

## **Department of Energy & Climate Change: Response to Electricity Market Reform Consultation**

**March 2011**

### **Introduction**

This submission is made in response to DECC's consultation on Electricity Market Reform published in December 2010. The Institution of Mechanical Engineers represents over 90,000 professional engineers involved in a wide range of commercial, industrial, governmental and charitable work. A large number of our members have expertise and experience in the supply, distribution and efficient use of electricity, across all technologies, as well as in the areas of research and development. The Institution is therefore acutely aware of the potential energy gap which is likely to emerge if new power generation plants are not built urgently, alongside the importance of incentivising the accelerated deployment of low-carbon technologies at scale. The potential for delay due to lack of investment will be an issue for all energy consumers but the potential risk of increased prices is also of concern. The Institution therefore believes that defining the right process for reforming the electricity market is essential.

### **Key Issues**

The Institution believes that the UK must have a secure and robust electricity supply system that provides the country with affordable clean energy. While reduction of carbon emissions should be a goal for the UK, changes to the electricity market must not create distortions that lead to large increases in electricity prices or stifle investment in either the generating plant or the transmission infrastructure.

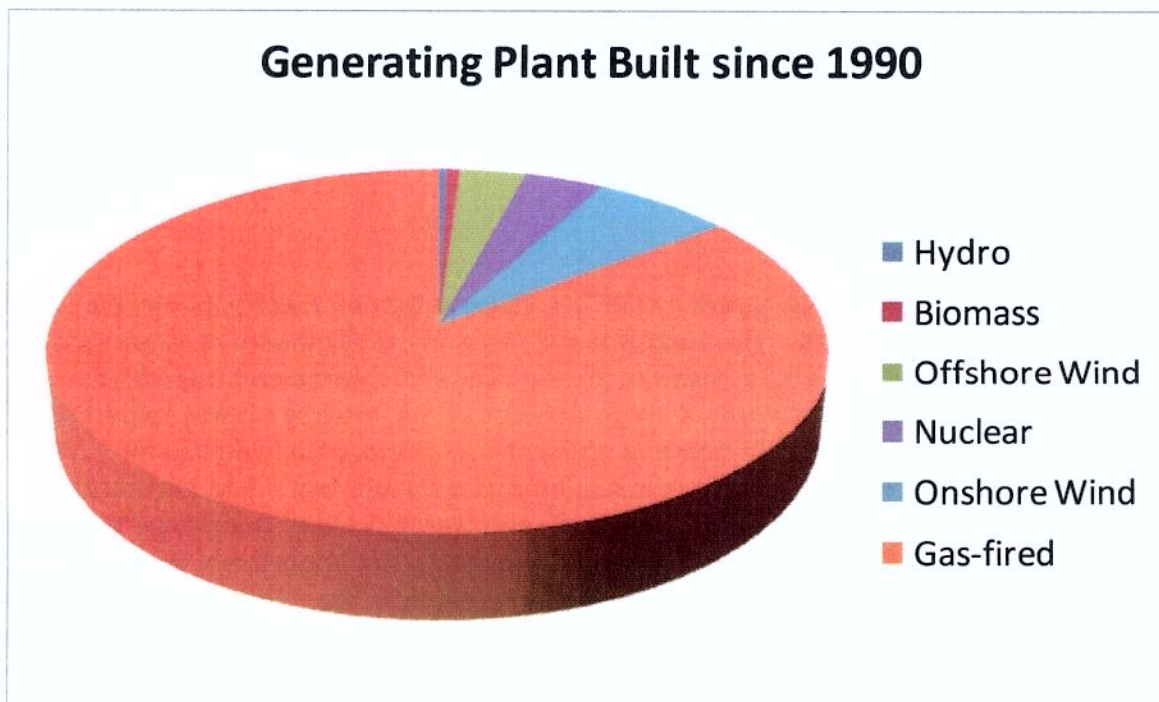
### **Security of Supply**

For decades, the UK has enjoyed a reliable electricity supply with very few wide-scale black-outs caused by shortage of supply. The construction of large numbers of gas-fired power stations in the 1990s provided more than enough generating capacity to supplement the substantial capacity in coal-fired and nuclear generation. The three baseload fuel sources provided both competition and stability in prices and consumers have become used to reliable and relatively low priced electricity.

Liberalisation of the electricity market in 1990 brought about some degree of competition in operation but investment has largely been limited to new generating plants which are low risk where capital costs are small, construction risks are minimal and project capital is readily available. This has meant that only gas-fired plants and some small renewable energy developments have been built since deregulation. The last

power plant at Sizewell B came on-line in 1995, it was first planned back in the early 1980s before liberalisation.

In fact since 1990, 31GW of new generating capacity has been built but 85% of this was gas-fired, mainly combined cycle gas turbines (CCGTs).



**Source: DECC Digest of United Kingdom Energy Statistics Table 5.11: Power Stations in the UK, May 2010**

Clearly the introduction of a more open electricity market has not provided the UK with investment in a balanced portfolio of generating technology and, the Institution believes that it is this balance that will ensure that the UK has a long-term secure supply of electricity. This is particularly important in the context of projections of increased market competition for finite resources of primary fuels, most markedly natural gas. Market reform is therefore needed to ensure that there is investment in a wider range of technologies. This is now urgently required.

### **Affordability**

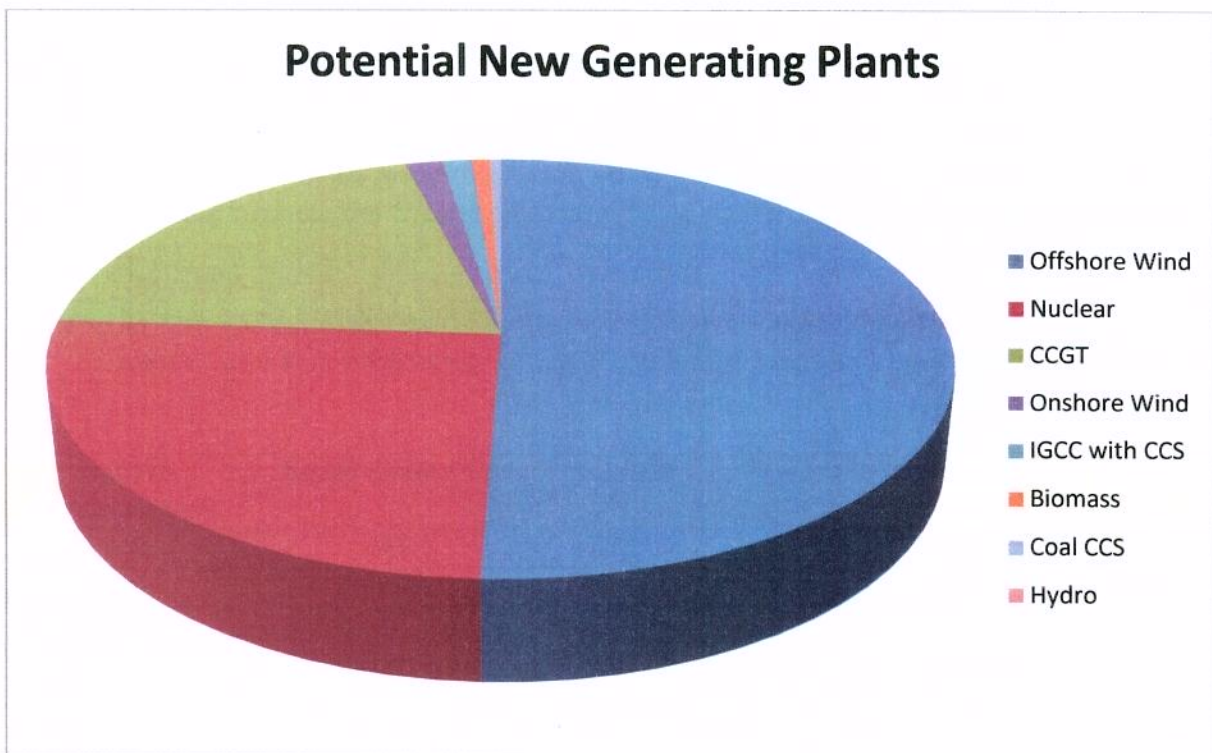
The UK has enjoyed relatively low electricity prices for many decades. Today, the price of natural gas feeding CCGT plants, which constitute around 40% of the generating capacity, now determines the wholesale market price for electricity. Shortages of gas during periods of high demand in cold winters therefore directly impacts on the price of electricity. Currently the wholesale price of electricity is around £45-£50 per MW-hour (MWh); when this is compared to the predicted price of electricity generated from new power plants it can be seen that as these new plants replace the existing fleet, the wholesale price will have to rise.

The latest assessment of potential levelised cost of generation from new power plants would indicate that nuclear and CCGT plants (at current carbon tax levels but without



Carbon Capture and Storage [CCS]) may be able to produce electricity for around £75 per MWh, coal or gas with CCS at around £130/MWh, onshore wind at £95/MWh and offshore wind potentially in excess of £160/MWh (source: PB, Powering the Nation, 2010 Update). There are wide variations around these central price estimates dependent on how the construction of these plants is funded but clearly prices are much higher than current wholesale levels.

The National Grid TEC register at the end of 2010 listed up to 67GW of possible new power plant construction up to 2025. Although not all will be built, of this possible investment more than half would be for offshore wind projects, predominantly Round 3 offshore, deep water developments which are likely to be the most capital intensive form of wind-power, especially when the associated grid transmission costs are taken into account. A quarter of the potential new plant is nuclear, 20% is new CCGT plant (without CCS) with the remaining few per cent for other renewables and potential fossil-fuel plants with CCS. While this is just a snapshot of potential construction, it would indicate that future electricity prices will become dependent on the cost of generating electricity from expensive and intermittent offshore wind-farms, less expensive but inflexible nuclear power plants and flexible but heavily taxed gas-fired plants. With this combination the electricity unit-price is bound to rise significantly.



**Source; National Grid TEC Register, November 2010**

If the unit-price of electricity was to rise significantly it could have a large impact on consumers and major industrial users in particular. As this potential rise will occur over the next 10 to 15 years as the new plant is brought on-line to replace old but cheaper plant, the rise could be smoothed out so that consumers would only feel a gradual increase year on year. Whilst utilities will appear to be making high margins before these plants are paid for, this will be necessary to fund the required investment. Such increases would also need to be accompanied by measures to encourage consumers to



become more energy efficient so that their overall energy bills do not necessarily rise significantly. However, for some major energy users, there could be a level of electricity cost above which their business is no longer viable in the UK. For example major metal smelters can consume vast amounts of energy but if their costs increase, it may become cheaper to move production out of the UK. It is therefore important, if we are to retain this industrial element in the UK, to consider the impact of potential electricity market reforms in the light of these sensitivities and consider methods that shield these major electricity consumers in some way. It is noted that the consultation questions below do not really address this issue, which must be considered.

Price rises will also impact on the poorest members of society and measures must also be put in place to protect them from the inevitable price rises. Any proposals for market reform should also be constructed to give a strong element of competition to help protect consumers. In the current economic climate, it is also important that we effectively manage the UK's legacy of low cost electricity generation plant, extending their lives where possible, while recognising the need to attract new investment.

## **Carbon Emission Reduction**

It can be seen from the assessment of potential planned construction of new generating plant that over 80% of the total capacity could be low-carbon. Unfortunately nuclear and offshore wind-powered plants have large initial construction costs but low running costs and therefore need very large amounts of capital investment. To encourage investors to build such plants they need to be assured of long-term revenues and a stable regulatory environment, which will continually reward low-carbon generation for the life of the plants.

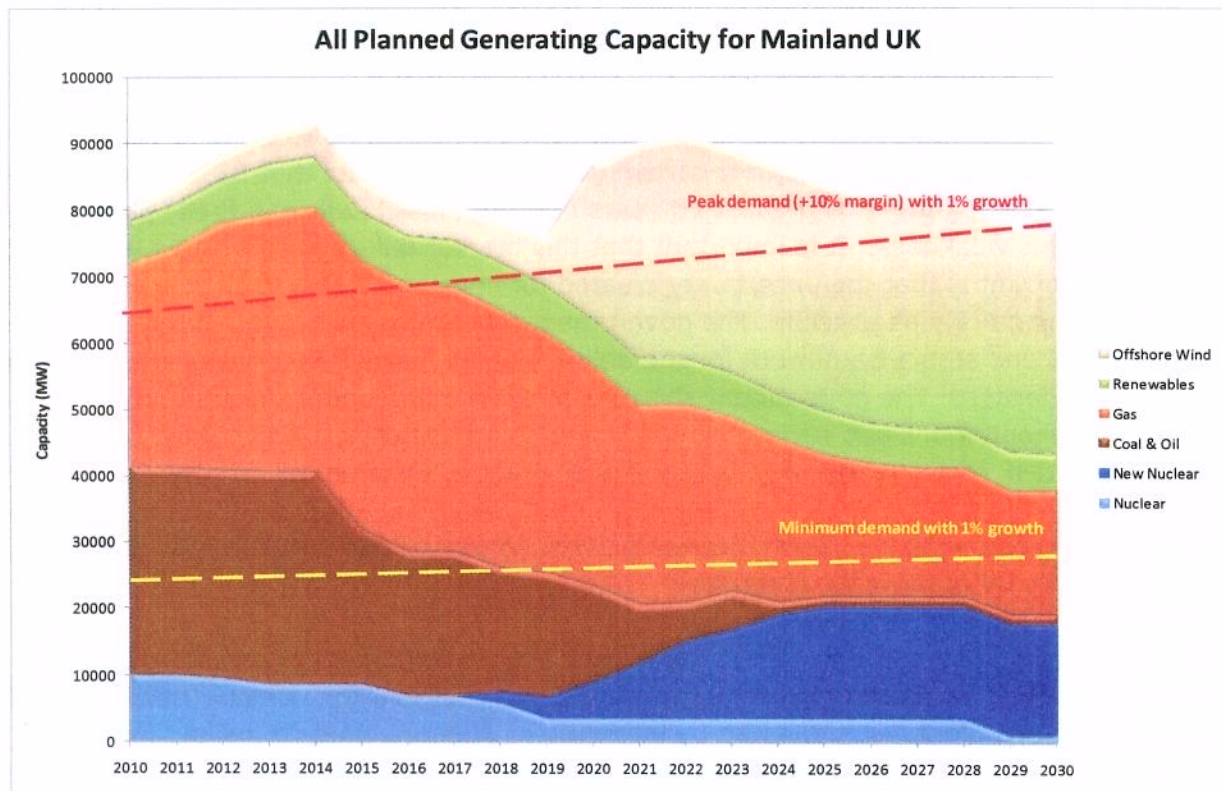
If the current generating plant is retired in-line with lifetime assumptions and all of the possible declared plants are constructed on time, the generation mix will change significantly by 2025.

<b>Year</b>	<b>Coal &amp; Oil</b>	<b>Gas</b>	<b>Nuclear</b>	<b>Offshore Wind</b>	<b>Other Renewables</b>
2010	39%	38%	12%	3%	8%
2025	2%	26%	24%	40%	8%

Once a large proportion of the generating capacity is intermittent wind power, there will be a significant need for backup capacity that could quickly accommodate for a loss of generation from wind. Incentivising the construction of this back-up capacity will be essential if the supply of electricity is to remain reliable and secure.

The graph below shows the possible changing profile of our power generating capacity up to 2030. This assumes that all currently planned projects will go ahead, which although unlikely, does provide an appreciation of the potential switch in generating technologies. Such a transformation would significantly reduce our carbon emissions but would require huge investment in both the power generating plant and the associated transmission grid infrastructure. It would also require construction of new plants to be built at a rate never before achieved in the UK.

The required transmission infrastructure to deliver the electricity from this new generating plant also needs to be considered carefully. Greater use of distributed generation would help to offset the increased demand on the transmission system and reforms to the electricity market should also aim to encourage such developments.



**Sources:** DECC Digest of United Kingdom Energy Statistics Table 5.11: Power Stations in the UK, May 2010 and National Grid TEC Register, November 2010

## Summary Position

The Institution supports the primary drivers for the proposed reforms to the electricity market, which must encourage investment in low-carbon technologies and power plants that will provide the security and stability that the UK needs. However, measures may need to be put in place to protect vulnerable groups from the inevitable price rises. Aiming to reduce our carbon emissions by such a large degree will be painful but if the UK is to provide global leadership on climate change we must find ways of achieving this goal without harming key elements of industry and society.



## **Consultation Question Responses**

### **Current Market Arrangements**

#### ***1. Do you agree with the Government's assessment of the ability of the current market to support the investment in low-carbon generation needed to meet environmental targets?***

Yes. The current market is not sufficiently attractive for investors to bring forward plans for capital intensive, large-scale, low-carbon generation. The fact that 85% of the generating capacity added in the last 20 years has been fossil fuel (gas-fired) plant underlines this weakness. It is important that this market failure is addressed, but equally important is that the uncertainty created for investors by the EMR process itself is resolved as quickly as possible. The government must move swiftly to establish a clear, robust and stable framework for the delivery of low-carbon technologies at scale in the coming decades. The government should now draw a line under the continuous stream of consultations and reviews so that investors, businesses and engineers can get on with the task of delivering what is required to meet environmental targets.

#### ***2. Do you agree with the Government's assessment of the future risks to the UK's security of electricity supplies?***

Yes. Unless significant investment is made soon the Institution is concerned about the level of generating capacity margin beyond 2015. In addition, the current list of planned potential developments is dominated by intermittent offshore wind-farms and inflexible large nuclear power plants. Fast response fossil-fuelled power plants are also needed to provide the overall capacity required to provide a secure electricity supply. Both legacy gas-fired plant and future new build require that the government mitigates the nation's dependency on imported gas for electricity generation, particularly in the context of depleting UK reserves in the North Sea. This needs to be done through the provision of increased storage volumes, negotiating strong binding supply agreements with a wide range of providers, establishing diverse gas transportation routes from source to UK and greater interconnectivity with the European transmission grid.

### **Options for Decarbonisation**

#### **Feed-in Tariffs**

#### ***3. Do you agree with the Government's assessment of the pros and cons of each of the models of feed-in tariff (FIT)?***

In general, yes. Carefully targeted incentives are required for potential investors to assure them of a long-term, profitable income stream from their constructed generating plant if the UK is to attract the massive amount of investment needed in the desired areas. However, market distortions are potentially introduced by FITs and care needs to be taken in their use. The consultation document does not yet provide sufficient detail for the Institution to assess how effective this method of incentivisation will be, nor does



it demonstrate how an element of competition will be retained to ensure that consumers are getting best value for money.

***4. Do you agree with the Government's preferred policy of introducing a contract for difference based feed-in tariff (FIT with CfD)?***

The effectiveness of the CfD process will be dependent on the way it is implemented. Given the spread of generating costs from the various technologies it would seem more appropriate to strike an auction price within the particular technology, rather than across a mixed portfolio, as it is likely to benefit those utilities that only build the low risk plant rather than the low-carbon option. While government has always shied away from setting desirable targets for particular forms of power generation, the auction process may work best if such targets were introduced.

***5. What do you see as the advantages and disadvantages of transferring different risks from the generator or the supplier to the Government? In particular, what are the implications of removing the (long-term) electricity price risk from generators under the CfD model?***

If the reforms work effectively together, there should not be any significant risk for the Government or the generators. The measures should encourage a balance of technologies to be constructed which gradually move to more low-carbon solutions. This could be achieved while maintaining sufficient flexibility in the system to accommodate the seasonal and daily variations in demand and the increased impact of intermittency, caused by having a higher proportion of wind-power in the mix. Overall prices to the consumers will have to rise to deliver this secure low-carbon solution but if the rise is implemented gradually, along with energy saving measures, the overall impact may not be too high. Unfortunately some energy intensive consumers will have little opportunity to further increase their energy efficiency and will be severely impacted by unit-price rises. Measures need to be considered to shield these users from price rises if this element of industry is to be retained in the UK.

***6. What are the efficient operational decisions that the price signal incentivises? How important are these for the market to function properly? How would they be affected by the proposed policy?***

Having an assured feed-in tariff encourages operators to run their plants for as long as possible and to minimise their maintenance costs. If a utility's operating costs rise faster than their competitors, their profits will reduce, so it encourages them to copy industry 'best practice' and to keep on top of maintenance issues so that equipment performs as efficiently as possible and does not breakdown unduly. It does, however, rely on true competition between generators of similar plants. This may be difficult to control for some technologies; for example, if all the utilities were to operate the same nuclear reactor design for their nuclear plants, which were fuelled and maintained by the original constructor, it would be difficult to have true competition between the utilities.

***7. Do you agree with the Government's assessment of the impact of the different models of FITs on the cost of capital for low-carbon generators?***

The Institution has no comment to make on this question.



**8. What impact do you think the different models of FITs will have on the availability of finance for low-carbon electricity generation investments from both new investors and existing investor base?**

Assuming carbon abated fossil-fuel plants are being developed (e.g. using CCS technology), the two main forms of low-carbon power generation being considered at present in the UK are nuclear power and offshore wind. Both of these do require significant initial capital investment but they also have significant technical risks for potential developers; although nuclear construction is underway around the world, until new nuclear power plants are regularly being built within the UK regulatory environment, investors will consider them to be high risk projects. Similarly with offshore wind developments in deep water; none have yet been operated at the size, scale and in locations being considered for long periods of time. Maintenance may become an issue or turbine lifetime may be foreshortened so investors will want to try and recover their investment over shorter periods until they have been proven over decades. As a result of these risks, while the FITs will help to encourage availability of investment finance, they are just part of the investor's overall consideration of risk.

**9. What impact do you think the different models of FITs will have on different types of generators (e.g. vertically integrated utilities, existing independent gas, wind or biomass generators and new entrant generators)? How would the different models impact on contract negotiations/relationships with electricity suppliers?**

The Institution has no comment to make on this question.

**10. How important do you think greater liquidity in the wholesale market is to the effective operation of the FIT with CfD model? What reference price or index should be used?**

The Institution has no comment to make on this question.

**11. Should the FIT be paid on availability or output?**

Output; availability equates to resource risk, which is already a risk acceptable to investors.

## **Emissions Performance Standards**

**12. Do you agree with the Government's assessment of the impact of an emission performance standard on the decarbonisation of the electricity sector and on security of supply risk?**

**13. Which option do you consider most appropriate for the level of the EPS? What considerations should the Government take into account in designing derogations for projects forming part of the UK or EU demonstration programme?**



***14. Do you agree that the EPS should be aimed at new plant, and 'grandfathered' at the point of consent? How should the Government determine the economic life of a power station for the purposes of grandfathering?***

***15. Do you agree that the EPS should be extended to cover existing plant in the event they undergo significant life extensions or upgrades? How could the Government implement such an approach in practice?***

***16. Do you agree with the proposed review of the EPS, incorporated into the progress reports required under the Energy Act 2010?***

***17. How should biomass be treated for the purposes of meeting the EPS? What additional considerations should the Government take into account?***

***18. Do you agree the principle of exceptions to the EPS in the event of long-term or short-term energy shortfalls?***

It is essential that other measures designed to support commercial-scale demonstration of carbon capture and storage (CCS) are delivered effectively and on-time, and that a current or potential future EPS is not used as an excuse to delay further action to support eventual widespread deployment of CCS. The Institution is not convinced that an EPS is needed to act as a 'regulatory backstop', because the Secretary of State has extensive powers in connection with permitting new power plants that could probably be used to achieve the same effect. We have, however, considered the proposals set out in the consultation document and have the following comments to make in response to the themes raised by the questions on EPS proposals (Q12-Q18).

The Institution agrees that an important feature of any EPS introduced by Government as part of the EMR is that it contributes to providing a clear, robust framework that encourages appropriate investment in electricity generating assets in the UK. It is essential, however, that a careful balance is struck between providing investor certainty and retaining sufficient flexibility to adjust EPS levels in the future.

In particular, we recommend that the Government undertakes careful analysis of any proposals that newly-permitted and/or existing plants are given special treatment and/or exemptions in EPS regulations that would lead to 'lock-in' of emissions from partially abated coal-fired power plants and unabated gas-fired power plants. This could make it difficult or impossible to meet future plans to reduce greenhouse gas emissions. There is also a risk of introducing perverse incentives that would lead to reduced upgrading or replacement in the then-existing fleet if 'existing' plants are exempt from an EPS, but an 'upgrade' would trigger a requirement to meet an EPS. The Institution recommends that these issues are considered in the scope of further work to develop any future detailed proposals for regulation in this area.

If an EPS is to be introduced as part of the EMR package, we support the proposal to set the EPS as an annual limit. This provides environmental integrity (since CO<sub>2</sub> emissions have global impacts based on cumulative emissions over timescales of years) while allowing necessary operating flexibility.



We also agree that careful consideration of how biomass-generated electricity is treated within an EPS framework is important. The Institution encourages Government to consider the potential for EMR and broader UK energy and climate change policy, where appropriate, to identify opportunities for 'negative' emissions projects where biomass combustion is combined with CCS to remove CO<sub>2</sub> from the atmosphere.

Finally, we have noted that further consideration may be given to extending the role of an EPS to drive further use of CCS in the future. If reviews of the role and scope of an EPS lead to proposals for an extended use of an EPS to drive a transition to widespread deployment of CCS (rather than just acting as a 'backstop' for any new coal plants), we recommend that the EPS design principles are checked (and, if necessary, revised) to ensure that they are 'fit for purpose' for this extended use.

For example, an important feature of any mechanism to encourage CCS deployment after the commercial-scale demonstration phase is that it facilitates conversion of progressively more individual power plant sites to full CCS (alongside all relevant new power plants being built with CCS). This is likely to mean that an EPS applied at the individual plant level would be inappropriate for driving widespread deployment of CCS. It is also important to remember that strategic planning for CCS rollout must consider appropriate support for timely infrastructure development for CO<sub>2</sub> transport and storage.

## **Options for Market Efficiency and Security of Supply**

### ***19. Do you agree with our assessment of the pros and cons of introducing a capacity mechanism?***

Yes. With a growing portion of the generating capacity provided by intermittent wind power it is essential that the construction of back-up capacity is well incentivised. As this plant may not be used for a large proportion of the time, its associated capital cost will need to be covered through the provision of capacity payments. The most appropriate technology for back-up capacity would be fossil fuel gas-fired plants; in this case it would seem illogical however to make capacity payments to these plant on the one hand and apply carbon taxation on the other. Any capacity payments should aim to resolve this potential situation. If defined standby plants were forced to fit carbon abatement systems such as CCS, their capital costs would increase and they would become less flexible, so reducing their effectiveness as cost-effective, standby capacity.

### ***20. Do you agree with the Government's preferred policy of introducing a capacity mechanism in addition to the improvements to the current market?***

As noted above, the proposed method of capacity payment needs to be considered carefully in parallel with the other reforms, otherwise it will not attract the investment that is required.

### ***21. What do you think the impacts of introducing a targeted capacity mechanism will be on prices in the wholesale electricity market?***

Targeted capacity mechanisms need to be carefully considered alongside the other reforms, to avoid perverse incentives that could distort the market. For example, if



utilities are encouraged to build gas-fired plants for back-up supply and these plants turn out to be more cost effective than the wind-power they are there to back-up, then utilities will effectively be incentivised to run the back-up plant for as long as possible to maximise profit.

**22. Do you agree with Government's preference for the design of a capacity mechanism?**

- **a central body holding the responsibility;**
- **volume based, not price based; and**
- **a targeted mechanism, rather than market-wide.**

In principal volume based and targeted is appropriate, however, if FITs operate successfully and generators strike long term contracts with consumers, then they will be encouraged to build the back-up capacity themselves rather than have a central body holding this capacity (which would move further away from a market mechanism).

**23. What do you think the impact of introducing a capacity mechanism would be on incentives to invest in demand-side response, storage, interconnection and energy efficiency? Will the preferred package of options allow these technologies to play more of a role?**

The Institution believes that demand-side response, storage, interconnection and energy efficiency is absolutely essential to ensure that we use the available capacity to the full. Such measures will help to offset the increased demand for electricity that will come from decarbonisation of the transport sector and an increase in its use for space heating in buildings. Such measures need to be incentivised in other ways or encouraged through the market mechanisms described above. Distributed generation should also be encouraged as this can flexibly satisfy local demand and reduce the demand on the transmission infrastructure.

**24. Which of the two models of targeted capacity mechanism would you prefer to see implemented:**

- **Last-resort dispatch; or**
- **Economic dispatch.**

The Institution has no comment to make on this question.

**25. Do you think there should be a locational element to capacity pricing?**

Yes, this will be useful until an effective, robust transmission grid is established. In the future the increased constraints on plant location due to availability of the renewable resource and operational constraints, such as location of CCS infrastructure, may require capacity building incentives to contain locational elements. Distributed generation also has a part to play here and methods of rewarding the development of local capacity should be encouraged in the proposed market reforms.

## **Analysis of Packages**

***26. Do you agree with the Government's preferred package of options (carbon price support, feed-in tariff (CfD or premium), emission performance standard, peak capacity tender)? Why?***

The Institution does not have the experience to agree or disagree, but we are clear that a market failure exists and it needs to be rectified through reform as quickly as possible. Establishing a clear, robust and stable framework that is adhered to over the long-term is as important as the package itself. That having been said, a combination of FITs, capacity payments and carbon pricing support may be sufficient to achieve the desired market behaviour. If these methods in combination work to achieve the desired outcome, then the application of an emissions performance standard will prove largely unnecessary.

***27. What are your views on the alternative package that Government has described?***

The Institution has no comment to make on this question.

***28. Will the proposed package of options have wider impacts on the electricity system that have not been identified in this document, for example on electricity networks?***

To deliver the desired outcome of a transition to a low-carbon economy it is essential that the transmission grid and energy storage schemes are delivered in tandem with the anticipated changes in generating capacity. Distributed generation also has a part to play here and should be encouraged in the proposed market reforms.

***29. How do you see the different elements of the preferred package interacting? Are these interactions different for other packages?***

The Institution has no comment to make on this question.

## **Implementation Issues**

***30. What do you think are the main implementation risks for the Government's preferred package? Are these risks different for the other packages being considered?***

Clearly there is a balance to be struck between implementing reforms which please the potential generators and attract the required investment and measures that protect the consumers from excessive price rises. However, it is even more important that decisions are made quickly and the adopted package is clear and remains stable; if the policy is subject to delay the limited available capital could move to more assured opportunities abroad.



A large unknown is the reaction of electricity customers and tax payers. Regardless of what package is put in place to incentivise the delivery of this large-scale engineering based task, UK citizens will ultimately pay the implementation bill either in their rolls as electricity customers or tax payers. There is therefore a real need for the government to ensure transparency regarding where the money is sourced, where it is spent and why, so as to demonstrate cost-effectiveness, best 'value for money', and that costs to customers and tax payers are being kept as low as possible. In view of the need to reduce the UK's budget deficit, and the parallel financial pressures on UK citizens, these decisions alongside their clear communication are vitally important. Without consumer and tax payer buy-in, the risk of failure will be high.

**31. Do you have views on the role that auctions or tenders can play in setting the price for a feed-in tariff, compared to administratively determined support levels?**

The Institution has no comment to make on this question.

- ***Can auctions or tenders deliver competitive market prices that appropriately reflect the risks and uncertainties of new or emerging technologies?***

The Institution does not have experience that would be relevant to this question.

- ***Should auctions, tenders or the administrative approach to setting levels be technology neutral or technology specific?***

A technology specific approach would seem to be appropriate given the large variations in cost of electricity production from the various technologies and the urgent timescale within which a diverse generation mix must be established to aid security of supply.

- ***How should the different costs of each technology be reflected? Should there be a single contract for difference on the electricity price for all low-carbon and a series of technology different premiums on top?***

The Institution does not have experience that would be relevant to this question.

- ***Are there other models government should consider?***

The Institution does not have experience of other relevant models.

- ***Should prices be set for individual projects or for technologies?***

Technologies.

- ***Do you think there is sufficient competition amongst potential developers / sites to run effective auctions?***

Provided that all the planned developments come to fruition there should be sufficient competition. However, with only 3 developers groups currently interested in nuclear power, this will be the least competitive element of the market, particularly as there are currently only two reactor technologies to choose from for the UK.

- ***Could an auction contribute to preventing the feed-in tariff policy from incentivising an unsustainable level of deployment of any one particular technology? Are there other ways to mitigate against this risk?***

The FIT policy may help to bring forward a range of technologies, but it will be the limitations of the technologies themselves that will encourage generators to develop a portfolio of different plants. The inflexibility of nuclear, the intermittency of wind, the fuel price volatility of gas etc. show that all technologies have their own risks, but the reform policies will help to mitigate these risks.

***32. What changes do you think would be necessary to the institutional arrangements in the electricity sector to support these market reforms?***

The Institution has no comment to make on this question.

***33. Do you have a view on how market distortion and any other unintended consequences of a FIT or a targeted capacity mechanism can be minimised?***

This will depend on how the measures are introduced; the consultation document does not yet provide sufficient detail to assess this.

***34. Do you agree with the Government's assessment of the risks of delays to planned investments while the preferred package is implemented?***

Yes, it is essential that these measures are implemented quickly otherwise potential investment could move overseas.

***35. Do you agree with the principles underpinning the transition of the Renewables Obligation into the new arrangements? Are there other strategies which you think could be used to avoid delays to planned investments?***

This will depend on how the measures are introduced; the consultation document does not yet provide sufficient detail to assess this.

***36. We propose that accreditation under the RO would remain open until 31 March 2017. The Government's ambition is to introduce the new feed-in tariff for low carbon in 2013/14 (subject to Parliamentary time). Which of these options do you favour?***

- ***All new renewable electricity capacity accrediting before 1 April 2017 accredits under the RO;***
- ***All new renewable electricity capacity accrediting after the introduction of the low-carbon support mechanism but before 1 April 2017 should have a choice between accrediting under the RO or the new mechanism.***

The Institution has no comment to make on this question.



**37. Some technologies are not currently grandfathered under the RO. If the Government chooses not to grandfather some or all of these technologies, should we:**

- **Carry out scheduled banding reviews (either separately or as part of the tariff setting for the new scheme)? How frequently should these be carried out?**
- **Carry out an "early review" if evidence is provided of significant change in costs or other criteria as in legislation?**
- **Should we move them out of the "vintaged" RO and into the new scheme, removing the potential need for scheduled banding reviews under the RO?**

Provided that the reforms work effectively these measures may not be needed but any change to the process now will discourage schemes that are currently in planning and could delay their implementation.

**38. Which option for calculating the Obligation post 2017 do you favour?**

- **Continue using both target and headroom**
- **Use Calculation B (Headroom) only from 2017**
- **Fix the price of a ROC for existing and new generation.**

The Institution has no comment to make on this question.

**END**

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