



Department
of Energy &
Climate Change

Response to Call for Evidence on Renewable Energy Trading

27 June 2013

This document was first published on 27 June 2013.
A correction was subsequently made to the penultimate technology in Table 2 on page seven;
this version incorporates that change.

Ministerial Foreword

Last year the Government asked for evidence about trading renewable energy with other countries. We wanted to look at the feasibility and value of such projects to the UK, which we suspected could offer an inexpensive source of additional energy to complement what we could produce domestically.

Our interest in this initiative stems from DECC's strategic goals. My Department exists for two main reasons: to protect the UK's access to secure, affordable energy supplies; and to clean up emissions of climate-changing greenhouse gases. I am determined that we should do both of these in a way that is unflinching in keeping down cost, and unapologetic about securing economic benefit for the UK. Trade in renewable energy touches on all of these objectives: importing new sources of clean energy may be achievable in a way that is cheap and clean, and which contributes to our energy system at scale. And, over the longer term, trade can bring large new markets into view for exporting our own natural energy sources like wind, wave and tidal – holding the promise of further economic benefits.

The idea of cross-border trade in renewables is innovative. If physical projects were to go ahead then they would represent a completely new and untested concept – not just for the UK, but for Europe as a whole. So it is not surprising that there are a number of hard questions that need to be overcome before it could be made to work. The purpose of our Call for Evidence was to begin filling in some of those blanks – to better understand the benefits, risks, costs, and solutions. I am grateful to respondents for their help in working through the issues, and for their help where we have been in touch with follow-up questions.

This work has allowed us to make great progress. As might be expected from our history as an island nation, the UK has been more focussed than most on resolving the practical, legal, regulatory and policy obstacles that currently prevent this trade going forward. Reflecting this, we are in touch with a number of project developers – especially of wind proposals in the Republic of Ireland – that look promising and comparatively well-developed, and we maintain an open mind about other good ideas for projects outside our borders. Our work to date continues to demonstrate significant potential for clean new electricity generation to contribute to the UK energy system in a way that looks cost effective.

The task for Government now is to continue this momentum. We are minded to take up some level of trading so long as it can be made to work – which will particularly be the case where such projects are around and close to our borders. We will therefore continue to develop our policy, putting us in a position to take a final and more detailed decision at the end of this year. That means examining the amount of energy that would be desirable and deliverable, over what timescale, and how such energy might find a 'route to market'. Our position will particularly need to reflect two priorities: firstly, the UK's absolute commitment to meeting the 2020 renewables target in the face of different delivery risks and uncertainties - for instance around heat and transport's contribution to the target - for which contingency options may be needed. Secondly, our clear and very strong objective of maximising the economic contribution achieved from investments in new low carbon technologies.

To get there, we have a wide and active programme of work in train both internally within DECC and with wider interests, including the Irish Government and the regulator, Ofgem. This has allowed us to start crystallising our thinking on some of the detail, like the best framework for the undersea cable linking projects to the UK. Where progress with this work allows us to say something earlier, we will do so.

Edward Davey, Secretary of State for Energy and Climate Change

Introduction:

What we asked, and why we asked it

Scope

1. This document responds to submissions received following the Department of Energy and Climate Change's Call for Evidence on Renewable Energy Trading¹. This Response summarises those submissions, sets out the Department's latest activity on the subject, and describes the further actions it is taking. This Response should be read as an update on the current direction of travel and ongoing activity rather than a final or definitive statement of the UK's position on international energy trading. Subject to the outcome of the work described in this document (and, if appropriate, consultation), our intention is to set out a clearer preferred policy position at the end of this year.
2. For clarity, any discussion of 'trading' can mean joint (physical, electricity) projects with other countries, 'statistical' transfer, where payment is made for new renewable generation that is not consumed in the country that pays, or, sometimes, joint support schemes. The Call for Evidence focussed on the first and second of these.

Background

3. In 2009 the leaders of EU countries came together to support a new vision for clean energy in Europe, agreeing that 20% of the continent's energy should come from renewable sources by 2020. But in establishing this ambitious target, the UK and others recognised that a *vision* that is shared across Europe might also be met through an *effort* that is shared. For that reason, when the subsequent Renewable Energy Directive² ('RED') set country-specific targets, it made provision for countries to cooperate on their achievement.
4. Since then, interest in such 'flexibility mechanisms' has grown, both in the UK and in other member states. For the UK, there are two reasons for this: one medium-term, and one longer-term.
5. Our medium-term interest is in maximising the range of options available to support achievement of the 2020 renewable energy target. In last year's Call for Evidence the Department of Energy and Climate Change (DECC) explained that "independent analysis carried out by the Committee on Climate Change (CCC) and DECC's own bottom-up analysis, developed with industry, both confirm that markets are able to scale up at the rate necessary to deliver the required amount of generation necessary for 2020". This continues to be the case: we remain confident that the target could be met through domestic action alone, and Government remains fully committed to a huge range of activity in support of that aim.
6. That activity is supported by the agreement of a profile for the Levy Control Framework, published alongside this document³, which should enable us to achieve 30% or more of

¹ DECC (April 2012), 'Call for Evidence on Renewable Energy Trading'. See <https://www.gov.uk/government/consultations/defining-our-policy-on-renewable-energy-trading>

² European Parliament and Council (April 2009), 'Directive (2009/28/EC) on the Promotion of Energy from Renewable Sources'. See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=Oj:L:2009:140:0016:0062:en:PDF>

³ See <https://www.gov.uk/government/publications/electricity-market-reform-delivering-uk-investment>, Appendix A

our electricity from renewables by 2020. Our plan for making that happen is spelt out in the latest Renewable Energy Roadmap Update⁴.

7. But DECC has also made clear that it is receptive to other options that could reduce the risk of missing the target should one of the three sectors fail to contribute as much as originally foreseen. For example, there are risks around the potential contribution of heat and transport due to a range of factors, including the importance of meeting sustainability standards and gaps in the evidence base on the costs and performance of renewable heating technologies. As one contingency option for managing this risk, DECC has said that flexibility mechanisms will be considered subject to proposals demonstrating cost savings compared with an alternative, wholly-domestic approach. Given the long lead-in times for joint projects (due to the multiple years required to obtain high voltage cabling, for example), it is necessary for the Department to perform work this year to ensure it is in a position to pursue trading as one such contingency option, should it wish, in good time.
8. From a longer-term perspective, it is plain that demand across Europe for renewable energy will continue to grow into the 2020s and beyond. But such ambition – spelt out in documents like the EU 2050 Roadmap⁵ - will begin increasingly to confront the continent's challenging mosaic of diverse and uneven renewable resources. A common solution for balancing any system of unequal supply and rising demand is trade, and the increasingly liberalised cross-European movement of electricity is no different. This represents a new opportunity for the UK: our north-western corner of Europe enjoys the finest wind and marine resources in the World, and there is obvious potential to capture its energy for export to regions that lack such advantage. We believe the potential supply could be very significant. So over the long term, we are determined to see the opening up of European electricity markets matched by the further bold development of UK offshore wind and marine resources, and the commoditisation of areas of indigenous resource that have hitherto lacked exportable value. If the commercial and technical challenges can be made to work, this could offer a profound new source of growth, jobs, and clean electricity.
9. For these reasons, over the last few years the UK Government has been considering whether, when and how to begin trading renewable energy across borders. The following (non-exhaustive) commitments have already been made:
 - **DECC's 2011 Renewable Energy Roadmap⁶** stated that “[trading] could provide an important mechanism to safeguard UK consumers in the event that the costs of domestic deployment do not come down sufficiently” so “[we] are ... taking powers to enable trading, should it be required”.
 - In **May 2012 the UK signed a Memorandum of Understanding with Iceland** to explore the possibility of developing electricity interconnection to give Icelandic geothermal energy a route into the UK market.⁷
 - The **April 2012 Call for Evidence** to which this document responds acknowledged the potential advantages while noting the need for more information on the possibilities and barriers.

⁴ DECC (December 2012), 'UK Renewable Energy Roadmap Update 2012'. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80246/11-02-13_UK_Renewable_Energy_Roadmap_Update_FINAL_DRAFT.pdf

⁵ See http://ec.europa.eu/energy/energy2020/roadmap/index_en.htm

⁶ DECC (July 2011), 'UK Renewable Energy Roadmap'. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48128/2167-uk-renewable-energy-roadmap.pdf

⁷ <https://www.gov.uk/government/news/uk-and-iceland-sign-energy-agreement>

- **November 2012's Contracts for Difference ('CfD') Operational Framework**⁸ suggested that for physical projects, "CfDs could in principle be used to support generation that is located outside of the UK [...] Generators outside of the UK should have access to CfDs, where there is a clear overall benefit to the UK and it is technically possible to effectively implement and enforce CfDs in other jurisdictions".
- **The Energy Bill**⁹, which had its First Reading in November 2012 and is currently passing through Parliament, therefore made provision for the assignment of CfD subsidy to non-UK generators.
- **DECC's December 2012 Roadmap Update**¹⁰ reiterated that "We are still actively working to develop policy to enable directly connected projects to contribute to our renewables targets."
- **In January 2013, the UK and Irish Governments signed a Memorandum of Understanding**¹¹ committing to a programme of work to jointly evaluate the case - and prepare for - the physical export of renewable electricity from Ireland to the UK.
- Finally, **Ofgem have released their consultation on Integrated Transmission Planning and Regulation (ITPR)**, which sets out some emerging thinking about questions raised by "multipurpose projects" (including non-UK generation) in the context of their wider ITPR project.

10. In order to take the policy further forward, the Call for Evidence asked a series of questions about the 'desirability' and 'doability' of renewable energy trading. This was intended to allow Government to:

- Understand the availability and potential for trading renewable effort with other Member States and third countries, including the potential to export renewable energy and credits.
- Understand the potential costs, benefits and risks to the UK of making use of the flexibility mechanisms to trade renewables.
- Understand the issues and barriers which will need to be addressed to enable renewables trading.

⁸ DECC (November 2012), 'Feed-in Tariff with Contracts for Difference: Operational Framework, Annex A'. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65635/7077-electricity-market-reform-annex-a.pdf

⁹ See <http://services.parliament.uk/bills/2013-14/energy.html>

¹⁰ DECC (December 2012), 'UK Renewable Energy Roadmap Update 2012', *idem*.

¹¹ See <https://www.gov.uk/government/news/energy-trading-creates-opportunities-for-ireland-uk-davey-rabbitte>

Summary of Responses

11. The Department received thirty-six responses, mostly from landowners, generators/suppliers, developers and trade associations (or their advisors). Many submissions identified specific answers as commercially confidential, and the following sections therefore summarise in broad terms rather than comment on specific proposals. A list of respondents is at Annex A.

Statistical transfer

12. Many (though not all) responses covered the use of statistical transfer. The majority of responses opposed its use, some strongly, either because they felt it was an undesirable option, or because it was unfeasible. Common objections were its uncertainty, inability to confer lasting benefit, and impact on investor confidence. Questions were also raised about the impact of any large statistical transfers on the operation of the non-UK state's electricity market. Fewer submissions felt that such transfers may have a role, but that they might carry higher risk, or perhaps that transfers could be used to 'fine tune' a deployment path. On the other hand, there was a minority view that it could be a helpful 'first step', with divergent views about the role of the private sector in such a mechanism.

Physical trading

13. Submissions included a large amount of helpful information on specific possible projects. From this and follow-up conversations, DECC is aware of the following potential physical projects under consideration or development. The vast majority of these projects are in either Ireland or one of the Crown Dependencies (72%):

Renewable Technology	Total
Geothermal	2
Hydro	2
Offshore Wind	9
Onshore Wind	6
Concentrated Solar Power	1
Tidal	4

Jurisdiction	Total
Channel Islands	2
Iceland	2
Ireland	11
Isle of Man	3
Norway	1
Portugal	1
Spain	1
Tunisia	1

¹² Some projects plan to use more than one technology, so numbers will not sum to other tables

¹³ Some projects plan to cover more than one jurisdiction; these are listed as multiple entries

14. It should be noted that different projects have very different levels of development. Some are at a much more advanced stage than others.
15. In addition to information on projects, submissions discussed a range of thematic issues. These tended to address three principle questions:
 - i. developer and project readiness, and the availability and potential of non-UK renewable resources;
 - ii. potential costs and benefits; and
 - iii. 'enablers': regulatory, legal, policy and other issues.

I. Developer and Project Readiness

16. **It is clear from the submissions received that there is strong interest in joint trading projects across a range of developers in different geographies, many with much experience and expertise.** In answer to the question, "should the UK make use of one or more of these mechanisms?", project developers tended to be strongly in favour.
17. Those involved in projects tended to emphasise their readiness to provide renewable energy by 2020, and were bullish about projects' potential contribution to the UK 2020 renewable energy target. They tended to feel both that such projects could be delivered in time for the target, and that the energy they could produce would be of material value.
18. However, some submissions argued against excessive reliance on trading, citing security of supply and the long-term decarbonisation pathway as reasons for caution. And a small minority opposed any use of trading mechanisms at all, arguing that they offer no benefit to the UK.
19. A number of respondents foresaw continued growth in market and system integration, and associated trading in renewable energy, as a clear long term path for the UK and Europe.

II. Potential costs and benefits

20. **There was a clear view from project developers that UK energy billpayer costs could be reduced by using these projects, which they suggested could be delivered at a cost effective price.** Some respondents further identified what they said were a range of strategic advantages to the UK and Ireland, from growth and jobs through to the avoided costs of electricity grid reinforcement.
21. There was a clear view among non-UK project developers that the treatment of such projects should be on a non-discriminatory basis. But responses highlighted the value of a holistic and transparent view of costs and benefits, with some arguing, for example, that job creation should be taken into account.
22. Some submissions included a range of quantified data about specific projects, and DECC has been looking closely at these numbers. However, while this has been very useful, it is also clear that the relatively underdeveloped state of some projects, and somewhat innovative nature of cross-border trade in renewables, means that we cannot yet have very much certainty about this data.

23. There was some concern about the potential impact on investment of moving towards trading – especially too quickly. Some felt that the UK Government should seek to mitigate this – for example by capping the total amount of generation to be imported from abroad. Others felt that there should only be a decision on trading later in the decade.

III. Enablers: Regulatory, legal and policy issues

24. Most respondents were clear that **there is a range of issues that needs to be overcome in order to allow trading to work**. They focussed on the need for early clarity from Government and regulators in order to reduce regulatory uncertainty. Key questions were:
- Political uncertainty. There was a desire for as much clarity as possible from all potential parties, as soon as possible, to allow projects to develop.
 - The level of subsidy for generators that should be expected.
 - Planning issues.
 - How subsidies would be allocated (e.g. through an auction or other system).
 - Whether the Contracts for Difference regime could be extended to non-UK projects, and how this would work in practice; questions were also raised about the impact of trading on the current Renewables Obligation regime, were it to take place on a short timescale, and on the economics and operation of the UK electricity market more generally.
 - A number of general questions were raised about legal backing and tax treatment.
 - Regulatory issues around the transmission asset: in particular, whether the wire would be treated as an ‘interconnector’ or more like domestic GB transmission. It is clear that different decisions on the wire will impact different kinds of risk, cost and deliverability. Again, clarity was desired.
 - Some concerns were raised about metering and verification should projects not be directly and exclusively connected to the UK grid.
25. Views were mixed about the potential role and strength of involvement of the EU Commission in trading arrangements.
26. **The Government is working through these issues with a view to finalising a clearer position this year.**

Next Steps: Commitment to a Programme of Work

Activity since last year's Call for Evidence

27. DECC has been working to refine its evidence base by interrogating the information received, and clarifying specific issues with respondents and other key parties such as the regulator, Ofgem. Until we have more clarity on the barriers and issues raised in the previous section, and the developers themselves have done more pre-construction work, we cannot be completely certain about projects' costs or potential contributions, nor guarantee that they could be built in time for 2020. Particular issues, such as the regulatory treatment of the transmission asset, may impose wide variations in estimates around each of these. **Nevertheless, the work conducted to date has given DECC the confidence to accelerate its policy work, and to believe that proposals hold promise.**
28. We have therefore begun to develop Government's final preferred policy position. Reflecting the preponderance of further-developed projects in the Republic of Ireland, and the wider economic benefits that may flow from connecting to generation close to UK territory, the most visible action taken since last year's Call has been the commencement of a programme of work with the Irish Government to tackle some of the issues and barriers raised in submissions and summarised in the previous section (though this should not be taken as an endorsement exclusively of that one country).
29. This work has enabled us to begin to come to a view on the value of trading, and how it could be implemented. There are a number of possible scenarios. For example, the UK could collaborate with the Republic of Ireland on a 'first phase' of international trading for the purpose of meeting the 2020 target, which would also serve as a vehicle for resolving a series of barriers to wider market and system integration with Europe. The outcome of this work could help accelerate the 'All Islands Approach'¹⁴ and contribute to further integration of EU electricity markets as renewables penetration increases.
30. DECC has created the project structures to enable it, with the rest of Government, to take a decision later in the year, and has begun discussions with devolved administrations through the British / Irish Council. We expect such discussions to intensify over coming months.
31. Finally, we have also opened discussions with the EU Commission, who remain strongly supportive of member states' use of flexibility mechanisms.

Where we are now

32. Responses were very helpful for further shaping our thinking about the possible issues around **statistical transfer**. However, it is clear from respondents and wider discussions in Europe that the potential cost and contribution of statistical trading remains unknowable at this stage. The EU Commission recently concluded that "further measures

¹⁴ See

<http://www.britishtishcouncil.org/sites/default/files/file%20attachments/20110620%20Energy%20Grid%20BIC%20Summit%20Discussion%20Paper%20-%20A1A.pdf> for context on what this means.

will be needed at Member State level in order to stay on the trajectory [to 2020] and for the targets to be achieved”¹⁵. This suggests that the availability of any surplus renewables effort across Europe – and hence the cost or indeed feasibility of statistical transfer – will remain unclear for some time. We also note the range of negative issues raised in responses.

33. In the light of the current uncertainties about feasibility and cost, and the additional evidence received, the Government does not believe that it is possible to make plans for engaging in statistical transfer at this stage. However, as noted elsewhere in this document, we need to stay open to the fullest possible range of options for meeting the 2020 target, including the use of statistical transfer if we believe it would result in a better outcome, and will therefore keep the position under review.
34. DECC’s work this year will therefore focus on **physical trading**, concentrating on the following areas:
- Drafting of an Intergovernmental Agreement with the Republic of Ireland. We and others are discussing with the EU Commission how such an agreement would work in practice. The UK has entered into a period of negotiation with the Irish Government on the precise content of this document, which will need to include provisions to mutually bind each party in a way that allows trading to go ahead at lowest risk and cost.
 - Development of the UK Government’s approach to support mechanisms. This includes the mechanism’s structure, how any support level might be set, and how it could be allocated. For example, the powers in the Energy Bill currently proceeding through Parliament allow the Secretary of State to enter into bilateral negotiation with international projects should he choose to do so. DECC is considering this now, but does not expect to develop a clearer view until after this summer.
 - The amount of non-UK renewable energy that might be desirable or required, and whether and how this should be constrained or capped.
 - Treatment of the transmission asset. There are a range of regulatory and policy questions about how any wire should be treated, and DECC is actively working with the regulator and others to devise a deliverable approach for projects seeking to export power for 2020.
 - The tension between short and long term objectives. DECC is keen to ensure that any decisions taken now for meeting our medium-term objective of the 2020 target do not preclude the longer-term growth in market integration and trading that we see as strategically important. Consideration is therefore being given to the balance between simplicity and ‘future-proofing’ developments.
 - A range of other important but less obvious questions, some quite technical. These have been prioritised for resolution in order to meet the deadlines required for achieving Intergovernmental Agreement at the turn of 2013/14.
35. DECC expects – but cannot guarantee – that such policy, technical, and regulatory barriers that exist are resolvable, and work on all of these issues will continue over coming months.

¹⁵ European Commission (March 2013), ‘Renewable Energy Progress Report’, p.2. See http://ec.europa.eu/energy/renewables/reports/doc/com_2013_0175_res_en.pdf

Next Steps

36. We have committed to keep in touch with interested parties as the situation progresses through the year. Respondents to last year's Call will be the starting point for this discussion, and a series of briefings and discussions will be held as bi-monthly 'developer days'. If another organisation has an interest in being included in this kind of discussion then they should contact kieran.power@decc.gsi.gov.uk.

Annex A: List of Respondents

Organic Power Limited	Energy UK	Jersey, Guernsey & Sark
Natural Hydro Energy	IWEA	RWEpower
Dublin Array	National Grid	Ecotricity
Vestavind Offshore	Mainstream	British and Irish Chamber of Commerce
Fred. Olsen Renewables Ltd	TuNur Ltd. & Nur Energie Ltd	Fuinneamh Sceirde Teoranta
Eggborough Power Ltd	Alderney Renewable Energy	European Federation of Energy Traders
SSE	Transmission Capital	National Offshore Wind Ireland
Oriel Windfarm	Landsvirkjun	Scottish Power
The Ulster Farmers' Union	Atlantic Supergrid Cooperation	EDF
Eon	Welsh Power Group	Ecofys
REA	Gaelectric	Renewable UK
Bord na Mona	RES	Element/ Greenwire

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