources, but the position is now very different. With a determination to decarbonise energy supply in all its forms and waning domestic hydrocarbon production, the multiple options provided by renewables look very attractive.

The key question for the renewable energy industry is whether the competence split between the UK and EU has been beneficial or detrimental for our industry, and how the balance should sit going forward. **The answer is clear: there is no doubt that action at the EU level to date has been pivotal in shaping UK renewables policy and has helped to drive a significant increase in renewable energy use.** In 2005 renewable energy accounted for only 1.3% of UK energy consumption. By 2012 that figure had trebled, due in large part to a directive in 2001 setting non-binding targets for renewable electricity and a directive in 2003 promoting biofuels in the transport sector. The result is that the UK renewables industry is now worth £12.5 billion a year and supports 110,000 green jobs. If the UK is to achieve its renewables targets the industry could be worth £50 billion and support 400,000 jobs in 2020¹³⁶.

For renewables the main breakthrough came in 2008 with agreement to the legally binding 20% EU renewables target by 2020, with the target split by Member State on an equitable effort sharing basis, and a sub target for each Member State to achieve 10% of its transport energy from renewable sources. Enshrined in Directive 2009/28/EC, the target provided a

¹³⁶ REA (2012). Renewable energy: Made in Britain – Jobs, turnover and policy framework by technology.

clear focal point for national policymakers and the renewables industry. The fact that the target is legally binding and enshrined in a European directive has provided industry with additional confidence that it is less prone to short-term, political manipulation at a national level.

We believe that in terms of balance of competence the Renewable Energy Directive got it right, by setting targets and a very clear framework but leaving it up to Member States to decide how to achieve the required growth in deployment. Although the UK ended up with a lower 2020 target than most other Member States, it is nevertheless one of the more challenging, given the UK's low starting point. However it must be said that the target was agreed rather than imposed, and it is certainly achievable given the right policy framework.

The success of the Renewable Energy Directive is precisely in getting the EU/Member State split right. The means for achieving national targets are left to the Member States, but they are required to submit national action plans showing how their target trajectory will be achieved, and to report biennially against their plan. The framework includes mechanisms to facilitate cooperation between Member States, common standards for such things as bioenergy sustainability and heat pump performance, and measures to create an internal market for renewable energy technologies covering for example training and certification.

The European Commission is closely monitoring the impact of the Renewable Energy Directive and has taken measures to ensure that its cost impact on energy consumers is minimised. It has recently issued detailed guidance on market support mechanisms to ensure their cost-effectiveness and on cooperation mechanisms to encourage Member States to seek more cost-effective ways of meeting their targets through the exploitation of resources outside their borders.

Renewable energy support measures are covered by EU state aid guidelines and these are now being tightened to ensure that renewables are subjected to full market pressure and that support for the most cost-effective technologies is phased out over time. It is appropriate for state aid guidelines to operate at an EU level, so long as they are applied equitably across Member States. We are currently at a critical stage of final discussion for the guidelines that will apply from 2014 to 2020 and the key is for HMG to ensure that the guidelines do not unduly restrict the range of support measures envisaged for the UK to achieve our 2020 target.

In addition the Commission is taking measures to encourage interconnection of electricity grids between Member States; this facilitates trading and is particularly important for intermittent renewables to allow grid balancing on a wider geographical basis. Significant EU resources are being devoted to the construction of trans-European networks and the Commission is seeking to avoid excessive reliance by Member States on national capacity mechanisms, thereby helping to create a true EU internal market for electricity.

EU policy has also made a significant contribution to the prospects for renewable energy through its support for research and development (the Framework Programme) and the Intelligent Energy Europe (IEE) programme, which addresses non-technical barriers to renewable energy deployment. These areas are often most effectively addressed through collaboration at a European level, stimulating the dissemination and sharing of best practice and drawing on a much wider pool of expertise than can exist in any one country. For example IEE has funded the three-year Europe wide GreenGas Grids project, which is helping the industry move to an EU wide green gas trading scheme.

It is important to note that the Renewable Energy Directive does not operate in isolation at the European level. An important feature of the 2020 EU climate package is that the three targets for greenhouse gas reduction, renewable energy and energy efficiency act in a

complementary way, each reinforcing the other. For example, by expressing the renewables target as a percentage of energy consumption, any efficiency gains facilitate achievement of the renewables target. Energy efficiency and renewable energy both reduce carbon emissions, so help to achieve the greenhouse gas reduction target. It is this synergy that makes the package robust, coherent and defensible.

Because these three targets are so interconnected we have advocated that the 2020 framework should be extended to 2030. We do not believe that a greenhouse gas target alone would be sufficient to mobilise the required investment in the renewables sector. The EU emissions trading system has so far proved an unreliable mechanism to incentivise carbon reduction. Renewable energy requires significant upfront capital investment and this will only be made by industry if policy and policymakers are very clear in their long-term commitment. By setting a legally binding 2030 target at an EU level, industry will have the strongest motivation to invest and to innovate. The EU level is seen as giving greater certainty precisely because there is less scope for the government of the day to change it. **A clear target has the additional huge advantage that, by providing certainty it lowers the cost of capital, thereby achieving the very cost reductions sought by policymakers.**

By operating across the whole of the European Union, the Renewable Energy Directive is creating an internal market for renewable energy across Europe, enhancing competition and reducing cost. It provides Member States with the flexibility to exploit renewable resources domestically or to seek lower cost options outside their borders. It is allowing European industry to build on its historical technological lead in the renewables field, opening doors to an expanding worldwide market. It is helping to give Member States and the EU as a whole resilience against geopolitical risk and move towards a low carbon future.

We therefore conclude that the UK government should be satisfied with the balance of competence between the UK and the EU with regard to renewable energy and indeed the wider energy market. The policy framework provides the UK with the flexibility it requires whilst taking advantage of the larger internal market that the EU can provide. That does not mean that there are not detailed areas where the UK might want greater freedom of action but that is a matter for ongoing policy-making and healthy debate. More often than not the threat to renewable energy can come from other EU policy areas, for example the Water Framework and Marine Strategy Framework directives or waste policies that can undermine energy recovery. However the EU provides a forum to debate these issues and seek equitable solutions, balancing the various policy priorities.

There are a few situations where the UK renewables industry regrets untimely changes to EU policy. Foremost amongst these is the Commission's proposal of October 2012 to restrict the use of first generation biofuels. Over £1 billion of investment has been made in the UK in renewable transport fuels (which deliver high GHG savings and provide high protein animal feed) on the basis of the Renewable Energy Directive as published in 2009. The Commission's proposals could all but destroy this investment and the jobs that go with it. It is vital that EU policy is consistent over a reasonable term if investment is to come forward. Other examples involve policies outside the energy sector, for example the Commission's prosecution of the UK with respect to our reduced VAT for domestic microgeneration and the recent imposition by the Commission of anti-dumping tariffs on PV imports from China.

However we would overwhelmingly conclude that the balance of competence in the energy sector, and in particular for renewable energy, is correct and should be maintained. The UK renewable energy sector has benefited enormously from the EU's policy initiatives and we believe there is every justification to maintain the current balance of responsibility between the EU and the United Kingdom.

Sustainable Energy Association

Executive summary

- The main benefit of EU action for the UK has been the introduction of binding targets for member states with regards to energy consumption and carbon emissions. However, the main flaw has been a lack of certainty over enforcement and the application of fines to member states that fail to meet these targets.
- Harmonisation of standards across countries is usually suitable and preferred. However, there will always be specific and legitimate cases for differentiation. For example, the application of zero carbon building standards could be delivered in the south of Spain by the inclusion of Solar PV but due to differences in climate, further north in Scandinavia, a focus on insulation to prevent heat loss would prove more effective.
- A key benefit of the internal energy market is the creation of a more consumer orientated energy market – enabling consumers to be more engaged in the sector and delivering vital messages. For example, enabling consumers to understand how to more efficiently manage their use of energy either through making improvements to their homes, using renewable technologies or making changes to their lifestyle. A further positive is increased competition amongst energy suppliers.
- Low carbon energy production and energy efficiency measures play a key role in building the low carbon infrastructure. The implementation of these measures has at times been hindered due to EU regulations for example the use of State aid rules to limit the subsidies provided for biomass led to a delay in the roll-out of the RHI by three months.
- A future challenge in the energy field for the UK and EU is better recognition of the economic benefits of low carbon energy production and energy efficiency measures. These measures are as cost effective as, and in some cases more cost effective, than large scale renewable. They can benefit householders and taxpayers, generate jobs and support renewables and carbon targets. EU measures should help provide adequate support for these measures whilst being appropriate to UK infrastructure.

About the Sustainable Energy Association

- The Sustainable Energy Association's aim is to promote the sustainable energy sector and deliver policy change which creates opportunities for business and benefits consumers. We work with leading commercial organisations, trade associations and policymakers to promote sustainable energy in the built environment. Our approach is founded on integrating energy efficiency and generation of low carbon heat and power with the wider energy system.

Question responses

General

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

- Several benefits and disadvantages have each been observed.
- One of the main benefits has been the introduction of binding targets for member states with regards to energy consumption and carbon emissions. These targets act as a strong incentive for nations to consider their current techniques. For example the introduction of renewables targets at EU level paved the way for the formation of the Renewable Heat Incentive (RHI).
- These are slightly marred however, due to a lack of certainty regarding the application of fines to member states that do not meet their designated targets.
- An area that has caused confusion is as to whether storage is classed as generation because it is hoped that DNOs will be able to own and operate storage systems - flexibility is needed.
- EU action can have a negative impact where it overturns a policy that is and has already demonstrated benefits. For example, in the UK the implementation of a reduced rate of VAT for the installation of energy saving materials as part of a social policy. The reduced VAT rate has many benefits, including alleviating the harmful effects of living in a cold home and reducing carbon emissions. However, the implementation of this reduced rate as part of a social policy has been challenged by the EU commission. The VAT higher rate will have a detrimental impact on energy efficiency measures in the UK and the benefits these measures bring to homeowners.
- The overarching requirement is for greater clarity within EU directives. By introducing clear wording and employing considered foresight the ambiguity found in some areas of current policy can be eliminated.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

- No comment.

3. In what areas might the UK's interests be served better if action were to be taken at:

a) EU level instead of national, regional or international level?

b) National, regional or international level instead of EU level?

- Across a broad level, the harmonisation of standards provides the most suitable course of action. Where there is a legitimate reason for differentiation, however, then it should be strongly considered.

- The implementation of building standards – with UK dwellings required to exclusively be zero carbon by 2016 - acts as a key illustration of the need to apply separate legislation under certain requirements.
- For example, a zero carbon dwelling in the south of Spain could be delivered by the use of solar power to neutralise carbon expenditure from energy use. In Scandinavia, however, this would not be suitable due to the difference in climate; instead a focus on insulation to prevent heat loss would prove more effective. As a result of geographical differences a set legislation for all member states would not be applicable.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances.

- When policy and legislation are introduced they need to be justified using relevant evidence in order to establish their necessity.

Thematic Areas

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

- The development of the internal energy market has led to the creation of a more consumer orientated energy market. It is hoped that this will enable consumers to become more engaged in the sector, and allow vital messages to permeate through to consumers. For example, by understanding how to more efficiently manage their use of energy either through making improvements to their homes, using renewable technologies or making changes to their lifestyle. The internal energy market has also lead to increased competition amongst energy suppliers and this change can be considered a further positive.
- As consumers and energy companies become more engaged it creates more possibilities to market renewable and low carbon energy technologies and develop the market. This allows low carbon energy production to act as a cost effective way of increasing energy efficiency; a role that it is already playing and with the right incentives can increase.
- The DECC Heat strategy (The Future of Heat Meeting the Challenge) has recognised a role for gas as we transition towards a renewable energy supply; this includes the use of hybrid technologies during the transition. Low carbon energy production and energy efficiency measures also play a key role in building the low carbon infrastructure described above. Incentive schemes to promote low carbon energy production in the UK, such as Feed in Tariffs (FiTs), the Renewables Obligation (RO), and the Renewable Heat Incentive (RHI) have all required state aid approval. There have been instances where this approval process has delayed policy implementation or even hindered a particular incentive. For example, the use of State aid rules to limit the subsidies provided for biomass led to a delay in the roll-out of the RHI by three months. The final decision was to adopt a tariff lower than the level proposed however this decision was not seen as completely favourable.

- Under another scenario the EU provisional anti-dumping duties on Chinese solar panel were imposed to prevent harm to EU solar PV manufacturers because of unfair trade price. However, there is also a strong counter argument that this will affect EU solar PV industry because we will be unable to manufacture enough panels to support demand.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

- No comment.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

- No comment.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

- The targets thus far have proven to be particularly helpful. The introduction of renewables targets at EU level paved the way for the formation of the Renewable Heat Incentive (RHI). However, current targets only extend to 2020 and there is potential for confusion and uncertainty as we approach and go beyond this date due to a lack of clarity after 2020 (i.e. no 2030 target).
- in addition, having guidelines and similar targets enables cross-comparison between member states which can provide answers to policy problems experienced by individual nations.
- However, there has also been some hindrance from policy introduction at an EU level. As explained under question 5, the use of State aid rules to limit the subsidies provided for biomass led to a delay in the roll-out of the RHI by three months. The final decision was to adopt a tariff lower than the level proposed however this decision was not seen as completely favourable.
- There are also instances where an EU target is beneficial, but when a complementary but slightly different target already exists this is not always beneficial and can create confusion. For example, the Energy Performance of Buildings Directive requires Member States to ensure that by 2021 all new buildings are so-called 'nearly zero-energy buildings'. The UK had created its own more ambitious target to reach 'zero carbon homes' (ZCH) by 2016, earlier than prescribed by the EU directive. Initially, this created a driver for builders and manufacturers and created a supply chain for low carbon energy technologies and energy efficiency materials. However, in 2013 the Part L building regulations were given a lower target than expected towards Zero Carbon Homes. This created uncertainty within industry and concerns that the UK may not reach its ZCH target although it may still achieve the EU target. The availability of either too much flexibility or too little guidance can create uncertainty.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

- No comment.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

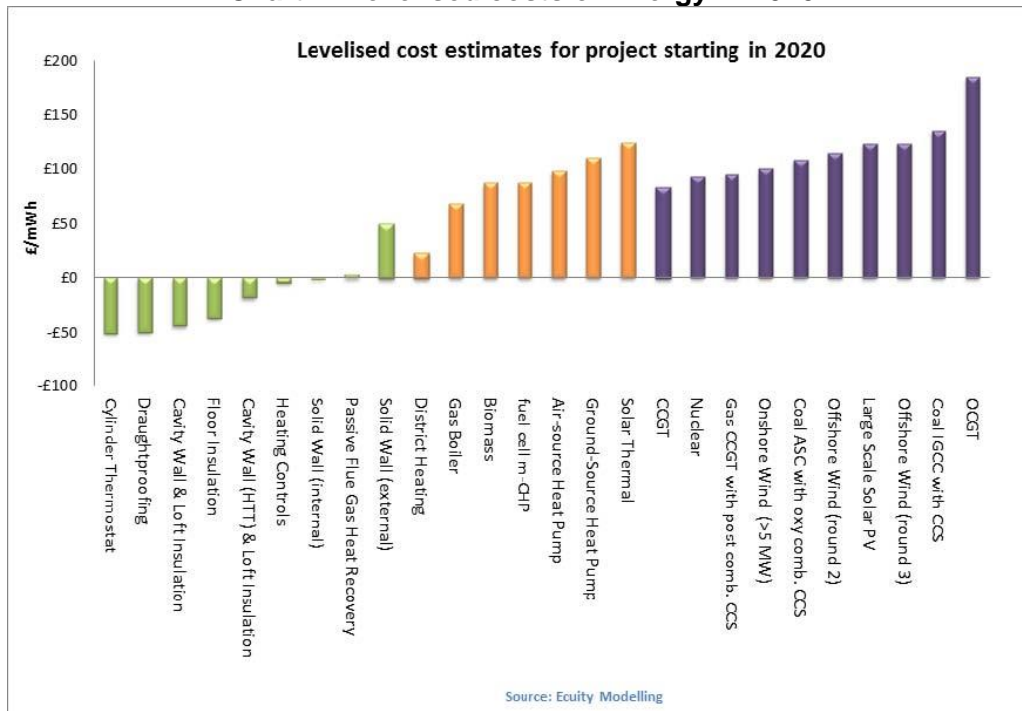
- No comment.

Future Challenges and Opportunities

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

- Increasing energy efficiency in buildings and the use of low carbon energy technologies acts as a cost effective way of meeting EU emissions objectives.
- Chart 1 illustrates the levelised costs of energy in 2020. Recently there has been a particularly detailed level of attention paid to the costs of energy and of renewables, especially the cost of these to householders and tax payers. The chart illustrates that energy efficiency measures and low carbon energy technologies are as cost effective as or cheaper than most large scale renewables. Therefore the overall benefits of these measures include their key role in meeting climate change and renewables targets but also the strong economic case for householders and the UK plc.
- These technologies can have a positive influence and play an important role alongside other 'bigger' solutions that support the transition to a low carbon economy.

Chart 1: Levelised costs of Energy in 2020



- In addition, a range of other opportunities are created from this market these include; jobs in the low carbon energy technology industry and security of energy supply.
- The challenge is to provide adequate incentives to create a mass market for low carbon energy technologies and energy efficiency measures whilst also inputting investment into the grid to adapt and provide the most cost effective means of energy generation. EU support at right level can be beneficial to these aims. Furthermore, regulation must also be effective and strike a balance between being sufficient but not a hindrance. Examples include the air quality directive, the energy efficiency directive and biomass sustainability guidelines. As noted under question three there must be sufficient ability to adjust incentives and regulation based on geographic differences.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

- No comment.

UK Green Business Council

INTRODUCTION AND BACKGROUND

Responsible for 17 per cent of UK carbon emissions, our 1.8 million non-domestic buildings must be at the heart of the UK's carbon reduction strategy.

One of the key drivers will be government policy. Unfortunately, the existing policy landscape for the non-domestic building stock is incredibly complicated to navigate.

Part of the problem is the lack of good data on energy use and carbon emissions on which to base energy reduction strategies and investment decisions. For a variety of reasons the property sector is not routinely measuring accurate operational energy use from private sector non-domestic buildings and, as the saying goes, 'if you can't measure it, you can't manage it'.

That is why UK-GBC has long called for the roll-out of Display Energy Certificates (DECs) to all non-domestic buildings. DECs are currently mandatory for public buildings over 1000m², but not private sector buildings. We also believe that DECs could provide a foundation for other policies and for market based drivers.

However, one of the potential difficulties with rolling out DECs to the private sector is the complex relationship between landlord and tenant, particularly in respect of energy use in multi-tenanted buildings. This problem is not unique to the proposed roll-out of DECs, it is also something which is central to many concerns the property sector has around the Carbon Reduction Commitment Energy Efficiency Scheme (CRC-EES).

During discussions with the UK-GBC membership in late 2010, it became clear that it did not make sense to think about the CRC-EES in isolation from a potential roll-out of DECs. Although there are clearly separate and distinct challenges, where possible it made sense to look for alignment and consistency.

This lack of alignment between policies that affect non-domestic buildings is a time-consuming and costly frustration for business and the public sector and UK-GBC wanted to take this opportunity to look for ways to streamline DECs, the CRC-EES and indeed other policy mechanisms in this space.

This report is not the final word, but should provide the basis for making serious progress on overcoming the practical barriers to a roll-out of DECs, improving the CRC-EES over time, and delivering faster and more cost-effective energy and carbon savings in our existing non-domestic buildings.

TASK GROUP OBJECTIVES

DECs

- Build the case for why DECs for the private sector should be mandated
- Consider what is needed to improve the methodology to enable a roll out of DECs, including an assessment of and proposals for: multi-tenanted buildings, benchmarks, robustness and quality of training, advisory reports, access to data and links to the EPC
- Set out a process for rolling out DECs
- Seek alignment to the CRC- EES

CRC-EES

- Examine whether the CRC-EES could be administered at the building level through a roll-out of DEC's
- Explore whether aggregated DEC's could be used as the basis for a public performance league table.
- Review the advantages and disadvantages of the CRC-EES as cap and trade scheme and CRC-EES as tax for future phases of the scheme.

KEY RECOMMENDATIONS

DEC's

1. Annual Display Energy Certificates (DEC's) should become mandatory for all non-domestic building occupiers, with a phased roll out starting in 2012. We believe this could be achieved through the Energy Bill currently going through Parliament.

2. Annual DEC's for landlords' services should become mandatory, starting with multi-let non-domestic buildings over 1000m², with a phased roll out. It should be mandatory for landlords to pass data to occupiers; this should be based on the Landlord's Energy Statement (LES).

3. DEC's (for occupiers and for landlords) should be introduced to non-domestic buildings via a 'mandatory soft start' in 2011/12, to take place prior to the formal display of certificates from 2012/13. This will ease administrative adjustment and allow for data collection and benchmark refinement before the results are disclosed and displayed.

4. Once the scheme is fully established, the DEC data should be publicly and freely accessible. An official review of the data should be published annually. Data lodged as part of the 'mandatory soft start' of DEC's to the private sector should be confidential.

5. A system should be developed to enable DEC's to be aggregated to produce a range of league tables based on occupiers, landlords, sectors, buildings types and uses.

6. With some minor adjustments, DEC's are suitable for private sector buildings. There needs to be clear and simple guidance available around how the methodology works, how to calculate DEC's for private sector buildings, how to interpret the results and explaining the difference between DEC's, LESs and Energy Performance Certificates (EPCs).

7. In order to produce a low cost and simple DEC, there should be a 'zero cost' advisory report option with generic recommendations which does not require a site visit. However, F and G rated buildings should, in due course, be required to have a rigorous energy assessment by a suitable professional.

8. Automated DEC's should be introduced by 2015 to reduce cost. By linking directly to utility metering data, the costs of annual updates will be reduced, and DEC's can be extended to a large number of buildings at very low cost.

9. There is a need to increase the pool of suitably accredited DEC assessors to meet the increased demand. Industry and government need to work together to devise a robust programme of assessor training and accreditation that delivers the required quality and standards at reasonable costs.

10. To underpin a wide range of policy measures and technical activities an independent, authoritative and properly funded technical body should be established to review data and benchmarks, provide advice to government,

and develop and maintain a sound technical platform for communicating building energy and carbon performance. Funding could come from a levy on lodging DEC's.

CRC-EES

11. Once established, DEC's should be used to produce league tables for the buildings sector. DEC based organisational league tables could replace the current CRC-EES league table for buildings.

12. Further work is needed to understand the scale and nature of non-building related emissions in the CRC-EES and to develop solutions to address them.

13. Mandatory greenhouse gas (GHG) emission reporting at an organisational level should be introduced which will act as a reputational driver, escalate decision making to board level and capture emissions beyond the building level.

14. The CRC-EES should remain as an annual retrospective charge for the first phase of the scheme. In later phases of the scheme the Task Group recommends the re-introduction of a cap and trade mechanism (including a forecasting element). This will provide the most efficient way in the long-run of reducing GHG emissions from, and changing behaviour within, UK organisations.

15. The first phase of the scheme should be further extended by one year, with the second phase starting a year later than scheduled. This will allow businesses to have the opportunity to build the required capability for implementing a cap and trade scheme and will also align to the roll-out of DEC's to allow this system to be used by the buildings sector for data collection.

16. When introduced, the cap and trade scheme should be simplified and to be effective, should allow for a proportion of upfront sale of allowances. UK-GBC would welcome the opportunity for further dialogue on this issue with the Department for Energy and Climate Change.

DECS – THE CURRENT SITUATION

DEC's, showing the annual operational energy use of an occupier, were introduced as a mandatory requirement for public buildings over 1000m² in England and Wales in October 2008 to comply with the EU Energy Performance of Buildings Directive (EPBD).

A Recast of the Directive (EPBD2) has set a timetable for reducing the 1000m² threshold and extending the scope of qualifying buildings. A similar system is used in Northern Ireland but not in Scotland although this may change. The focus for the Task Group was finding a solution for England and Wales which could be replicated in Northern Ireland and Scotland.

Evidence is now emerging of the value of DEC's in public buildings, with substantial year-on-year improvements in DEC ratings and reductions in energy costs. This has happened because of the reputational driver and because of the financial incentive of reduced energy bills.

DECS – A SOLUTION FOR BOTH LANDLORDS AND TENANTS

In rented buildings, the division of responsibility for energy use between landlords and tenants has hindered energy efficiency improvements. The landlord is not always responsible for controlling the tenant's energy use in the tenant's demise and the tenant is not responsible for the building design or control of the landlord's shared services and systems.

Overcoming this obstacle is essential if DEC's are to be mandated for both landlords and tenants. This can be achieved for all non-domestic buildings, regardless of occupancy type, with some adjustment to existing tools. The existing DEC methodology has been developed for tenants, but it does not enable data to be allocated from a landlord to a tenant in order to produce a DEC. It also doesn't provide data for landlords to demonstrate to investors and potential tenants that they offer good service management.

However, the Landlord's Energy Statement¹³⁷ (LES) allows this relevant data to be collated and allocated to tenants for tenant based DEC's. It also allows benchmarking and rating to produce a DEC for the landlord's services. This approach has a number of advantages:

- It provides a 'granulated' approach to data collection, enabling a DEC to be produced at a tenant level, landlord level, building level and clearly allows for split responsibilities, for example, a shopping precinct or business park, based on comparable robust data.
- It will encourage discussions between tenants, landlords and managers about steps to be taken to motivate both absolute improvement against benchmarks and relative improvement year-on-year.
- DEC's could also be aggregated to produce a league table or range of league tables, which is explained further below.
- It enables a robust and consistent measurement of building related energy and carbon emissions which could be used within the CRC-EES, explored below, and other building and carbon related policies, such as the Green Deal for business and greenhouse gas (GHG) reporting.

It should therefore be mandatory for non-domestic building occupiers to produce a DEC, with a phased roll out based on size and sector of building. It should also become mandatory for landlords to produce a 'landlord DEC' starting with multi-let buildings over 1000m² based on an LES or equivalent tool with compatible metrics. It should be mandatory for data from the LES or equivalent to be passed from the landlord to the tenant to feed into occupier DEC's.

IMPROVING THE DEC METHODOLOGY

This section provides more information around some of the key recommendations related to the DEC methodology and introduces some additional issues, which were also considered. This list is not exhaustive; see the full report for further details.

Benchmarking

The benchmarking methodology used has a critical impact on the numerical and A-G rating of the building. The benchmarks to inform the overall rating need realigning for some non-

¹³⁷ Funded by the Carbon Trust and developed by the British Property Federation with the Usable Buildings Trust and CIBSE, see <http://www.les-ter.org.uk/page/les>

domestic building types, but more data must be gathered from private sector buildings to enable this to happen.

The Task Group recommends an initial 'soft start' where DEC's are mandated but ratings are not publicly displayed. This will allow data to be collected, reviewed and more robust benchmarks developed for the private sector. Special energy uses (such as large server rooms or trading floors) and occupation level and density indicators can also be developed over time as data becomes available.

Quality and availability of data

A publicly accessible, free database should be made available holding full DEC data. This should be subject to an annual technical review, analysing progress, following trends, identifying emerging issues and advising on revisions to benchmarking. Data collected as part of the 'soft start' should be confidential, for technical review only.

As DEC's are phased in to all non-domestic buildings it will become increasingly important for data collection to be automated using existing building information systems where possible to reduce costs. The rollout process should be gradual and flexible to allow adequate resourcing of measurement, compliance and enforcement.

Design versus actual performance

The Energy Performance Certificate (EPC) is currently required for completion, sale or let of a building and assesses the potential of the physical asset, as designed, to be energy and carbon efficient. However EPC's are not currently driving change in the non-domestic market. The DEC is based on actual energy use and does motivate change. Further work is required to review the role of EPC's, but the emphasis over time should move towards measuring the actual energy performance of buildings and as a result EPC's could eventually become redundant.

Delivery, training and advisory reports

The roll out of DEC's should be phased to avoid peaks and troughs of work. Training and delivery of DEC's needs to be carefully managed to achieve a balance of reasonable cost with adequate standards of assessors, certificates and reports.

There should be the option of a zero cost advisory report with generic recommendations that does not entail a site visit. A simple, low cost, 'entry level' DEC can be produced based on basic data: Building type, area, occupancy hours and energy use.

However, F and G ratings should be required to invest in a rigorous energy assessment by a suitable professional. This may encourage metering, more detailed data and in turn improve ratings.

DEC COSTS

An 'entry level' DEC, with a generic advisory report, could be produced for an estimated maximum cost of £350. However, this could be vastly reduced, to a negligible cost, as systems are put in place to make the process automated.

When using a professional assessor to compile a rigorous energy assessment costs will rise considerably. However, if this motivates energy reductions, these costs can be recovered

(potentially many times over) through achieving reductions to energy bills of between 1 and 5 per cent.

There will also be considerable cost savings if DEC's are used for the basis of other policies, such as CRC-EES and Green Deal.

LEGISLATIVE REQUIREMENTS

Government could potentially mandate DEC's for private sector buildings under EPBD2, but there are challenges associated with using this as the legislative vehicle. A preferred option would be to include enabling powers in the Energy Bill currently going through Parliament, which is primarily concerned with improving energy efficiency in the existing housing and building stock through the introduction of the Green Deal.

DECS, LEAGUE TABLES AND THE CRC-EES

The CRC-EES

The CRC-EES started in April 2010. It is designed to raise awareness of energy efficiency in large organisations, escalate decision making on energy efficiency to a senior level, and motivate behaviour change.

Government has been consulting on simplifications to the scheme since changes were announced in the 2010 Comprehensive Spending Review (CSR), which scrapped the recycling of finance, but retained the league table. The Task Group agrees with the aims of the CRC-EES but believes that the current scheme is too complicated and does not fit well with the structure of the built environment sector, preventing it from meeting its overall objectives.

The Task Group is supportive of the principle of league tables to drive behaviour change, and acknowledges that government is keen to keep a league table as a reputational driver. However, the Task Group's view is that the CRC-EES league table in its current form will not motivate action to reduce energy use and carbon, because, as currently proposed, organisations of completely different types and sectors are being compared.

Using DEC's

A roll out of DEC's would allow the compilation of DEC based league tables to enable peer-to-peer comparison. Once the DEC data is in place, DEC based organisational league tables could replace the current CRC-EES league table for buildings.

However, until DEC data is available, the Task Group appreciates that government may wish to keep the current CRC-EES league table.

Non-Building Emissions in the CRC-EES

There are other emissions captured under the CRC-EES such as manufacturing, process and construction emissions. Little information exists on what proportion of the emissions within the existing CRC-EES relate to non-building energy use, although it may well be relatively modest as a percentage of the total.

The Task Group believes that some of these other emissions could be captured by DEC's, in industrial buildings where process energy is not dominant, using the separable methodology.

However, there will be significant remaining industrial and process emissions which cannot be measured by DEC's and would not be captured in a DEC based league table.

Further work is needed to:

- Understand the scale of and nature of non-building emissions under the CRC-EES
- Determine the extent to which DEC separable methodologies are relevant for measuring industrial/process/construction emissions; and
- Identify solutions for those remaining CRC-EES emissions which are not captured through DEC's or other policy mechanisms.

Greenhouse Gas Emission Reporting

Once DEC's are rolled out, it will enable a consistent and robust way to collect data from buildings, which can then be used for different purposes. This includes collation of data for GHG emission reporting, which should become mandatory, to help a business understand its carbon footprint and escalate reduction strategies to the board level.

Aligning methodologies would reduce administrative costs and allow for more effort to be devoted to improving performance.

CRC-EES: TAX OR CAP AND TRADE?

Under the changes announced in the CSR in 2010, the CRC-EES charge effectively became a 'tax' rather than a cap and trade scheme as originally intended. In the light of these changes, the relative merits and challenges of both a tax and a cap and trade scheme were considered, in order to make recommendations on how the scheme should be structured going forward.

Three policy alternatives for the CRC-EES were evaluated:

1. A Simplified Emissions Trading Model;
2. A Retrospective Carbon Tax; and
3. A Merger of the Climate Change Levy (CCL) and CRC-EES.

Each option was weighed against a range of critical success factors, including: reduced burden on business; removal of investment uncertainty and the potential to drive behavioural change. The findings from this process are in the appendices of the full report.

A number of different viewpoints emerged with opinion divided on which method would be most effective overall. Some were strongly in favour of a tax, with others strongly in favour of a cap and trade approach. On average, the majority narrowly preferred an organisational level retrospective tax.

The merger of the CCL and CRC-EES was not thought to be the most effective option. The CCL is inherently absorbed by business at the billing stage so has not proved to be a very strong driver for energy reduction. It also only deals with electricity.

Three clear findings emerged from the process:

1. A trading mechanism was considered to be the most 'efficient' way of distributing the 'abatement cost burden' between businesses, i.e. the shared cost of carbon reductions.
2. A tax would pose the 'least fixed cost burden' on business.
3. A tax would be the best way of overcoming the current market institutional problems (e.g. landlord/tenant issues).

On balance the recommendation is that the CRC-EES should remain as an annual retrospective charge for the first Phase of the scheme to combat the market institutional problems. A carbon tax would help to address these issues, whilst not imposing the complexities of a cap and trade scheme too quickly.

In later phases of the scheme, in anticipation of greater market sophistication in terms of energy management and benchmarking, the recommendation is the re-introduction of a cap and trade mechanism (including a forecasting element). The Task Group believes that this will provide the most efficient way, in the long-run, of reducing GHG emissions within organisations.

CONCLUSION – THE BUSINESS CASE

We will not achieve radical reductions in carbon emissions from our private sector non-domestic buildings unless we have consistent and robust data and a clear, comparable rating system that works for all building occupancy types. With minor improvements, DEC's provide the basis for this. This report also highlights how a roll-out of DEC's can align with other policies, notably the CRC-EES, and ways in which the CRC-EES itself can be improved.

However, the recommendations are not only geared towards energy and carbon reductions. The proposed way forward will result in significant advantages for business:

- Reducing energy use is impossible without good data on which to make management and investment decisions. Evidence is emerging of the benefits that DEC's can bring in terms of their impact on reduced energy bills, which far outweighs the cost or perceived administrative burden.
- Good data on energy use is a valuable source of information for research and enables feedback to designers, which in future results in better quality, lower cost buildings.
- A voluntary approach to DEC's penalises those who measure and report their energy use, inviting criticism of poor performance. A level playing field provides a reputational benefit to improving performance, allowing benchmarking against peers.
- A comparable and reliable energy rating scheme will increase the value of sustainable buildings, and could reduce vacant periods, sending a signal to developers and investors that sustainable buildings are higher quality buildings.
- Aligning methodologies between carbon policies will reduce the administrative and cost burden of adhering to those policies. DEC's have the potential to provide the basis for building related emissions within the CRC-EES, the Green Deal and mandatory GHG reporting. Therefore, the roll out of DEC's to the private sector should not be seen as an additional piece of regulation, but an essential component in a larger system for delivering energy efficient non-domestic buildings.

UKLPG

UKLPG welcomes the opportunity to comment on the above Call for Evidence.

UKLPG represents the liquefied petroleum gas (LPG) industry within the UK which employs around 10,000 people and has a turnover of around £750 million per annum. UKLPG Member companies cover over 95% of the total LPG sales in the UK. The role of UKLPG is to be the one voice of the UK LP Gas industry and through the creation of industry codes of practice, promote its safe use by UK consumers.

UKLPG would like to address its remarks on the Balance of Competencies between the EU and the UK under these three questions.

1. To What Extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

The EU Renewable Energy Directive is the most marked example of where a Directive with ostensible aim of providing benefit works against UK national interest in providing low carbon energy. By imposing targets for one type of energy it forces national policy makers to spend an inordinate amount of time and taxpayers money in defining energies, funding incentives and distorting the market.

At EU level a simple set of carbon targets, including production to consumption on energy and products should be set with declining carbon output signalled over time and very clearly.

At national level it then remains the choice for each country to decide its most appropriate policy response to meet these targets. As the targets are EU wide there is no market distortion, whilst at national level it allows the best use of a country's resource to meet these. Thus, whilst France may choose nuclear as its energy base, and the Scandinavian countries biomass, the UK would be able to develop its gas resources with the dual benefit of providing national security and meeting progressive carbon reduction targets.

The setting of EU carbon targets, ultimately the most effective means to reduce the impact of climate change, allows the UK and other national governments to plot longer term policies to set the framework in which business can meet lower targets and compete to provide the most effective means to meet these targets.

The EU should not determine through Directives which energies best meet carbon targets.

2. *Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?*

The EU recently added refillable steel gas cylinders to its list of items that should come under the European Packaging Waste Directive (94/62/EC).

Refillable liquefied petroleum gas cylinders (LPG), containing butane or propane, are widely used throughout the UK for a myriad of end purposes, and their portability means that energy can be taken to the remotest parts of the UK, used where mains energy is not available or where operations on the move require energy. For leisure or emergency, they can power large campsites and areas of temporary accommodation providing heat, light and cooking resource.

By their very nature, they are designed to be refilled and the distribution cycle is aimed precisely at this: The cylinder is filled with gas by its owner who charges a deposit for the cylinder as they retain ownership. Once the customer has used the gas they can return the cylinder and be refunded with their deposit, or roll-over the deposit and take another cylinder. The returned cylinder is checked for its integrity and refilled and re-enters the distribution chain. Every 15 years the cylinder undergoes a rigorous test, and can be re-entered into the distribution chain or refurbished allowing a further 15 years of good use. Indeed a 45 year lifetime for cylinders is not unheard of.

The closed loop distribution system remains within the UK. Cylinders damaged beyond repair are recycled with the steel and brass fittings being 100% recyclable. Only cylinders stolen for scrap, illegally exported, misappropriated or abandoned by the customer fall out of this chain. The industry, at some cost, has put in place a simple recovery process and is working with British Transport Police to address the theft and export issues.

The inclusion of refillable gas cylinders into the Directive, and as transposed by British law, simply adds a cost burden to this as each new cylinder put into the market place picks up cost obligations, both for the material and in administration (financial and time), under the Packaging Essential Requirements Regulations. The financial costs in terms of registration and PRN purchase(excluding company personnel time) is estimated at a minimum of £75,000 but steel PRN's are at low price and a rise in their cost would add further cost to industry.

The principle of the Directive and Regulations is to add a charge to packaging with the aim of reducing waste and increasing recyclability, yet the additional cost burden on the LPG industry will add no benefit whatsoever to what is already a virtuous cycle.

The competency in legislation affecting packaging where the closed distribution chain is contained within a nation's borders should be held at national level. A distribution chain based on reusable items should not attract or need legislative intervention, except in matters of safety.

3. In what areas might the UK's interests be served better if action were to be taken at:

- a. EU level instead of national, regional or international level?**
- b. National, regional or international level instead of EU level?**

Emergency relaxation of Drivers' Hours Regulations and Working Time Rules.

The EU Drivers Hours Rules (EC 561/2006) and the Working Time Directive (2002/15/EC) both apply to the LPG bulk distribution business. Both are designed with safety of the workforce, the public and the business in mind. In normal day to day operations the LPG business meets its obligation and the rules as we hope does every other distribution business they apply to.

LPG (propane gas) is supplied in bulk to households and industries not connected to the gas grid to provide energy for heat, hot water and cooking, using trucks to bulk trunk LPG from primary supply sources, as well as to distribute to local storage tanks on customers' premises. The LPG business is heavily peaked to winter demand and builds its resources, working practices and contracts towards this. However it has been the industry's experience that wholesale supply of LPG can be disrupted in winter as can be the road network upon which the industry relies to deliver product to its customers. These disruptions will tend to occur at times of severe cold or snow, which themselves lead to a spike in demand from rural business and domestic customers.

Whilst resourced to meet peak winter demand this combination of events leads to a backlog of orders with the risk of vulnerable customers, critical rural institutions or rural businesses running out of energy. Whilst request for relaxation of drivers' hours regulations can be dealt with at national level, a report must be sent to the EU. At a certain level only the EU can grant a relaxation. The WTD is a European competence and there is no facility to relax this at all.

The UK geographically sits on the border between a warm damp maritime influence of mild Atlantic air masses and cold dry Continental air masses, the dominance of either being hard to predict in any long or medium range forecast. The situation is further compounded by unpredictable movements of the Jetstream over the UK's latitude. Therefore winter weather is hard to predict and severe events arrive with little notice.

The UK has also adopted a policy of clearing first trunk and major routes, with a secondary clearing of "B" roads. C roads and rural lanes are not gritted or cleared. For example 46% of roads in the county of North Yorkshire are either estate roads or rural roads and the council policy is not to grit these. Indeed they only "will consider treating them if conditions persist for more than 72 hours and resources allow". These are the very roads that the LPG industry must use to carry out its distribution business, un-cleared at times of spikes in demand.

The recent unpredictable series of severe winter events has lead a number of industries (eg LPG, animal feed, heating oil, salt and grit bulk distribution) to seek relaxation of EU Drivers' Hours Regulations and WTD conditions to help alleviate customers' plight. Though the level of request has been within the UK Government's authority, as a result of reports sent to the EU, the EU has threatened infraction proceedings against the UK, and so as a result takes longer and officials demand even more information before granting any relaxation. The EU

stance leads to a presumption not to grant emergency relaxation at times when the UK needs it.

Given the UK's unique weather position, and the growing lack of resource at local authority level, it makes absolute sense that the power to relax hours and the WTD for limited and tightly controlled periods for drivers whose distribution routes lie solely within the UK lies with the UK Government. There is no risk of distortion of competition as requests are made through trade bodies and apply to all businesses in that sector who operate solely in the UK.

Though there is no means to relax the WTD at EU or national level, on the back of Drivers' Hours Rules relaxations the DfT has offered a very limited relaxation. Industry evidence presented to DECC and the DfT suggest that powers to relax the WTD to a greater extent for a limited and controlled period would make a significant difference to achieving local deliveries, and a responsible plan has been put to the DfT that improves delivery capability and does not compromise safety.

The powers to relax the WTD and Drivers Hours Rules should be repatriated to the UK for businesses whose network does not extend outside the UK, and under conditions that ensure safety is maintained for staff and the public, but enable UK businesses to meet urgent demand for life and business saving heat and hot-water.

UKPIA

Thank you for the opportunity to comment on the Government's review of the balance of competence between the United Kingdom and the European Union in respect of energy matters. A copy of our responses to the questions posed in the call for evidence is attached as Attachment 1.

UKPIA is the trade association representing the downstream oil refining and marketing industry in the UK. Our members own and operate all seven major crude oil refineries and supply some 85% of the inland market in oil products, about a third of UK primary energy demand.

Refining is a global business, with widespread trading of crude oil and other feedstocks and finished petroleum products both within Europe and globally, between Europe and other regions. It has significant exposure to risk of carbon leakage – unilateral UK policies imposing costs over and above those found for refineries located in other EU Member States or outside the EU, inevitably result in a loss of competitiveness.

UKPIA continues to have concerns regarding the increasingly complex and multiple legislative instruments covering the energy sector, in particular, those concerned with climate change, air and water quality and other environmental aspects. The Government should undertake a fundamental review of this area to rationalise policies and reduce administrative burden, in line with the commitments made in the Coalition Agreement to reduce red tape and “end the so-called ‘gold-plating’ of EU rules, so that British businesses are not disadvantaged relative to their European competitors”.

UKPIA remain keen to work with Government to ensure practicable, operable and affordable solutions for policy initiatives affecting the refining sector. We remain concerned regarding loss of competitiveness against others in Europe and elsewhere - loss of competitiveness will inevitably restrict discretionary investment and introduce risk of further refinery closures, job losses and loss of supply resilience, along with significant risk of carbon leakage.

Attachment 1

Review of the Balance of Competence between the United Kingdom and the European Union

Energy Review – UKPIA Responses to Consultation Questions General

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Action by the EU in the energy field, coupled with robust UK implementation of EU legislative measures and the development of overlapping unilateral UK policy measures, often creates a UK legislative environment which disadvantages the UK refining sector against refinery operations in other EU Member States and in other non-EU countries.

For example, for large energy intensive users such as refineries, where energy currently accounts for around 60% of refinery operating costs, UK electricity prices are uncompetitive with those in many EU countries and particularly the US, where the exploitation of shale gas is a 'game-changer'. Refining is a global business, with widespread trading of crude oil and

other feedstocks and finished petroleum products both within Europe and globally, between Europe and other regions. Inconsistent implementation of EU Directives and unilateral UK policies imposing costs over and above those found for refineries located in other EU Member States or outside the EU, inevitably result in a loss of competitiveness.

UKPIA is therefore opposed to over-robust implementation of EU legislative measures (whether this be so-called “gold-plating” or non-implementation of flexibilities and options to mitigate impacts on industry built into these measures) and is also opposed to unilateral UK policy initiatives having impacts on the refining sector.

A specific example concerns the overlap between the EU ETS Directive¹³⁸ and UK Carbon Floor Pricing legislation. The EU refining sector has been identified as being exposed to significant risk of carbon leakage¹³⁹, based on the quantitative criteria set out in Paragraph 15 of Article 10a of the EU ETS Directive. The Commission has taken steps to mitigate against carbon leakage in the refining sector under the EU ETS allocation rules¹⁴⁰, which define a benchmark based on a concept of carbon or complexity weighted tonne (CWT).

Under this benchmark, the EU refining sector will be required to purchase a proportion of its EUAs in EU ETS Phase III from 2013 onwards. UKPIA has estimated the additional cost to the UK refining sector for purchased allowances at some €70M/year from 2013 onwards based on an EUA cost of €15/CO₂e tonne, rising to some €230M/year at €50/CO₂e tonne. Carbon floor pricing and the imposition of carbon price support for natural gas used for electricity generation inflates these costs further and undermines free allocation of allowances under the EU ETS benchmark rules.

These costs already represent a significant proportion of current refining margins⁶; the further imposition of the carbon price support mechanism places UK refiners at a competitive disadvantage to other EU refineries, with very significant challenge to their continued viability against substitution of domestic UK supply by imports for Europe and elsewhere. Loss of competitiveness will inevitably introduce risk of further refinery closures in a sector currently exposed to significant challenges, with consequent job losses and loss of supply resilience, along with significant risk of carbon leakage.

A further area where EU action is likely to lead to loss of competitiveness of UK and EU refineries against their non-EU competitors, concerns the Industrial Emissions (IPPC) Directive (2010/75/EU). Here a requirement is placed on operators to use best available techniques (BAT) to minimise pollution and waste; permitted emissions level ranges associated with BAT (BAT-AEL) are defined and updated periodically in BAT reference documents compiled by the European IPPC Bureau¹⁴¹. The Directive also requires that operators must achieve compliance with permitted emissions levels within four years of publication of and applicable Commission Decision on BAT conclusions.

¹³⁸ Directive 2003/87/EC, as amended.

¹³⁹ Commission Decision of 24 December 2009 – see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:001:0010:0018:EN:PDF>.

¹⁴⁰ These have been defined under the Commission Decision determining transitional Union-wide rules for the harmonised free allocation of emission allowances of 27 April 2011 (see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:130:FULL:EN:PDF>).

¹⁴¹ See <http://eippcb.jrc.ec.europa.eu/>.

The Directive includes provisions for derogation from the BAT-AEL ranges, providing scope for the competent authority to set less strict emission limit values in specific circumstances, where achievement of emission levels within the BAT-AEL ranges would lead to disproportionately higher costs compared to the environmental benefits. The need for robust assessment of abatement costs and their comparison against environmental benefits and societal benefits delivered by competitive and secure energy supply is likely to be of particular importance for the refining sector. CONCAWE¹⁴² has estimated required EU refinery investment costs as €11-30 billion for air emissions abatement and €1-5 billion for additional water treatment, based on the BAT conclusions identified in Chapter 5 of the final draft of the Refinery BREF document. Again, these costs represent a significant proportion of current refining margins and place EU refiners at a competitive disadvantage to non-EU refineries.

2. Do you think that the EU has introduced legislation that is proportionate/ disproportionate to the issue it aims to address?

The UK refining industry strongly believes in the need for better balance between environmental ambitions and energy resilience and competitiveness. The right policy and regulatory framework, which does not disadvantage industry against EU and global competitors, will be a prerequisite in ensuring that oil products can be supplied to consumers at affordable prices whilst continuing to meet UK's energy needs in a way that is consistent with policy on sustainability and economic growth. The Industrial Emissions (IPPC) Directive and the methodology used to define permitted emissions levels for industrial installations provides one example of where legislation is disproportionate to the issue it aims to address. Indeed, the cost impacts have not been assessed against the level of ambition identified in in the Thematic Strategy on Air Pollution published in September 2005, where the costs associated with achievement of defined levels of air quality improvement were identified as approximately €7.1 billion per annum across all sectors.

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

b. national, regional or international level instead of EU level?

Although climate change policies and competences are not the focus of the Energy Review, UKPIA and its member companies strongly support action at an international level to address GHG emissions and climate change. Action at EU level, preferably in conjunction with other non-EU national and pan-national initiatives is also appropriate in the interim until global agreement can be achieved, although this must recognise the potential for loss of competitiveness and risk of carbon leakage. Unilateral UK policy is clearly inappropriate where this compromises refinery competitiveness, security of supply and supply resilience in this area (see also comments above on electricity and environmental costs). UKPIA believe action should be taken at national level to ensure adequate levels of supply security and resilience and have previously provided evidence to DECC on this topic¹⁴³.

¹⁴² The European oil industry technical body for conservation of clean air and water in Europe (see www.concawe.com).

¹⁴³ See report by IHS Purvin and Gertz of 10th May 2013, sponsored by UKPIA to inform the DECC review into the Refining Sector in the UK. This is available at <http://www.ukpia.com/files/pdf/therolefutureoftheukrefiningsector.pdf>.

UKPIA continues to engage with the DECC Energy Resilience Team and IEA on supply resilience and compulsory oil stocking arrangements for the UK.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible/practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

The EU's current competence for energy must be used more effectively to achieve a balance between energy, climate change and environmental policies and competitiveness impacts on energy intensive industries, particularly against global competitors, which could potentially lead to compromise of energy security and supply resilience and competitive pricing of energy products.

A number of specific concerns have been identified by UKPIA in the development of EU policy proposals and the preparation of impact assessments:

- The Commission should be better engaged with Member States during development of policy proposals. At the same time, the UK Government should also engage more effectively with other Member States during this development phase, including both those with shared interests with the UK and those having a different (or uninformed) perspective.
- Although the regulatory procedure for basic or legislation acts allows adequate scrutiny by the European Parliament and Council of Ministers, UKPIA has concerns regarding the level of scrutiny applied to secondary legislation such as delegated acts and implementing measures post Lisbon Treaty, where the balance of power now appears largely with the Commission in the comitology processes.
- A specific example is the recent revision of the Refinery BREF document and development of BAT conclusions by the Commission, where BAT-AEL ranges and other input provided by CONCAWE and expert refining sector representatives and supported by sound evidence, has not been properly taken into account by the BREF author or by the Commission. Although the Commission Decision on BAT conclusions will be subject to inter-service consultation, there would appear to be little remaining opportunity for Member State scrutiny. In view of the significant cost impacts and potential lack of feasibility to achieve specified requirements, the UK Government should demand further checks and balances be built into comitology processes to protect industry against loss of competitiveness and compromise of other important objectives, such as the EU industrial strategy for growth.
- UKPIA has carried out a comprehensive review of Commission guidance on impact assessment to provide input for the EU Refining Sector Fitness Check currently underway. The Commission has developed a number of different smart regulation tools and methodologies under its Smart Regulation policy and these are continually being improved. The Commission Communication of 12th December 2012 on "EU Regulatory Fitness"¹⁴⁴7 announced the consolidation of a number of Smart Regulation initiatives under the Regulatory Fitness and Performance Programme (REFIT) to identify disproportionate burdens, inconsistencies, gaps and ineffective legislative measures. Under REFIT, there are currently three methodologies used by

¹⁴⁴ See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0446:FIN:EN:PDF>.

the Commission for assessment of policy and legislative cost impacts: impact assessment, fitness checks and competitiveness proofing.

The UK Government should insist that Commission legislative proposals are subjected to full and objective assessment using these methodologies, which include assessment of the cumulative impacts of current and planned legislation. The Commission Regulatory Impact Assessment Board should also be held to greater account to ensure impact assessments are sound and properly evidence based before approval.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The call for evidence document indicates that the oil market is not included under the scope of EU internal energy market legislation. UKPIA therefore has no response on this question.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK downstream oil industry has seen significant increases in capital expenditure and operating costs as a result of UK, EU and, in some cases, global legislation over recent years, mostly to meet tightened environmental requirements and an estimated £11.4 billion in further investment will be required to comply with existing and planned EU and UK legislation in the period to 2030⁶. The legislative cost impact is likely to increase further once the impacts from legislation which has yet to be fully defined, such as the Fuels Quality Directive (FQD), are factored in.

This cost impact has and will continue to compromise security of supply and supply resilience and may lead to further refinery closures, leaving the UK even more exposed to the international refined product market for those products already at high risk, assessed using IEA measures developed to evaluate national energy security risks and resilience capacities⁶.

Despite this situation, which impacts the whole of the EU refining sector, the EU has not (thus far) proposed any measures to increase security of supply or oil product infrastructure development.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

UKPIA has no specific response on these questions, although the UK refining sector supports early exploitation of shale oil and shale gas, as this is likely to result in more competitive electricity and gas pricing against, for example, US refineries, which now enjoy a structural advantage on feedstock and energy costs over EU and UK refineries.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

UKPIA has no specific response on these questions. However, since energy costs represent the second most significant cost after feedstock costs, EU and UK refineries remain focused on continued energy efficiency improvements and where appropriate, consider use of renewable and lower carbon energy.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

UKPIA do not support greater EU involvement in regulation of the downstream oil sector (see also responses to Question 3 and 6).

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to/disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

UKPIA has no response on this question.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The International Energy Agency forecasts global primary energy demand rising by about 35% through to 2035 and that for several decades to come, oil is still likely to be the most important fuel in the energy mix. In Europe, oil is set to account for around 85% of total transport fuels in 2030¹⁴⁵ and for the UK, oil is projected to account for over 32% of total primary energy demand by 2030, with transport accounting for 41% of final energy consumption¹⁴⁶.

The projected global increase in demand for primary energy creates a tremendous challenge. Sustaining and maximising domestic production are key to ensuring a reliable, secure source of energy supply. The right infrastructure, policy and regulatory framework are a prerequisite to ensure oil product supply to consumers at affordable prices, meeting the UK's current and future energy needs in a way that is consistent with sustainable environmental policy and to facilitate economic growth.

¹⁴⁵ IEA World Energy Outlook 2011.

¹⁴⁶ DECC Updated Energy and Emissions Projections 2012 - Central Scenario

12. What would be the costs and benefits of facing these at an international, EU, or national level?

UKPIA has not assessed the likely costs to the refining sector to ensure sustainable domestic production whilst meeting environmental and sustainability policy objectives, although these would require very significant investment in carbon capture and storage measures. (See also response to Question 6).

Ulster Farmers Union

UFU response to DECC Call for Evidence on the Balance of Competence between the UK and EU

Background

The Ulster Farmers' Union (UFU) is the largest farmer/land-owner representative organisation in Northern Ireland and we welcome the opportunity to respond to this call for evidence.

UFU has 12,500 members covering every aspect of NI agriculture and horticulture, including many farm enterprises which are intensive use of energy and heat, namely dairy, pig, poultry and mushroom sectors. In addition to traditional farm production, the UFU are the largest single representative of small-scale renewable energy/heat generators (<250kW) in NI, covering a wide range of other renewable projects including Wind, Anaerobic Digestion, Solar Thermal/PV and biomass (both feedstock production and generation).

Overall View

In July 2013, the European Renewable Energy Council ranked the UK 25th out of 27 EU Member States, in terms of meeting 2020 targets in their renewable contributions. As it currently stands, the likelihood of meeting 2020 targets is unlikely. What this illustrates is the two-speed progress in meeting these targets and this can be attributed to many factors. In Northern Ireland (and GB) we are facing significant structural barriers to the uptake of renewables, namely Grid (lack of development and integration) and Planning Policy.

These barriers are not unique to Northern Ireland but not directly relevant to the subject of the consultation, but the UFU believe they are symptomatic to a selection of failings of the Balance of Competence in the EU when it comes to Renewable (and wider) Energy Policy.

GENERAL

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

From an agricultural angle, EU action in the energy field can be viewed in two ways; farmers in their roles as energy users and as energy providers through Renewable Generation.

Legislation which enforced the 20-20-20 renewable targets have changed the way many farmers view their industry with a dash to build renewable projects (wind turbines, AD units etc) not for environmental reasons, but rather to snap up generous financial subsidies in the form of NIROCs. In fact several dissenters have said that some farmers now view themselves as producers of energy as opposed to food producers.

The UFU policy since the start has been that renewables should be viewed as a diversified element to a farm business which should be integrated into the more traditional farming activities.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The UFU believes that the EU has introduced adequate legislation from a EU-wide level, unfortunately it has been disproportionately applied between individual Member States, with a gap between implementation and effectiveness in the various regions.

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

- Integrated and uniform electricity grid development – currently this is a patchwork of differing grid infrastructures, with differing priorities and efficiencies.
- Research and development, in particular how this is rolled out to each Member State

b. National, regional or international level instead of EU level?

- Integrated and uniform electricity grid development – see above. From a local point of view, the reality is that the local grid is unable to cope with embedded generation. Added to this, we are now facing situations throughout Northern Ireland where parts of the grid are full to capacity meaning less are finding it possible to connect small scale renewables.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

Development stage for proposals (along with the preparation of impact assessments) could be used more effectively by improving Member State input and involvement. This extends to how the Member State involve the devolved **regions** within the UK. At Government level in Northern Ireland, our sector seems to have little or no input at the development stage.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

From a Northern Ireland point of view, further integration would only be desirable should we make progress in integrating with energy markets in GB, which to date has been negligible. Especially when you consider that the Moyle Interconnector is currently running at 30% capacity.

The lack of market integration in the UK is seen by the UFU as opportunity missed. The UFU have been supportive of a demand response to market signal, namely smart grids and smart meters. Demand aggregation might be considered, however, this would be considered in conjunction with the incorporation of small scale renewables on to the grid and the longer term grid development.

The UFU believe that the lack of concentration on storage is another wasted opportunity as this could allow a solution to those who are unable to connect to the Grid.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UFU is of the opinion that this question should be reworded with “disadvantaged” with “advantaged”. In Northern Ireland, farmers are reliant upon a 11kV electricity lines which are in need of upgrade. NIE proposed their upgrade in their original RP5 submission but this was subsequently turned down by the Utility Regulator.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

The UFU would be best qualified to comment on the use of indigenous biomass in Northern Ireland. There is a shortage of indigenous woodchip in Northern Ireland meaning that local users need to import this to fuel their generating units. We would prefer to make no comment on shale gas.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

Energy efficiency is being driven in Northern Ireland by the need to reduce input costs rather than any legislative reason. Further the Greenhouse Gas Implementation Group has identified on-farm energy efficiency as the best means of tackling GHG emissions rather than any form of formal legislation. This voluntary approach is back by the UFU.

Attention should be paid to how sustainability and scalability policies are applied throughout the EU and the need for avoidance of any blanket application policy. There is a need to take into consideration widely varying geographic and economic conditions in Member States.

Scalability is a problem we are witnessing in terms of AD development in Northern Ireland. Here the industry focus seems to be upon mainland Europe-sized solutions, where for the majority of members, smaller scale on-farm AD solutions would make more financial and practical sense.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

It is crucial that Member States continue to represent themselves, any dilution of this would never be acceptable. Since the UK has four devolved regions, by the UK speaking as a Member State, this is the best way to ensure that the Northern Ireland voice is heard.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do Euratom measures in respect of non-

nuclear activities help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

The UFU has no view on this question.

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The UFU has no view on this question.

12. What would be the costs and benefits of facing these at an international, EU, or national level?

The UFU has no view on this question.

REGULATOR

Ofgem

Ofgem welcomes the opportunity to respond to DECC's Call for Evidence on the Balance of Competences in the energy field. We are an independent National Regulatory Authority (NRA) under the Third Package of European energy legislation and our powers and duties have been adapted over time in accordance with European as well as national legislation. We represent the UK in the Agency for Cooperation of Energy Regulators (ACER) and the Council of European Energy Regulators (CEER), as well as working directly with neighbouring regulators and the European Commission.

In this response we will first set out briefly some of the key drivers affecting the balance between European and national competence in energy, and then provide evidence drawing on specific examples from our experience. Our response focuses on the electricity and gas sectors, reflecting our own competence, rather than on broader climate change policy.

Key drivers

In relation to gas markets in particular, the characteristics of the market can only be understood in the context of the European – and to some extent, global – market. GB is dependent on gas imports, and achieves security of supply through access to multiple sources of gas, including indigenous production, pipeline imports from Norway and through the interconnectors with Belgium and the Netherlands and imports of LNG, as well as storage.

In electricity, interconnectors have historically been less significant but that is changing over time as the recent development of interconnection to the Netherlands and Ireland increased capacity from 2.5GW to 4GW. Additional projects are under development. As we transition to a lower carbon economy with increased intermittent generation, increased interconnection can contribute to balancing our system alongside other forms of generation, demand response and storage.

In this context, we consider that there are considerable benefits from furthering the Internal Energy Market. This brings benefits to GB consumers from increased competition, efficient cross-border trade, reducing price volatility and supporting security of supply. However individual measures each tend to bring costs, either from investment in infrastructure or changes to systems. It is therefore important that the principle of subsidiarity is respected and changes to rules and regulations are justified on the basis of impact assessments, and that investments are either made on a commercial basis or, if mandated, subject to rigorous assessment.

Examples

Third Energy Package and independence of NRAs

The Third Package of energy legislation adopted in 2009 established the role of the National Regulatory Authority (NRA) strengthening national regulators' powers and introducing an obligation on Member States to ensure that NRAs are legally and functionally independent from any other public or private entity, including government. Aside from allowing for impartial decision-making in regards to energy regulation, independence also allows NRAs to play an important role in the governance of the Internal Energy Market (IEM) at both the national and European level.

Creation of ACER

The Third Package also created the Agency for the Cooperation of Energy Regulators (ACER) and established a European regime for NRAs with broadly similar institutional frameworks. This enables further improvements in collaboration between energy regulators across Europe. In practical terms this has closed a gap where the regulation of cross-border infrastructure could be inconsistent either side of a border – the respective NRAs are now required to cooperate and if they cannot agree then ACER can arbitrate. Where detailed market or technical rules need to be set at a European level, regulators can now provide effective oversight through ACER. The creation of ACER has provided a mechanism to allow more effective monitoring of energy markets, through the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT).

Ofgem has taken a leading position in both ACER and CEER. Our former chairman, Lord Mogg, is chair of the ACER Board of Regulators and President of CEER. Our staff chair one of the key working groups (on Electricity) and lead a number of task forces (on sustainable development, gas balancing, electricity grid connection and wholesale market monitoring and governance, for example).

We would, however, note that ACER is most effective where the legal framework guarantees that it builds on collaboration of independent NRAs and strong oversight through the Board of Regulators is maintained. We therefore consider that any further powers granted to ACER should adopt the model in the Third Package where the support of the Board of Regulators is required for any formal decisions or positions.

Since its creation ACER has had several new tasks and roles assigned to it under various legislation such as REMIT and the Energy Infrastructure Package. If this trend is to continue it will be important to maintain consistency between the scope of ACER's functions and its resources, and a strong role for NRAs within ACER can contribute to this.

Establishing the Internal Market in Energy

While European energy consumers will benefit from the internal market, different Member States currently often have different rules and systems which act as a barrier. This implies there will be costs to change, which even if smaller than the benefits throughout, fall differently between Member States dependent on individual decisions. In these circumstances, it can be very difficult to achieve consensus on the best way forward. The Third Package and other recent European energy legislation such as REMIT, the Infrastructure Package and the Energy Efficiency Directive, tackle this dilemma in a balanced manner and establish consistent approaches.

The Third Package approach of using Framework Guidelines and Network Codes, developed by ACER and associations of transmission companies (ENTSOs) is particularly notable. The Network Codes ultimately become binding European legislation and provide technical rules that facilitate cross-border trade in gas and electricity. While most of the Network Codes are still under development, the first code (capacity allocation management in gas) has now been adopted and we are actively considering implementation of the first codes in GB. Overall we consider that the process has worked well in advancing the Internal Market, albeit with much learning from the early experience. We consider that continued engagement, from ourselves through ACER, from DECC in the Comitology process and from GB stakeholders, will be needed to ensure the costs of implementing the Network Codes in GB are no higher than they need to be.

Drawing on experience from industry codes in GB, we do see a need for ongoing review and modification of the Network Codes, albeit less frequently than for national codes. This is as

yet untested. In our view the process set out (at a very high level) in the Third Package and elaborated further by ACER can be made to work provided there is appropriate stakeholder input. However the Third Package also envisages that the European Commission can choose to bypass this process and act directly. We favour a stronger role for ACER in this process, particularly if the role of the Council is reduced in relation to the Comitology process.

REMIT

As previously mentioned, Ofgem has a designated role under REMIT both at the national level and in our cooperation with other regulators through ACER. The benefits for GB of REMIT include reducing the potential for information asymmetries and market abuse, allowing for market prices to more accurately reflect supply and demand, and ensuring that consumers have confidence that the prices they pay for energy accurately reflect the costs.

From an Ofgem perspective, REMIT will require market participants from all over Europe and beyond to provide transaction data relating to GB, something that national legislation would be unable to deliver. There is no disadvantage to the UK relative to the rest of Europe of introducing REMIT as the regulation covers all European energy markets.

Setting 2030 targets

While the establishment of targets for greenhouse gas reduction, renewable energy or energy efficiency is clearly a matter for governments rather than regulators, we have worked through CEER to provide advice on the mechanisms that could be used. Since the original adoption of the EU 20-20-20 Climate and Energy targets, economic circumstances and developments in global energy markets have fundamentally altered, so it is important to take on board the changed situation and lessons learned in setting a new regime taking us up to 2030. Nonetheless, these policies tend to have characteristics of international public goods (where action in any country to reduce carbon emissions has the same impact, or increased renewable generation reduces overall fossil fuel dependency for example) so international action will tend to be more efficient than national action if well designed.

European and international engagement

As previously mentioned, Ofgem through its leading role in CEER engages in sharing of regulatory best practice and expertise with other European regulators, however our exchange does not end at Europe's borders. CEER has strong bilateral relationships with our US and Russian counterparts as well as with other regional groupings of energy regulators in North Africa and Latin America. In practical terms, this provides better access to information and learning than we could resource on our own.

Our former chair Lord Mogg is also Chair of the International Confederation of Energy Regulators (ICER) which focuses on international cooperation among regulatory associations around the globe. Our work in CEER and ICER has had real impact with the Statement by Energy Regulators on Sound Regulation and Investment in Infrastructure as part of the G20 Energy Regulators Roundtable in Kazan, Russia in 2013 a good example.

Renewables

Europe will face new challenges as a result of the increasing share of Renewable Energy Sources in the generation mix and the associated issues of intermittency, intermittency and distributed generation. We are currently working through CEER, for example with the

Commission's Smart Grids Task Force on these and other issues. CEER will produce a green paper on the role of DSOs (Distribution System Operators) before the end of 2014.

In respect of distribution networks, we do see some common challenges across Europe and the opportunity to share best practices, hence our engagement with the Commission and through CEER. However, national differences are considerable at the distribution level and any moves towards European level harmonisation would need to be well justified.

Developing infrastructure

Work in CEER has led to positive collaboration and sharing of experience among NRAs in how policy interventions interact with energy markets and cross-border trade. We are now working in ACER to develop a more strategic analysis of how European energy and regulatory arrangements need to adapt over this time-frame, in the "Bridge to 2025" papers and following a consultation phase in spring/summer 2014 ACER will publish its final thinking in time for the new European Commission in the autumn.

In parallel with the establishment of the medium term energy policy goals, we are regulating the development of the physical infrastructure to support the energy market – in the European context, cross-border infrastructure in particular. We welcome the work that the ENTSOs are developing to provide better coordinated assessments of future network developments and cost-benefit analyses, overseen by ACER.

Further harmonisation

We are aware that the Commission are currently considering moves towards increased harmonisation in the sphere of retail markets and distribution networks. We agree with the ACER and CEER positions that there is much scope for progress in retail market competition across Europe.

However, the benefits from cross-border trade lie primarily in the wholesale market and it is not clear that the justification for European intervention in the detail of retail markets is as strong.

In particular, in the light of our Retail Market Review in GB, we are concerned that simple harmonisation of requirements may not be appropriate and could risk prematurely unwinding some of the remedies and protections we have now established in GB.

SCIENCE AND ACADEMIA AND THINK TANKS

Cardiff University

Vicki Stevenson

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

I believe that the EU enables the UK to make collaborative steps on energy efficiency, renewable energy, reduction of carbon emissions which may not be economically viable if carried out independently.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Generally, yes

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

energy efficiency, renewable energy, reduction of carbon emissions

4. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

In general, I think EU measures have supported the development of indigenous renewable energy resources

5. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less? In many instances the EU drives sustainability measures to a greater degree than would have been possible independently. Governments are able to carry out sustainability related actions and "blame" the EU for any additional costs or inconvenience, thereby side stepping flak from a population which doesn't understand some of the technical issues we're having to deal with.

I would support the EU going further with sustainability measures which have lost support in recent years due to economic difficulties.

6. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.

It is understandably a long and complicated exercise to negotiate a way forward with so many Member States. Negotiating to a position where a united EU view can be presented at global negotiations may actually delay global decisions rather than facilitate them.

7. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

The energy sector (like many sectors within engineering/manufacturing) faces a huge skills shortage in UK and across Europe over the next couple of decades. This is a problem which needs to be addressed on a wide scale, or it will result in companies migrating to other continents to meet their needs. In terms of energy - this would work against attempts to develop energy security in the UK and EU.

8. What would be the costs and benefits of facing these at an international, EU, or national level?

The costs of facilitating a sound energy skills base in UK and EU also supports economic development and overall prosperity, so is likely to be less expensive in the long run than allowing these skills to go to other continents.

Green Alliance

Report: What has EU climate and energy policy done for the UK

See link: http://www.green-alliance.org.uk/grea_p.aspx?id=7305

Centre for European Reform

1 To what extent does EU action in the energy field benefit and / or disadvantage the UK? Is there a sector where this is most marked?

The Large Combustion Plants Directive/ Industrial Emissions Directive have helped limit acid rain damage and improve UK air quality – though transport pollution means that UK air quality is still not clean enough to protect human health.

More EU action on climate and energy would benefit the UK, because pollution does not stop at frontiers. The UK acting alone cannot protect the climate or the environment. Action would ideally be taken globally. But this will not happen. So EU action is necessary, and better than national action.

The target in the Renewables Directive has benefitted the UK by encouraging us to harness more of the extensive renewable energy available to us. When the target was set, the UK got a lower proportion of its energy from renewables than any other member-state except Malta and Luxembourg.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

The Large Combustion Plants Directive/ Industrial Emissions Directive is proportionate in its regulation on sulphur and nitrogen dioxide. Best Available Technology/Technique Not Entailing Excessive Cost (BATNEEC) ensures proportionality. The directive is, however, disproportionate in that it does not regulate carbon dioxide.

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

There is no theoretical advantage to action being taken at the EU level rather than international level. But there is a major practical advantage. Climate action happens at EU. At international level it does not. If there is agreement at the 2015 UNFCCC meeting in Paris (which is far from certain), the targets will be set only for 2020. And the UN has no powers to enforce targets. The EU can and does act without international agreement.

See <http://www.cer.org.uk/publications/archive/policy-brief/2011/eu-climate-policies-without-international-framework>

The UK would benefit if the EU adopted similar policies to British ones on climate and energy. For example, the EU should set an Emissions Trading System (ETS) price floor, as the UK already has. This would make the ETS an effective instrument in encouraging low-

carbon investment. The UK price floor may only discourage investment in new generation capacity in the UK. Increased energy prices mean that UK businesses have a competitive disadvantage. And UK policy alone does not protect the climate, as fewer permits being bought in the UK mean that more are available, at lower cost, elsewhere in Europe.

For more on the ETS, see <http://www.cer.org.uk/publications/archive/policy-brief/2012/saving-emissions-trading-irrelevance>

If the EU set an Emissions Performance Standard (EPS), again as the UK already has, the UK would benefit because the climate would be better protected and there would be less disincentive for energy companies to invest in UK capacity rather than elsewhere in Europe. An EU EPS would also help demonstrate and deploy CCS.

On the EPS, see <http://www.cer.org.uk/publications/archive/policy-brief/2013/europe-should-regulate-promote-carbon-capture-and-storage>

b. national, regional or international level instead of EU level?

None.

4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments?

The EU's current competence for energy would be used more effectively if the Commission was restructured. There should be senior commissioners leading teams which include other commissioners, as recommended in CER's 2013 'How to build a modern European Union' (<http://www.cer.org.uk/publications/archive/report/2013/how-build-modern-european-union>) A senior commissioner could lead on energy, climate action, transport and environment.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

EU action on energy efficiency – including the Eco-design Directive and the Energy Performance of Buildings Directive - has helped the UK (and EU) security of supply. See <http://www.cer.org.uk/publications/archive/policy-brief/2011/delivering-energy-savings-and-efficiency>

The UK has not yet benefitted greatly from EU efforts to facilitate energy infrastructure development, but will do so in future. For example, the EU will help construct a North Sea electricity grid, which will enable the UK to harness more offshore wind power, and also use Norwegian and Swedish pump storage capacity for electricity storage. See

<http://www.cer.org.uk/publications/archive/policy-brief/2012/connecting-europes-energy-systems>

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed

Renewables are a UK indigenous energy sources. EU measures have helped in the development of UK renewables. Further measures are needed, including a 2030 target for renewables. This would also help reduce opposition to nuclear by emphasizing that renewables cannot provide all our energy needs for many decades, if ever, so other low-carbon bridge technologies are needed. See

<http://www.cer.org.uk/publications/archive/policy-brief/2012/how-expand-renewable-energy-after-2020>

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The EU has had a positive impact on energy efficiency and renewables, as outlined in my answers above. As the Dutch foreign minister said at the end of the Netherlands' subsidiary review, energy is an area where the EU needs to do more.

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

The UK would have very little impact alone at international energy or climate negotiations such as the UNFCCC. See <http://www.cer.org.uk/publications/archive/review-article/2013/eu-and-climate-change-policy>. However, UNFCCC will not deliver sufficient action, whatever the outcome.

10. To what extent does EU action under the Euratom Treaty (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU?

EU action on nuclear has little impact on nuclear development in the UK or elsewhere. However, the EU wastes enormous amounts of money on the nuclear fusion project, ITER. This should be stopped, and the money reallocated to support for molten salt reactors and

integrated fast reactors. See <http://www.cer.org.uk/publications/archive/policy-brief/2011/thorium-how-save-europes-nuclear-revival>

12. What would be the costs and benefits of facing these at an international, EU, or national level?

They will not be faced at international level, and cannot be faced at national level, so must be faced at EU level.

Institute for European Environment Policy

1. Introduction

The Institute for European Environmental Policy (IEEP) is an independent research organisation concerned with policies affecting the environment in Europe and beyond. Our aim is to disseminate knowledge about Europe and the environment in a broad sense and to analyse and present policy options. We undertake research and consultancy on the development, implementation and evaluation of environmental and environment-related policies in Europe. We work closely with the full range of policy actors from international agencies and the EU institutions to national government departments, NGOs and academics.

We are a charity with offices in London and Brussels and a network of partners in other European countries. The London office of IEEP was founded in 1980, the Brussels office in 2001. A presence was established in Finland in 2008.

2. Sources of Evidence

The evidence underpinning the response that we are making to the consultation is drawn from several sources. These include:

- More than 30 years of experience of EU policy, primarily in environmental and related policy domains, by staff, associates and trustees, stretching back to the 1970s. EU energy policy has become increasingly important within this spectrum, not least because of the linkages to climate objectives. Our activities have included both academic and applied research work, sustained interaction with the European institutions, national officials engaged in EU matters and other stakeholders from civil society, business, science, research and elsewhere, the organisation of conferences and events, evidence to the European Parliament, parliamentary committees in the UK, etc.
- A number of research and consultancy projects, reports covering both specific issues and the broader generality of EU energy policy. These include: on *energy efficiency*, IEEP's recent assessment of costs and benefits of energy savings¹⁴⁷; on *bioenergy*, IEEP has published widely on the sustainability of different forms of bioenergy and biofuels¹⁴⁸, on necessary policy reform¹⁴⁹ as well as on the potential for an advanced biofuels industry in the UK and Europe¹⁵⁰; on wider *energy (and climate) policy*, IEEP has undertaken comparative studies on energy and carbon taxes in the context of

¹⁴⁷ Sauter, R., Volkery, A. (2013) Review of costs and benefits of energy savings, A report by the Institute for European Environmental Policy (IEEP) for the Coalition of Energy Savings. Task 1 Report. Brussels. 2013

¹⁴⁸ Bowyer, C, Baldock, D, Kretschmer, B and Poláková, J (2012) The GHG emissions intensity of bioenergy: Does bioenergy have a role to play in reducing Europe's GHG emissions? IEEP: London. Diaz-Chavez, R, Kunen, E, Walden, D, Fingerman, K, Arya, L, Kretschmer, B, Poláková, J, Farmer, A, Bowyer, C, Menadue, H, Alberici, S and Toop, G (2013). Mandatory requirements in relation to air, soil, or water protection: analysis of need and feasibility. Report by Winrock, IEEP and Ecofys for the European Commission (DG ENER) under the contract ENER/C1/2010-431.

¹⁴⁹ See for example recent policy briefs related to the ILUC file: <http://www.ieep.eu/minisites/pursuing-change-in-biofuels-policy-developing-alternatives/briefings/iluc/>

¹⁵⁰ Kretschmer, B, Allen, B, Kieve, D and Smith, C (2013) Shifting away from conventional biofuels: Sustainable alternatives for the use of biomass in the UK transport sector. An IEEP discussion paper produced for ActionAid. IEEP: London.

environmental tax reform¹⁵¹ and phasing out environmentally harmful subsidies¹⁵². Experience also has been gained in undertaking work relating to EU legislation commissioned by different DGs within the European Commission, including drafting impact assessments, reviewing implementation of extant legislation, examining issues where EU intervention might have a role, etc.

- Representation on formal groups and committees. At present we are represented in two so-called “high level groups” established by the European Commission, one concerned with the future of policy related to the car industry in Europe, the other with key enabling technologies.

ISSUES OF COMPETENCE AND NATIONAL INTEREST

Before providing answers to the detailed questions in the Energy Review, we would like to clarify two overarching issues that we deem important for the overall Balance of Competences review process:

1. There is a need to ***distinguish between three different questions*** while performing the review: One relates to establishing the right level at which competences should be established in principle (ie European, national, or global). A second concerns the relevant EU and Member States structures and institutions and their capacity to exercise competence in an appropriate way. The third is a different question about whether good policy decisions have been taken in the past by actors at those levels. This helps to clarify the point that bad decision-making in the past, as has arguably been observed at the EU level as well as nationally and regionally, does not necessarily imply that responsibility is allocated at the wrong level, and vice versa.
2. The second point of clarification relates to ***defining the UK's interest***, a phrase that is repeatedly used in the consultation documents. Given the UK is a part of the EU, it is clear that good outcomes for the EU are also good outcomes for the UK. In other words, entirely separating UK and EU interests is not helpful. Because of external effects, both environmental and energy policies are cases in point. There are situations in which, although some competences would be better off at the Member State level for some countries from a purely nation-state perspective, actually moving the competence to the Member State level would not, overall, be advantageous for the environment and the wider public interest, neither in particular countries nor in the EU as a whole. This is because moving competences might well lead to a situation where more Member States would perform worse rather than better compared to a situation where environmental legislation is in the hands of the EU.

In considering the national interest in the context of potentially different relationships between the UK and the EU it is perhaps most relevant to weigh up the advantages of pooling aspects of sovereignty in a policy domain, such as energy, with the compromises

¹⁵¹ Withana, S., ten Brink, P., Kretschmer, B., Mazza, L., Hjerp, P., Sauter, R., (2013) Evaluation of environmental tax reforms: International experiences, A report by the Institute for European Environmental Policy (IEEP) for the State Secretariat for Economic Affairs (SECO) and the Federal Finance Administration (FFA) of Switzerland. Final Report.

¹⁵² Withana, S., ten Brink, P., Franckx, L., Hirschnitz-Garbers, M., Mayeres, I., Oosterhuis, F., and Porsch, L. (2012). Study supporting the phasing out of environmentally harmful subsidies. A report by the Institute for European Environmental Policy (IEEP), Institute for Environmental Studies - Vrije Universiteit (IVM), Ecologic Institute and Vision on Technology (VITO) for the European Commission – DG Environment. Final Report. Brussels. 2012

this usually entails, with the alternative, pursuing greater national autonomy outside the EU. The latter path has many implications, including a continued need to negotiate fresh relationships with the EU and a number of its policies given its role as a powerful neighbour. This is a different judgement to make than assessing whether a particular set of EU policies is better or worse than those which the EU might make at any given moment. It is this last question which often receives the greatest attention but it should not be confused with the more fundamental issues of competence which the review appears intended to address.

Questions

To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

The question of national benefits is not straightforward, as remarked above. Some of the principal benefits inside and beyond our particular sphere of interest can be summarised as:

Benefits

- UK energy security has benefitted from important European infrastructure projects, such as the gas and electricity interconnectors between the UK and continental Europe. Recent funding streams, ie the Connecting Europe Facility, continue to make available EU funding for infrastructure development in the UK. A more developed and inter-connected energy infrastructure has long term benefits for the UK and other Member States, potentially more so with a higher level of renewables in the supply mix.
- Binding EU targets for renewable energy sources have stimulated very significant new investment and jobs in the UK renewables sector and a far greater growth in renewables than otherwise would have occurred. The UK has gained technology leadership, notably in the area of offshore wind, and having renewable energy targets in place throughout the EU opens up significant investment opportunities for UK industries.
- EU level action to support research, development and demonstration further contributes to the development of low carbon technologies in the UK and helps the UK to develop new industries, for example through successful UK applications for funding in the area of ocean energy under the NER300 funding stream.
- EU policies on energy efficiency supported and helped to motivate the UK in making progress in this area, contributing to lower energy consumption, hence lower greenhouse gas emissions and improved energy security. They also helped to attract attention in emerging markets in Asia to energy efficiency product standards, which in principle opens up new markets for UK and European producers.
- The UK has been able to influence EU energy market liberalisation in the spirit of its own model. Whatever the consequences in economic, energy supply and environmental terms it has attracted significant foreign investment to the UK.

Challenges

- As a frontrunner in some areas, there is a need to align UK domestic policies to EU legislation where this gets adopted. However, at the same time, this might entail, as has happened in the past, that existing UK practices are promoted EU wide, resulting in 'first mover' advantages.

- Due to slower liberalisation efforts in most other Member States, UK energy companies have as of yet not benefitted to the full extent from investment opportunities abroad. This is outside of our sphere of expertise but arguably it reinforces the need for the UK to play a strong role in EU debates and push for the completion of the internal market.

What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

It is broadly accepted that the EU internal energy market has to a large extent been modelled on the basis of the UK approach to energy market liberalisation. The UK was able to use the EU as vehicle to spread its regulatory approach across Europe which underlines the UK's strong influence in shaping EU (energy) policy. The UK as first mover was in an advantageous position and attracted considerable foreign investment. Other key benefits of the development of a more integrated internal energy market include downward pressure on energy prices as a result of stronger competition. A recent study for the European Commission¹⁵³ estimated that further gas market integration could result in benefits of up to €30 billion per year and that further integration of the electricity market could generate annual benefits of up to €16 billion by 2015 and as much as €40 billion by 2030 in the EU. For 2012 alone the benefits were estimated at up to €27 billion due to gas market integration. Besides these economic gains the UK has benefitted from increased energy security as a result of physical market integration (see below).

However, the UK's first mover role may have been disadvantageous in that the country's fully liberalised market has exposed UK energy companies to competitors in other Member States that were benefitting from protected markets and could use their power to enter the UK market. While the market entry of utilities from continental Europe may have increased competition in the UK to the benefit of final consumers, UK energy companies did not benefit from similar expansion strategies in other European markets. From an economic perspective this has underlined the rationale for a more proactive approach at EU level to advance energy market integration to the benefit of both energy suppliers and consumers. Greater integration will however require further clarification on the ultimate objectives of market integration. For example, a conflict between UK policy choices and EU level intervention may arise due to different priorities on the key policy objectives. While the UK has more recently pushed for an energy policy dominated by the objective to reduce greenhouse gas emissions, other Member States put more emphasis on energy security which may result in different market frameworks and public interventions.

To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK is among the EU Member States with the highest share of natural gas (over one third) in gross inland energy consumption. It has been a net importer of gas since 2004 with

¹⁵³ Booz & Company, Newberry, D., Strbac, G., Pudjianto, D., Noel, P, LeighFisher (2013) Benefits of an Integrated European Energy Market. Final report prepared for Directorate-General Energy, European Commission.

net imports of gas accounting for 47 per cent of supply in 2012.¹⁵⁴ While pipeline imports from Norway are the most important source for gas imports, interconnectors with the Netherlands, operating since December 2006, and with Belgium are important components of the UK's gas supply infrastructure. The UK was also a net importer of electricity. Although imports have a low share of below 5 per cent in total electricity supply, virtually all imports came from continental Europe via the interconnectors with France and the Netherlands.¹⁵⁵ Being embedded in the European gas and electricity networks with interconnections to continental Europe has therefore contributed to security of energy supply in the UK, which is clearly in the interest of UK business and consumers.

Infrastructure projects such as the interconnectors between the UK and the European mainland have been substantially supported by EU level measures either by action plans to remove bottlenecks in the European energy markets or by providing important EU co-funding.¹⁵⁶ Future funding for improving UK energy infrastructure and hence its energy security will be available under the Connecting Europe Facility. The first list of priority energy projects published by the Commission under the Connecting Europe Facility includes several UK priority energy projects relating to the priority corridor 'Electricity Northern Seas Offshore Grid (NSOG)' but also 'Electricity WEST', 'Gas WEST' and 'Smart Grids'.¹⁵⁷ The selected projects will benefit from a number of advantages including accelerated planning and permit granting procedures (binding three-and-a-half-years' time limit) and the possibility of receiving financial support under the Connecting Europe Facility. The total budget available to trans-European energy infrastructure projects for the period 2014-20 under the Connecting Europe Facility is €5.85 billion. The pipeline of projects of relevance to the UK shows the important role that EU measures and support continue to play for the development of energy infrastructure in the UK. In addition to the improved infrastructure, EU Member States' energy security is strongly reinforced by coordinated action at European level in times of crisis, benefitting consumers and businesses in all Member States including the UK.

What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

We have been involved in reviews of current EU legislation relating to the exploitation of shale gas, yet to be finalised. There are a number of environmental safeguards in place already but the overall coverage of these measures and their coherence as a group could be improved and we consider that a new, more comprehensive, measure would be valuable.

¹⁵⁴ DECC (2013) Digest of UK energy statistics (DUKES), Natural gas, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65800/DUKES_2013_C_hapter_4.pdf

¹⁵⁵ DECC (2013) Digest of UK energy statistics (DUKES), Electricity, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65800/DUKES_2013_C_hapter_4.pdf

¹⁵⁶ For an overview of projects financed through the Trans-European Energy Networks (TEN-E) programme in 1995-2012 see http://ec.europa.eu/energy/infrastructure/tent_e/doc/2013_ten_e_financed_projects_1995_2012.pdf

¹⁵⁷ European Commission (2013): Full list of projects of common interest by country, http://ec.europa.eu/energy/infrastructure/pci/doc/2013_pci_projects_country.pdf

How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

In 2009, the EU adopted an ambitious energy-climate legislative package that made a real change to investments on the ground. The Renewable Energy Directive's (RED)¹⁵⁸ binding target to achieve a 20% share of energy from renewable sources out of total final energy consumption by 2020 implied a step change compared to the previous framework of indicative targets only in the heat and electricity sectors¹⁵⁹. Nonetheless, the extent of Member States' initial level of installed capacity as well as economic and resource potentials were taken into account in formulating differentiated national targets, 15% in the case of the UK. Tracking of Member State progress in the field of renewable energy by the Commission shows that the indicative targets for 2010 in the electricity and transport sectors were missed by a majority of Member States¹⁶⁰. Earlier Commission analysis¹⁶¹ concluded that the rate of growth in renewables investment had increased with the adoption of the RED and its binding targets and was anticipated to remain high up to 2020, as projected by Member States in their National Renewable Energy Action Plans (NREAPs).

As reported by DECC, between January 2010 and September 2013 private sector investment in renewable electricity generation worth £31 billion was announced with the potential to support over 35,000 jobs¹⁶². However, the 2013 progress report projects a gloomier outlook for investment in the renewables sector for the years to come up to 2020 as the impacts of the economic and financial crisis trickle through to this sector. While these effects make it more challenging to meet the renewable energy target, they must not distract from **significant growth in renewables deployment. The presence of EU-level binding targets has certainly facilitated development of renewable energy sources within the UK.** As noted earlier, policy support for renewables facilitated a scaling up of offshore wind in the UK and UK leadership in an industrial sector with significant growth potential that is envied in other Member States, such as Germany where barriers remain to be overcome to reach ambitious objectives in the deployment of offshore wind. Besides the strong stimulus for renewables deployment, EU level action to support research, development and demonstration has helped the UK to develop new innovative industries. For instance, under

¹⁵⁸ Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources

¹⁵⁹ Directive 2001/77/EC of 27 September 2001 on the promotion of electricity produced from renewable energy sources; and Directive 2003/30/EC of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels.

¹⁶⁰ For electricity, 15 Member States failed to reach their 2010 target and for transport, 22 Member States failed to reach the 5.75% target by 2010, as analysed in the European Commission's 2013 renewable energy progress report,

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0175:FIN:EN:PDF>.

¹⁶¹ Commission's 2011 renewable energy progress report, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0031:FIN:EN:PDF>

¹⁶² DECC (2013) UK Renewable Energy Roadmap Update 2013, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATION.pdf

the NER300 funding programme¹⁶³ the UK was awarded nearly €40 million to develop two innovative ocean energy projects.

At the same time, more remains to be done. The rapid scale-up in bioenergy use precipitated by the RED has introduced serious questions of sustainability. These include major concerns about the lifecycle impacts of growing bioenergy consumption on climate mitigation efforts over the period to 2050. There are several reasons for these concerns, one of which is the very limited regulatory requirement to take account of indirect land use change (ILUC) factors in assessing the performance of biofuels under present EU legislation, despite its importance in the calculation of real impacts on the climate. In this area a robust EU policy framework is yet to be put in place.

While sustainability criteria for biofuels and bioliquids are included in the RED, they remain incomplete, with indirect land use change emissions not accounted for, definitions (highly biodiverse grasslands) outstanding and certain sustainability issues not addressed (eg soil and water impacts as well as social impacts). Efforts to modify the requirements have not borne fruit and it is unclear whether the EU institutions can reach agreement on a modified version of the recent Commission proposal without seriously weakening the sustainability safeguards it proposes, which themselves are less than those IEEP considers to be necessary. Equally pressing is the situation related to use of solid and gaseous biomass (mainly for heat and electricity generation) where no harmonised EU criteria have been proposed up to date. This puts into question the low-carbon and sustainable nature of using these sources. It might also introduce new obstacles to the internal market if (and once) individual Member States were to adopt national measures in this area.

UK energy efficiency policies have been strongly guided by EU legislation such as the Energy Performance of Buildings Directive (EPBD)¹⁶⁴, the Framework Directive for Setting Ecodesign Requirements for Energy related Products¹⁶⁵ and the more recent Energy Efficiency Directive¹⁶⁶. **These measures encouraged the UK to make progress in energy efficiency contributing to lower energy consumption, hence lower greenhouse gas emissions and improved energy security.** Lower energy consumption means lower energy bills and net savings for citizens and industry and hence ultimately contributing to jobs and growth, as a recent review by IEEP on costs and benefits of energy savings showed¹⁶⁷. EU legislation has provided additional impetus to energy efficiency policies in EU Member States including within the UK. For example, it has required the development of energy efficiency action plans and set targets at the EU level while giving Member States a choice as to how these targets are implemented at national level. The UK not only benefits in terms of lower energy consumption and lower emissions but also in terms of indirect benefits such as lower energy demand in Europe that reduces pressure on energy prices and increases energy security. The ecodesign requirements for energy related products provide

¹⁶³ A large EU funding programme to support the deployment of CCS and innovative renewable energy technologies, whose funds are derived from the sale of 300 million emission allowances from the new entrants' reserve (NER) set up for the third phase of the EU emissions trading system (EU ETS), <http://ec.europa.eu/clima/policies/lowcarbon/ner300/>.

¹⁶⁴ Directive 2002/91/EC

¹⁶⁵ Directive 2009/125/EU

¹⁶⁶ Directive 2012/27/EU repealing the Directive on Energy End-Use Efficiency and Energy Services Directive 2006/32/EC

¹⁶⁷ Sauter, R., Volkery, A. (2013), as cited above

for common standards in the internal market and stimulate innovative products consuming less energy with better market opportunities. Not only do these common standards help UK products in the internal market, but they also attract attention in non-EU markets such as Asia¹⁶⁸ and hence open up new opportunities for UK products in emerging markets. This is only possible because of the EU internal market is the biggest common market in the world.

The UK has undoubtedly been successful in shaping EU legislative outputs in the field of energy efficiency on some occasions. For instance the Energy Company Obligation scheme was a policy design that was picked up in the recent Energy Efficiency Directive to encourage other Member States to put similar schemes in place.

To ensure the continued deployment of sustainability measures, a clear EU signal for the post-2020 period is now needed, since this has become key to Europe's energy future and fulfilment of its climate objectives. Commission proposals are expected for the end of January 2014. Some Member States, including the UK, are pushing for a **GHG target only, which IEEP believes is not sufficient**. The European Parliament and a number of Member States are also signalling support for a triple target. Separate targets are a necessary condition to attract sufficient investment in both the renewables and energy efficiency sectors (as has been demonstrated by the move from indicative to binding targets under the RED) and to exploit the cost-effective potential in the period to 2030. Also from a technology and innovation policy viewpoint, a technology neutral approach under a GHG target alone would not be sufficient as the 'cheapest' technology under current market conditions would in many cases not be renewable energy and/or energy efficiency technologies. **This would delay development of low carbon technologies EU wide, and hence also reduce the UK's potential for pursuing investment opportunities abroad, for example in the field of offshore wind.** In addition to cost issues, many other barriers persist that require RES and EE targets, one important (and investment-intensive) one being grid development. **A triple-target framework for 2030 is therefore needed to avoid continued technological lock-ins and to take the necessary steps now to make our energy system fit for a low-carbon future.**

What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Both increasing global demand and subsequent rising energy prices will make low carbon and energy efficient technologies even more profitable options and constitute an important growth market in future. In order for the EU and the UK to be prepared to fully exploit these market opportunities and to avoid economic downturns associated with rising energy prices, measures need to be taken now to avoid technological lock-in of carbon and energy intensive solutions that would expose our economies to the risks of future high and volatile energy prices. These measures should include continued, but tailored, support for

¹⁶⁸ See for example the establishment of the EU-ASEAN Energy Efficiency Standards Harmonization Initiative, <http://www.switch-asia.eu/switch-asia-projects/project-impact/projects-on-designing-for-sustainability/energy-efficient-air-conditioners-in-asean.html>

renewables and other low-carbon technologies, taking into account their deployment status and maturity, in order to move along the learning curve and continuously bring down their technology and policy costs. A triple-target framework for 2030 with ambitious GHG reduction, energy efficiency and renewable energy targets is necessary for this reason. EU level binding targets leaving Member States sufficient room for setting priorities in line with national preferences can provide for the necessary market scale. Such a target framework needs to be complemented by continued efforts, coordinated at EU level, to ensure that the upgrading of the UK and European energy grid infrastructure is in line with the requirements of a low carbon energy future, including further improvements in the interconnection between the UK and continental Europe.

EU energy policy can provide an important stimulus in those areas. Efforts to complete the internal market, foster energy efficiency and renewable energy technologies and stimulate investment in European grid infrastructure will make the EU's and hence also the UK's energy system fit for the future challenges ahead. At the same time, the EU benefits from being the largest common market in the world, which gives it negotiating power on world energy markets that is valuable given its high energy dependency. Also, the EU market can set precedents in areas such as energy efficient product design or renewable support schemes that spill over to other regional markets, hence contributing to decarbonisation elsewhere while at the same time creating investment opportunities for European firms abroad.

National Nuclear Laboratory

The following evidence was submitted to the Balance of Competence R&D Review but is relevant also to the Energy review; NNL agreed this could be included as evidence also for this review.

The UK's National Nuclear Laboratory (NNL) is a Government-owned body, operating as a commercial business providing nuclear analysis, research, technology solutions and insight to customers in the UK and overseas. With over 10,000 man-years of accumulated nuclear industry experience, NNL hosts a large portion of the UK's nuclear research & technology knowledge.

This note summarises NNL's involvement in European Union funded R&D programmes, and provides evidence and opinion against the questions posed by BIS for the Balance of Competences review.

Background to EU nuclear fission R&D and UK involvement

International collaborative research projects are fundamental to the development of both the current and next generation of nuclear technologies, and for the long-term management and disposal of nuclear waste. In the EU, nuclear energy research is managed by Euratom, previously through the Euratom Framework Programme (FP7) and in the future through Horizon 2020. The nuclear fission FP7 budget was ~€300 million and Horizon 2020 is set to be ~€355 million over 5 years. Supporting and coordinating this research are three forums that bring together leaders from industry, academia and national research and safety organisations to plan and carry out research more strategically.

Sustainable Nuclear Energy Technology Platform (SNETP)

Implementing Geological Disposal Technology Platform (IGDTP)

Multidisciplinary European Low-Dose Initiative (MELODI)

Each has a Strategic Research Agenda which guides the research conducted. The UK is represented on each forum by a number of universities, companies and national bodies, such as NNL and the Nuclear Decommissioning Authority.

The level of UK engagement in collaborative research programmes over the past decade has been low compared to other nations, and there has not been a UK nationally funded or coordinated approach to EU R&D involvement between academia, industry and national laboratories.

To address this issue, UK Government has stated in its recently published Nuclear Industrial Strategy a change of role and remit for NNL to one that is more nationally strategic – at present NNL operates purely as a commercial entity. NNL's future remit will involve coordinating and representing UK industry and academia in international fora, and leading UK national R&D programmes on behalf of Government through a new Nuclear Innovation Research Office (NIRO). The aims are to increase the international profile of the UK's nuclear sector, to maintain key domestic capabilities and ultimately to contribute to energy security and economic growth. A recent indication of the UK's increasing reputation is that

NNL were asked in March 2013 to chair the NUGENIA Executive Committee (one of three SNETP initiatives), and to host the 2014 NUGENIA General Assembly.

It is NNL's view that the UK should maximise the possible benefit from the EU funded programmes into nuclear fission related technologies on a greater scale than we do presently. To do this the UK will need to have its own national programmes which make a valuable financial as well as technical contribution to international collaborative research.

Impact on the national interest

Where has EU action had a **positive impact** for the UK on research, technological development, innovation or space? What evidence is there for this? Has EU action encouraged national action in any areas?

EU research funding under the Euratom Framework Programme (FP7) has allowed NNL to participate in cutting edge nuclear fission research using the UK's active nuclear R&D facilities. A number of examples are given in the annex to this note. Each project has resulted in its own specific benefits which are listed, the general themes of which are:

Developing people and attracting new entrants into the industry.

Generation of valuable research networks on an individual and organisation to organisation basis.

Increasing the UK's capability, both in technical knowledge and expanding the research facility base in areas that "UK only" funded research would not do. This includes gaining access to and knowledge from major international nuclear fission research facilities and programmes.

Increasing the UK's international reputation in making valuable contributions to collaborative nuclear research.

Leverage UK funding giving access to much larger research projects that would not have been possible from a "UK only" position, allowing the UK to collaborate on level terms with other EU R&D institutions and industry.

Innovation being seen to be led by the UK, allowing the UK to influence the future direction of research.

Conducting research that can underpin future UK national energy policy.

Where has EU action had a **negative impact** for the UK in these fields? What evidence is there for this? Has EU action prevented potentially useful national action in any areas?

NNL can identify no specific negative impacts on UK Nuclear Fission research

How, and where, has UK engagement with partner countries or international bodies, both within and outside the EU, been helped or hindered by EU involvement?

Collaboration with other EU R&D institutions and industry is facilitated by the involvement in EU programmes allowing the UK to market its talent, expertise and cutting edge facilities. The only hindrance is in relation to the level of funding achievable for nuclear research

through the Euratom treaty arrangements where anti-nuclear nations block funding increases and limit the scope of research called for under the fission framework calls.

What benefits or difficulties has the objective of a European research area (ERA) delivered for the UK?

NNL is not aware of any specific benefits or difficulties associated with ERA, and believe the objective is more linked to academia and their European research alliances.

How has the EU sought to coordinate the policy instruments at its disposal across different policy areas to create an enabling environment for researchers and innovators? How successful has this been?

This has been well coordinated by SNETP and its underpinning R&D strategy groups to enable the best environment possible.

Future opportunities and challenges

What could the EU most helpfully do to promote scientific and technological progress and innovation (including in the space sector)?

- *How could the EU use its existing competence differently to deliver more in your area?*
- *How might a greater or lesser degree of EU competence deliver more in your area?*
- *How could improvements to existing EU activities make them more effective and efficient?*

The EU could use its processes and support arrangements to better align the R&D calls with member states' national programmes (where these fit) to maximise the benefit of EU wide collaboration.

It could also streamline the bidding/competition process to reduce the time between proposal submission and project start dates.

Where might future EU level action be detrimental to your work in this area?

NNL are not aware of any specific areas where this is likely.

Where might action at national rather than EU level be more appropriate / effective?

A structured and funded UK Nuclear research programme, alongside an EU programme, would allow the UK to take a more leading role internationally, and direct EU research in areas that are relevant to the UK.

In the bidding/competition process, the UK could provide support to groups developing project proposals in the pre-contract phase. The current proposal process is considered cumbersome and may be too costly for industry to justify, resulting in missed opportunities.

As with a number of sectors the nuclear research area is subjected to Export Control regulations. This controls the export of strategic goods and technology that are subject to

national legislation and typically in the civil nuclear research area applies to items that could have a dual use. Action therefore at a national rather than EU level may be more appropriate for some areas of civil nuclear research.

How could EU and national policies and funding streams interact better?

Better coordination of the national programmes and their interaction with and development of the EU programmes would help to maximise the overall value of the projects.

What impact would any future enlargement of the EU have on this area of competence?

It would increase the potential for collaboration between member states and allow cross border learning opportunities.

Are there any other points you wish to make which are not captured above?

None.

Annex – Examples of NNL involvement in EU R&D programmes

The following are examples of EU R&D projects under the 7th Framework programme that have been beneficial to NNL and the UK. NNL are currently involved in or have submitted proposals for over ten R&D programmes, and further details of these can also be provided if necessary.

ACSEPT - Actinide Recycling by Separation and Transmutation

The ACSEPT project ran between 2008 and 2012. The project focussed on developing aqueous and pyrochemical processes for advanced actinide separations, moving R&D towards pilot scale demonstrations. Actinide recycling by separation and transmutation is considered as one of the most promising strategies to reduce the inventory of radioactive waste as part of a more sustainable future nuclear fuel cycle.

ACSEPT was the largest single project in the EURATOM 7th Framework Programme. It had a budget of €24 million, €8 million of which was from EU funding, with over 20 partners drawn from numerous universities and research institutes across Europe; this included all of the major European national nuclear laboratories as well as CRIEPI and ANSTO.

The benefits for the NNL and the UK are:

Developing people – A total of 25 NNL staff were involved, resulting in a significant level of learning and development, with networks between researchers (both internally & externally) developed or enhanced. The project allowed the UK to maintain a skill base in fuel reprocessing science and engineering R&D against the backdrop of a difficult funding environment in the UK.

Increasing the UK's capability – ACSEPT has driven the development and commissioning of NNL's glovebox capability for fuel cycle chemistry within its PuMA Laboratory. The gloveboxes have since been used for projects supporting Sellafield Ltd, NDA, DECC and the European Space Agency. Without ACSEPT, NNL would not have been in a position to support these customers.

An increased international reputation for the UK - UK was seen as a leading partner in the project, and has established close collaborations with EU universities and research institutes. This has led to new opportunities for NNL and UK universities in European level projects (SACSESS, ASGARD, TALISMAN). 11 papers have been submitted to scientific journals and publications with a further 10 planned. 11 presentations have been made at international conferences.

Innovation - NNL have led development of a new, innovative GANEX (Group Actinide Extraction) process that has now been hot tested with Spent Fuel at ITU, Karlsruhe. This process is being developed further through a DECC funded R&D programme.

Underpinning future UK energy policy – ACSEPT has enabled the UK to demonstrate the technical feasibility of innovative options for future closed fuel cycles that can be objectively evaluated against likely future scenarios in order to scientifically underpin UK nuclear energy strategy and policy decision making by Government.

ASGARD – Advanced Fuels for Generation IV Reactors: Reprocessing and

Dissolution ASGARD is a four year programme which began in 2012; funding is provided by the EU, NNL and NDA. It focuses on advanced/novel nuclear fuel for Generation IV reactors focussing on their fabrication and respective reprocessing issues. ASGARD seeks integration between reactor, fuel and recycling communities and is an international effort of 16 institutions from 9 European countries. NNL's involvement is with the fabrication and reprocessing of carbide fuel.

The benefits for the NNL and the UK are:

Developing the UK knowledge of fuel fabrication techniques for future generations of reactors. This will allow us to retain a capability that the UK were world-leaders in several decades ago, and are still highly considered, but are at risk of losing if no action is taken.

Understanding where opportunities for UK research, development and ultimately commercial involvement may lie in fuel fabrication in the European and wider markets.

Underpinning the direction of future UK energy policy.

GoFastR – Gas-cooled Fast Reactor

GoFastR is a three year programme that began in 2010 and will conclude in 2013. Funding is provided by the EU and NNL through the NNL's internally funded Reactors and Fuels Signature Research Programme. The Gas-cooled Fast Reactor (GFR) is a Generation IV reactor design that is being developed through international collaboration in order to be safe,

sustainable, economic and proliferation resistant. In particular, GFR could be capable of operating at very high temperatures (higher than other fast reactors) thus allowing for more efficient electricity generation and the supply of process heat for other applications such as hydrogen gas production.

The GoFastR project has focused on the development of the designs for GFR and the ALLEGRO demonstrator reactor with contributions from 22 institutions across 9 European countries. NNL has contributed a strategic assessment of the potential impact of GFR in the fuel cycle, a fuel performance assessment of the MOX fuel proposed for the first lower temperature core of ALLEGRO and a review of advanced cladding materials for the subsequent higher temperature ALLEGRO cores.

The benefits for the NNL and the UK are:

Increasing the UK's international reputation – the UK contribution to the development of the design has been significant. The project has also provided a platform to showcase the UK's world-leading capability in fuel cycle modelling through NNL's ORION code.

Providing the technical underpinning to direct future UK national energy policy decisions with regards to possible future nuclear fuel technologies.

Developing the UK's knowledge of high temperature fuel cladding material through an extensive (3000 document) literature survey.

CARBOWASTE

CARBOWASTE was a European collaborative research project into the 'Treatment and Disposal of Irradiated Graphite and other Carbonaceous Waste'. It commenced in 2008 and completed in March 2013. The aim of the project was to develop best practices in the retrieval, treatment and disposal of irradiated graphite, addressing both existing legacy waste as well as waste from graphite-based nuclear fuel resulting from a new generation of nuclear reactors. The consortium was led by Germany and involved 28 partners from Europe and South Africa.

The benefits for the NNL and the UK are:

Access to a wide knowledge base of the behaviour of irradiated graphite, which is essential for us to be able to manage and dispose of graphite safely in the UK.

Increasing our international reputation by successfully leading the Integrated Waste Management Work Package.

Space Batteries

In 2011, NNL was awarded a contract from the European Space Agency (ESA) to carry out research into the potential use of americium extracted from UK civil plutonium to power future spacecraft. This built on an initial scoping study carried out under contract with ESA in 2010, involving a number of UK companies and universities. The project focused on the

feasibility and plant requirements to carry out the extraction of americium, and used material from the UK civil plutonium stocks for testing in the NNL Central Laboratory located on the Sellafield site.

Whilst the research was focused on the needs of the ESA, the research carried out is very relevant to future work expected to be required to manage UK civil plutonium stocks. The project has therefore had benefit to the UK in supporting this future work and the decisions that will need to be taken. It has also developed skills in the specialist area of radiochemistry, and supported the ongoing development of capability at the NNL. The project has also linked with UK universities and furthered research links between industry and academia. Through involvement in this project, NNL has expanded its links into other technology sectors. This has enabled previously unseen technology transfer opportunities to be identified and exploited, providing benefit in reduction of cost or improvement of efficiencies to existing NNL customers in the UK.

(Note: this project was not funded through the EU FP7 framework, but directly from ESA).

1. To what extent does EU action in the energy field benefit and/or disadvantage the UK/your sector/stakeholders? Is there a sector where this is most marked?

Intelligent Energy Europe funds partnership projects involving at least three different countries. I was invited to be involved with the European Promotion of PassivHaus project - to our discredit we had little knowledge prior to being involved yet the science and solutions and immediately beneficial to the energy efficient improvement of the UK's building stock. This project has heavily influenced all those involved in the building industry and has helped define future UK building regulations.

This cross exchange of knowledge should not be undermined - the Germans and Austrians in particular have a lot of knowledge, experience and also products which are in advance of our own (a great quantity of products are actually just re-brands of EU produced equipment).

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

On the whole I believe that the EU legislation relating to energy efficiency has been suitable and proportionate. We should still retain powers on how to ratify these requirements into our own law.

The only thing I do have contention with is the need for energy audits to be undertaken as a part of Article 8 of EPBD (at consultation under the Energy Savings Opportunity Scheme) - reason being that most of the audits will not likely generate improvements (professional/personal opinion).

3. In what areas might the UK's interests be served better if action were to be taken at EU level instead of national, regional or international level?

Shared EU targets, rather than national targets, could help. Also EU emissions trading scheme.

Knowledge sharing and joint-industry efforts to deliver the products and services we need cross-boarders.

4. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

I believe we need to continue to work and cooperate at all levels.

5. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

I believe the EU should progress all means necessary to stop the development of Shale Gas in member states.

We should not exploit Shale Gas.

<http://www.theguardian.com/environment/2013/sep/23/fossil-fuel-reserves-left-in-ground>

6. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?
I would say that EU legislation has been a major driver - I consider the UKs involvement to be robust in seeking to transpose the requirements nationally. The balance is about right.
7. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves.
We should remove politics and follow the science - if the scientific basis is followed then the presently mandated EU targets are appropriate.

University of Manchester

1. In what areas might the UK's interests be served better if action were to be taken at national, regional or international level instead of EU level?

In the nuclear sector, the UK has not taken national steps to secure the domestic supply of the crucial medical radioisotope Technetium-99m, which is used in 85% of nuclear medicine procedures and is second only to MRI as an imaging method. The UK presently relies on overseas research reactors to provision this isotope, and due to its short lifetime it cannot be stockpiled - it must be manufactured weekly to be used. These overseas reactors are under threat due to their age, and the UK has little effective control over them.

The UK, as part of its broader policy on nuclear research to support energy production, must consider the impact of not having suitable domestic nuclear research facilities on other national infrastructure such as medical isotope provision. There used to be dozens of research reactors in the UK, but now the last civilian one is about to close.

The lack of domestic production of Technetium-99m is a direct and immediate threat to the ability to conduct medical diagnostics on UK hospital patients, and a better connection between nuclear energy research and useful by-products - such as Technetium - should be made.

TRADE UNIONS

Prospect

Executive summary

Many of the key energy issues affecting society can only be resolved at a global or regional level. Individual member states, working in isolation, can only have a limited impact on issues such as climate change or the internal market.

Therefore there is a key role for the EU to set policy as a forum for member states and EY energy stakeholders, including unions, to find practical solutions for complex energy problems. The focus on the EU as a body separate from the member states is unhelpful as decisions made by the Council of Ministers rely on significant political and popular support across the EU. We believe that the EU has had a positive impact on issues such as health and safety and stakeholder engagement.

We believe that EU action in the following areas would benefit the UK:

- Encouraging co-operation across energy networks;
- Leading member states to co-ordinate policy and establish a stable framework for long-term investment;
- Promoting higher standards of training;
- Supporting academic research into energy issues;
- Support research, development and demonstration projects for new energy technology; and
- Co-ordinating environmental standards across the EU

We recognise that the EU is designed to work on the basis of consensus amongst member states and we believe that this is best done by a combination of:

- Goal-setting regulation;
- Support for research and training; and
- Encouraging greater co-ordination of stakeholders

Given the energy problems facing the UK and the need to use our domestic energy services in a manner that minimises harmful environmental impacts, we believe that the EU can enable UK policy to be more effective. In a global market and with high levels of European integration, we will only deliver the best solution for the UK by co-operation with other member states.

Prospect and the Energy sector

Prospect is a democratic and politically neutral trade union, not affiliated to any political party, representing 115,000 scientific, technical, managerial and specialist staff in a range of diverse sectors – including energy.

In the energy sector, we represent approximately 20,000 professionals and managers across a range of activities including staff in operational and engineering business; energy trading and supply; specialist corporate functions and safety. We are recognised by employers as key partners in the sector: we are proactive participants in industry-wide initiatives on training and safety.

We participate in:

- Energy and Utility sector skills council
- The National Skills Academy for Power
- Cogent Sector Skills Council The electricity industry's National Health, Safety and Environment Committee (HESAC¹⁶⁹).
- The Powering Improvement safety initiative¹⁷⁰

We are the recognised trade union for professionals throughout the whole nuclear cycle¹⁷¹ including design, construction and commissions to generation and decommissioning – as well as regulators in the Nuclear Decommissioning Authority and safety inspectors in the Office for Nuclear Regulation. We are represented on the government's Nuclear Development Forum and the board of the National Skills Academy for Nuclear.

More than 50,000 Prospect members work for employers that carry out science, engineering or technology functions ranging from those who work on tackling the environmental challenges that affect our country and planet to developing the best energy mix for the UK over the coming decades.

Prospect policy context

Our policy is framed within the context of a UK energy market that is mainly dominated by multi-national companies with generation ownership based in other EU states and networks ownership on a global scale.

Prospect recognises that the UK electricity sector has experienced continuing organisational upheaval since privatisation, including changes of ownership, staff reduction, pressures on investment needed to modernise the ageing infrastructure. At the same time, the urgency of the climate change challenges necessitates attention to both environment impacts and ensuring energy supply security. Prospect is also aware the sector is in a period of substantial technological change, in part driven by changing political priorities, which affects how energy will be produced, transmitted, distributed and traded.

Prospect therefore:

- supports a balanced energy policy,
- believes that the twin priorities of climate change and security of supply are inextricably interlinked,
- recognises the move to a low-carbon economy has massive potential implications for jobs and huge economic consequences,
- supports new nuclear build as a vital part of the balanced energy mix,
- supports the need for a substantial programme of investment in transmission and distribution networks to maximise the potential of renewables,
- Supports research and development of innovative forms of low-carbon electricity generation that includes carbon capture and storage and development of biomass

¹⁶⁹ HESAC <http://www.energynetworks.org/electricity/she/national-hesac.html>

¹⁷⁰ Prospect has members in each of the 19 licensed nuclear sites and associated civil nuclear liabilities in the UK – making it the largest union representing workers in the UK nuclear industry

¹⁷¹ Powering improvement - a five-year strategy drawing together the Energy Networks Association, the Association of Electricity Producers, industry unions and the Health and Safety Executive with the aim of making the UK's electricity industry a world leader in health and safety by 2015

- recognises investment in all forms of energy generation is long-term in nature, and requires a greater degree of certainty than currently exists over future energy policy
- Pushes for a higher priority on training and professional development so we can commercially use new technology
- Recognise the key economic impact of energy, with energy imports with trade in fuels showing a £19 bn trade deficit in 2012

History of contributions (evidence)

Prospect has since 1988 contributed to the energy debate – some of our formal submissions are pertinent to this call for evidence and include:

- *The energy challenge: the policy framework for new nuclear (October 2006)*: A report in response to the Department for Trade and Industry publication of The Energy Challenge, on the contextual, planning and licensing issues set out in the proposed policy framework.
- *The future of nuclear power: Submission by Prospect to the Department for Business, Enterprise and Regulatory Reform (October 2007)*¹⁷²: Prospect acknowledged that nuclear power has a role in combating climate change as part of a balanced energy policy. Our members believe that future energy solutions should be both robust and sufficiently flexible to take account of changing patterns of demand – including variations in regional and local requirements and natural resources. It will also need currently untried technologies to be proven as viable on both a technical and financially acceptable basis.
- *The future for Clean Coal (October 2008)*¹⁷³: Prospect brought together leading players in the energy industry for a seminar on clean coal at the Royal Society. The report is based on the discussion of the potential for turning carbon capture and storage into reality, and how achieving this in the UK could help combat climate change, enhance energy security and achieve social justice.
- *Consultation on proposed EU emissions trading scheme from 2013 (June 2009)*¹⁷⁴ : Submission by Prospect to the Department for Environment, Food and Rural Affairs. Prospect recognised that in order to capture environmental externalities effectively it is essential to build the costs of carbon pollution back into the system and to incentivise current investment decisions accordingly.
- *Statutory consultation on the renewables obligation order for 2009 (October 2008)*¹⁷⁵ : Prospect's submission to the Department for Business, Enterprise and Regulatory Reform in response to the Statutory Consultation on the Renewables Obligation Order for 2009. In this submission, Prospect welcomed the Government's support for renewable energy sources and for further development of carbon capture and sequestration technologies. We supported the need for a substantial programme of investment in transmission and distribution networks to maximise the potential of renewables.

¹⁷² Future of nuclear power <http://library.prospect.org.uk/id/2007/00651>

¹⁷³ Future of clean coal <http://library.prospect.org.uk/id/2009/00025>

¹⁷⁴ EU emissions trading scheme <http://library.prospect.org.uk/id/2008/00481>

¹⁷⁵ Renewables obligation order <http://library.prospect.org.uk/id/2008/00156>

This submission does not aim to answer all the questions laid out in the consultation document but aims to give evidence of our members working experience – who within the context of a complex set of EU and UK criteria – keep the lights on and keep the economy turning.

We will highlight the challenges through the lens of our core function of representing members in the workplace. Elected members of our Committee¹⁷⁶ structures have contributed to this submission through an on-line questionnaire. Contributions have been made from Prospect elected officials, representing members in both the environment/sustainability fields and energy companies including EDF Energy, Scottish and Southern Energy, E.ON Generation, Nuclear Decommissioning Authority (NDA) and Research Sites Restoration Limited (RSRL).

GENERAL QUESTIONS

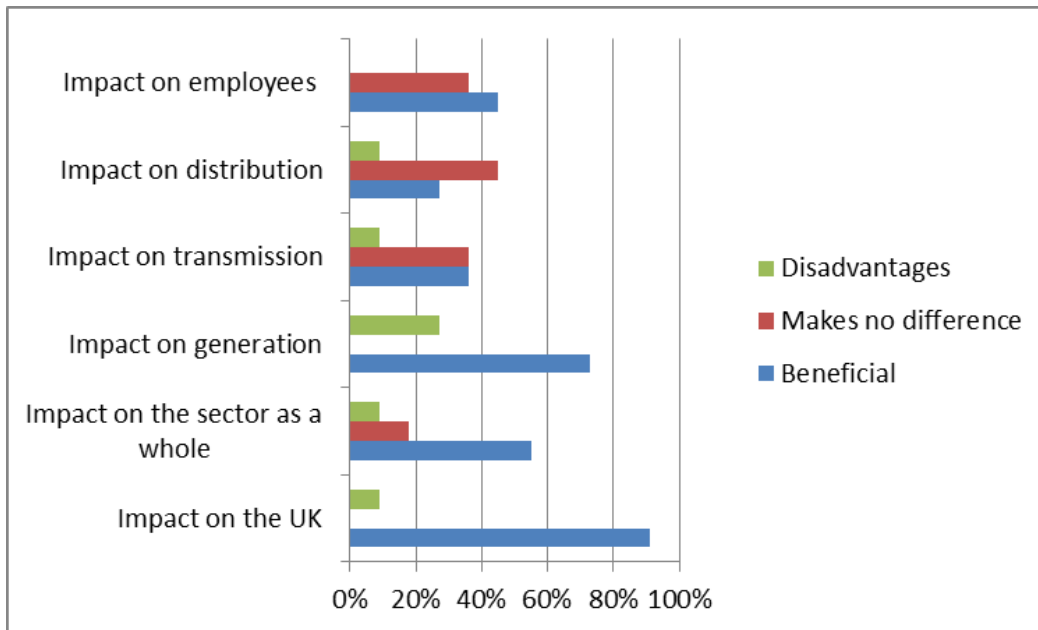
To what extent does EU action in the energy field benefit and/or disadvantage the UK electricity sector?

The impact of EU decisions does not lend itself to a simple binary answer: we believe that effective and focussed regulation does both protect individuals and encourage competition by providing clear market signals.

Whilst the principle of subsidiarity does imply that energy decisions are made at the most local level that is effective, the global nature of the energy market and the existence of an Internal Market for Energy point to the need for action at a Europe-wide and global level. EU co-operation is required to ensure that global initiatives are effective rather than simply displacing carbon emission to less effectively regulated states.

91% of respondents to our questionnaire indicated that the overall impact on the UK by EU action in the energy field is beneficial. With 73% indicating that EU action has been of benefit to the electricity generation sector whilst 27% believe it has been disadvantageous.

¹⁷⁶ Committees include Science, Engineering and Sustainability Advisory Committee, Electricity Supply Industry Sector Executive and Nuclear Development Group



The impact on the sector as a whole is seen as positive with 45% indicating that the impact on employees' terms and conditions has benefitted by EU action.

However respondents indicated that EU action has made no difference to transmission (36%) nor distribution (45%).

Responses to benefits and disadvantages of specific elements are detailed in the table below:

	Benefitted	Disadvantaged	No opinion
Security of supply	36%	27%	36%
Infrastructure development	36%	27%	36%
Development of nuclear power	18%	36%	46%
The internal energy market	18%	46%	36%
Regulation of the wholesale energy markets	9%	36%	55%
Interconnections for cross border flows	73%	9%	18%

In what areas might the UK's interests be served better if action were taken at EU level, instead of national, regional or international?

45% of our respondents indicated that the UK's interests would be better served if action were taken at an EU level with 18% believing that interests would be best served at national or international respectively.

Prospects submission to the EU review on environment and climate change argued that action in this arena should be at the regional EU level.

Prospect has consistently argued that action on climate change should be conducted at EU level, given the transnational nature of many other energy issues there is a need for European co-operation on energy. In the absence of a EU input into energy policy then energy policy would be made on the basis of action designed to regulate competition and the environment

THEMATIC AREA QUESTIONS

What have the benefits or disadvantages for the UK/sector of the development of the internal market?

Whilst greater economic and technical integration of European energy markets points to greater European integration of energy policy, we still believe that more information and analysis is required to determine the limits of EU and nation competence in the energy sector. There is clearly significant financial and social advantages from integrated electricity networks operating within a consistent market as this can increase security of supply and enable greater economic efficiency.

The relationship between national policy and EU objectives on the internal energy market can be confusing especially when different states adopt very different approaches to the twin issues of security of supply and controlling greenhouse emissions. These decisions require a high level of public support as they have substantial economic impact pointing to shared responsibility between nation states and the EU. The development of the internal market needs to recognise the powers held by nation states and develop greater consensus on energy policy if the full benefits of an internal market are to be realised.

Inter connectors

An interconnected European transmission grid raises immense technical challenges) but many opportunities and advantages for a balanced European generation portfolio, and making best use of all types of fuel including renewables. Promoting a higher level of interconnection for its own sake through state aid seems pointless but EU energy policy coordination should provide clear sets of standards to be followed to enable economically viable interconnections to take place.

The nature of the technical challenges such as controlling power flows and maintaining consistent voltage controls vary according to the types of generation connected to the network. In these circumstances central control of technical standards runs the risk of excluding forms of generation that meet the objectives of EU and national policy: therefore we believe that enabling network operators to establish their own technical network standards is more effective.

We believe that a strongly integrated EU market benefits employees for the following reasons:

Health & Safety

Safety is a core consideration for the electricity sector - both the safety of the public and the safety of the workforce that operates the electricity system. Electricity companies have implemented rigorous health and safety measures to reduce potential harm to workers.

Formal exchange of information and best practice is underpinned by EU legislation that allows trans-national companies, regulators and worker organisations to benefit from each other's experiences and to identify and address potential risks to employers and contractors, as well as to society. These regulations include:

Council Directive 89/391/EEC¹⁷⁷ of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work. This is significant to the UK industry due to the transnational and international ownership of the UK sector. For example:

- EDF: 9 European countries, Asia-Pacific (including China) and North America
- GdF-Suez (International Power): Europe, Asia-Pacific, Latin America and North America
- Iberdrola (ScottishPower): EEA-EFTA and EU candidate countries (17 countries), Africa, Asia-Pacific, Latin America and North America
- Cheung King Group (UK Power Networks): Europe, Asia-Pacific and North America
- RWE (RWE Power, RWE Energy and Thames Water): Operations in EEA-EFTA and EU candidate countries (15 countries)

A National Audit Office 2012 report on The nuclear energy landscape in Great Britain, states; "As a Member State of the European Union, the UK is bound by legislation relating to radioactive substances made under the Euratom Treaty, which provides for the establishment of uniform basic safety standards to protect the health of workers and the general public against the dangers arising from ionising radiation. The 2009 European Union Nuclear Safety Directive, established under this Treaty, created a high level nuclear safety framework as part of EU law that is enforceable before the European Court of Justice. It represented the first step towards the harmonisation of nuclear safety approaches across the EU. The Radioactive Waste and Spent Fuel Management Directive, which was adopted in July 2011, require member states to submit national programmes for waste management to the Commission by 2015 for approval."

A consistent regulatory approach to health and safety at European level gives operational structure to trans-national companies and a regulatory framework for governments.

¹⁷⁷ Council Directive 89/391/EEC (Health & Safety) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31989L0391:EN:NOT>

Stakeholder enabling environment for the region

As the trans-national and international nature of ownership reflected under health and safety two directives create the enabling environment for stakeholder engagement within the EU.

Information and Consultation Directive¹⁷⁸: Social dialogue helps to improve risk anticipation and make work organisation more flexible. The EU Directive establishing a general framework for informing and consulting employees (2002/14/EC) plays a key role in promoting social dialogue.

It sets minimum principles, definitions and arrangements for information and consultation of employees at the enterprise level within each country. Given the range of industrial relations practices across the Member States, they enjoy substantial flexibility in applying the Directive's key concepts (employees' representatives, employer, employees etc.) and implementing the arrangements for information and consultation.

European Works Council Directive: 2009/38/EC¹⁷⁹ of the European Parliament and of the Council of 6 May 2009 on the establishment of a European Works Council or a procedure in Community-scale undertakings and Community-scale groups of undertakings for the purposes of informing and consulting employees (Recast). This Directive aims at guaranteeing employees' transnational information and consultation rights. It provides for the establishment of a European Works Council or a procedure for informing and consulting employees.

The EU Competence in these areas ensures that at a regional level there is a consistent approach and targets that all in Europe aspire to. This, in tandem with a regulatory framework, provides an enabling environment that has seen a growth of trans-national multi stakeholder activity.

As a part of the Treaty establishing the European Community (TEC), the European social dialogue is a fundamental element in the European social model. It encompasses the discussions, negotiations and joint actions undertaken by the European social partners. European social dialogue, which is the name given to the bipartite work of the social partners, whether or not it stems from the official consultations of the Commission based on Articles 154 and 155 of the Treaty on the functioning of the European Union (TFEU).

An example in the energy sector of the social dialogue model - worker representation bodies (ie trade unions) working in partnership with regulators, industry leaders is EURELECTRIC¹⁸⁰ - the sector association which represents the common interests of the electricity industry at pan-European level, plus its affiliates and associates on several other continents.

¹⁷⁸ Information and Consultation Directive: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0014:EN:NOT>

¹⁷⁹ European Works Councils Directive <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0038:EN:NOT>

¹⁸⁰ <http://www.eurelectric.org/>

In 2000, the social dialogue in the electricity sector received formal recognition with the establishment of the European Social Dialogue Committee. This committee consult on EU policies with social implications and the work covers a broad range of issues such as health and safety, vocational education and training, restructuring, demographic change, diversity and equal opportunities, adaptation to new technologies and corporate social responsibility.

A joint Framework of Actions of European Social Partners in the electricity sector is an example of the how the EU social partners are tackling future challenges in a coherent and strategic way that embeds the role of the workforce as stakeholders in the decision making process.

We would argue that formal partnerships such as EURELECTRIC are an essential means by which employers and employees contribute to the governance of the European Union and the definition of European social standards.

Responding to political shocks and change

The major benefit of decision making at EU level is that it promotes a stronger voice on a global problems at a regional level and an opportunity to build political dialogue. In parallel to this the EU Competence on environment and climate change is a foundation that withstands national political changes and ideological trends within the UK. This is particularly important when attempting to seek global action on issues such as climate change and security of supply.

To what extent has EU measures had on the development and exploitation of the UK's indigenous energy sources?

As previously stated, Prospect supports a balanced energy policy. There is no silver bullet and all energy sources have challenges associated with them.

Thus we view Fracking as a new technology rather than a solution to controlling carbon emissions. With all energy sources, we would apply the precautionary principle and believe that the development of this technology should be regulated like other energy supplies so its extraction is safe and minimises environmental disruption. Our feedback indicated high levels (82%) of uncertainty over the EU role in regulating of indigenous energy sources.

There is some concern that the fragmented nature of EU energy policy excludes the development of some energy sources and is a barrier to research to reduce the climate impact of UK fossil fuel resources such as coal and gas. European co-operation needs to set standards in an interconnected energy market that reduces the pressures on individual member states to place a low priority on environmental impacts in the interest of competitiveness. We believe that supporting higher standards by research and development is the key to higher economic competitiveness.

How have measures and policies at an EU level helped or hindered the deployment of sustainability measures – is more or less needed?

It is evident from our survey response that 73% of respondents believe that EU action and policies have helped the development of renewable and low carbon energy sectors with 46% indicating the EU has been beneficial to the UK on measures to regulate the carbon capture and storage industry.

The table indicates our views on whether the EU should be doing more or less.

The energy market is increasingly globalised in relation to fossil fuels, with growing demand and prices affecting all countries and the need to transition to a low carbon economy is/should be a common objective for all countries such that greater European level support and co-ordination would help in addressing these challenges. A greater emphasis at a European level programme to implement CCS and other technologies is an obvious focus for further European involvement.

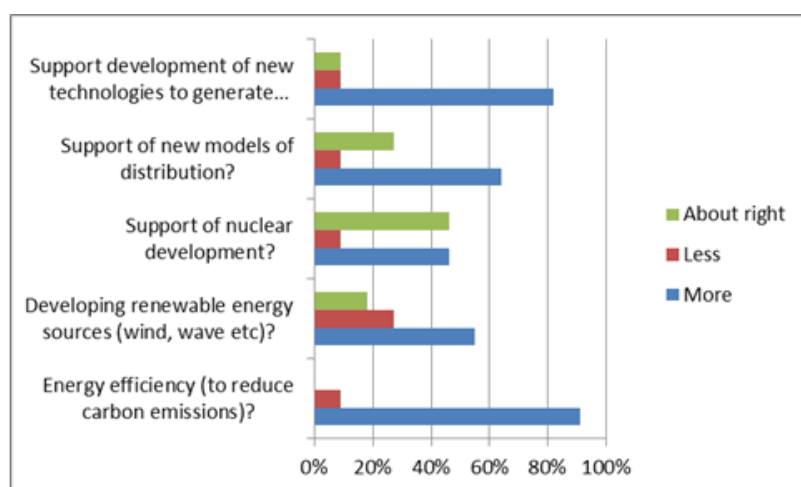
FUTURE CHALLENGES AND OPPORTUNITIES

Skills for long term sustainability

The UK Commission on Employment and Skills (UKCES¹⁸¹) report on the sector has identified the key challenges facing the sector over the coming decade are; the need to increase productivity; meeting increases in demand for energy; and further reducing the environmental impact of energy production.

The report furthermore states that, “The above demands facing the sector mean that employment across the sector is expected to expand by at least four per cent between 2010 and 2020, with the strongest growth in occupations requiring higher level qualifications. In addition, there is likely to be a significant demand for new recruits to replace an ageing workforce, creating a strong demand for technical and engineering skills in the electricity, gas and water industries.

Their research indicates that UK relies heavily on international migration to supply skills relevant to the sector. The Migration Advisory Committee’s shortage list identifies a number of shortage occupations, including engineering professional occupations, engineering



¹⁸¹ UKCES <http://www.ukces.org.uk/publications/er51-sector-skills-insights-energy>

technicians, and skilled trades such as welders and line repairers.

It is anticipated that meeting the target of reducing greenhouse gas emissions (80% CO₂ reduction by 2050) (1990 base) will require investment of between £200 billion and €1 trillion. It will also result in a strong demand for essential sector-related technical and management skills across the EU (European Commission, 2010; Ofgem, 2009).

Cogent (Skills for science based industries) together with Prospect and industry leaders have also identified skills shortages as a major challenge for the industry. A range of interventions have been made including the development of a nuclear skills passport¹⁸² which supports evidence of agreed industry standards training and career development. In view of the advent of new nuclear build in the UK we believe that there is much more to be done at a trans-national level to secure the skills and knowledge needed to sustain this industry.

As the nuclear industry is a global industry with global operating standards there is an opportunity to enlarge the coverage of the UK nuclear skills passport not only to the EU but globally.

Research undertaken for Prospect by the independent pay analysts at Incomes Data Services confirms that pay for many highly skilled workers is determined by the UK labour market or, in some cases, internationally. Energy companies operate in a world market, with many workers travelling to secure high reward contracts. Conversely, Prospect has evidence of an inability to recruit skilled engineers in areas where pay is being held down.

The entire UK energy sector is facing a huge challenge with the availability of skilled resources. Some £200bn is required in new energy infrastructure over the coming decade, requiring a doubling of the annual rate of energy investment. The largest network upgrade in over half a century will be facilitated by the considerable uplift in the OFGEM allowance for infrastructure rebuild during DPCR5. But delivery depends also on companies' ability to source a sufficient and appropriately skilled workforce. The Energy and Utility Sector Skills Council has identified evidence of skills shortages and gaps and increasing demand for skilled engineers across the UK, and the National Skills Academy for Power has highlighted the urgency of this challenge, noting that 4 out of 5 employees in the sector is set to retire in the next 15 years. This position is compounded by difficulties in attracting graduate engineers, amidst cross-sector competition for their skills, including an estimated £100 billion investment in the off-shore renewable industry by 2020.

The EU have a valuable role in helping set training standards and in promoting more investment in the core engineering and scientific skills by universities that then is applied in the energy sector.

¹⁸² Nuclear skills passport <http://www.nuclearskillspassport.co.uk/>

Loss of skills in nuclear decommissioning

As part of a balanced energy policy, linked to low carbon energy generation, Prospect has continued to highlight the important contribution that new nuclear needs to make in order to sustain base load generation. Prospect has been supportive of seeking to build a political consensus in the UK which recognises the fundamental contribution that nuclear new build can make in achieving the policy objectives of energy security, capacity and low carbon generation.

All the major political parties in the UK now see nuclear new build as a key part of the energy mix needed going forward. Whilst this is welcome, the real challenge is making this policy consensus a practical reality. The up-front investment demands in relation to nuclear new build are very significant. The investment cost of Hinkley Point C, which will provide 7% of UK electricity when it comes on line is £16 billion. Providing investors with a legislative framework where they have the confidence to make such long term investment decisions is thus very important. Prospect has been supportive of the development of the “strike price” mechanisms across nuclear and a range of low carbon generation technologies to support investment in low carbon generation and provide investors with the confidence that their long term investment decisions will not be blown of course or undermined by short term political decision making.

Whilst Prospect is confident that the European state aid investigation in relation to the strike price agreement will conclude positively, this provides both another hurdle and delay in relation to investment and construction.

As nuclear new build gathers momentum, ensuring the nuclear industry has the skilled workforce necessary to meet the demands of nuclear new build, decommissioning and the development of long term storage facilities will pose significant challenges for the industry. This is at a time where the international competition for such skills is growing and the existing demographic within the industry reflects the hiatus in nuclear construction. Valuable work is undertaken by the National Skills Academy for Nuclear which encourages and promotes collaborative working across the nuclear industry, setting common standards and skill pathways.

Climate change response

Evidence to the review on environment and climate change¹⁸³ recognises that we have faced with a global problem that needs to be addressed at global, regional and national levels. Energy policy is clear element of this global and regional approach

There is a plethora of published research that clearly demonstrates that climate change and environmental degradation is a global problem; its impact varies between regions and countries and is a long-term issue. Solving this requires a mechanism that produces a

¹⁸³ Submission to the review of EU competences for environment & climate change
<http://library.prospect.org.uk/id/2013/01213>

cohesive and aligned framework that is robust enough to accommodate the concerns of national and local politics.

We need policies and regulations that aim to maximise the likelihood that future changes are beneficial and minimise the harmful impacts. We believe that the EU has a valuable role in encouraging research and development into more effective energy technologies and in ensuring that we have the skills required to utilise them.

Prospect has a clear policy about the urgent need to mitigate and adapt as a result of human-induced climate change. An example of this is the need to set minimum standards in energy efficiency in an integrated free market; thus Europe needs to set clear domestic energy efficiency standards, such as minimum thermal insulation levels for new homes, the integration of PV generated electricity with local distribution networks and the appropriate level of support for technologies such as heat pumps.

In conclusion

We believe that it is important that any regulatory framework is flexible enough to encourage investment in new plant, new techniques, new skills - investment in staff and skills will be crucial to delivering progress and long term sustainability of the sector.

Prospect's view is that security of supply and reduction of carbon dioxide (CO₂) emissions are key and linked priorities for future energy policy whether in the UK or the EU.

Mike Clancy, Prospect General Secretary, in evidence to the Energy and Climate Change Select Committee in the pre-legislative scrutiny of the draft Energy Bill in 2012 stated, "Arguments for much more radical reform that could simplify arrangements have some merit, and could include a more direct role for the state in investment decisions. However, parliamentarians have been debating energy policy for over a decade and the imperative now is for early action." Clancy said the key requirement at this stage is for a framework that provides certainty and stability and therefore delivers investment.¹⁸⁴

184

<http://library.prospect.org.uk/id/2012/01186>

TUC

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

The EU's influence on energy policy has brought strong and enduring positive benefits to the UK by creating a level playing field and setting common goals across the EU through the EU ETS and the EU's 20-20-20 strategy, with legally binding cuts on our greenhouse gas emissions.

In turn, a sustainable energy policy has underpinned the growth of the green economy, as BIS evidence shows, is one of the fastest growing economic sectors in the UK. Economic and environmental benefits to the UK have been spurred by the important part the environment plays in EU Treaties. Article 3(1) of the Treaty on European Union makes protecting and improving the environment a key objective of the internal market:

- “The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment”.

The UK's Climate Change Act 2008 was passed with cross-party support and high levels of public engagement. But the UK was obliged to take appropriate national action to tackle climate change in response to the package of EU climate and energy legislation adopted in June 2009¹⁸⁵.

This legislative framework has underpinned the UK's energy and climate change strategy, whilst the CCC has published, and government has adopted, a series of five-year carbon budgets prioritising those areas where the UK needs to take action to reduce carbon emissions, by decarbonising energy supply, cutting transport emissions, and in domestic and industrial energy efficiency.

UK businesses have benefitted from new opportunities in the global low carbon goods and services sector. Supported by ambitious climate legislation, the green economy as a whole generated a £5 billion trade surplus in 2011-2012. BIS evidence¹⁸⁶ shows that the green economy is a UK success story:

- 51,700 companies in the UK's low carbon goods and services sector (LCEGS);
- employing 939,627 people (up 2.8% on the previous year); and
- the sector recorded sales of £122.2bn in 2011-2012, a 4.7% growth rate.

A report from the Renewable Energy Association, *Renewable Energy: Made in Britain* (2012) revealed that there are currently 110,000 people employed across the UK renewable energy

¹⁸⁵ The UK Climate Change Act 2008 – Lessons for national climate laws, An independent review by ClientEarth, 2009.

¹⁸⁶ <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/l/12-p143-low-carbon-environmental-goods-and-services-2010-11.pdf>

sector, with the potential for a total of 400,000 if we meet our 2020 renewable energy targets.

The EU is also calling for the establishment of a 2030 carbon reduction commitment from the EU of at least 40%, and the possible extension of its legally binding targets for renewable energy for 2030, thereby bolstering the efforts of environmental policymakers within the UK. The EU therefore provides valuable external pressure and support for progressive environmental policy in the face of calls to weaken our commitments to tackle the global challenge of climate change.

ii. disadvantaged the UK / your sector?

On balance, because of the level playing field it provides, EU energy legislation itself has not unduly disadvantaged the UK within the EU. However, as we pointed out in our response to the *Environment and Climate Change consultation*, TUC and trade unions in the energy intensive industries (EIs) are concerned about the threat of carbon leakage and the loss of jobs, investment and carbon controls to non-EU competitors with few or no environmental measures. But, in response to representations from the TUC and industry bodies, including the Energy Intensives Users Group (EIUG), the government is developing a package of response measures that provide the basis of an industrial strategy that capable of addressing these concerns.

2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

Yes, it has been proportionate. The need to take concerted global action to address the challenge of climate change underpins the EU's energy strategy. The EU's energy policy is consistent with its obligations under the first and second Kyoto Protocols.

3. In what areas might the UK's interests be served better if action were to be taken at:

a. EU level instead of national, regional or international level?

Action taken at EU level ensures that UK energy policy works within a common framework across the EU. A new study funded by Tata Steel, *Understanding the economic contribution of the Foundation Industries*, notes that:

The EU has also developed a proactive approach to industrial policy involving four main elements:

Establishing the right framework conditions to stimulate new investments, accelerate the adoption

- *of new technologies and boost resource efficiency; Improving the functioning of the Internal Market and opening up international markets to speed*
- *up recovery;*
- *Unlocking the private funds needed to finance investment by EU companies; and*
- *Accompanying measures to increase investment in human capital and skills to equip the labour force for industrial transformations.*

The policy has some important similarities with that of the UK Government in that it recognises the importance of manufacturing industry to the wider economy and targets broadly similar sectors.

b. national, regional or international level instead of EU level?

The dangers of going it alone are shown with the example of the UK setting its own carbon tax, the Carbon Price Floor, which adds costs burdens on to industry on top of the EU ETS carbon market price, as the EEF has argued¹⁸⁷.

This policy came into force in April and has created a unilateral carbon price in Britain above and beyond the cost of the EU's Emissions Trading Scheme. This is around £16 per tonne this year but is expected to rise to £30 in 2020 and £70 in 2030. Since the rest of Europe has a lower cost of carbon, businesses are concerned about the loss of competitiveness caused by this policy. Consumers are also worried that the costs will be passed on.

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

The provision of secure, affordable, low carbon energy should be a national priority. As Prospect noted in its response to the energy consultation, "this issue should be kept at the level where the legislature is accountable to the public."

Despite the challenges of developing an interconnected European transmission grid, including power flow control, interconnectivity presents huge opportunities for a diverse European generation portfolio, especially ensuring that the EU is and making best use of renewables of all types.

¹⁸⁷ <http://www.businessgreen.com/bg/opinion/2303740/why-the-carbon-price-support-tax-should-be-scrapped>

The EU social partnership model is critical to the overall success of the electricity industry. An example of worker representation bodies (ie trade unions) working in partnership with regulators, industry leaders is EURELECTRIC - the sector association which represents the common interests of the electricity industry at pan-European level, plus its affiliates and associates on several other continents.

The health and safety at work of employees in the energy sector is supported through EU initiatives. Legislation relating to radioactive substances made under the Euratom Treaty, sets basic safety standards to protect the health of workers and the general public against the dangers arising from ionising radiation. The 2009 European Union Nuclear Safety Directive created a high level nuclear safety framework as part of EU law that is enforceable before the European Court of Justice. It represented the first step towards the harmonisation of nuclear safety approaches across the EU. The Radioactive Waste and Spent Fuel Management Directive (2011) requires member states to submit national programmes for waste management to the Commission by 2015 for approval.

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

As an example, CCS represents a key infrastructure development for the EU, the deployment of which requires EU leadership and coordination. The Carbon Capture and Storage (CCS) Directive establishes a legal framework for the environmentally safe geological storage of carbon dioxide (CO₂).

Without CCS, there are enormous risks that we will not achieve our climate targets and that we will not be able to decarbonise cost effectively. IEA data show that delaying deployment by just 10 years would increase the cost of decarbonising the power sector massively. The low ETS CO₂ price is inhibiting CCS development, but there are opportunities to reset policy and build on recommendations that have been made in the European Environment Committee draft report on *Developing and applying carbon capture and storage technology in Europe*.

The EU's 2030 framework must include provisions for CCS. CCS is the only option for energy intensive industries such as steel, cement and chemicals if they are to have a future in Europe.

Currently there are few Member States who are pursuing active programmes for CCS development. European cooperation will be necessary to take full advantage of opportunities for the commercialisation of important new technologies such as CCS that are required for climate mitigation. Much can be achieved through shared infrastructure, R&D and knowledge sharing and European funding programmes to support commercial scale CCS projects. The societal case for CCS is critical with the jobs and skills, benefits it will bring, especially through CCS clusters.

7. What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources?

The UK's renewable energy industry has benefitted from the firm sense of direction provided by EU policy in this area. That the EU is making progress towards meeting the 2020 target of 20% renewable energy in gross final energy consumption is due largely to the stimulating effect on investment of its target-led approach.

In its response to the EU's 2030 consultation¹⁸⁸, the TUC¹⁸⁹ welcomes the decision of the UK government to support a renewed 2030 greenhouse gas target for the EU. But we are disappointed that the government opposes an extension of the EU's renewable energy target beyond 2020. The Government argues that its "approach is technology neutral, and our reforms will rely on the market and competition to determine the low carbon electricity mix. We will therefore oppose a Renewable Energy target at an EU level as inflexible and unnecessary."

Despite the government's claim to technology neutrality, for which read an aversion to "picking winners", public policy is obviously guiding investment decisions in new technology and manufacture - or holding them back. A week before Budget 2013, six global power manufacturers wrote to the UK Chancellor to set a 2030 CO2 reduction target in its Energy Bill.

In 2010, the renewables share in the EU was 12.7% compared to 8.5% in 2005. In the period 1995-2000 when there was no regulatory framework, the share of renewable energy grew by 1.9% a year. But with the introduction of indicative targets (2001-2010) the share of renewable energy grew by 4.5% per annum.

With legally binding national targets growth has increased but needs to average 6.3% per year to meet the overall 2020 target.

Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

Yes. TUC policy support applying the precautionary principle to shale gas fracking.

There must be an appropriate relationship between science and regulation in developing any new energy source. Unfortunately, the UK government appears to be opposed to EU legislation to regulate the fracking industry, saying it would "create uncertainty and stifle investment." This approach is excessively "politicised", and would not appear to strike the right balance between environmental, climate change and economic considerations.

¹⁸⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0169:FIN:EN:PDF>

¹⁸⁹ EU consultation on energy and industry policy to 2030: TUC response, June 2013.

The mandatory EU Directive on strategic environmental assessments (SEAs) helped ensure we are better informed on the science and impacts of shale gas fracking. The DECC study (December 2013) looks at the scale of shale reserves and impacts on public health, water supply and management, climate change and job creation. The report provides the kind high level transparency that has been absent from the debate on shale gas fracking in the UK. If anything, it adds to the case for a clear and wide ranging regulatory framework.

However, apparently, the EU will issue a set of non-binding "recommendations" covering protection against water contamination and potential earthquakes in January 2014. Every EU nation will be asked to produce a public "scorecard" within six months stating which recommendations have been implemented: if the commission is unhappy with the results it will push again for new legal rules within 18 months.

8. How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy?

The UK's renewable energy industry has benefitted from the firm sense of direction provided by EU policy in this area, notably the 2020 target for RE.

As the DECC consultation paper confirms, improving energy efficiency contributes to all three pillars of EU energy policy: sustainability, competitiveness and security of supply and helps to keep consumer costs down.

It has the potential to boost employment and economic growth both in the short and long-term. It can lower domestic energy bills through energy savings, which in turn helps address fuel poverty and leads to higher disposable incomes that can be spent elsewhere in the economy. What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

The European Union's Energy Efficiency Directive (2012) establishes a common framework of measures for the promotion of energy efficiency in order to ensure the achievement of the EU's headline target to increase energy efficiency by 20% by 2020 and to pave the way for further energy efficiency improvements. It lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy. It also established indicative national energy efficiency targets for 2020.

As a result, all EU member states are undertaking programmes to increase energy efficiency in both the residential and commercial sectors. The UK is in the bottom half of the league table for energy efficiency gains in industry from 2000 to 2011. While the EU average was 14.2% over the period, UK energy efficiency increased by 12.0%. A number of countries in Eastern Europe, Norway and the Netherlands all performed better. Meanwhile, the UK has the best record for the energy intensity of services.¹⁹⁰

¹⁹⁰ <http://www.odyssee-indicators.org/online-indicators/>

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater external competence in the field of energy, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

The current advantages of the EU's coherent approach of negotiating en bloc through the EU should be retained. The UK has played a leading and progressive part in this process.

Throughout the UNFCCC process, including the negotiations to extend the Kyoto Protocol through the 2020, the EU and Member States negotiate en bloc. EU positions are arrived at by consensus among Member States and the Commission. Although the TUC may prefer different policy approaches to those adopted by the EU, in terms of its leadership function, the approach of negotiating en bloc through the EU should be retained.

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

All this implies the urgent need for EU-wide coordination of energy policy matched against global commitments to steeply reduce greenhouse gas emissions. In turn, these commitments will need to drive investment in all forms of low carbon energy, including fully abated coal and gas.

In conclusion

Security of supply, reduction of carbon dioxide (CO₂) emissions and affordable energy for industry and domestic consumers are key and linked priorities for future energy policy in the UK or the EU.

The the key requirement at this stage is for a framework that provides certainty and stability and therefore delivers investment.¹⁹¹

¹⁹¹ <http://library.prospect.org.uk/id/2012/01186>

Workshops discussion notes

14 November 2013 – London: Internal market, security of supply and EU – external energy relations.

Internal gas and electricity market; security of supply; indigenous resources and import dependency; infrastructure development; EU-external energy relations

General

- There is a great deal of legislation in place that should lead to a natural trend towards harmonisation without legislating for further measures. However difficult to determine when there is sufficient legislation - you cannot always draw a neat line.
- Better enforcement of EU legislation is needed across Europe. There is a tendency to create new legislation rather than fix the shortcomings of existing legislation.
- There is a grey area between the single market and the national competence to decide a Member State's own energy mix. It would not be sensible to have 28 countries with the same energy mix, but there is a role for the EU to facilitate trade and flow of energy. There needs to be a balance.
- Greater EU harmonisation [of standards / rule]) is often costly for companies to implement unless done in a cost effective manner. There needs to be a balance between cost and control.
- There needs to be a balance between innovation and standardisation; if too much standardisation then some (better) new technology may not be developed.
- Legislation should be proportionate to the issue. However the process of creating it can be very long and the length of time to do so is often underestimated. As a result, the timescales for implementation and making the necessary adjustments are often compressed and too short. For example plant and infrastructure takes time to plan, obtain consents, construct and commission.
- Getting agreement across all 28 member states is difficult, a big 'ask' and takes time. The EU should be more cautious in its proposals.

- The EU needs to recognise its limitations of what it should and should not be involved with.
- There is an increased tendency for EU legislation to be more, rather than less, prescriptive and to become too detailed. There needs to be some flexibility to reflect local and national issues. Flexibility in implementation is important.
- There are also issues of differential interpretation of legislation across the EU which can work against UK interests.
- The process whereby the EU produces its impact assessments is opaque. Impact assessments are often written to justify legislative proposals. Despite the large number of consultations by the Commission, few are on Impact Assessments.
- Many EU measures are un-coordinated between various Directorates in the Commission and long term implications not properly thought through – this has been a contributing factor to high prices.
- Whatever the EU does it needs to be aware of the importance of maintaining a competitive environment and to ensure it is globally competitive. We need to ensure that the rest of the world is following the EU and the EU not playing catch-up.
- Companies would probably prefer standardisation to be at a global rather than EU level because global issues require global solutions.
- The EU has become too big too quickly; consequently new members lag behind and this is leading to a two track system and two sets of standards.
- An EU wide emissions target is good if it does not hamper EU competitiveness at the same time. We need to be aware of the rest of the world. The EU cannot solve climate change by itself and its emissions compared with the rest of the world are small.
- The transition to a low carbon economy only makes sense if the global market follows.
- The EU has unrealistic climate change targets (too high) so now has no clout in global negotiations.

- There is a difficulty that now things are as they are, it is difficult to “go backwards” and undo what has already happened.

Advantages of EU activity

- There is benefit to the UK of being part of a much larger EU market given the UK is now a gas net importer.
- There are benefits of economies of scale in operating in a larger EU market, particularly in technology developments.
- The progress with technology standardisation is often overlooked. The grid works. There are technological developments around both large and small scale standards (e.g. smart meter standards). Having common standards is good for companies as it avoids them having to comply with 28 different standards. The EU is good at making a standard bench mark.
- There is significant benefit to the workforce in operating in a wide EU market. It provides a large number of platforms to encourage more harmonised standards across many sectors. This is particularly relevant in the energy sector because of the changing dynamic of the sector and since it involves such a large skill base. However the exchange of skills across the EU is an issue. At the moment there is no consistency within companies how this is managed, nor in different member states. This will become increasingly problematic in terms of the emerging future workforce unless action is taken at EU level.
- Standardisation can have some significant benefits e.g. on eco-labelling, fuel grades; this avoids companies having to comply with different requirements in different member states.
- Competitiveness and growth are key issues, but most climate change measures result in increased costs and this balance needs to be acknowledged. If the EU wants to be competitive then it needs to look at its energy costs. By showing leadership it can be possible for the EU to “keep going” while the rest of the global market catches up.

Disadvantages of EU activity

- Increased integration of the EU will mean giving up some level of national control.
- One size does not fit all – for example the UK should not suffer and be prevented from developing carbon capture and storage policies and infrastructure just because

some countries are against it; other Member States views should not be allowed to impact national choices.

- Due to qualified majority voting, the UK can lose out because it can be forced to accept legislation that is not in its best interests. Different Member States have different needs; for instance the UK has good regulation in many areas but this may not be the case in some other Member States.
- For example, the battle of turning a original proposal for a prescriptive offshore safety regulation into a directive was very costly for the UK; it created a lot of extra work for the industry and was very time consuming. Had it remained as a regulation and not been turned into a directive, it would have been to the detriment of the UK which has a world class system.
- Essential that the UK retains control over what happens in its North Sea sector which can demonstrate a number of best practice models. Not right that the EU or other Member States who have no production or expertise in the field try to impose new standards. There is a difference between the EU laying down standards and 'advising' what best practice might mean. Best practice in North Sea upstream development and production can be used as models elsewhere in the EU and / or Mediterranean area – prescription is unnecessary.
- Capacity Allocation Mechanism *is* the EU rule, in the form of one of the EU network codes for gas. The point here is the same as the 'one size does not fit all' point. EU change is generally for the greater good, but the individual implementation should take into account developed markets which already achieve the aim of the code rather than forcing states such as the UK to take a step backwards to a less optimal system.
- If there was one [energy] regulator for the whole of EU, then the UK may find itself being forced by other Member States to comply with something it does not agree with.
- It is not possible to change things "over night" and make changes quickly – if this approach is taken then it will just scare off investors.
- If things are done too quickly then there is not always enough time for new and potentially better innovations to be developed and considered. REMIT is a good example of this. REMIT was as much a 'financial' driven piece of legislation as energy driven.
- Over regulation and ill-devised regulation drive investment away.

- Harmonisation of renewables may not be possible – it needs to be done locally [national level] and reflect local needs or it can act against UK interests.

Proportionality

- The way the UK has implemented the oil stocking directive is detrimental to the UK. The lack of a centralized agency is reducing the resilience of the UK. The way a directive is implemented is therefore important and does not always benefit the country.
- Some parts of EU legislation are less strict for smaller and less complex installations e.g. small combustion plant in the Industrial Emissions Directive which is a positive.
- Energy security is a political concept and always involves a cost. That cost is best assessed nationally as the UK bears the cost - flexibility is therefore key.
- 2020 targets are expensive and we are now lagging behind. Is the EU meeting them just for the sake of meeting them? Would it have just been better to invest in CCS?
- 2020 targets have had a detrimental impact on the development of CCS.
- In general, legislation ends up in a reasonable shape after the negotiation process.

Policy and the single market

- If you have a single market and EU internal energy market, the decisions about it have to be made at the EU level.
- There is an increased drive to complete the single market and the EU seems to be widening its scope of legislation and control – an issue of “legislation creep”.
- There needs to be more integration, for example on the carbon price but there are conflicting priorities and objectives which cannot be separated out from each other e.g. energy and climate change targets, national emission targets and carbon price.
- The concept of “one size fits all” doesn’t really work. In theory it sounds good but on a practical level it is not always appropriate. Member states should be accountable to their own people and not blame other Member States if the lights go out.

Cost and fiscal issues

- Whilst the single market should generally be beneficial – facilitating the move of energy supplies around the Union and the development of renewables - complete harmonisation (logical step of the single market) is very expensive and there are practical issues.
- The costs and benefits of all measures needs to be considered and EU measures need to avoid being too prescriptive. A further example is the third package three week time limit [for switching retail suppliers] - different from the established UK standard of four weeks.
- On the other hand there is still a fair amount of cost savings that could be made through greater access to markets; one study has estimated this could be €14bn. Some of this will require the creation of physical infrastructure to make the savings possible.
- Quick wins need to be considered, but only if they are cost efficient. For instance the 3 pin plug would cost a fortune to change in the UK if there was an EU standard – such harmonisation would not be cost effective.
- There is potential for the UK to be a net winner in wholesale market prices and there are opportunities [for companies to be active] in some of the continental markets.
- However the wholesale price does not always represent the true cost. There is now a strong commitment to environment and climate change and sustainable development measures that have to be factored in.
- Where there are higher costs of, for example, greater use of wind power in a particular Member State, then these costs should be a local [national] cost and not borne by other Member States and neighbours.
- The EU internal energy market was built on the UK model and some Member States were against it; however uncertainty now because the UK seems to be changing its position and become more like other Member States.

Future Challenge and Opportunities

- The real challenge is the different way the UK market operates compared to the rest of the EU. This has led to a prolonged review by Ofgem which itself has led to uncertainty. There is 10-20 GW of interconnection which is potentially available but it is very unlikely it will happen.

- Greater interconnection is also a challenge. As we need to import more and become less of an energy island, it benefits the UK to access a bigger market. LNG is a good example of the market working. The UK left it to the market to build and it worked.
- Security of supply assumptions in the UK have been that at a time of high demand for electricity it would still be able to meet demand, including export to Ireland. However, this raises a long-term question as to whether a common set of rules could be developed at EU level to ensure that Member States could always rely on electricity supplies? The EU could address this issue and further develop rules around interconnection so that all Member States can be assured of supply at all times.
- Acceleration in the planning process for Projects of Common interest under the provisions of the TEN-E regulation is broadly in line with UK practices; that regulation may lead to more opportunities for the UK to tap into the wider energy market.
- The EU should take more of a coordination rather than prescriptive role in the future.
- Whilst there may be merit for greater harmonisation in some areas, nevertheless if the EU was a company then a “consultant” would probably be telling it to concentrate what it is good at and stop widening the scope of what it is becoming involved in.
- The impact of different issues influencing energy prices, e.g. shale gas in the USA which is driving costs down and other related energy and climate change measures all need to be factored in future proposals.
- Shale gas is an indigenous resource and for Member States to develop how they wish subject to complying with existing legislation. The EU should not put in place rules that prevent other Member States from doing something with their own resources simply because they disagree with the type of production. In the US, not every state is pro-shale, but it does not stop those that wish to develop shale continuing their fracking activities.
- Competition policy that works well should stay, along with state aid (although the rules are unclear). The EU should tighten up its rules on state aid particularly where some Member States create uneven and unpredictable distortions in prices.
- A core principle should be that the EU needs to ensure that it can compete globally and to evaluate any new proposals and measures in that light.

18 November 2013 - London: General

- Some believe that there has been gold-plating of EU legislation in the UK. But this perception may be a result of poor implementation in other Member States. The Commission needs to enforce regulations agreed.
- Need more focus on energy efficiency – there are obligations on renewables but not on energy efficiency. Need a binding energy efficiency target.
- Some believe it would be best to have a carbon-related target, not a renewables target. Other support binding targets for renewables, climate and energy efficiency, notably green NGOs.
- Working with other MSs on same decarbonisation objectives could give extra force. Some support one technology neutral target and argue it would be detrimental to have a renewables target.
- If there is uncertainty over the UK's position in the EU, is it worthwhile to carry out all the work involved in the development of network codes?
- Support should be given to renewables rather than nuclear. Nuclear has environmental costs.

Advantages

1. What are the advantages of EU competence / action in the area of energy to your sector/business?

- Third Energy Package and harmonisation of EU gas legislation has increased security and energy trading.
- EU has been good at promoting R&D. Clear advantage in working across the EU to promote new technologies. But support for R&D should not involve ongoing subsidies where technologies are already mature or commercially viable, including for nuclear and fossil energy sources, and should be based on potential for excellent research rather than other factors such as the number of EU universities involved in a project.
- EU has opened door to inward investment and helped to increase health of UK energy market.
- EU regulation is positive in that it offers a clear baseline for companies to work from, provides regulatory certainty.
- EU encourages market integration and gives consistent rules. It has enabled sustainability criteria to be developed in a consistent manner and ensures that scarce resources are used in the best way. Competence for the EU should be stronger in this area – support more harmonisation to ensure that scarce resources are used to get the best economic solution to climate change.
- Climate change is a huge concern so happy to see renewables sector take off. Need huge investment across EU and competition across the EU is needed to keep costs down.

- EU does a good job in balancing energy and environmental policy. Has introduced legislation that protects the natural environment – one of the most crucial things the EU does.
- More action at EU level on renewables would be better. Member States have been left to decide their own renewables mix, but it would be more efficient if decisions were taken at a regional level.
- It's fine for the EU to set the framework for energy policy but Member States should have flexibility over how to implement legislation. Target-setting has not worked in practice.

Disadvantages

2. How has EU competence / action in the field of energy disadvantaged your sector/business?

- There is no robust delineation of where EU competence begins and ends.
- Closing power plants simply displaces emissions to other parts of the world.
- EU environmental legislation has increased prices and in practice, by being anti-coal, limits MSs choice of energy mix. Has destroyed skilled jobs – 'green jobs' are generally low-skilled. Need an energy policy that serves consumers, supports employment and increases security of supply. EU energy policy is driven by environmental policy and has a negative impact on the UK.
- Regulatory uncertainty has driven investment to elsewhere in the EU. Poland is protective of its coal industry, France of its nuclear industry and UK should have done the same for its coal industry.
- EU ETS harmed European competitiveness – there was a lot of offshoring of emissions. Should be less regulation at European level in pursuit of climate objectives – more appropriate at supranational level.
- Not many advantages to EU membership for energy policy.
- EU legislation ignores competition at retail level. Introduction of market legislation in the UK only introduces costs as UK already had legislation in place. EU response to climate change and introduction of 20-20-20 renewables targets was economically illiterate and has created inefficiency.
- Some EU initiatives have been disastrous – e.g. on CCS. A lot of EU money is wasted if not targeted properly.

Where is the UK's interest best served

3. In what areas might the UK's interests be served better currently if action were to be taken at:
- EU level instead of national, regional or international level?
 - national, regional or international level instead of EU level?
- UK is the largest producer of oil and gas in the EU; few others besides Netherlands with similar levels of expertise. As a result, there is a widespread belief in the upstream oil/ gas industry that the EU does not have the expertise to act in this area.
 - After the 2010 deep water horizon disaster in the USA, the EU decided in a knee jerk reaction that new legislation was needed. But there is nowhere near enough expertise - in the Parliament in particular but also the Commission - to be legislating on this.
 - Legitimate concerns about shale exist but there are 14 directives that already address onshore oil and gas, there is no need for new legislation. Once again, the European Parliament is pushing action in an area where it has insufficient expertise.
 - Shale is an issue where there is inequality between MS in terms of their available resources. Decision should be taken at a MS level. The UK already has sufficiently rigorous environmental safeguards in place.
 - If Mediterranean countries want to explore their indigenous hydrocarbon resources, they should be encouraged to draw on other Member States' expertise – such as the Netherlands or the UK – and not look to the Commission for approval/ advice.
 - Response: Shale is an area where two competencies: energy and environment, overlap. It is right that the EU has competence to intervene in this area because it must be able to ensure unified, adequate environmental impact assessments take place across the EU so that no one country is able to gain a competitive advantage by having weaker environmental protection.
 - Article 194, which defines the EU competence on energy, explicitly mentions the duty to protect the environment when decisions are made on energy; hence EU action in this area is justified.
 - The consultation process in the EU is much worse than in the UK. There is a feeling that it is simply a box ticking exercise. Lobbying is so intrusive because the consultation process is so poor.
 - Both lobbying sides in a debate are often perplexed by the proposals the Commission produces. They do not seem to take stakeholders' views on board and change proposals to reflect their own views.

- Member States that do not have indigenous oil and gas resources – the majority – have an interest in keeping energy prices high in other Member States by preventing them from developing their own resources.
- There should be a light touch approach to EU energy markets. The EU should add expertise and have a coordination role for helping regional cooperation and infrastructure projects, but the idea that the UK, for example, should have a say on Nordic or Eastern European interconnection policy is absurd.
- Universal network codes being unified and coordinated centrally from Brussels is a recipe for disaster. This should be done between Member States. This allows nuances like the fact that Northern Ireland has the same codes as Ireland but different to mainland UK.
- The Commission should not take a 1960s style agenda of ambitiously trying to change society. Its role should be to facilitate and encourage, not to set bold long-term plans and targets.
- Regulatory certainty is a problem in the energy sector. The Commission should be clear about what its timetable of activity is, and then it should stick to this and not add unplanned regulation at a later date.
- We now have a review of green levies promised coming shortly on the back of EMR, at the same time as new state aid guidelines being issued – it is confusing. UK and EU policy needs to be more joined up. It is unclear how much the UK is really talking to the EU. There needs to be more transparency.
- It is disingenuous to say that the EU lacks expertise; exactly the same could be said of national governments – that is why the UK gets in seconded experts from the energy sector.

Future Challenges

- 4. Future Challenges including EU – external role (including partnerships with third countries and EU role in international fora)**
 - a. In what areas in the field of energy do you think the UK would be better served if EU action was made at a national, regional or international level as opposed to EU level?**
 - b. In what areas should the EU be taking on an increased external role in the field of energy?**
 - 5. What would be the relative costs and benefits of facing these challenges at an international, EU, or national level?**
- Externally, it's important that the EU has the role of including energy elements in international negotiations. This could help to prevent problems like carbon leakage.

- But the EU should ensure it involves social partners with relevant expertise when it does this.
- It is important to get state aid guidelines right, otherwise you could easily get cases say of France selling its subsidised energy on to other countries at a discounted rate.
- Increased expertise on energy at an EU level is unlikely to happen because that would mean increased salaries for EU officials – something that is politically impossible.
- There is less potential for the EU to speak for Europe with one voice internationally when it comes to energy than there is for say, environment. This is due to the particular interests that eastern Member States like the Baltics have with Russia, and other pre-existing bilateral ties such as France and Algeria and the UK and Australia.
- The EU is well placed to push ahead the integration of energy markets and it should do this even if this prompts political opposition.
- The energy dilemma is actually a square of issues rather than a triangle: energy security, decarbonisation, affordability and also promoting economic growth. Both national and European debates on energy have become so politicised that different groups emphasise one of those priorities far too firmly. Even within the Commission there are entrenched positions in DG Energy and DG Clima towards one of those particular four that partly reflects how heavily they have been influenced by outside interests.
- On 2030 we need a strong greenhouse gas target and no renewables target.
- Although speed of German adoption of renewables might have caused hiccups in Europe, we must simply accept those hiccups as it is difficult to see how it is justified for the Commission to interfere in determining a Member State's energy mix.

Proportionate/Disproportionate

- 6. Has EU action in the field of energy been proportionate to the issues / problems it seeks to address, also for the UK? In what specific areas has EU action in the field of energy been disproportionate to the issues/problems it seeks to address and for the UK in particular?**
- It varies – in some areas it is disproportionate and in other proportionate. On climate change the EU has taken the lead but to what extent has this push affected energy prices and competitiveness?
 - From a high level perspective the EU is proportionate with regards to how it sets targets for renewable energy and in creating the single market.

- A joined-up approach at the EU level is good. Although at times things would be more effectively delivered through a regional approach.
- The EU can be too prescriptive especially with interconnectors. If there is a need for interconnectors then they will be built without the need for EU intervention.
- The 2020 targets are too prescriptive. Renewable energy targets as well as carbon reduction targets are unnecessary. Similarly, whilst improving energy efficiency has benefits, separate targets are not needed. Under a single emissions target, there is greater flexibility and less prescription to allow local circumstances to be taken into account.
- The 2020 target has also undermined the EU ETS scheme. A strong carbon floor price is needed for the EU ETS but that undermines the renewables target. They are out of sync with each other. It's the unforeseen consequences of the interaction between different elements of EU regulation.
- There are different support mechanisms in different countries for renewables. In some countries it's a full feed-in-tariff system and in others not. There is therefore a logical argument for more to be done at an EU level to provide consistency and if you are going to have a single market then you need similar support schemes.
- The renewable energy directive is disproportionate. The UK is behind in terms of meeting its targets and is having to fudge them and throw money at it [the problem] in order to deliver it. When it was first signed in 2008 it was a very different political and economic environment. The targets are disproportionate as they are challenging for Member States and are also expensive to implement. This is potentially a result of the way in which the legislation was made.
- The disadvantages of the 2020 targets were not well thought through but some kind of target is necessary if you want to achieve something. Without the targets progress would be even slower. Efforts to meet the renewable energy targets have fallen disproportionately on electricity as opposed to doing more on heat etc.
- The difficulty of making changes to existing legislation is a double edged sword. On the one hand it provides a long-term framework and certainty but if the legislation is not working effectively it is difficult to change legislation as you essentially have to go through the whole process again.
- The finally agreed legislation might be proportionate but the amount of effort to get to that point was disproportional. For instance it took nearly two years to come up with the Offshore Safety Directive. This took up a lot of parliamentary and industry time and it was not a good use of their time considering the existing regulations in place in the UK. Equally there was never a review of whether the action was needed in the first place. It was the same after Fukushima. There was a call for a lot of stress tests but this felt like a knee-jerk reaction as opposed to a well thought out proposal.

More effective competence

7. How could the EU's current competence for energy be used more effectively?

- The EU is not perfect. It really needs to think about the way in which policies are implemented and the over-arching strategy within which policy is developed. The EU's consultation process is also problematic and takes up a lot of time. If the consultation was better than the need for subsequent lobbying would be reduced.
- Realistically, no Member State will ultimately give up sovereignty over its own security, for example the UK's capacity mechanism is against the EU views. Article 194 and the ability of Member States to determine their own energy mix is always something Member States can point to.
- You can only lead if others follow. Therefore the pace at which the EU decarbonises should reflect that adopted by international competitors ; otherwise you get carbon leakage and the export of emission
- In granting a higher degree of discretion to Member States to finance the deployment of renewable energy technologies, we now have "beggar my neighbour" policies. So Germany can dump its power in the Czech Republic therefore undermining the low carbon forms of generation there. The EU is restricting Member States ability to allocate costs.

20 November 2013 - London: Renewable energy; carbon capture and storage

Advantages of EU competence/decisions taken at EU level

- EU level policy making provides permanency, long term stability and resilience to short term political change/national vagaries – vital for major capital expenditure
- EU policy facilitates national discussion and movement; focuses national minds. In the UK, energy transformation debate became not ‘if’ but ‘how’. Renewable Energy Schemes (RES)¹⁹² targets acknowledged as challenging, but considered necessary catalyst to get national authorities moving, mobilise investment and ‘get us over the hill’. Some success evident – certain RES costs are coming down, solar approaching grid parity. Investments which led to this success would not have been made in absence of targets and the certainty they provided. EU normative leadership noted and appreciated.
- Size of a single market greatly appreciated. Benefits of ability to trade across 28 Member States under single product standard/regulatory framework noted; single specifications for petrol and diesel as outlined in Fuel Quality Directive cited
- EU multiple target approach adds resilience, and backstops. If one strand of policy making fails (e.g. the EU ETS), other strands (RES and to some extent EE) are present to ensure progress. Under a single goal approach (e.g. GHG only), if flagship policy had failed, no progress until system is reformed (difficult over long term trading phases)
- EU work on trans-boundary issues noted and appreciated. Need to complete single energy market, but the EU is forcing open previously protected national markets. Greater competition, better economic outcome with more choice and lower prices for users.
- Flexibilities in EU system noted. Directives (as opposed to Regulations) set goals/define ends but leave the means to Member States to select.

Disadvantages of EU competence/decisions taken at EU level

- Frequent risk of unintended consequences in EU policy making. The permanency of EU policy making and the difficulty for EU to respond to political expediencies and national peculiarities apparent at a later stage can be a major disadvantage – cf. biofuels, land use, RES in UK national context.
- European geography incredibly varied – from the Arctic to the Mediterranean, from the oceanic to the temperate. Member States also vary greatly in GDP, regulatory

¹⁹² Note: For the purpose of the notes for this work ‘RES’ means ‘Renewable Energy Schemes’ and not ‘Renewable Energy Systems’.

tradition and view of role of government. EU level too high for levels of specificity of current competence – one-size-fits-all frequently cannot fit all.

- EU considered overly prescriptive, particularly when going beyond a technology neutral approach. Most important EU climate goal should be decarbonisation of EU economy/society by 2050; other policies should simply support that goal. Multiple targets frequently inherently incompatible, RES target particularly unhelpful in defining a technology (or set of technologies) to favour in EU decarbonisation. RES target detracts from other measures – low carbon (CCS, nuclear), energy efficiency etc.
- Differentiation of policy making (even with burden sharing) frequently inadequate and more subject to political deal-making than evidence and science. Difficulty to change national burden share when problems arise or situation changes.
- EU ideas frequently laudable but policy design process flawed. CCS Directive cited as destroying the energy and momentum of CCS in Europe.

Need for more EU?

- EU adds value by increasing interconnections; single European grid with solar in south and wind in north would make sense. More EU competence and funding in this area (and in R&D) could increase positive outcomes
- Support schemes for RES could pass to the EU level. Currently, fragmented national systems lead to RES development where subsidy is most generous – leads to less efficient outcome. Under a single harmonised system, RES deployment would take place where geographical conditions were most appropriate – would lead to more rational deployment.
- Funding from ETS permits currently stays with national treasuries; finance ministers begin to rely on the revenue. Ideally, EU carbon market should ‘do itself out of a job’ – encourage decarbonisation of EU economy and society such that by 2050 carbon permits will not be necessary (and thus not be bought and sold). Transferring auctioning revenues to EU level would remove possible perverse incentives for Member States to maintain income stream and accelerate decarbonisation.

Need for less EU?

- EU harmonisation installs certain national norms and preferences and promotes them continent-wide. CCS Directive (‘disabling Directive’, ‘undeliverably onerous’); assumes CCS is potentially dangerous rather than potentially helpful. Limits ability for those Member States who so wish to pursue CCS because certain other Member States oppose it.
- Despite perceived stability, EU also vulnerable to following fashions; subsequently unable to respond when fashions change. Current EU energy policy focuses to

considerable extent on one aspect of energy trilemma (sustainability), prioritised in pre-crisis conditions when public finances and economy were stronger and RES needed a boost. Relatively little attention paid to competitiveness or security of supply – now of greater importance post-crisis given economic conditions and turbulence in energy exporting countries.

- UK Government with full competence could respond to changing national circumstances and situations as and when required. Stability provided by EU acknowledged but thin line between stability and rigidity. Political preferences, technological capabilities and economic context can change rapidly (cf. shale gas revolution in US, Europe's situation pre- and post-2008/09 recession) but putting competence at EU level reduces ability of governments to react to negative developments or to capitalise on new opportunities. Smaller, leaner EU would allow UK greater ability to design policy best suited to national interest and preference.

How might EU competence for renewables and CCS be used more effectively?

- Energy is a shared competence so Member States should be allowed to decide on their own decarbonisation targets.
- It would be more sensible to have an EU rather than individual MS targets.
- It would be better to have an emissions target for 2020 rather than a number of conflicting targets. 2020 not a coherent set of policies. It was not clear at the time what the cost of the policy or the effect on security of supply would be. UK policy has been skewed as a result of EU policy. Targets have compromised affordability - costs have ended up on customers' bills - and security of supply.
- There is a role at EU level for target setting that gives consistency to decarbonisation. It is more difficult to say if targets should be technology specific. The EU could do more to help develop the right technologies in the right MS – e.g. CCS in the UK.
- The renewables target is about right – it sets the right framework and has the right tools. The action plans are very important. The raft of obligations will assist trade and development and bring down costs.
- The renewables target was intended to deal with initial difficulties faced by the renewables sector. A 2030 target is still needed to give companies the confidence to invest in future.
- A renewables target was needed initially but is no longer needed. It is undermining the carbon price. Renewables are part of the solution but other more cost-effective solutions may emerge.
- One drawback of the renewables target is that it has resulted in the import of technology. A more gradual introduction would have allowed the domestic industry to develop.

- One alternative option would be for MSs to commit a certain amount of money to developing new technologies.
- The renewables target detracts from EU ETS. It has reduced the carbon price. Over-supply caused prices to drop. It has been disastrous for Energy Intensive Industries
- The carbon floor price is not saving carbon – savings in one MS can be spent elsewhere in the EU. This is an argument for reform of EU ETS.
- We don't just need a carbon price, we need a lot of different technologies. The benefit of the renewables target is that it has forced the development of lots of different renewables technologies, providing options for Member States.
- The priority is to get the carbon price fixed. The market will then decide what the cheapest technology is. We need to give support at R&D level and the Commission can provide resources to help technologies compete.
- The EU should be doing more to facilitate interconnection. There is spare capacity that can't be traded. However, interconnection is not a silver bullet and energy will only flow if the price is high enough.
- The renewables target means that MSs are incentivised to meet that target. There is nothing similar for CCS so there is a disincentive in EU policy to focus on CCS.
- The CCS Directive tried to set uniform standards for storing CCS and has been onerous. National regulators are responsible for regulating. We need regulators who understand the policy. If not, regulation will be set at the highest level and that will kill CCS.
- The CCS Directive has been counter-productive. It is more about risk protection than enabling.
- The EU pays lip service to the idea that CCS is part of the solution to climate change but we could not decarbonise in the EU without CCS.
- The main pathway to decarbonisation is through the use of nuclear power. If we are not making progress quickly enough on nuclear we should use CCS but we need a target to be able to put money into a technology.

What are the future challenges for the development of renewables and carbon capture and storage? What would be the advantages or disadvantages of addressing these future challenges at the national or EU level?

- Costs, environment and security of supply are the biggest future challenges.
- It needs to be recognized that there has been technology cost reduction recently. It also needs to be recognised that distributed generation renewables are still an attractive option but there has to be a market for them. For instance, we have the

opportunity of using bioethanol to power our plant, but unless there is a market for driving it forward we can't continue.

- The EU provides a high-level technocratic perspective that avoids political views. However, this lacks accountability.
- Future challenges are almost the same as the current challenges.
- Public acceptability is a challenge. The public may vote for renewables but not in their backyard.
- Communities should be more involved in the process. The EU should focus on the high-level legislation, not detail on how it is implemented.
- Public awareness is also an issue. The public has little understanding of the potential for CCS as it is portrayed as an unproven technology.
- CCS is still in the technology development stage; demonstration is therefore the first challenge. You need to get to that point first and then the costs will come down. At an EU level you need 4 or 5 demonstrators.
- There is no long-term market for CCS and therefore no reason for people to invest. The EU target for renewables has driven investment into renewables but this has been to the detriment of CCS. If the EU goes with a broad de-carbon approach it will work, alternatively if sub-targets are included then there needs to be sub-targets for each technology, including CCS. The big challenge for CCS is that there is currently no incentive to do it.
- CCS is often considered only from a generator perspective but there is also storage and other issues you need to overcome especially with regards to those who live near it.
- The CCS directive is aimed at storage not transportation. It made the level of financial commitment so big it dis-incentivised investment. A separate issue is that implementation of the Directive is overseen by Brussels who lack the experience or knowledge to be able to do so effectively. It is also odd that DG CLIMA is responsible for the directive 2009/31/EC rather than DG ENER.
- CCS is not being dealt with holistically. We tend to go our own way rather than follow others. The challenge is therefore making it acceptable to those who deal with it/who take responsibility for it over time.
- For CCS the biggest challenge is scale. They are small scale projects by fossil fuel standards so they don't benefit from economies of scale. The infrastructure also needs to be put in e.g. pipelines. The second project will get this for free but at the moment it's a significant upfront cost so there is a role for state intervention. Although research and development is needed the most important thing is a market place.

- It's helpful for the EU to ensure that member states are all doing the same thing – burden sharing. We should share the decarbonisation effort across Europe.
- The EU is moving towards an integrated single market. The EU has a role in harmonisation of support schemes as the results of member states putting in their own 'crazy' support systems are becoming clear. Spain has had particular issues. On the other hand, the 'crazy schemes' at Member State level are a consequence of having national targets. Member states are under pressure. Nuclear, CCS and renewables are the only way to decarbonise in the UK.
- The balance of competence is always changing/evolving. Energy transport for instance has developed recently as there has been seen to be a need. Harmonisation of principles around capacity mechanisms is a good thing as it helps to address the balancing challenge of renewables.
- Integration into the market is also a challenge with more renewable coming along.
- Bio-methane at a large scale produces very clean CO₂. This can be used in food but the technology needs to be progressed.
- Electricity is the immediate concern but it might be more interesting when heat is turned into electricity. It needs to be remembered that the heat sector is big and the swing between summer and winter is enormous.
- With regards to electricity moving across borders, the EU moving towards harmonisation makes sense. Heat however is different.
- Carbon and transport of CO₂ across borders will be a future problem.
- Renewables have a high impact on the market. European market design is therefore being developed and it makes sense that the UK is in line with that.
- Not enough resource going into R&D. There is a tendency just to charge towards renewables. The funding is going into today's challenges and not tomorrow's. There is therefore a misallocation of resource.
- Renewables are not just an issue of greenhouse gases other issues such as air quality also exist. Therefore we still need an EU target for renewables otherwise nothing will happen. A lot can be done at a national level, although there is also a role for the EU level.
- In principle it would make sense to have common support schemes but there is a danger of intervening with things that have already gained funding.
- If there is a target after 2020 there needs to be a sustainability target. There needs to be a strengthening of EU ETS and tightening of the carbon targets. Renewable

targets are incompatible with the EU ETS. If we have EU ETS we also need to look at how it impacts energy intensive industries.

- The EU should get involved with infrastructure. The cross-border allocation issue is a role for Brussels, including providing support.
- The renewable contribution to the energy system will be based on whether it's cost effective. The cost of technologies goes through a curve based on volume. Technology development is something the EU is good at and volume deployment (short-term subsidies). Solar has halved in cost recently but there is uncertainty in how long it will continue. There is also a challenge with intermittent renewables e.g. solar/wind and incorporating it into the infrastructure.

25 November 2013 – London: General

What are the advantages of EU competence in the area of energy?

- The internal energy market has been important. The harmonisation of codes has helped to increase competitiveness and bring down costs. The Third Energy Package was only ever something that could be done at European level, never bilaterally.
- Single market legislation and resulting efficiency and output gains have already demonstrated the benefits of a single regulatory framework for EU business and productivity. It is of no benefit for companies to face 28 different compliance regimes. Greater harmonisation of energy market and regulation would reduce costs and non-tariff barriers for energy producers and lead to lower prices for end users.
- Current grid management arrangements are inadequate. Variable nature of renewables and increasingly connected European grid suggest need for improved cross-border (and perhaps ultimately pan-European) supply management, operating independently of national authorities
- Energy inevitably involves cross-border issues and policies. The Commission is in the unique position to foster synergies between national energy policies and to consider energy challenges continent-wide. It is better for the EU to have a strategic energy vision rather than a collection of reactive, disparate and event-driven Member State policies.
- The European energy market model largely mirrors the UK one – with independent regulators, unbundling of energy companies etc. So European Law has not required great changes for the UK. However, if a monopoly trades with an open market, the monopoly wins. So if France and other nations had not been required to also make the market reforms the UK has made, the UK would have been disadvantaged.
- We have benefitted from market integration, but we currently only have 4GW of cross-border interconnection (all of which is almost always used) and our capacity is 60GW, so we should not overstate its impact. It will be more significant when interconnection grows in the years to come.
- Whilst it would be uncomfortable for the Commission to be negotiating commercial deals with companies like Gazprom, when dealing with say Middle Eastern countries it is undoubtedly better for the EU to act as a whole rather than for member states to negotiate bilaterally, where they have less influence.
- Without the EU's influence, it would be hard to stop a significant proportion of gas imported into the EU from being routed first via Russia.
- Having an EU energy policy has meant that many energy companies can operate across the EU more easily. This is good news for skills and knowledge exchange and

to facilitate mobility amongst the work force. For example, when certain companies need a nuclear expert from the UK, it is easy to arrange that.

- The EU has a far stronger voice in international talks than Member States would have individually. Much less would have been achieved on the energy front if Member States had been acting individually.
- Setting European targets stops backsliding. If emissions reductions were only a Member State issue, there might easily be backsliding in the face of a rival country such as China ramping up its coal production. Because we act as an EU bloc, the positive impact we can have on the climate is clearer. Politically, it is more acceptable to put the blame / responsibility for setting targets on the EU rather than to have to take separate domestic initiatives.
- In a single market, with agreed rules and regulations, there is a need for an arbiter, for an actor with a policing function, and ultimately for judicial redress. The Commission and EU Courts fulfil these functions. Member States trade some freedom to act for a stable, rule-based system and benefit as a result
- Negative externalities of energy policy also spill over beyond national borders. The current balance of competence - mostly allowing Member States to pursue the technologies they choose while dealing with externalities which have a cross-border dimension (emissions, pollution etc) at the supranational level - appears logical.

What are the disadvantages of EU competence in the area of energy?

- For energy companies operating solely in the UK, the EU does them few favours from a purely commercial perspective. The Energy Performance of Buildings Directive for example, as well as the general push for renewables over fossil fuels at a European level, have been very onerous on upstream oil companies with operations based solely in the UK. They derive less direct benefits from the completion of the internal market.
- In areas like building standards, it is clear that there cannot be a one-size fits all approach, because the energy needs of a building in Finland are very different from, for example, those in Greece. Member States need freedom as to how they achieve energy efficiency building standards.
- Flexibility for MS to implement EU directives is a good thing. However, the UK often gold plates by going faster than required on areas such as building regulations, or by imposing extra requirements such as the carbon price floor, bringing greater burdens on businesses in sectors such as the upstream oil/ gas sector.
- Just as it can take a long time to pass legislation at an EU level; it can also take a long time to alter it. This is problematical in different ways and leads to irrational and inefficient outcomes. On the one hand when, for example, changed economic circumstances would indicate that alterations need to be made to the legislation or when new factors / events arise such as the shale gas revolution in the US and its

impact on the EU suggest different measures need to be taken, the process for changing existing legislation or introducing new legislation takes too long. There is also the situation that governments are obliged to continue to take and / or implement legislative measures that have become outdated and obsolete over time because they were designed for different circumstances at a different point in time.

- Just as there could be a danger for the UK being the Member State to act first on climate targets etc. when it sets them domestically, so too there is a danger for the EU acting first, before countries such as the US and China leading to a situation where the UK is at a competitive disadvantage..
- Matters of market coordination that are more administrative rather than those relating directly to competition are often unnecessary. For example, the standardisation of the gas trading day will cause huge inconveniences for UK companies without bringing serious benefits.
- We almost had an offshore safety regulation. Due to successful lobbying by government, industry and Parliament, the UK was able to have this turned into a Directive with more flexibility built in. If that had not been the case that would have caused real difficulties for the upstream sector.
- This raised the question as to whether Member States, who choose to forsake certain technologies and opportunities (nuclear, shale), be able to influence the policy choices of those who wish to pursue them? Furthermore should choices of one electorate (who may not, themselves, possess the resources in question, prevent people of another country from exploiting the opportunities that geography and fortune offers them?

Effectiveness of EU Process

- If you know who to speak to, the process of lobbying and consultation works well in Brussels. Officials are of a high quality, and although they have a healthy dose of scepticism towards lobby groups, they are prepared to change their mind if the arguments made are sufficiently robust.

Criticisms of EU Process including Impact Assessments and Consultations

- Brussels considered distant, physically and metaphorically. Difficult for actors to get points across to policy makers and decision makers - linguistic and cultural differences, distance and working practices are an obstacle. National politics and lobbying inherently easier.
- The Commission's Impact Assessments are opaque – severely lacking in transparency. They are much worse in this respect than the ones done by the UK Civil Service. Because of this, it is hard to tell if the Commission simply has pre-selected its options and, if the analysis does not fit with their views, they simply change the parameters to get the desired results. It is impossible to know because

the Commission does not release the models it runs for people to scrutinise them. For example, the Low Carbon Roadmap said that the biggest emissions savings could come from the refining industry. The industry has asked the Greek professor responsible for the analysis to see it, but so far it has not been made available to them.

- Commission consultations are often clearly framed with the conclusions already in mind. It would be helpful if the consultations included spaces to give 1000 word opinions on a certain subject, not when they only offer boxes to tick or cross. Also the interpretation and analysis of contributions needs to be better. In one instance it appears that a single citizen's critical response to shale gas was taken as meaning that all Member States were against shale gas.
- EU process is too slow, even in the short term. Example given of Working Time Directive (WTD). In a cold winter, fuel distributors may need drivers to work extra hours – so a temporary derogation from the WTD may be required. This is obtained by contacting HMG who in turn contact the Commission. The answer comes back several weeks after the request was made, by which time weather conditions have changed. The EU process is not sufficiently nimble to cope with this.

In what areas might the UK's interests be served better currently if action were to be taken at:

a) EU level instead of national, regional or international level?

- Harmonisation of supply management and shock response would benefit from harmonisation at EU level; nationally focused measures are less effective and suffer from a lack of coordination (e.g. there is little point of one Member State taking rationing measures whilst another Member State is releasing stocks).
- Renewables deployment would be better stimulated through a pan-European approach. Southern solar and northern wind can complement each other to a greater extent continent-wide than would be possible within in any individual EU Member State.
- Certain Member State actions (e.g. setting a high strike price for Hinkley Point C) have considerable potential to distort the single market. Value of single market widely accepted; review of potentially market-distorting actions is therefore necessary. If distortion is disproportionate, centralised strike down powers are logically beneficial.
- A combined EU negotiating bloc would have more weight in global energy markets than the collective weight of Member States acting separately (cf. Common Commercial Policy - exclusive EU competence in trade negotiations). In some energy markets, for example in negotiations with Russia and European neighbourhood countries, and where pipelines and geography determine buyer-seller roles, the EU would be in a near-monopsony and advantageous situation.

b) National, regional or international level instead of EU level?

- EU level too high to set climate change targets – one-size-fits-all frequently cannot fit all. Even when burden-shared, targets fail to take sufficient account of variations in geography, regulatory tradition and differing views on the role of governments. National targets are frequently negotiated to implement EU law across a variety of policy areas, but if percentage figure targets are used this is subject to horse trading and negotiation. This does not seem a sensible way to decide a country's policy choices or to keep in tune with national electorates.
- In a world, where energy is globally traded and increasingly interconnected, some national objectives can better be achieved in concert with neighbours. Many policy areas are not zero sum games; national objectives can be furthered by a neighbour's success, and this in turn may be furthered by international (and supra-national) cooperation. Energy policy is a good example. Supplier countries often distant; one country's supply may be dependent on another country's infrastructure. Current balance of competence maintains national freedom to act while fostering a joined-up approach to things like transportation, transmission etc.

How could the EU's current competence for energy be used more effectively?

- There is a need for review clauses and frequent reviews - these could maintain the benefits of supra-national co-operation whilst improving flexibility and outcomes. Could be said that frequent review clauses might impact investor certainty, but the absence of the ability to review also impacts confidence and discourages investment. Examples are the difficulties in the EU ETS (arising from the lack of ability to review and respond to changing circumstances), the collapse in the carbon price and the lack of investment in newer and cleaner generation – all illustrate the problems that arise from the lack of a review process.
- The Impact Assessments need to be done well ahead of time in the legislative process, so that they can be altered and properly scrutinised, not simply referred to as static evidence. Circumstances change so it should be possible to revisit these models, not simply to have them written and then used as concrete evidence.

Has EU action in the field of energy been proportionate to the issues problems it seeks to address?

- In a single market with agreed rules and regulations, there is a need for an arbiter, for an actor with a policing function, and ultimately for judicial redress. The Commission and EU Courts fulfil these functions. Member States trade some freedom to act for a stable, rule-based system and benefit as a result
- The EU should allow the UK more flexibility in certain areas, considering that it is generally ahead of the curve on liberalisation of markets etc. For example, the third energy package stipulated that consumers should be able to switch energy suppliers

within 3 weeks. The UK already has good average switching rates, within a timeframe of four weeks. The cost-effectiveness of changing the entire system to increase the speed by one week is simply not there for the UK as it is for other Member States (who have average switching times of months) and therefore need to create an entirely new system. Hence the UK should be allowed some flexibility in this area.

- Many criticisms of the EU are unfair and ill-informed. While it is true that the Commission has sole right of initiative, it proposes legislation in response to requests from Member States, Parliament, civil society or citizens and its proposals are amended and agreed by democratically-elected national governments and MEPs. Competence hitherto bestowed on the EU (in reality, not lost by national authorities but shared among neighbours) was granted by unanimous agreement among Member States in response to perceived need.
- Competence creep is a problem. Euratom was founded (and continues to exist) specifically because Member States did not want to grant power over energy policy to supra-national level. Although Treaties explicitly state that competence over energy mix remains with Member States, the Commission has proposed legislation in other areas (health and safety, environmental protection etc.) which heavily affect the energy industry. It does appear that the Commission are increasingly attempting to occupy the field.

Future Challenges

- The question of how we integrate renewables onto the system is one that will have to be solved at a European level – whether it means hydro-electric pumps, some complicated storage system, greater interconnection, or a combination of all of these. This is already causing problems in Germany with a negative market power price at times, and it will be a pan-European problem that will need to be solved at a European level. There will be a need for improved cross-border (and perhaps ultimately pan-European) supply management operating independently of national authorities.
- The question of where does the internal market end and where does the responsibility of Member States for security of supply begin, is one that will need to be properly addressed in the future, as clearly Member States are going to want the freedom to ensure their security of supply. At the moment this is still a bit of a grey area. This also links to the balance that needs to be struck between liberalisation of the energy markets and incentivising low carbon generation.
- Interconnection now is at 4GW, by 2020. Particularly with renewables coming on-line from Scotland and Ireland, the UK is going to need all of the interconnection that is expected to come forward (8GW was suggested).

- The 2020 Framework was signed at a time of strong economic growth. Creating a new framework will be harder given that we can no longer rely on growth picking up significantly.
- Energy policy needs to be more joined up. It is clear at the moment that the renewables target does not work coherently with the EU-ETS. This is not to say that they could not work together, but if there is going to be another renewables target, we need to think more about how to guarantee coherence this time round.
- We need a strike price for nuclear and renewables, and there is a real danger that the Commission with its rules on state aids could prevent this. The main issue for the UK going forward is guaranteeing that the capacity needed will be there.
- Easier and cheaper to design legislation from scratch than to retrofit legislation late. If legislative framework for new energy resources (shale, renewables, potentially fusion) is to be designed, it would be rational to achieve a single unified approach now before significant investment is made.
- We need to work on trade deals to try and get a single worldwide energy market. This is definitely best done at a European level.

29 November 2013 - London: Energy Efficiency

Advantages

- Improvements in energy efficiency might not have occurred without the EU taking action. The EU provides a common framework that is needed. The EU, by taking action, has ensured that member states have done more than if left to their own devices.
- An advantage of the EU has been the innovation it's stimulated. It has forced change and made space for the innovation to come up with new technologies. It's also created a market for the products of that innovation.
- The harmonisation of product standards is a good thing. Although energy suppliers are not directly affected it gets people more interested and engaged in energy efficiency which helps deliver our wider objectives. Having product standards set at an EU level is consistent with the single market and means that manufacturers have only one standard to meet rather than multiple and differing standards.
- EU policy is longer-term and less subject to change than domestic policy and legislation and as such provides more certainty for investors and those subject to regulation. However, this can also be a negative if the legislation is wrong as it can be difficult and time consuming to change.
- EU energy labelling has created a more informed consumer/citizen and helps trigger behavioural change and thus responsible citizenship.
- The UK has been ahead of the curve in the development of supplier obligations, an approach that has now been promoted across the EU through the Energy Efficiency Directive this is an example of UK policy influencing action at the EU level. Suppliers active across the UK and EU have been able to draw on that experience in considering how these obligations might apply in other markets.
- It is good to share best practices at the EU level and learn from other member states, though what works in one Member State may not always work in another as national circumstances differ.
- The funding which the EU provides to local authorities for energy efficiency measures is definitely an advantage.

Disadvantages

- Disadvantages often stem from how the UK transposes the EU legislation rather than the legislation itself. There have also been instances where in the UK we have been an early mover in developing particular policy approaches; the EU has then subsequently taken these approaches forward at the EU level but in doing so has

often required us to add extra layers or more stringent requirements to our existing legislation which can cause problems.

- It can be harder to retrofit existing UK legislation with new EU requirements than to implement something from scratch. For instance switching suppliers used to be easier in the UK than most other member states, the EU has sought to replicate this across the EU but in doing has required us to provide for switching within 3 weeks as opposed to the current UK requirement of 4 weeks and making this change to systems is very expensive and seems unfair as we were already doing more than other member states.
- Another example is zero-carbon homes where we have developed a UK-centric approach. The problem is if the EU decides we can't do it this way. It's a huge risk for developers. In essence, the early mover who thinks about it to come up with something that fits their own circumstances risks losing out and be negatively impacted unless what comes from the EU is more or less what they are already doing.
- We often do things purely to comply with the legislation not because there are any obvious advantages to the UK of doing so.
- Legislation is also useless without effective enforcement , without it action won't be taken
- Increasingly we are seeing more prescription coming out of the EU which leaves less flexibility for member states. It used to be different. Legislation is also taking a lowest common denominator approach rather than seeking to reflect best practice.
- In contrast to the renewables that have a binding target but a flexibility to meet it, energy efficiency has binding measures but not targets under the 2020 package and this has meant greater prescription.
- One of the current problems with the EU is that it has stopped thinking about the end goal and become too focussed on harmonisation of measures and policy tools which is not always appropriate as national circumstances – climate, consumer attitudes – differ considerably between member states, the UK and Greece have little in common.
- In order to achieve energy efficiency all new homes will have to be carbon neutral in design. The only way to do this to invest in fabric, however, you can also achieve this by offsetting the carbon by installing renewables. Renewables though have a shorter life span than fabric. There is consequently a need to look at how people live with these outcomes.
- The legislation should reflect the need for action to be cost-effective. The energy efficiency directive does not do this at the moment and there is a risk that you can end up propping up specific industries if you are too prescriptive.

- As the current EU energy efficiency target is not binding there is no certainty that it will be met.
- A negative aspect of the EU is the time consuming and over-prescriptive nature of the tendering process for access to EU funding. We are moving towards area based projects with local authorities but the system of accessing EU finance needs de-clogging, there is too much bureaucracy involved.
- It can very difficult for stakeholders to know how to engage with the EU and the process is not always transparent – it is very unusual for feedback to be provided about the usefulness of a contribution from a stakeholder. Also it tends to be a case of: “who shouts loudest, gets heard”.
- With regards to the carbon targets the UK was over-achieving whereas other member states were under-achieving so the UK stopped. It lost motivation.

Effectiveness

- The effectiveness, need and impact of legislation will vary according to the local circumstances and requirements of a particular member state, for example the design of houses will be very different in Spain compared to the UK; the “one size fits all” approach does not always work.
- Some legislation has not been implemented by member states or they have taken much longer to do so than the legislation allowed for, consequently the Commission has become stricter about its implementation and enforcement and set tighter, more prescriptive, requirements; and this in turn has been to the detriment of the UK.
- Stakeholders have time to influence the legislative process especially as it’s such a leaky ship. Everything comes out in a draft so you get a lot of visibility and the process usually takes a long time giving plenty of time to influence it. Nevertheless, the opportunities to provide feedback are not as extensive as the UK and the process is not that transparent - it is often hard tell why version 25 is different to version 24.
- In large chunks of EU legislation on energy the energy companies are the key players. Energy efficiency however, is very different there is a more diverse, niche set of stakeholders, including individual consumers, appliance manufacturers, and builders.
- The UK and EU are increasingly placing the focus of energy efficiency policy and legislation on energy suppliers but it may not always be appropriate for suppliers to be given the responsibility of delivering it and doing so may even put people off acting to improve energy efficiency. Increasingly energy suppliers end up having to do things that aren’t their core service.

- Timescales for implementation are not always long enough especially if changes to an installation are required.
- Sometimes the requirements of the legislation are not clear either in the directive or in the guidance and it is unclear who is able to provide the necessary interpretation. If it is not clear to a large company then a smaller company with more limited resources will find it even more difficult to make the correct interpretation
- There is a general trend that the more developed a policy area becomes then the more prescriptive and more awkward legislation tends to become.
- In considering whether or not legislation is or is not effective it is necessary to assess whether any shortcomings are the result of bad legislation or of Member States failing to implement it properly.
- There is a considerable public disenchantment with the political process and energy companies. There is therefore room for citizenship education at a young age on sustainability. There needs to be space within the legislation to bring in an educational element. People don't trust messages about efficiency when it's coming from the energy suppliers.
- Targets for energy-saving or efficiency should be subject to on-going monitoring and reviews of progress rather than being just assessed at the end

Future Challenges

- There is an on-going need to make sure the legislation is consistent with national regulation already in place especially for instance with the UK Climate Act.
- Legislation needs to be better enforced – legislation that is not enforced will not happen.
- There needs to be the flexibility to change and amend legislation – particularly if it is bad or ineffective, at the moment the timescales for doing so are too long and it is unlikely to happen.
- The EU needs to think about what it is trying to achieve rather than how it is trying to achieve an objective. This will have the advantage of allowing more flexibility in the legislation and make it more effective.
- There is a major challenge with reaching the zero carbon targets for buildings.
- Dealing with the existing building stock remains a key challenge. The buildings directive doesn't require action to be taken on recommendations set out in the Energy Performance Certificates with the reports. It will be worth considering how to ensure more of the recommendations are actually implemented, recognising that it is sometimes not practical to implement changes to the buildings unless you are

undertaking wider refurbishment of the building anyway due to costs. EU financing helps to overcome some of the barriers to the existing stock.

- There is more to be done on financing but also on citizenship education. There seems to be an assumption that it has nothing to do with the consumer but the fundamental issue to be tackled is the consumers demand for energy and education will be fundamental and could be mandated at the EU level. There is also a need for greater understanding of the positive role the EU has played on many issues,

3 December 2013 – Brussels: General

How has EU competence / action in the field of energy advantaged your sector/business?

- Measures to enhance security of gas supply have been a positive thing to come out of the EU. At the time of the Russia/Ukraine gas supply crisis [in 2009] the Commission pulled everyone together and achieved effective results. It's a clear example of the strength of numbers and coordination the EU can deliver.
- The internal energy market is beneficial for companies operating globally or within the EU as it provides a clear common framework in which businesses can operate. The internal energy market is also vital due to energy being increasingly traded across borders. It will also eventually lead to lower prices and add to security of supply. The internal energy market benefits both businesses and the consumer - although it has not worked quite so well for electricity yet. There would also be more positives if the internal energy market was fully completed and third package measures fully implemented. This has not yet happened due in part to reluctance from some Member States.
- Coordination at an EU level is important. No Member State is any longer a complete energy island. Getting Members States together and taking action in a coordinated way on issues such as infrastructure investment needs is an advantage. It also reduces the time and cost of developing infrastructure. These things would be harder to do without the EU.
- The Radioactive Waste and Spent Fuel Management Directive was beneficial; it has encouraged governments to make decisions and to plan ahead.
- EU funding programmes have also helped get important monies into projects that might not have gone ahead otherwise and has promoted beneficial co-operation. EU support for emerging technologies such as carbon capture and storage (CCS) is very positive. Once an application is submitted, there is less bureaucracy to get EU funding as opposed to getting UK funding,. The EU also has a larger pot of money.
- The EU helps the UK to showcase best practice, especially as the UK is effective at lobbying. EU regulation can also force governments to do things they might not otherwise do - for instance taking measures as a result of the Renewable Energy Directive.
- Long-term targets set at EU level are beneficial as they provide greater certainty for investors as they are less vulnerable to changing domestic political landscapes.
- Though there would be some interconnection investment without EU action, action taken at the EU level facilitates such investment and ensures everyone adheres to the same rules.

- The EU also provides a level playing field, for example the Energy Taxation Directive has been very beneficial as there are now no huge disparities between Member States. Even if some requirements may be unwelcome, competitors now have to work to the same standards.
- The ability to move gas across the EU, facilitated by EU legislation is incredibly important. This has opened up markets and helped with coordination.
- If we want to achieve climate targets then a competitive EU market is essential
- Renewables – if an unpredictable source of energy has preferred access to the grid, it will destroy certainty for investors. Need renewables targets at EU rather than Member State level.
- Without EU coordination of renewables, we risk undermining the EU ETS.
- On commercial matters, better for Member State to act. But if trying to set environmental targets would be better to act at EU level.
- Member State decisions are distortive in certain areas – taxation, implementation of biofuels. If there are artificial boundaries, there cannot be a true single market.
- Need for greater role for ACER in coordinating cross-border grid infrastructure, such as in the North Sea.
- It is advantageous for the consumer to have standards set at EU level. Companies prefer one set of rules as opposed to 28 different sets. Common standards for appliances also help manufacturers. Having standards avoids barriers to trade. Standards are often forward looking and help drive innovation.
- The EU is the biggest trading block and most of Asia follows EU standards. You would not get the same impact if standards were set country by country.
- We should be doing more on energy efficiency at an EU level. Imposing national energy efficiency targets would work but these need to be linked to product standards, for instance fuel efficiency of vehicles.
- The internal energy market works better with standards all being the same.
- There have been benefits in sharing best practice on renewables. EU does this well – not just a matter of agreeing legislation.

How has EU competence / action in the field of energy disadvantaged your sector/business?

- There is a disconnect between existing legislative requirements and on-going market developments. Legislation that is proposed tends to be reactive to a particular market situation. However by the time the legislation is actually in place the market

[situation] that it was intended to regulate has often changed significantly and with different issues.

- The renewable target, whilst successful in driving forward action on renewables, has held back CCS development as all the money is put into renewables. CCS is therefore further behind than it should be.
- On the other hand it was pointed out that there has been a separate EU budget line for CCS but no projects have yet come forward.
- CCS needs more action on research and development rather than be subject to target setting. Renewable technologies are more advanced and closer to being 'market ready', so having a target for renewables is more appropriate.
- Greater transparency of the legislative process is important and needs to be addressed.
- People see a long-term EU vision as a good thing because there is less chance the EU will be prone to 'swinging' [moving off course]. However this can have a negative impact if the EU sets off down the wrong track in the first place because it is then very difficult to change. This emphasises the importance of fighting for the right path [solutions] in the negotiations as the UK will have to live with the outcome.
- The TEN-E regulation to develop the North Sea for the grid is seen as effective as there is no infrastructure there yet.
- It is important to recognise that the energy sector is also directly impacted by other areas of EU competences such as legislation on air-quality, environmental protection, etc. This creates a very complex, and often conflicting, regulatory environment and there is room for some simplification. Liberalisation [of energy markets] has led to significant rationalisation of the way the EU market operates.
- The requirement for unbundling of company structures was a good idea but the way in which Member States have implemented [the EU legislation] has not been ideal particularly in countries where the government owns everything.
- It is right that the EU has competence to look at trans-boundary issues.
- The balance and share of competence needs to be addressed in some areas because sometimes the EU acts and sometimes the Member State has already taken action in very similar areas. For instance, the Energy Efficiency Directive introduces new requirements that are not always consistent with the UK's existing energy efficiency regime.
- In the UK we take quite a relaxed view to new requirements as we think we are already doing it and implementation should be easy but in practice it never is.

- Buildings are interesting as they are not a traded good so whether you should set a standard at an EU level is debateable. Building regulation should set targets and the direction of travel but not the tools as circumstances such as climate etc. are different in each Member State. Buildings standards should be set at a national level; this includes taking measures aimed at renovation of existing buildings.
- The UK has been presented as a best case example for its measures to promote energy efficiency. The Green Deal policy was a source of inspiration so it is questionable whether action at EU level on energy efficiency was needed as regards UK interests.
- On the other hand it was argued that some other Member States need to be inspired to take action so action at an EU level may indeed be appropriate.

General remarks on whether the EU has been proportionate / disproportionate to the issues/problems it seeks to address, also for the UK.

- Competence in the treaties is not always clearly defined so this can be an issue.
- The EU should set high level targets and leave it to Member States to decide how to deliver it. On the other hand it can be argued that whilst it is beneficial to have more flexibility this can lead to uncertainty and lack of consistency of approach. Getting the balance right is therefore crucial.
- The key question is not whether the EU has competence but how that competence has been exercised.
- To achieve or promote something you do not necessarily need a hard target. Also legislation can be quite difficult to change if it is no longer appropriate so it is good to have high level goals sometimes.
- It is good when the UK 'exports' an approach into the EU but being an early mover can also be disadvantageous if subsequent EU legislation amends or adds to that approach.
- With regards to picking technologies the Commission turns the tap on and off. When a measure / issue is likely to be more controversial, action tends to be left to the Member State to legislate domestically; however when it concerns less controversial issues the EU legislates too prescriptively.
- The EU should focus on the things they do well and ignore the fiddly things.
- There is a tendency to introduce new legislation as opposed to fixing problems with existing legislation. Quality over quantity is important.

- The UK provided the original model for the internal energy market but now it is a very different landscape in the UK and there is a lot more politics around energy issues.
- Energy systems in Europe are governed by at least 6 chapters of the treaty and the internal energy market is a shared competence so decisions might impact domestic measures already in place. Understanding how all these areas of competence fit together and to be able to influence energy policy development is important. For example EU ETS will at some point make coal un-bankable, so Member States will no longer be able to build coal plants. There is also the linked question of how all this fits with the fact that the energy mix is a national competence under the Treaties.
- Difficult to know what we would have in place now without EU action. For example the EU phase out of inefficient light bulbs was seen as a good model for Asia. The EU was a sufficiently big enough market to provide an incentive for the big three lighting companies to innovate and tool-up to meet the requirements. However, from a political perspective, many consumers saw it as unnecessary EU interference.
- As regards nuclear, Euratom has minimal interaction with other energy systems and its provisions are rather thin/hollow. The fuel supply chapter of the Euratom treaty is the only operative chapter.

Have EU energy policies been fit for purpose or had unintended consequences? How would you address them? Any subsidiarity issues?

- It is appropriate for the EU to have competence over energy but need to ensure policies and actions are joined up to avoid unintended consequences. The EU rightly sets the direction of travel but goes too far in trying to pick winners. Whilst it is appropriate to have emission targets, for example, below that, flexibility is needed otherwise you move away from a market driven approach. Technology specific targets deliver a less efficient outcome and distort the market. Each Member State has different circumstances, needs and experiences of different technologies and that needs to be recognised.
- There have been unintended consequences for some policies / legislation. Some MSs were too ambitious in setting their renewable policies. Lack of guidance on appropriate domestic RES support schemes under 2020 package led some MS to adopt poorly designed schemes whereas if the EU had intervened earlier on how renewable policies should be designed, that could have prevented problems. Those mistakes should not be repeated for the 2030 package and when setting targets.
- The failure of EU ETS has forced MSs to set up own systems and highly efficient gas turbines are not running because of renewables targets.
- Renewables targets have squeezed the market – there is no room for CCS and gas is being squeezed out. This is the result of little flexibility in setting EU energy policies. The EU has not been able to respond to the economic crisis or the US shale gas revolution.

- Though the 2020 targets for renewable energy have been positive for renewables, the impact on the grid was not foreseen and was a weakness of that policy. Account should be taken of the effect on infrastructure and any other interconnected policies and issues.
- A single target approach is sensible, with more focus on innovation and technology development. Where there is an obvious market failure, Member States should be able to intervene but have time limits for doing so.
- Important not to have 28 different approaches. Goals and direction should be set e.g. on biofuels but there should be flexibility in getting there.
- Should be much greater coordination between national energy support schemes.
- Benefits of single scheme under ETS contrasted by complexity and distortions of 28 national policies points to greater EU role in shaping and coordinating national policies.
- Emissions trading scheme is an example of unintended consequences. Harder targets cause changes of behaviour for the good but setting a minimum requirement for biofuels caused a rush for biofuels.
- Lack of adequate transposition leads to unintended consequences. For the internal energy market to deliver, Directives have to be fully transposed.
- Energy policy has become a facet of climate policy but the two are very different in nature. The focus on climate objectives also makes it easy to forget the importance of security of supply issues.
- Once an EU energy policy is introduced and long-term targets agreed, it is difficult to go back and amend e.g. when there is a problem with EU ETS – no quick fix is possible.
- Business wants long-term certainty but there is also a need for flexibility – problem is how to achieve a balance without political interference in long-term targets. If there had been no economic crisis, the three [20-20-20] targets would have worked well.
- Need to define purpose of EU energy policy. Is it only decarbonisation? Or affordability and competitiveness of energy? If purpose of EU energy policy is to deliver competitive energy prices for the EU, EU policies have not been fit for purpose.

Should the EU be taking on an increased external role in the field of energy? What are the competence implications for Member States? Increased role for the EU or less EU? Is enforcement an issue?

- Purpose of EU energy policies is to provide a common legislative framework and to facilitate cross-border energy flows. This is very helpful from a trading and investment perspective.

- Common legislative framework also gives countries/ companies outside the EU a common basis. From this point of view, EU energy policy has achieved its purpose.
- An external role for the EU is not so important for the UK. Smaller Member States want the support of the Commission. But important for all Member States that the Commission has a strong negotiating role – what affects Bulgaria could affect the UK. Member States can request the help of the Commission in getting support in negotiations – this strikes the right balance of giving help when it is needed.
- If the EU focused on completing the internal energy market, the concerns of the Central and Eastern European MSs over energy security would lessen. Not helpful for the Commission to have full powers in relation to external action.
- External commitments to climate can't be divorced from energy choices. Cannot leave completely to Member States.
- Baltic States have to negotiate with Russia so need an EU voice.
- US government is restricting the export of shale gas to the EU – good to have the EU negotiating for all Member States in TTIP.
- Important for energy security for EU to negotiate on a level playing field with third countries. Important for the EU to have a stronger voice.
- Third countries like Russia and US would prefer to speak to the EU as one body and better for EU as a whole to do so – collective weight in discussions/ negotiations on the Caspian pipeline is a good example of EU speaking with one voice.
- Envisage greater role externally for EU in opening up potential commercial opportunities for European companies, and for companies then to use those openings to compete for contracts on commercial terms.
- EU should set high-level direction. It is important to have EU competence in energy as energy is not just a national issue. National energy policies can have knock on effects in neighbouring countries. Therefore cannot leave energy policy making as the sole domain of individual Member States.
- Whilst it is important for the EU to have a strong voice at the international level, on some issues e.g. regarding legislating for offshore oil and gas operations, it is better for Member States to act.
- The EU does not yet have a completed internal energy market. This creates distortions as the right tools are not in place. Energy markets are global so the EU needs to have greater competence to influence the markets.
- It sends wrong signals if Member States can choose their own energy mix whilst the internal energy market is incomplete. Member States choosing their own energy systems makes it difficult to have a fully functioning single market.
- If EU gets to the position of having a complete internal energy market, Member States will have to make decisions collectively. They will not be able to have individual capacity mechanisms.

- A number of instruments are confusing the market. Need to get the internal energy market working and everything will follow from that.
- The EU should take better enforcement action. EU competence is not being exercised properly. Problems across all areas of implementation. Need for stricter method of implementation and enforcement.
- Subsidiarity is a very complex issue and interpreted in different ways to suit the positions of Member States and Commission at the time.
- Lack of adequate transposition of legislation is not just a problem in the energy area. If the UK copies out legislation, this results in less flexibility but creates more certainty [of intention].
- No evidence that there is any gold-plating of legislation but there is a lot of parallel legislation – e.g. energy efficiency legislation at EU and UK level. Whether there should be more legislation at EU level is debateable.
- The attitude of always getting the best deal for individual Member States is holding back progress in the EU.
- In some cases there is an advantage for the UK in other Member States being made to raise their standards to match UK standards – e.g. offshore safety.

What significant Future Challenges in the energy field do you see on the horizon and how would you deal with them? More EU action? More flexibility? More prescription?

- The biggest challenge is raising global demand for energy (over 30%). The UK cannot address this challenge on its own given how global energy markets work.
- The biggest challenge is how to ensure greater market integration for gas and electricity. EU action is necessary to achieve this – both to strengthen infrastructure and the legal framework. The commitment to a fully integrated energy market has not yet been realised – this was due to be completed by the end of 2014 but this goal is far from complete.
- We need more market integration and fewer national measures that cut across the single market, e.g. the carbon price floor in the UK. There should be a more centralised EU approach to subsidising renewables so those available in one Member State would be similar to those in another. Over time, subsidies should reduce to ensure a level playing field between different technologies.
- A level playing field across different technologies would need to take into account different levels of maturity, for example marine energy could not be expected to compete with gas.

- An EU agreed approach to reducing GHG emissions would be useful as the main objective for an EU energy policy. Having a separate national emissions target, as in the UK is not as helpful as having a common EU approach.
- A single GHG target is more appropriate than multiple energy targets. All the objectives of affordability, decarbonisation, security of supply need to be taken into account when setting a target but also need to take account of the role of energy policy in driving forward competitiveness.
- The aim should not be to decarbonise at any cost; competitiveness and security of supply also needed to be taken into account.
- Agreeing a framework for 2030 that provides investment certainty is the biggest challenge. An early agreement with an ambitious single GHG target would help provide this.
- Climate change is the biggest challenge. The EEAS should be more engaged on this agenda.
- Security of supply is the major challenge; it is wrong just to focus on climate change. A GHG target on its own may not be sufficient; other measures, e.g. on air quality, may be needed.
- Member States should have flexibility as to how to meet their GHG reduction targets; it is important not to pick winners from the available technologies.
- A broad based low-carbon target is helpful in addressing future challenges in that it would leave space for CCS and nuclear to contribute to decarbonisation objectives.
- The 2020 targets have shaped investment decisions in an unhelpful way, e.g. EU is falling behind in developing CCS technology.
- Climate change, security of supply and competitiveness are all important. Currently, there are too many instruments (renewable support schemes, carbon price floor) that impact negatively on the internal energy market. It would be better to have a single long-term CO₂ target complemented by a fully effective ETS scheme.
- Instead of new EU actions, we should focus on making sure existing policies worked effectively.
- The carbon price floor is not an effective mechanism to reduce emissions but rather to generate revenue. The third energy package should be fully implemented, including finalising the work on network codes.
- EU membership has benefited the UK in terms of its impact in international negotiations. Other aspects of energy policy, e.g. offshore safety, are better done at the national level.

- The internal energy market is an important project. It primarily means enforcing existing rules on competition and unbundling and strengthening interconnection rather than 28 Member States doing their own thing.
- There has been an unhelpful trend towards national interventions [in the market]. Recent experience in Hungary has demonstrated that government intervention in pricing constitutes a huge disincentive for investment.
- The biggest challenge is to consider energy policy at the EU level not the national level. Member States regard energy issues from their national perspectives – this is not helpful given the interdependencies of the internal market. Article 194 and the provisions regarding the national competence for energy mix should be amended to change the mind-set. It prevents a helpful discussion about the optimum energy mix for the EU.
- The EU needs to speak with a single voice on the global stage to strengthen its impact internationally, e.g. with Turkmenistan. Individual Member States will not negotiate from as strong a position with Russia than acting as the EU.
- Competitiveness is the biggest single challenge facing the EU. There needed to be more of a level playing field re: energy prices both within the EU and with other parts of the world.
- Political uncertainty provides the biggest challenges going forward and a strong EU framework is necessary to help provide the certainty needed to facilitate investment.
- The energy sector is so highly regulated in the EU, that political uncertainty on the post-2020 regime has a big impact on investment. Greater certainty on the future of renewable energy is needed as well as new legislation. Given the cross-border nature of the challenge, an EU framework for infrastructure is key. The power sector is different from many other sectors in that a lot of generation capacity needs to be replaced - hence investors need greater certainty over what to invest in than for other sectors. The 2050 decarbonisation targets of 80-95% are not set in legislation - hence the lack of longer-term certainty.
- The EU should set the overall direction of energy policies but leave enough space for the market to determine the means. The biofuels sector had been adversely affected by recent changes in direction by the EU. The EU needs to leave space for innovation and take into account other global developments. This is why setting binding targets out to 2050 is difficult.
- If MSs discover shale gas in their territories, they should be free to exploit it. Public acceptance issues in other Member States should not prevent that from happening.

- The power sector should be set a carbon intensity target, and the rest of the framework needed to be simplified. If decisions on energy mix were taken at the EU level that could lead to a more cost-effective approach.
- The UK has benefited from being part of Europe for all 3 objectives: cost-effectiveness, security of supply and decarbonisation. It does not make sense for the UK to try to address these challenges on its own in the future, as opposed to addressing these from an EU perspective.
- Agreeing the 2030 Climate and Energy framework is the biggest future challenge facing the EU. The risk of industry relocating to the US is real and the EU needs to take into account the impact of its energy policy on competitiveness when setting this framework.
- The biggest energy challenge facing the EU is climate change and how much addressing it effectively is going to cost. The EU ETS needs to be strengthened and there may need to be an EU carbon tax floor to provide more certainty. The UK's approach to setting 5-year carbon budgets is helpful in providing certainty to industry.
- Having an EU carbon tax floor provides some certainty and removing surplus allowances on a permanent basis. Capacity mechanisms may also be necessary but these should be done at the EU rather than the national level.
- The EU needs to focus on the implementation of the existing legislation and strengthening the internal energy market, e.g. through stronger arrangements for reverse flow. We should be careful that all the state interventions, e.g. around capacity mechanisms, do not lead to the EU adopting a common energy policy rather than promoting the internal energy market -whereby the market provides the right price signals for energy to flow across the EU.
- Perhaps what is needed to tackle climate change is a common energy policy rather than just pretending that the internal market can deliver the right investment signals, e.g. for cross-border investments.
- It is important to recognise that if certain decisions are taken at the EU level they may lack democratic legitimacy. Some decisions might better be taken at a more local level even if this leads to slower decision making.

Where future EU action could add most value

- The biggest challenge facing the industry and its investors is regulatory certainty. Investors do not want to navigate 28 different sets of rules but a balance needs to be struck where the EU sets the direction of travel and Member States still have a degree of flexibility.
- The EU should focus on areas with a genuine cross-border effect, e.g. infrastructure, network codes and the robust implementing of existing legislation. Overlapping

support schemes for energy efficiency are unhelpful and having 28 Commissioners does not result in joined up policy making.

- Investments, e.g. in pipelines and agreements with third countries might be easier from an EU perspective than a national perspective as you have the full EU regulatory framework behind you. The EU could also play a helpful role in leading by example through the implementation of its rules on the internal energy market, e.g. with Ukraine

Alternatives? Binding v non-binding measures? In what areas might the UK's interests be served better if action taken now at EU level was taken instead at national, regional or international level?

- There is a useful role for binding standards in driving innovation, e.g. vehicle standards or housing standards. Whether these should be set at the EU or national level depends on the area. Targets are more useful in defining the broad objective but then letting the market decide on the best means to get there. Overlapping binding targets are very unhelpful.
- Binding targets for GHG reductions are sensible but binding targets for interconnection less so, as the costs for the infrastructure involved varies to such a significant extent between Member States. A non-binding target for regional interconnection may be more appropriate.
- Targets can be very crude instruments and they need to be realistic. The Energy Efficiency Directive sets targets but does not take into account the different starting points of Member States, e.g. in relation to the quality of the housing stock, or previous energy savings schemes.

Commission consultations and impact assessments – Can they be improved?

- IAs are not very rigorous and the questions are often self-serving. For energy they appear to have little outcome – for example the framework programme for energy efficiency is very leading. They should not pre-empt answers and should be more open to discussion. Furthermore they should not be simply contracted to a consultant but could be improved if they were done by the services themselves.
- There is some variability in IAs from one DG to another, but they can be self-serving. The Sec Gen should have a stronger role in standardising the consultation model.
- The tick box, multiple choice format is inappropriate for consultations - the shale gas consultation is an example of how inappropriate this form of consultations can be
- It would be helpful to be able to influence the process for IA tendering – the process is not transparent and policy lines appear to be already established. It is often seen as 'internal business'. It would be helpful if national governments were more closely

involved in this pre-consultation phase - industry would wish to be involved too but accept that national Governments would be more appropriate than industry.

- The standardisation point is something that should be emphasized; some IAs are better than others and it is really down to the policy officer concerned as to the quality of the assessment. Therefore an element of standardisation could improve the general quality. Not all DGs work with a consultancy, in which case it is completely up to the DG to interpret the results. This can lead to further bias.
- Sub-standard IAs are a result of bias by the directorate and/or by the consultants. DGs may have a policy in mind, but they also seem to have a tendency to go to smaller, less expert, cheaper consultancies that are of a similar mind-set to them. This has a significant impact. It could also be worth considering a greater role for the services' chief scientific officer in the preparation of impact assessments.
- On the other hand an opinion was expressed that IAs are not too bad and are important for backing up the Commission's proposal. There is a bigger problem in getting the European Parliament and Member States to properly look at them; this issue is equally as important as any process of reform.
- There is an issue where Commission officials writing IAs in a way which supports their policy (self –selection of policies). The IA board, comprised of people from other DGs, are supposed to have an over-arching view and could improve the process but it is not transparent and the decision of the IA board is not binding on the Commission. Also it is not helpful when proposals are modified further down the line (e.g. by the Council or the EP). There should be a re-assessment of the impact in those cases though it was also recognised that it would be important not to paralyse the system with too much administrative process.
- IAs could be made broader and not just consider a proposal in isolation – it needs to look at interactions with other policy issues.
- The examples of the ETS, the renewable energy directive and the energy efficiency directive are cases in point.
- Transparency could be improved and timing is an issue - sometimes base data underpinning an Impact Assessment is not made available to parties until too late in the negotiating process. UK impact assessments were quoted as good practice examples of how impact assessments should be done. Also often a problem of not having enough time devoted in Council work groups to consider impact assessments
- The use of Delegated and Implementing acts are increasing – this could become a more substantial problem.
- IAs are better than the Commission's consultations. It was suggested that there would be merit in an independent body carrying out consultations rather than by the Commission..

- The problem with this idea was that you would have to have a different independent body to work on every single policy area. It was suggested that instead, there should be earlier and much fuller consultations. For example, the IA on transparency for extractive industries identified that project definition and country level reporting could be potentially problematic areas, but this was completely ignored in the proposal. So the results of consultations and IAs need to be better reflected in the actual proposals.
- Being able to have greater opportunities to influence at early stages of a proposal, rather than having to rely on influencing Parliament at a late stage in proposal formation would be helpful.
- Opening up the inter-service consultation more widely would be advantageous.
- It is up to the MS to make sure that constituents and associations are more involved and aware of the IA process. We should however also bear in mind that as soon as a proposal is suggested, this starts to create uncertainty. For example, in respect of energy taxation proposals if a tax is proposed the price of gas would immediately go up. So there are also downsides to transparency.
- It was also suggested, in the interests of more transparency, consultations could be carried out at an earlier state. A second consultation when the proposal was available in draft form could also perhaps be considered; currently this happens informally and based on leaks of the documents. Following the leaks, some organisations are able to feed into the process by lobbying the Commission. But there could be a more transparent process to facilitate this.
- Policy options could be more genuinely nuanced so there is no obvious favourite option or Commission's preferred one. The number of options will depend on the purpose of the document. The consultation should be intended to get the views of all. It is then for the Commission to make an internal review and come up with a proposal reflecting these different views. Having say four genuine options for a consultation could be a better way to reflect stakeholder views. However the final proposal forming process needed to be internal and not up to stakeholders.
- The 'competitiveness test' idea should be applied at both the consultation and the IA stage - if a proposal fails this test, it should be re-drafted.
- Numerous consultations could also be problematic and resource intensive. However, thinking about the need for further assessment before adoption could be worthwhile.
- Should be careful about suggesting processes which implied further administration as 'overly-administrative' is often a criticism laid at the EU's door.
- Currently, the system only really functions because of leaked documents which are not the best way of proceeding. On the other hand, there is an annual plan published

by the Sec Gen which gives a summary of everything planned for the year so it is simple enough to get an idea of what is taking place and to do appropriate lobbying at that early stage. Perhaps this process could be expanded or made more detailed.

- The view was also expressed that the Commission is quite open about what it proposes and it is not difficult to secure a meeting with the Commission to discuss issues. The formal stakeholder consultations phase (including workshops) also allows for discussion.

How could the EU's current competence for energy be used more effectively? Are there issues of coherence of policies?

- Companies favour the completion of the single market and only when the third package is fully implemented should consideration be given as to whether new policies are needed – to avoid new and potentially conflicting policies or reforms would be a big step forward.
- The same situation applies to energy efficiency measures - barely had measures been implemented before a new energy efficiency directive was adopted.
- A long term approach is therefore important.
- The 2050 framework is already in place so more policies are not needed. Further policy initiatives can also create problems of coherence – for example the Environmental Impact Assessment and the Offshore Directive overlap.
- There is a lack of coherence and over-complexity as well as a tendency to want to control everything by the Commission. Climate and energy are prime examples of this – the overlapping of the ETS and renewable energy directive exemplify this problem.
- Different and often conflicting policy options across DGs are a problem. This also applies in the EP.
- A requirement for the EU to wait for one piece of legislation to be properly implemented before starting another would be a good starting place. Also the Commission needed to slow down what it is doing and be more effective in looking at the broader scope of its activities, including outside its immediate policy area.
- There are many different energy initiatives in existence and perhaps a single coherent energy chapter that captures everything would be useful. It was questioned whether anyone was working on this issue of coherence in the Commission and asked whether a full treaty review was being done.
- It would be difficult to look at the Euratom treaty with this approach.

- The Commission could do less in some areas but more in others work on infrastructure and grids are examples where more could be done – in that respect the PCI lists were important and where the EU can add value.
- Work on completing the internal energy market is important. Capacity mechanisms are seen as obstructing deepening integration and there is a need to extend capacity markets across borders.
- The ‘target model’ was designed before renewables had become so prominent and that there is now a question as to whether it is fit for purpose, particularly if reserve capacity is needed in the long-term. This is just one example of when one policy is being followed, but which can be knocked off course by a different policy initiative.
- Ongoing State aid questions raise uncertainty in the market as to what may or may not, get clearance.
- The ‘three pillars of energy’ are in conflict with each other.

6 December 2013 – Glasgow: General

EU action helpful to UK interests / more EU action needed

- EU actions in the area of hydrogen and fuel cells development have been positive, particularly on distributed power. For example, the European Fuel Cells and Hydrogen Joint Undertaking 5 –year programme has been crucial in enabling the Aberdeen hydrogen-powered bus project and has received €9.3 million of EU funding.
- The Joint Undertaking work is also stimulating further Scottish projects – including the design by Caledonian Marine Assets Ltd (CMAL) of the world's first car and vehicle ferry powered by hydrogen fuel cells, a carbon-neutral ship with zero emissions so has improved air quality.
- More broadly, EU leadership in this area has been very successful - the Joint Undertaking has contributed to the understanding of the link between energy and transport in Scotland and has given Scottish stakeholders the opportunity to take part in, and shape future policy on, hydrogen and fuel cells development.
- For the future, more synergies are needed between TEN-E and TEN-T programmes to facilitate the development of sustainable transport.
- EU actions are advantageous as regards protection of wildlife because energy policy development at EU level has to have regard to obligations under the environmental directives. There needs to be greater coherence between the Renewables and Habitat Directives.
- Energy efficiency should become a cornerstone of EU energy policy; this would have the effect of naturally limiting the construction of some infrastructure that potentially disturbs wildlife.
- The EU 20-20-20 targets have had a significant impact on R & D, resulting in greater research on renewables and carbon capture and storage.
- The issues around energy storage should be addressed at a European or international level. Analysis has shown that the balancing of demand and supply of renewable energy is more difficult to pursue at a domestic (national) level or on a country-to-country (bilateral) basis. European guidance on energy storage, including issues such as gas quality standards and capacity needs of gas networks, is welcomed.
- Consideration of environmental liabilities should have a more prominent role in considering different energy solutions. For example, Strategic Environmental Impact Assessments (EIAs) for energy projects should be made obligatory. There is evidence that EIAs are not always fully implemented or consistently applied across Europe.

More coherence needed across EU policies and legislation

- Greater coherence across EU energy, climate and environment policy is essential. Investments tend to be drawn to technologies that are backed up by clear and binding legislation which gives long-term investor certainty.
- There are tensions between EU market-based objectives such as the Emissions Trading Scheme and the development of the internal energy market on the one hand and those EU policies which seek to make specific interventions in support of specific technologies such as the Renewables Directive or the CCS Directive on the other. These tensions have to be resolved despite the seeming paradox; in some areas more binding measures may be needed.
- It is important for the EU going forward to provide greater coherence between these policies to ensure that the various objectives are properly aligned; this would avoid perverse incentives / unintended consequences that could destabilise other parts of the EU acquis.

EU action hampering UK interests / action at a different level than EU

- The lengthy duration of the EU legislative process is unhelpful for planning projects as industry has to face uncertainty for a long time until legislation is agreed and implemented.
- A top-down approach for some policies would be beneficial, starting with agreements at an international level that are subsequently translated into European, national and regional policies.

General observations

- Some stakeholders were concerned that some groups of stakeholders could be under-represented in the Review process and this could have implications for interpretation of 'evidence' in the final report.
- Providing evidence on the impact of EU action on energy could be complicated by the fact that the energy acquis is only a relatively recent development - work on an EU energy policy started only in 2005. This may be important when considering the totality of the BoC exercise as the thinking in other areas e.g. environment [and its effect on energy] may be much better developed.

11 December 2013 – London: Nuclear and Euratom

To what extent does action under the Euratom Treaty:

- **Contribute to the development of nuclear power in the UK and EU e.g. in relation to nuclear safety?**
- **Disadvantage the development of nuclear power in the UK and EU?**

Have EU energy policies been fit for purpose or had unintended consequences for nuclear? Is coherence of EU policies as they affect nuclear an issue?

- The Euratom Treaty, which has as its primary objective “the creation of the conditions necessary for the speedy establishment and growth of nuclear industries”, should be the frame of reference for nuclear policy. It has been extremely valuable – without it there would have been a lot more conflict in the EU on nuclear policy. But the Treaty is 50-years old – is it still considered a live piece of legislation? Commission has tended to move away from the Treaty.
- Euratom Treaty is a statement of law and focus should be on what the Treaty requires but the Commission attempts to extend its competence by stretching interpretation of the Treaty especially in the areas of safety and security.
- Treaty is a massive piece of legislation but the Commission doesn’t take it into account in considering the case the promotion and development of nuclear energy. As nuclear has become more controversial, Commission has stopped considering it for energy purposes. Happy to talk about nuclear safety and security but not to nuclear as an energy source.
- Nuclear Energy Agency deals with nuclear energy and that has become an excuse for the Commission to stop working on nuclear energy. This results in a distortion in EU energy policy – other forms of energy generation are discussed, for example in the State aid guidelines, but no references to nuclear energy as part of the energy mix.
- There is a focus on ‘innovative technologies’ and as nuclear is not regarded as new or innovative then this is used against nuclear energy – though the same argument is not used for renewable energy sources such as wind turbines which is a technology that is even older than nuclear. Implication that only industrial policy matters and climate change is ignored. The argument for nuclear energy helping to tackle climate change is neglected. The Commission should be putting the case for nuclear energy because it delivers so much low carbon energy and on a much greater scale than renewables, but isn’t doing this – this is not in line with objective of Article 1 of the Euratom Treaty.
- Commission has lost sight of the strong messages in the Euratom Treaty to develop the nuclear industry. If a MS doesn’t want to pursue nuclear energy, there are provisions in the Euratom Treaty to ensure effects on other MSs are considered and provisions in the TFEU to allow MSs to decide on their own energy mix so the

Commission has no reason not to support nuclear energy. The Commission focuses on the safety and security aspects of its responsibilities rather than the growth of the nuclear industry.

- There is an issue in terms of PR for nuclear. Standards set by IAEA and Euratom have less impact than if they were set by those who do not promote nuclear as an energy source. Non-nuclear organisations such as the WHO should give confirmation that nuclear power is safe. UK approach, with separation of powers between nuclear authorities and Environment Agency, is better.
- There is no case for tightening legislation. Need to strengthen public trust in nuclear. Equally accept the extreme difficulty, in PR terms, in suggesting nuclear legislation should be relaxed.
- Standards set by IAEA and Euratom are not very helpful. Non-nuclear organisations such as the WHO should give confirmation that nuclear power is safe. UK approach, with separation of powers between nuclear authorities and Environment Agency, is better.

To what extent do Euratom measures in respect of non-nuclear activities help or hinder:

- a) **Occupational protection?**
- b) **Protection of the general public?**
- c) **The use of medical exposures and procedures?**

- Attendees felt they did not have sufficient expertise/experience in this area to comment.

Has EU action affecting nuclear been proportionate/disproportionate to the issues and problems it seeks to address?

- a) **Need for flexibility or greater prescription?**
- b) **Need for binding or non-binding measures?**

- Reducing greenhouse gases is the most important issue. The EU should be making the argument that nuclear energy can provide low carbon energy on a far bigger scale than renewables.
- Action specifically on nuclear has generally been proportionate e.g. in the field of safety but action in relation to fossil fuels has been inadequate.
- An example of disproportionate action was raised in that the requirements of the OSPAR Convention (to which the EU and the UK are parties) had resulted in the closure of 4 safe nuclear reactors. It was felt the EU could have done more to oppose such disproportionate effects.

Commission consultations and impact assessments – are they fit for purpose?

- Most recent consultations on nuclear safety and nuclear liability have been very poor. It was felt that it was not worth responding to the consultations.
- There is very low visibility of consultations and they receive a very small response – the Commission then takes forward actions on nuclear safety based on a very small sample (300 in one case). In addition, the questions that are asked by the Commission are not fair – they tend to be leading questions – and it is clear that the Commission has not sought proper advice on how to frame its questions.
- If the Commission is carrying out public consultations, they need to be sure that they are widely available/accessible and that a process is followed to ensure consultations are professional and questions are fair and do not lead only to the conclusion the Commission are seeking to promote. Unacceptable to set EU policy using the evidence of only 300 responses.
- Impact assessments are too narrow as they only consider the issues related to introducing legislation – they don't consider the impact of not introducing legislation and don't consider the impact on other sectors.
- If legislation has a sunset clause, then an impact assessment should be carried at that point.

To what extent does action at EU/Euratom level mesh well with action at international (IAEA) level?

What are the benefits/disadvantages of EU/Euratom acting at international level on behalf of Member States?

- Changes in nuclear policy are initiated at international level in IAEA and the EU follows. This results in long time gaps between policy direction and actual implementation.
- Process where IAEA suggests revised guidelines and they are cascaded down through the EU is appropriate – companies are able to manage change as they know what is coming. If EU legislation differs from IAEA guidelines, there is a risk of confusion and companies not following the correct procedures.
- Important to be able to influence the IAEA if their guidelines eventually shape EU legislation. EU law introduces stability – there are no sanctions at international level but can be infringed for breaching EU law.
- Member States should be able to represent their own interests rather than Euratom representing MSs. Inappropriate for EU to speak with one voice in the IAEA.
- If MSs have the right to determine their own choice of energy sources, then they should be able to speak for themselves in international organisations.

Future challenges in the nuclear field:

- a) Is there a need for more/less EU/Euratom/international actions?**
 - b) Do we need more flexibility?**
 - c) Do we need more prescription?**
-
- There shouldn't be more prescription on nuclear energy – need more prescription in relation to fossil fuels.
 - EU should be doing more to prevent disproportionate measures such as the need to close down sound NPPs by a particular deadline.
 - There are a number of issues in the pipeline that are unhelpful. Legislation should be driven by evidence rather than political considerations.

7 January 2014 – Aberdeen: General

EU competence/action in the field of energy – has this advantaged /disadvantaged your sector/business?

- Upstream oil and gas activities have not been affected to a huge degree by EU actions - good to have less of front line impact.
- On the other hand it was recognised that, because of the global nature of the industry, incidents that might occur, for example offshore in the Mediterranean, would be likely to impact on UK operations.
- In that context a more prescriptive approach could be helpful though proposals would need to recognise that not all [Member States / industry] are at the same stage of development.
- In discussion it was pointed out that, had the original proposal for an Offshore Oil and Gas Safety regulation not been changed to become a directive, and only after huge lobbying effort, this would have had implications for the Commission extending its competence in this field.

EU action proportionate / disproportionate to the issues it purports to address? Fit for purpose? Suitability of legislative process?

- Timing is a real issue when the EU puts forward a legislative proposal.
- Insufficient time is devoted to consultations and at each stage of negotiations – even large companies operating globally find it difficult to resource and consult with their relevant experts in the short turnaround times demanded by the legislative process.
- Tight timetables are often set by successive Presidencies keen to complete dossiers during their term of office when the emphasis should be on getting the legislation fit for purpose.
- There is generally a lack of transparency of the legislative process - even large companies have to rely on the umbrella organisation, Oil and Gas UK, to get clarity on what is happening.
- Though often documents have restricted circulation during this time, some companies nevertheless manage to get hold of copies. On the other hand it was thought unhelpful if documents were generally publically available and the press got involved – this could have implications for lengthy negotiations.

- Concern also expressed at the lack of expertise amongst legislators – both amongst MEPs and the Commission – much time was spent, for example, during the negotiations on the Offshore Oil and Gas Safety Directive, to educate MEPS on practical operational aspects of work offshore as opposed to onshore and to avoid large cost implications of proposals.
- These concerns were also relevant to the process for the revision of the Environmental Impact Assessment (EIA) Directive.
- Also of concern is that initiatives are not being allowed to bed in to assess how effective they are before new proposals are made. More stability is needed.
- For example there are proposals to change the Gas Day because of new technical codes required by internal energy market legislation, but which also impact on upstream operations. This is a regulatory burden for the UK even if it helps the rest of the EU/Europe. Many [company] agreements will have to be changed as a result of these developments - the legislative process on this to agree the code is too far advanced to pull back.

In what areas might the UK's interests be served better if action taken now at EU level was taken instead at national, regional, or international level? How could the EU's current competence for energy be used more effectively in the future? Is coherence of policies an issue?

- If the EU acts to set prescriptive standards, then this could have implications for the industry in operating outside of the EU. For instance companies operating in the US have to apply US standards.
- Helpful therefore to have international standards setting. However these would need to be set at a high standard reflecting those being applied in the EU; problems arise where standards, though set, are not being imposed in some countries.

Commission consultations and impact assessments – fit for purpose?

- Impact assessments need to be more transparent as to how they are put together.
- In discussion it was pointed out that the offshore industry had been unhappy with the quality and data of the Commission impact assessment for its original proposals for a Offshore Oil and Gas Safety Regulation. The Commission had made assumptions in its impact assessment of a number of things that could go wrong and applied costs – but with no justification as to how those costs were made up. OGUK had submitted their own data to the Commission, but no revision was made to the impact assessment.

Should the EU be taking on an increased external role in the field of energy? What are the competence implications for Member States.

- Stakeholders attending the workshop did not feel qualified to give views on this.

Have EU energy policies been fit for purpose or had unintended consequences? How would you address them?

- Stakeholders had nothing to add further on these questions, other than recorded in the earlier discussion.

How could the EU's current competence for energy be used more effectively? Is coherence of policies an issue?

- Stakeholders had nothing to add further on these questions, other than recorded in the earlier discussion.

Future challenges in the energy field: is there a need for more/less EU action? More flexibility? More prescription?

- Stakeholders had nothing to add further on these questions, other than recorded in the earlier discussion.

Advantages of EU competence/decisions taken at EU level

- EU level policymaking provides permanence, long term stability and resilience to short term political change/national vagaries, vital for major capital expenditure. This is considered particularly useful in the energy sector.
- Distance from day-to-day political debate and absence of electoral horizons fosters objectivity and long-term vision in European Commission policy proposals. In energy, several countries have made more progress in decarbonisation and reducing import dependence (expensive in short term, cost-effective in long term) than would otherwise have been the case.
- EU provides a convenient stooge for unpopular but beneficial policies. Challenging but necessary actions which would otherwise fall foul of national politicians' self-interest/initial public scepticism (climate mitigation action, progress in energy transition, market liberalisation etc.) can be proposed by Commissioners and enter the European policy debate. Technocratic EU oversight prevents backsliding and 'saves Member States from themselves'.
- Single market valued highly. Absence of integration would mean 28 different national regimes with which to comply and thus increased costs for business. Single market brings economies of scale and allows Member States to act as global standard-setter. Each individual national market is small on a global scale, but 500 million consumers under one regulatory regime represent world's most important market; regulating collectively allows Member States to punch above their weight.
- Generation potential primarily linked to geography; national borders political and often arbitrary. EU facilitates cooperation and interconnection between Member States and thus a rational approach to energy and power generation and distribution, lowering costs for end users. EU also stimulates sharing of best practice across continent.
- Energy externalities spill over beyond national borders. Chernobyl and other incidents show hazards do not respect frontiers; climate change a global phenomenon. EU oversight and peer review prevent beggar-thy-neighbour policies and increase the effectiveness of mitigation efforts.
- EU has a multiplier effect; dealing with external suppliers collectively raises EU Member States beyond the sum of their parts. With certain suppliers, EU potentially in a near-monopsony position; contrast with weakness when faced with divide-and rule tactics of suppliers acting bilaterally with Member States.

Disadvantages of EU competence/decisions taken at EU level

- Geography not quite destiny, but nor should it be ignored. Europe a region of great contrasts, stretching from the Arctic to the Mediterranean, from the Alps to low-lying scrubland. Important energy sub-sectors – heating and insulation, for example – tailored to very local conditions and materials. Harmonisation of energy policies under such differing conditions inappropriate.

- European countries also differ greatly in wealth, outlook, culture and political preferences. Single policies touching at the core of politics and identity considered inappropriate.
- 'Brussels' considered distant, geographically, culturally and linguistically – and especially so when viewed from Wales. 'The further the administration, the more remote it is'. Lack of understanding of how to feed directly into EU policy making process (although comprehension of process and work of pan-European trade associations).
- Inverse of EU policy stability is inflexibility. When policies go awry or unforeseen consequences arise, EU law difficult and slow to change. Unnecessary costs may be locked-in for a long time. Manner of EU law-making also open to criticism – horse-trading and compromise lead to sub-optimal outcomes and unnecessary costs.
- EU given legislative competence without executive power to act. EU considered unable to respond with necessary speed to events.
- EU legislative approach considered to be regulation heavy. EU felt to impose a greater legislative burden than hypothetical UK national action. Cost of compliance with EU legislation significant; challenging for smaller companies, though compliance could also stimulate innovation due to changing policy or regulation framework. Overall, Directives rather than Regulations were felt to be a better driver of local innovation.
- Choice of energy mix explicitly reserved to Member States, but phenomenon of 'competence creep' – energy policy made through other areas of EU competence (climate change mitigation, health and safety etc) evident. Neither intended nor desired but difficult to arrest.

Current balance of Competence Proportionate

- Various legislative instruments available to EU. While Regulations are indeed directly applicable, Directives set an objective to be achieved within a certain deadline and leave the Member States to choose the means which best suit their national circumstances. Potential for flexibility and national differentiation is present in the system.
- Sub-national administrations (of which Wales) benefit from two different approaches (UK and EU). Different approaches mean received ideas are challenged; potential for complementarity and synergies between approaches. Sub-national administrations may choose to concentrate on the approach that works best for their circumstances.
- Sub-national administrations (of which Wales) felt to benefit from EU funding streams in areas which UK government less likely to prioritise.
- Understanding of inevitable trade-off between policy stability and flexibility. Current arrangement felt to be reasonable – comprehension that increased policy flexibility means less stability and vice-versa.
- EU policy lines (reducing pollution and import dependence etc) product of consensus and generally acceptable to all. Disagreement only on rate of progress and means. Recognition that nobody is prevented from going faster than EU as long as in direction of travel.
- Frequent suggestion that problems arise not so much from EU having competence but rather from disparity in national administrations' interpretation of EU law and

imposition of penalties. Removing such anomalies to avoid distortions of competition in single market greater priority than shifting competence. Desire for consistency among Welsh stakeholders, with less importance placed on whether decisions are taken in Brussels or London (or indeed Cardiff).

- Standard of EU officials felt to be high. Understanding of high standard and objectivity of EU staff recruitment process

9 January 2014 – London: Emerging Themes

Cross-cutting issues

Advantages / disadvantages of measures to harmonise across the EU including level playing field considerations

- Concerns about the inconsistency in policy implementation across the EU with specific focus on price competitiveness. Specific example provided of German industry not being subject to the same level of energy taxes as the UK as well as being cushioned by the German government. This contrasts with the situation in the UK and as such leads to distortion in competitiveness across EU. Consistency of competitiveness across the EU should take prominence.
- Price discrepancies tend to arise as a result of inconsistent interpretation of legislation; the sense in UK industry is that other EU markets tend to be better off than the UK.
- In general the UK appears to implement policy different to the rest of Europe. UK is seen to be adding more complexity to the legislative process through the way it implements legislation (for example, ILUC and the Fuel Quality Directive).
- There appears to be a lack of common sense when it comes to policy development and limited work conducted on assessing the impacts of policy, particularly the cost effectiveness of policy.
- More broadly, interpretation and implementation of EU legislations is inconsistent between Member States.
- Implementation should be strictly monitored. More can be done [at EU level] to report implementation progress as well as reports being made more efficient.
- Content to have a level playing field but it is important that the level at which the playing field is set which is crucial.
- There is a lack of coherence, the EU over emphasises sustainability and security of supply and affordability appear to be lower down on the chain of the EU's priorities. This was evidenced by the Renewables Directive and EU ETS. The EU should take a more holistic approach to policy making.
- The solution to the issue of inconsistent implementation is not to introduce more regulation but rather to encourage greater interconnection between markets.
- The EU has previously drawn on the UK model of markets but the balance is shifting.

The degree and effect of EU action on energy and form of that legislation (regulation v directive)

- Generally prefer the Directives to Regulations which offer more flexible implementation. However, the UK has a tendency to be over prescriptive when implementing Directives.
- The internal market and competitive pricing are linked. It could be possible to argue that the cost of non-compliance is less than the cost of compliance, so some Member States go down that route.
- Article 194 (2) of the TFEU implies that Member States have the choice to decide their own energy mix and Member States are better placed to assess the need for innovation in their country and the best diversity mix. However political intention in some countries appears to allow policies at EU level through the back door that are contrary to those treaty provisions.
- One example of this is the fuel mix agreed by politicians on renewables where the treaty provisions appear to have had no standing.
- The carbon price is not sufficient to liberalise the market.
- The Commission needs to do more work on retail markets.
- German industry appear to be better insulated from green taxes than GB industry and there appears to be no clear vehicle for the UK to make interventions and representations to the Commission where it is felt that another Member State has placed their industry at an advantage over those of another Member State.
- The right balance needs to be struck as to the level of prescription in legislation. For instance, as regards gas and electricity, you need prescribed rules. However, in other areas prescription is unworkable - for instance obligations under the Energy Efficiency Directive.
- Some proposals for legislation are significantly improved as it goes developed through the Council working group negotiating process. However, there have been instances where legislation has imposed obligations where the tools have not been in place for those affected to comply. An example was REMIT where publishing and reporting obligations on industry came into force before the Commission had provided a platform for data reporting.
- The complexity of EU policy is a hindrance rather than a benefit. It appears that the UK is arguing for more policy complexity as well as the Commission.
- EU legislation is remote from business and much too complex. It sometimes appears as though the UK is using EU Directives as a cloak to implement difficult domestic

policy objectives. There needs to be more transparency as to why UK is using the EU to implement its own policies.

- Concerned about HMG's ability to mitigate the impact of EU energy policy on energy intensives.

Degree of coherence of policies or otherwise across EU Directorates

- DG CLIMA and DG ENER should be merged as Directorates. There is currently no cohesion between the two Directorates and often seems that when they should be collaborative they are producing policy which effectively works against their respective objectives. This reflects different political priorities of Commissioners.
- For instance, in respect of carbon capture and storage, there are three directorates who are dealing with this area of policy (RESEARCH, CLIMA and ENER). This should more properly have come under the jurisdiction of DG ENER. Comparison made with the relationship between DECC and DEFRA which has generally been very successful.
- DG ENER appears to be marginalised in the wider EU agenda with more attention being given to priorities of other Directorates such as those in DG COMP and DG CLIMA leading to further restrictive legislation rather than dealing with issues of security of supply and affordability. This has led to a lack of investment which in the long term will affect security of supply and diversity in [Member States'] energy mix.
- Recognition that things may slowly be changing at a political level.
- An example quoted of difficulties caused by Directorates other than DG ENER taking forward legislation on energy issues was the 'REMIT' financial legislation led by DG MARKT. DG ENER appeared to be slow off the mark to influence the policy making process.
- DG ENER appear to move to the drafting phase of legislation too soon following the consultation phase and can end up promoting a specific technology rather than considering the particular [policy] need for the legislation in the first place.

Longer term versus short term vision of EU action

- Doubts expressed as to whether the EU's aspirational aims are actually achievable. The allocation of allowances in the EU ETS Scheme which ended up as being ineffective was given as an example.
- EU does not provide long term vision and is a barrier to investment and innovation for non – renewables sectors. In driving forward the renewables agenda the lack of focus on non-renewables has subsequently led to decreased interest in investment. The impact on the UK economy has been job losses.

- EU legislation has led to limitations in the use of the UK indigenous energy sources (i.e coal)

Role of EU externally and merits or otherwise of EU as a negotiating body for Member States

- The EU appears to be doing more to aid relationships with third countries and Member States. The Russian –Baltic dialogue is an example of where the EU Commission has played a constructive part in relationships between Member States and Third Countries.
- The EU role at UNFCCC negotiations enabling it to speak with one voice has been successful.
- If the EEA fund was abolished and half the fund allocated to ACER, given its financial difficulties and the other half to the Commission that would be a step forward.

New EU legislation before existing legislation is fully implemented

- There has been a belt and braces approach in some areas – e.g. energy efficiency in respect of power generation requirements has been excessive.
- Perception is that EU regulations grow and grow – EU needs to be better at using a “one in, one out” process.
- On environmental matters, the tendency is to go towards perfection. E.g. there has been an endless discussion on biofuel sustainability, which is hurting investment in EU Renewables. Tendency to fix things by adding complexity.

Whether disconnect between existing legislative requirements and on-going market developments

- Very difficult to quantify benefits of increased competition, market integration, etc.

Consideration of EU legislation incorporating regular review/sunset clauses as standard

- No evidence that the balance has been wrong in promoting smart technology, but the quality of [the legislation] is not good enough. Often important to address things at the EU-level.

- It is possible that EU-level decisions help protect against more local political pressure

Timescales in respect of consultation, negotiation, adoption and/or implementation of EU legislation

- Concern that UK Government reflects the views of 'he who shouts the loudest' when negotiating legislation.

Differential implementation by Member States of EU legislation and whether 'gold plating' or first mover advantage can be an issue

- As an example of 'gold plating' at the EU-level, whilst the Carbon Capture and Storage Directive was designed to be helpful, the non-legislative guidance documents (of which there are four, and are very extensive) have made the Directive aims undeliverable
- Sometimes, 'by-the-letter' interpretation of European rules can be unhelpful. For example, on issuing consumer check-lists, the UK has interpreted this as a need to send by post. Other Member States issue this electronically, which the Commission have been happy with.
- There are times where guidance documents can be helpful.
- Focus has been on wholesale markets. Would object to too much prescription in respect of retail markets.
- There is an issue whether there is 'gold plating' of legislation whether it is differential interpretations of Directives – e.g. whether British Civil Servants are looking at things properly when other Member States are not.
- Question how much the UK approach is dictated by risk-adverse lawyers, and e.g. ensuring that there is no risk of infraction, whereas other Member States take an approach which looks to work around regulations.
- Need a level playing field. Concern that, with regards to energy policy, UK Government interprets laws differently to other Member States.
- Is there a habit of politicians introducing unpopular regulation and blaming Brussels? Needs to be more testing of EU regulations and more scrutiny. National Governments need to be more open when they over-implement.

- Gold-plating is a bit of a myth. Regulation is necessary and in some areas it has to be harmonised. In others, you need to set a floor and it might be better to go above this floor when implementing domestically.
- Gold plating as a phrase tends to be used in reference to additional policies. But the issue is more of under-implementation by others. However recognise there is a capability [resource] issue in some Member States.
- There is much less gold plating in the UK than there has previously been.
- On the Internal Energy Market, UK has been ahead of the curve. This is not gold plating.
- An example of gold plating is REMIT - Ofgem could be interpreting the rules too strictly. An initial view is that there is a heavier version of REMIT in the UK than in other Member States.

Whether EU action has been proportionate to the issues it seeks to address

- The Energy Efficiency Directive (EED) has not taken into account national [?] incentives to be as energy efficient as possible.
- A lot of 'overreach' from the EU on energy matters. The issue in Brussels is both over-ambition at the political level and mission creep between different DGs.
- Currently there is uncertainty on the impacts of the cap on transmission charges from Regulation 838/2010

Impact assessments (IAs) and consultation process

- More early engagement opportunities with the Commission would be welcomed - particularly at the green paper stage. The Commission does not do enough to engage with stakeholders at an early stage.
- When consultations take place it is difficult to establish where and when they are happening. Better communication on the part of the Commission, informing key stakeholders when consultations are taking place, would therefore be welcomed.
- Commission consultations tend to be technical in nature but the broad policy has already been agreed and there is no scope for constructively influencing the direction of policy.

- In developing new legislation there is insufficient consultation with consumer groups and therefore identifying the potential impact of new proposals. Consumers are rarely consulted; it is important the EU makes a concerted effort to consult all interested groups when developing policy.
- Affordability does not appear to feature in the discussions on EU policy proposals nor is there consideration of the most cost effective solution for consumers. This should be reflected in the Impact Assessment accompanying legislative proposals.
- There is a need to recalibrate the assessment criteria used in impact assessments (IAs) to address consumer perspectives; impact assessments contain nothing to help determine whether there is a net benefit to EU consumers.
- IAs appear to be about making the case for the proposal the EU is putting forward rather than providing a sensible cost benefits analysis.
- The general public are ill informed about the cost of renewable energy. The Commission tends to produce 'independent' reports that support their policy objectives and do not provide a balanced view. Furthermore, it is difficult to access the basis of EU information [used in the preparation of proposals]. Transparency is an issue for the EU.
- The Offshore Drilling Directive is an example of a poorly conducted IA. Political will and intention [of other Member States] can overrule the UK's position on areas where we have ceded competence to Europe.
- IAs have not looked at the right things – for example, carbon, capture and storage has not featured in the 2030 impact assessment.
- Need to 'clean up the rules' for IAs – should be asking the right questions. If they are being undertaken to prove a particular point, then the IAs are not objective. For example, Time of Use metering – Commission is very excited about the future prospects of this but it is not necessarily the right approach for all groups.
- There are examples of IAs being completed after policy decisions have been made, driven by tight timetables – e.g. IA on framework guidelines on gas tariffs.
- EU IAs are of variable quality, and need to be clear as to their purpose.
- Good examples of IAs are where there is clear technical consensus – e.g. the IA on electromagnetic radiation.
- IAs tend to be self-serving.
- Need to be careful of unintended consequences, which IAs do not measure – e.g. Fuel Quality Directive has resulted only in a reshuffle of lower quality fuel to other parts of the world and the Commission would not initially commit to doing an IA.

- IAs are skewed from the beginning as the Commission is always going to propose something to address a perceived problem – e.g. Offshore Safety Directive – was there a need for a Directive at all?

Sector specific issues

Internal energy market and competitiveness; security of supply; indigenous energy resources and import dependency; eu external relations

Common framework and benefits / disadvantages:

- Some EU action seems to be unnecessary and to conflict with the right in the Treaty for Member States to determine their own energy resources. The Directive on offshore drilling does not add anything new to what the UK already does but a lot of time was spent in defending the current position and preventing the prescription of a Regulation.
- The EU may now introduce regulations on shale gas that will allow other Member States with no such reserves having a voice on the issue. This could lead to prescriptive regulations which deter exploitation.
- Some EU legislation is unnecessary and politically-driven – e.g. on unconventional gas. Rules on offshore drilling and shale gas are examples of what the EU should not do – rules set by MSs that do not have a stake in the industry or want to stop it.
- Danger that regulation will be used as an instrument to stop fracking.
- No justification for overarching legislation on shale. Already have the rules that are necessary. The only people who want rules are those who do not want shale.
- There are a lot of burdens on operators. EU technical codes which have options can be implemented differently which causes uncertainty. Regulatory regimes in Member States are different and there can be problems if neighbouring Member States interpret codes in a different way.
- It is not obvious what EU legislation affects companies. EU legislation adds uncertainty in relation to EMR.
- Legislation on carbon capture and storage (CCS) has imposed onerous liabilities and harmed the development of this technology. Regulation has been influenced by Member States that do not have CCS.

- EU should not introduce legislation (e.g. on CCS) unless there is a lack of legislation to cover it in Member States.
- EU should assert itself to be a leader on issues like CCS but it is not happening. There is a lack of commitment at EU level. Rest of the world is getting ahead and there is a detrimental effect on investment.
- Potentially best technologies might not be adopted for political reasons
- EU position on climate change can create un-competitiveness for UK companies. Creates an uneven playing field for the EU in relation to global partners.
- Member States have a right to determine their own energy mix so there should be nothing in EU legislation to stop UK fracking even if other Member States do not like it. Important to keep good manufacturing jobs in the UK
- Tendency for Member States that want to stop a technology to want more legislation.

Interconnection:

- EU legislation has been helpful in relation to interconnection.
- Greater interconnection is good for prices and security of supply but unacceptable if there is a prescriptive approach to targets for interconnection.

Completion of third package:

- Internal market has focused on needs of industry. DG ENER has been slow to look at benefits for consumers. Would like more focus on consumers and the needs of different groups of consumers.
- EU could learn from the approach of the UK to consumers. Difficult to get the voice of the domestic consumer heard. When drafting policy, there should be a focus on the requirements of different consumer groups.
- Generally the internal market is beneficial. Benefit of the internal market is limited by lack of interconnection but greater integration is not the entire solution. Need capacity mechanisms too.
- Large industrial users are in a better position now. Unbundling has been very positive. But not all distortions are being addressed – the Commission finds some Member States easier to take action against than others. For example, the

Commission could have been more active in dealing with tariffs that are not cost reflective.

- Need to avoid EU-wide codes that benefit certain players over others.

Coherence on capacity mechanisms across Member States:

- UK policy should take into account the effects of new mechanisms at EU level and try to 'future-proof' policy.
- The EU has made progress on capacity mechanisms (e.g. in State aid guidelines). Consistency in relation to capacity mechanisms will help the internal market to develop.

Role of EU externally and as a negotiating body for Member States:

- EU could have a larger role in some international agreements – EU ratification of the London protocol on cross-border transportation of CO₂ could speed up agreement.
- Can't rely on the EU to represent UK interests. It is influenced by the majority view. We are losing out on the potential of emerging markets because other Member States do not have an interest.
- Energy Intensive Users (EIIs) need protection – it is not in the interest of the global climate if they move to India/China.
- Helpful for the EU to have a stronger external voice in a crisis and more coordination – e.g. in dealing with the effects of Ukraine-Russia relations [on supplies to the EU].

Renewables and Target Setting – role of EU and issues / degree of co-ordination of policies

- There is a role for the EU in setting technology neutral emission reduction targets and promoting a range of technologies.
- It would be better if the EU just set a target for emissions reduction and allowed the Member State (MS) to choose the best combination of measures to achieve these targets. It is not the role of the EU to choose which technologies between renewables or nuclear or carbon capture and storage (CCS). Member States should deploy reflecting their national circumstances (climatic, economic, political etc).

- There needs to be greater consistency in how parameters such as emissions are measured. In the transport sector there is a great deal of detail for some vehicles but not others.
- There has been some disagreement between the different DGs in the Commission and this has not helped in the development of clear policy.
- The introduction of a renewables target in addition to a carbon target is just an incentive to pick “winners” from existing technology without any incentive to develop new technologies. It is not the business of the EU to dictate which proportion of energy should come from renewables – this is correctly reflected in Article 194 of the TFEU.
- In the UK the Energy Act 2014 means we are heading for a level playing field between technologies – so far as that is possible. There will only be a level playing field for contracts for difference (CfD), for instance, if all other things are equal.
- The carbon floor price is, in effect, a tax which goes to the Treasury and is gold plating. This should be compared with CfDs which result in the funds being recycled and these fund the creation of low carbon electricity.
- It is not clear that investment in wind power is worthwhile, the carbon price has not been included in the cost calculation and this is a significant omission.
- The best way of making renewables work in the EU as a whole is through the greater use of interconnectors – accepting that there are transport / transfer costs.

Energy Efficiency and advantages / disadvantages of action at EU level

- There is a limit to what the UK can achieve on its own in for example energy efficiency and climate change. It is futile for the UK to act on its own if the rest of the world does not act in a similar manner; what is liable to happen is that UK industry and jobs (such as the steel industry) will be exported to other countries with no benefit to the UK or in terms of global emissions reduction.
- Product standards, for example, fridges and other appliances have resulted in more energy efficient products.
- The present UK energy efficiency regime, much of it derived from the EU, is over burdensome; there is a lot of duplicate reporting and lack of co-ordination amongst different reporting organisations and for different schemes, for example climate change agreements and the new Energy Savings Opportunity Scheme (ESOS) which implements the Energy Efficiency Directive. All this reporting has a cost which needs to be paid for.
- The UK seems to do more reporting of results than other MSs; this is an unnecessary burden and could be argued as being ‘gold plating’.
- Some MSs already have long standing energy efficiency policies and adding further layers of reporting etc just adds unnecessary burdens.

- Energy efficiency is a normal part of business, particularly for the energy intensive industries; further legislation requiring them to do so is therefore not needed.
- Further improvements in energy efficiency will be in the domestic sector. However this will require investment in, for example, new housing stock and at the moment there is little incentive to do so.
- There needs to be a recognition that the achievements of efficiencies tend to be back loaded to the end of the timescale; therefore just because progress does not seem to be “on schedule” does not imply that the target will necessarily be missed or that remedial action is required.
- In the UK companies have to go to the Regional Growth Fund or Green Investment Bank (which only operates at commercial rates) to secure finance for investment in energy efficiency, so is not worth doing. However these companies are competing against low cost MSs such as Poland, who have access to considerable EU funding.

Shale gas development

- The EU tries to set out a level playing field but then MSs approaches distort it. For a level playing field to work it needs to be global - but this is not going to happen, for example shale gas is giving the US significant cost advantages.

Carbon Capture and Storage

- The general lack of commitment to CCS by the EU, such as the lack of a target for it, has been a handicap to its development. On the other hand Canada does have a target and has taken CCS development forward.
- The low carbon price has also not helped the development of CCS.

Research, Development and Skills

- There is a role for the EU in promoting R&D and to enable pilot / demonstration plants to be built and demonstrate the feasibility of different technologies and knowledge sharing.
- The EU has already done some valuable work on R&D and training, for example the use of EU funding in re-skilling in areas affected by closures in the UK coal and steel industries.
- At the moment the lack of skills relevant to renewables and CCS is acting as a barrier for their development. Promotion of these skills by the EU could help to overcome this.

Nuclear

- There is a need to ensure that EU policy does not result in, for example, Member States being able to dump subsidised nuclear generated energy via interconnectors on other MSs such as the UK [which distort the market].

Consumer Interests

- There seems to be the perception at the Commission that the high cost / price of consumption is seen as a virtue and results in emissions reductions. However there have been no instances where rising costs have resulted in an increase in job numbers.
- At the moment there is not a “strategic approach” assessing the costs on consumers who ultimately have to pay for any improvements or changes required by EU legislation.
- There is also insufficient consideration about what consumers need or what they want.

Impact Assessments

- There needs to be clearer and more transparent impact assessments including analysis of costs.
- There needs to be a better consideration of options in impact assessments. These also need to include possible exemptions that are being considered. Although exemptions may be beneficial to a particular MS they will add to the cost of the overall cost of a particular option.

13 January 2014 – Belfast: General

State aid guidelines – impact on energy and capacity market mechanisms

- It is more for Member States rather than companies / organisations to judge whether or not the EU is pushing competence boundaries.
- However state aid guidelines as it applies to energy is an area where the EU does seem to be increasingly encroaching on a Member State's (MS) ability to decide how to develop its market - yet the EU market is not yet sufficiently developed in some regions for this to be sensible. It is a timing issue.
- For example the all Ireland 'Single Energy Market' (SEM) includes a capacity market mechanism which was never felt to fall under the definition of State Aid. However now the EU is intending to include capacity market support in its state aid guidelines, there is a potential concern that it may not suit the existing SEM arrangements. This is an example of competence creep as it falls outside the current state aid rules.
- This is also an example where, although the island of Ireland has had a capacity market for a long time and it has worked successfully, it now feels that options in market design are unduly limited as a result of EU action.
- It is possible that you design something for say 2017, which then has to be re-designed for 2019 due to the subsequent introduction of EU legislation and this can prove to be relatively expensive. You often have to change things and are disadvantaged if you are ahead of the game.
- The Commission has a set view as how capacity mechanisms should be used and the potential for different effects of the rules and the unintended consequences are a problem. Though as an island, N Ireland with Republic of Ireland had already put in a capacity mechanism for the SEM, it was not considered to fall within the definition of State Aid when it was implemented, but interpretation at EU level seems to be changing.

Renewables – size of markets

- The rural community in N Ireland has always been encouraged to take up renewables incentives. At the moment NI has 14kwh up from 12kwh but this is a long way from the 200kwh that it hopes to achieve by 2017. Overheads and costs are very frustrating for small scale projects and are disadvantaged. It is much easier when it is done on a larger scale and large scale projects are ploughing ahead. Companies operating in N Ireland want to be competitive but it is easier for those in larger member states to compete in the wider EU market.

Technical Codes and competitive (cost) issues

- The technical codes are interesting due to the directives that underpin them. The harmonisation that is achieved and aided by the roles of ACER, and ENTSO-E/ENTSO-G is a good thing in principle, but because development of the technical codes is being rushed, there are inconsistencies in drafting that undermine harmonisation.
- It's interesting to note at what point the internal energy market is completed. Theoretically full implementation of the technical codes will complete the 3rd package.
- Once directives are implemented, if there are slight differences in follow on directives this may not cost a lot to a country like Germany to put in the necessary changes but in Northern Ireland it is a big cost. This also applies if you have interpreted an existing Directive in a certain way and the next directive comes along with more prescription.
- There is a growing tendency from the EU for more prescription.
- There is no single gas market in the island along the lines of SEM.
- The prescriptive design of the EU single market is the problem - not the concept of a single market.
- The issue of increased consumer costs is important. There is a new report coming out from the Commission which energy supplier companies are very wary about as the studies they draw upon may not be helpful.
- For example, comparisons are often made with German prices and their prices appear to be cheaper, but in reality they are not. In Germany, industry does not pay renewables support charges so their costs and therefore prices are cheaper and in the Netherlands, prices can be cheaper because they need less miles of cables; this is simply due to their geographical location. So comparing prices across the EU can be difficult and sometimes misleading.

Energy Efficiency

- In Northern Ireland price comparisons are complicated as it depends on whether domestic prices or those of corporate entities are being compared and what is being considered.. Energy efficiency is aimed at the socially deprived and some energy efficiency is incorporated in consumer bills. Nevertheless prices are probably lower than the rest of the UK.
- In terms of cost, energy efficiency measures tend to be less than other measures whilst the benefits from energy efficiency are potentially huge.
- On the other hand the calculation methodology in the Energy Efficiency Directive can undermine progress on reducing carbon, namely the conversion factors used.

For example, a more efficient boiler might use less energy but produce more CO₂. An equally efficient oil and gas boiler might create better efficiency. An oil and electricity boiler, even if they take the same amount of energy, might produce different CO₂ but the energy efficient directive treats them the same.

- The Industrial Emissions Directive (IED) - even though it is environmental legislation – has huge impacts on the electricity power market. Northern Ireland has a plant that is closing but is still required to meet a short-term capacity shortfall. Interpretation and implementation should therefore have involved Government Departments beyond the Environment Agency.
- For example, Scotland has interpreted the IED in a way that allows for greater flexibility for power stations – for example they can be run more during the first years of the IED. However the rest of the UK has interpreted it differently and in a more restrictive way. This is a good illustration of the sometimes significant ways in which MSs (and within MSs) can use the flexibility of Directives. In this instance, Northern Ireland would have been better to adopt the Scottish model.

REMIT

- REMIT is a regulation that should cover physical trading that isn't covered by financial regulations (EMIR, MIFID). Compliance becomes complex as energy suppliers may need to report the same transaction to a number of different agencies. It is also causing some participants to leave markets, with impacts on liquidity/competition.

Need for more flexible / prescriptive regulation – market size as an issue

- It depends on what solutions to an issue are found when deciding whether legislation should be more or less prescriptive.
- Size is an important issue. In Northern Ireland the market is small so it costs a lot to fix things. Sometimes the EU does not focus on the scale of the market/infrastructure and therefore the appropriateness of the proposals – one size does not always fit all.
- Northern Ireland has to implement at a regional level as it sits under the umbrella of the UK. Even if solutions [in legislation] are found for small Member States and for larger Member States, this does not necessarily address the issues for Northern Ireland since it is part of the UK as a larger Member State. Few other Member States are in this situation.
- On the whole the EU is beneficial for N Ireland but timing is an issue. An example is the billing information required [under the Third Package]. As N I is a small market, every time we have to change billing information it comes at a cost. It is right to have good information that customers want, but it is costly to change it all the time. It is also important to remember how much information customers actually want. You do

not want to swamp the customer with information. The issue is not so much where the EU has got to with requirements on billing but the fact it took 3 steps [three lots of legislation?] to get it there. The 3 step process takes up a lot of time which could be spent doing better things – especially in Northern Ireland.

- The issue of switching suppliers from the UK present rule of 4 weeks to 3 weeks was not an issue for NI since it had no such requirements in place – therefore it went straight to requiring a 3 week maximum time.

Impact Assessments (IAs), small markets and legislative process

- IAs are not always relevant to Northern Ireland. IAs are drafted in such a way that tends to be a 'one size fits all' - but that does not always work due to geographical location.
- It is hard to reflect the difference in geography and size of market in legislation. We attempted to do that in the TEN-E regulation but it was quite difficult.
- As regards the security of gas supply regulation - not being a detailed market regulation - this was easier to achieve. NI is almost like a separate country from the UK as gas to N Ireland and gas to Republic of Ireland all come from Scotland and treaties between the UK [and Republic of Ireland] govern this.
- Getting legislation right takes time but in practice the EU legislative process means you have to act quickly and you do not get a chance to work out complicated solutions.
- Under the Renewables directive there is a requirement that renewables should get priority to dispatch but under another directive interconnections should get priority to dispatch – so this can make for conflicting priorities. *[Subsequent note by a stakeholder suggests that - Article 16(2)(b) of The RES Directive ([2009/28/EC](#)) is probably being referred to].*
- Because in SEM the most economic solutions for the whole island has had priority, the development of renewables in N Ireland has been curtailed. This is seen as a consequence of an EU directive and its requirement to trade with other Member States and acts as a disincentive to develop renewables. *[Subsequent note by a stakeholder suggests that on the level of curtailment - Article (2)(9) of 2009/28/EC is probably being referred to].*
- The methodologies in IAs are not at all clear. Seeing the methodologies would help to understand the proposals for legislation even if you do not agree with them.

Other comments including benefits of action at EU level

- A level playing field and harmonisation across MSs can be beneficial but on the other hand can be an issue for smaller markets.
- If you change one of the three main pillars, you'll affect the others: costs, sustainability, security of supply are all interlinked. However you never know what the counterfactual is and energy policy is essentially quite new so it's difficult to conclude the extent to which action at EU level has been beneficial.
- Assessing the results of EU energy policies is difficult as we shall not be seeing the full effects of all the legislation and measures for around 30/40 years.
- It is important to note that Northern Ireland has a different energy mix to the mainland - for instance it has no nuclear or serious tidal.
- N Ireland always had security of energy supplies but because the market has changed quite considerably [in recent years] and now the focus is on environment impact etc., it raises the question of how prepared N I is to keep the lights on at that price. Energy efficiency has a role to play here.
- The EU continues to press forward in trying to join Member States' markets up but Member States want to keep control of their own energy mix - that is not in the best interests of developing the internal energy market.
- The legislation for the oil stocking directive is good. In an emergency a country could have blocked another country taking its stocks. This impacts us all and means we can get stocks from other countries.
- The National Oil Reserve Agency is also a good idea in Northern Ireland. It's a good idea to allow industry to do it within certain parameters.
- Energy has been subject to a lot of prescription in EU legislation as regards energy industries. However competition was absent on the retail side 10 years ago. Now that it is being addressed it is a very positive outcome of EU action.
- Regulation 994 (Security of gas supply regulation) is a good example of where the EU has provided a focus. The EU pushes MSs to take 3 steps instead of the 2 we would normally take and we would not have gone as far if that regulation had not been there.

21 January 2014 – London: Horizontal Interest Groups (HIGs)

DECC began by clarifying the scope of the report and setting out some of the themes emerging from stakeholders' observations in workshops and evidence so far, including views that:

- The EU continued to push at the boundaries of its competence on a range of energy issues.
- There was a lack of coherence across EU Directorates could lead to perverse incentives and unintended consequences.
- There were some benefits to the EU's approach, which tended to be more long-term than that taken by Member States.
- Although greater harmonisation provided legal certainty, it might not always be the most cost-effective option.
- The EU had an increasing tendency to introduce new legislation, rather than amend existing legislation.
- Timescales for consultations were sometimes inappropriate, but there was no easy solution to this.
- Problems also arose due to the differing ways in which Member States chose to implement measures.
- There were mixed views on whether EU action was always proportionate.
- There were concerns about the quality of impact assessments and the consultation process.

Discussion initially focused on whether EU competence for energy had been exercised in a beneficial way for the UK and the extent to which stakeholders agreed with an emerging view from some stakeholders that the EU tends to build in a longer term perspective in its proposals and therefore preferable to the vagaries of 'short termism' sometimes displayed by Member States.. Stakeholders had mixed views. While some felt that, given the debate around Britain's domestic energy policies, the degree of certainty offered by the EU's long-term approach was helpful, others questioned whether the EU really did take a longer term view – the EU was yet to announce its policies up to 2030, while the UK already had climate change commitments for 2050. The European elections added a further element of uncertainty; it was difficult to know what the next Commission's priorities might be. The EU was also vulnerable to the vagaries of domestic politics within Member States.

The discussion moved onto the EU's efforts to create a level playing field. One stakeholder noted that it was easier to create a level playing field in place in certain industries, such as gas, which was transportable, than others, such as electricity, where the UK and Ireland were isolated compared to the rest of Europe which was more interconnected. Cyprus had made representations regarding how difficult it was for them to implement certain elements of EU energy legislation that were more straightforward for other Member States. The EU should acknowledge these differences.

One stakeholder also noted that the UK was at a disadvantage if it enforced measures which other Member States subsequently failed to enforce. Equally, the EU might pass legislation which, while designed to address an issue in a particular Member State, had to be

implemented by all Member States; the Member State whose issue the legislation was intended to address might never even implement it.

There was concern that the EU failed to implement existing legislation fully before passing new legislation. For example, there was a proposal for a new Nuclear Safety Directive, notwithstanding the fact that the previous one had not yet been fully implemented. The new legislation proposed was also more prescriptive. There was a sense that the EU should let the existing legislation run its course to measure its effectiveness.

One stakeholder noted that this was related to the issue of how difficult it was to amend Directives once they were in place, citing the EU-ETS as an example. Another stakeholder noted that, although having a sunset or review clause in legislation was probably preferable to not having one, the prospect of a review might mean that the Commission felt compelled to demonstrate progress, might propose new measures and this could become political. There needed to be more analysis of what was happening under existing legislation. There were also issues around cost-effectiveness and how this should be best evaluated.

Stakeholders agreed that there needed to be greater levels of transparency around Impact Assessments and consultations. One stakeholder noted that the Commission had published an Impact Assessment at the same time as its proposal for the Fuel Quality Directive, which did not give industry any chance to react to the findings of the Impact Assessment. Others commented that Impact Assessments needed to be more neutral and independent.

For example the scenarios in one Impact Assessment had been quite biased against nuclear in a disingenuous manner. Although the Commission might not be actively supportive of nuclear, a large number of Member States were pro-nuclear. Impact Assessments should be a genuine attempt to look at all the possible scenarios and options, without the politics.

One stakeholder observed that a consultation to which they had responded had been framed in a way that seemed designed to elicit particular responses. The stakeholder had had to submit a separate written response, as they had not been able to give their view in response to the questions as they had been framed in the consultation.

Stakeholders also called for greater accountability, citing Carbon, Capture and Storage (CCS) as an example where the EU had had grand plans, projects had been selected, but then no steps had been taken to address the fact that the aims had not been achieved. Stakeholders thought there was a role for the EU with regard to CCS, across the complete chain of storage, capture and transportation. Many Member States were sceptical about CCS at the moment – someone needed to go out on a limb and take a risk. It would make sense to have collaboration at EU level on this issue.

Sources and literature used in the Energy report

This list is not exhaustive but includes some of the sources considered in preparing the Energy report.

UK Parliament reports

14th Report of Session 2012–13
“No Country is an Energy Island: Securing Investment for the EU’s Future “
Published 2 May 2013

4th Report of Session 2009-10
Impact Assessments in the EU: room for improvement?
Report with evidence, published 9 March 2010

5th Report of Session 2007–08
The Single Market: Wallflower or Dancing Partner?
Inquiry into the European Commission’s Review of the Single Market
Chapter 5: Energy

European Commission

DG Energy http://ec.europa.eu/energy/index_en.htm

DG Environment: http://ec.europa.eu/environment/index_en.htm

Eurostat: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

LIST OF DOCUMENTS SUPPLIED BY THE COMMISSION AS OF JANUARY 2014

Legislative documents

1.1 GENERAL

[Council Regulation \(EU, Euratom\) No 617/2010](#) of 24 June 2010 concerning the notification to the Commission of investment projects in energy infrastructure within the European Union and repealing Regulation (EC) No 736/96

[Directive 94/22/EC](#) of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons

[Regulation \(EC\) No 663/2009](#) of the European Parliament and of the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy

1.2 OIL

[Council Regulation \(EC\) No 2964/95](#) of 20 December 1995 introducing registration for crude oil imports and deliveries in the Community

[Council Directive 2009/119](#) of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products

[Directive 2013/30/EU](#) of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending [Directive 2004/35/EC](#) (Text with EEA relevance)

1.3 GAS

[Directive 2009/73/EC](#) of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing [Directive 2003/55/EC](#)

[Regulation \(EC\) No 715/2009](#) of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing [Regulation \(EC\) No 1775/2005](#)

[Regulation \(EU\) No 994/2010](#) of 20 October 2011 concerning measures to safeguard security of gas supply and repealing [Council Directive 2004/67/EC](#)

[Directive 2008/92/EC](#) of the European Parliament and of the Council of 22 October 2008 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users (recast) (text with EEA relevance)

[Regulation \(EC\) No 713/2009](#) of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (Text with EEA relevance)

[Regulation \(EU\) No 1227/2011](#) of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency

1.4 ELECTRICITY

[Commission Regulation \(EU\) No 838/2010](#) of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging

[Commission Regulation \(EU\) No 774/2010](#) of 2 September 2010 on laying down guidelines relating to inter-transmission system operator compensation and a common regulatory approach to transmission charging

[Directive 2009/72/EC](#) of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing [Directive 2003/54/EC](#)

[Regulation \(EC\) No 714/2009](#) of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity repealing [Regulation \(EC\) 1228/2003](#)

[Directive 2005/89/EC](#) of the European Parliament and of the Council of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment

1.5 RENEWABLE ENERGY

[Directive 2009/28/EC](#) of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing [Directives 2001/77/EC](#) and [2003/30/EC](#)

1.6 ENERGY EFFICIENCY

[Directive 2012/27/EU](#) of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

[Directive 2010/30/EU](#) of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (recast)

[Regulation \(EC\) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters](#)

[Directive 2010/31](#) of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings and its amendments (the recast Directive entered into force on 9 July 2010, but the repeal of the [previous Directive](#) took place on 1 February 2012)

[Directive 2004/8/EC](#) of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending [Directive 92/42/EEC](#) of 21 May 1992 on efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels - will be repealed by the Energy Efficiency Directive with effect from 5 June 2014

1.7 NUCLEAR ENERGY

[Council Regulation \(Euratom\) No 2587/1999](#) of 2 December 1999 defining the investment projects to be communicated to the Commission in accordance with Article 41 of the Treaty establishing the European Atomic Energy Community

[Commission Regulation \(Euratom\) No 66/2006](#) of 16 January 2006 exempting the transfer of small quantities of ores, source materials and special fissile materials from the rules of the chapter on supplies

[Council Directive 2009/71/Euratom](#) of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations

[Council Directive 96/29/Euratom](#) of 13 May 1996¹⁹³ laying down basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation (and [corrigendum](#) to it), repealing and replacing [Council Directive 80/836/Euratom](#) of 15 July 1980 and [Council Directive 84/467/Euratom](#) of 3 September 1984

[Council Directive 90/641/Euratom](#) of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas

[Council Directive 97/43/Euratom](#) of 30 June 1997 on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure, and repealing [Directive 84/466/Euratom](#)

[Council Directive 89/618/Euratom](#) of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency

[Commission Regulation \(Euratom\) No 770/90](#) of 29 March 1990 laying down maximum permitted levels of radioactive contamination of feeding stuffs following a nuclear accident or any other case of radiological emergency

[Council Regulation \(EEC\) No 2219/89](#) of 18 July 1989 on the special conditions for exporting foodstuffs and feeding stuffs following a nuclear accident or any other case of radiological emergency

[Commission Regulation \(Euratom\) No 944/89](#) of 12 April 1989 laying down maximum permitted levels of radioactive contamination in minor foodstuffs following a nuclear accident or any other case of radiological emergency

[Council Regulation \(Euratom\) No 3954/87](#) of 22 December 1987 laying down maximum permitted levels of radioactive contamination of foodstuffs and of feeding stuffs following a nuclear accident or any other case of radiological emergency

[Council Directive 2003/122/Euratom](#) of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources

[Council Directive 2006/117/Euratom](#) of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel between Member States and into and out of the Community, repealing [Council Directive 92/3/Euratom](#)

[Council Directive 2011/70/Euratom](#) of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste

¹⁹³ Note: Council Directive 2013/59/Euratom of 5 December 2013 published in the OJ in January 2014 lays down basic safety standards for protection against the dangers arising from exposure to ionising radiation and repeals Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom, and 2003/122/Euratom

[Commission Regulation \(Euratom\) No 302/2005](#) of 8 February 2005 on the application of Euratom safeguards

[Council Regulation \(Euratom\) No 1493/93](#) of 8 June 1993 on shipments of radioactive substances between Member States

[EAEC Council: Regulation No 3](#) implementing Article 24 of the Treaty establishing the European Atomic Energy Community (on security gradings and the security measures to be applied to information acquired by the Community or communicated by Member States which is covered by Articles 24 and 25 of the Treaty establishing the European Atomic Community)

[EAEC Council Directive of 5 March 1962 on freedom to take skilled employment in the field of nuclear energy](#)

1.8 RECENT LEGISLATIVE PROPOSALS

Proposal for a Council Directive amending Directive 2009/71/EURATOM establishing a Community framework for the nuclear safety of nuclear installations COM(2013) 343 final http://ec.europa.eu/energy/nuclear/safety/doc/com_2013_0343_en.pdf

Commission Regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009 of the European Parliament and of the Council <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32013R0984:EN:NOT>

Policy documents and reports

2.1 ENERGY POLICY TO 2030

Green Paper on "A 2030 framework for climate and energy policies"
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0169:FIN:EN:PDF>

2.2 ENERGY ROADMAP 2050

[Communication on the Energy Road Map 2050](#)

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0885:FIN:EN:PDF>

2.3 RENEWABLE ENERGIES

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Philip Booth and Carlo Stagnaro

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EU renewables target protects favoured industries at the expense of consumers

Carlo Stagnaro

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Author(s): [Jacques de Jong](#), [Christian Egenhofer](#)

In: [Energy](#), [CEPS Special Reports](#)

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Acronyms

Acronym	Name
ACE	(UK) Association for the Conservation of Energy
ACER	Agency for the Cooperation of Energy Regulators
BCC	British Ceramics Confederation
BIS	Department Business Innovation and Skills
bcm	Billion cubic metres
CCC	Climate Change Commission
CCGT	Combined Cycle Gas Turbine
CCS	Carbon Capture and Storage
CEER	Council European Energy Regulators
CER	Centre for European Reform
CHP	Combined Heat and Power
CIBSE	Chartered Institution of Building Services Engineers
CoalPro	Confederation of UK Coal Producers
CPI	Confederation of Paper Industries
CRC	Carbon Reduction Commitment Energy Efficiency Scheme
DECC	Department for Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DETI	Department Environment Trade and Investment in Northern Ireland
DG	Director General
EC	European Community
ECJ	European Court of Justice
ECSC	European Coal and Steel Community
ED	Energy Directive
EDF	EDF Energy (Energy supply company)
EEC	European Economic Community
EED	Energy Efficiency Directive
EEF	The Manufacturers' Organisation
EFSA	European Food Safety Authority
EIA	Energy Information Administration of the United States of America
Ells	Energy Intensive Industries
EMR	Energy Market Reform
ENTSO-E	European Network of Transmission Operators for Electricity
ENTSO-G	European Network of Transmission Operators for Gas
ESA	Environmental Services Association
ETS	Emissions Trading System
EU	European Union
EU ETS	EU Emissions Trading System
EURATOM	European Atomic Energy Community
FDF	Food and Drink Federation
FiT	Feed in Tariff
FOE	Friends of the Earth
FQD	Fuel Quality Directive

FTE	Full-Time Equivalent
GB	Great Britain (excluding Northern Ireland)
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GLA	Greater London Authority
GVA	Gross Value Added
IA	Impact Assessments
IAEA	International Atomic Energy Authority
ICE	Intercontinental Exchange
IEA	International Energy Agency
IEEP	Institute for European Environmental Policy
IME3	EU Third Energy Package
IRENA	International Renewable Energy Agency
ISLES	Irish-Scottish Links on Energy Study
LCPD	Large Combustion Plant Directive
LNG	Liquid Natural Gas
MEPs	Members of the European Parliament
MSs	Member States
NBP	National Balancing Point
NFU	National Farmers Union
NGOs	Non-Governmental Organisations
NILGA	The Northern Ireland Local Government Association
NNL	National Nuclear Laboratory
NRA	National Regulatory Authority
NSCOGI	North Seas Countries' Offshore Grid Initiative
OECD	Organisation for Economic Co-operation and Development
OSPAR	Oslo and Paris Convention
PCI	Projects of Common Interest
R&D	Research and Development
REACH	Registration, Evaluation, Authorisation & restriction of CHemicals
REA	Renewable Energy Association
RED	Renewable Energy Directive
REMIT	Regulation on Wholesale Energy Market Integrity and Transparency
RES	Renewable Energy Systems
RSPB	Royal Society for the Protection of Birds
RWE	RWE Group (Energy supply company)
rWFD	revised Waste Framework Directive
SEEG	Senior European Experts Group
SET	Strategic Energy Technology
SSSI	Site of Special Scientific Interest
tcm	Trillion cubic metres
TEN	Trans Europe Energy
TEP	Third Energy Package
UK	United Kingdom
UK ETS	UK Emissions Trading System
UKELA	United Kingdom Environmental Law Association

UKPIA	Trade association representing petroleum refining and marketing industries in the UK
UKPLG	Trade association representing PLG companies in the UK
UN	United Nation
UNFCCC	United Nations Framework Convention on Climate Change
US	United States of America
USA	United States of America
UWWT	Urban Waste Water Treatment
UWWTD	Urban Waste Water Treatment Directive
WFD	Water Framework Directive
WT	The Wildlife Trusts
WTO	World Trade Organisation
WWF	World Wildlife Fund

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