

#### **DECC consultation: Electricity Market Reform**

### Submission by the Energy Institute March 2011

#### **Introduction**

The Energy Institute (EI) is pleased to make the following submission to the DECC Electricity Market Reform (EMR) consultation. This document is a synthesis of the views of EI members collected through a call for contributions and various stakeholder workshops and briefings.

The EI is the professional body for the international energy industry. It has a membership of over 14,000 individuals and 250 organisations and provides an independent focal point for the energy community, bringing together industry, academia and Government. The EI's purpose is to develop and disseminate knowledge, skills and good practice towards a safer, more secure and sustainable energy system. In fulfilling its purpose, the EI can address a wide range of topics in detail, from upstream and downstream hydrocarbons and other primary fuels and renewables, through to power generation, transmission and distribution to sustainable development, demand side management and energy efficiency.

As a charity, incorporated by Royal Charter, with membership across the full range of the energy sectors, it is not appropriate for the EI to promote specific technologies or options. Instead it seeks to assist the policy process by helping to clarify the key issues and by improving the evidence base on which decisions will be made.

The EI response attempts to bring into focus the differing views of a range of stakeholders, from suppliers, producers and consumers. It reflects the views of a cross-section of EI members; it highlights where consensus has been reached, makes observations about the implications of the reform package and reflects on the uncertainties that persist.

EI members have applied particular consideration to the analysis of the packages and implementation issues, focusing on the impacts of the proposed measures, any unintended consequences and the identification of potential opportunities that exist but which are not fully defined within the proposals. Where questions are left unanswered, it is because EI members and stakeholders are better placed to reflect on those answers via their individual responses.

#### Key points

- Substantial investment is required in all elements of energy infrastructure in the UK if the goal
  of decarbonisation by 2050 is to be achieved. Billions of pounds must be invested in physical
  assets and their systems, user technologies and critically the human expertise to innovate,
  design, execute and operate the new decarbonised system.
- 2. The current market mechanism will not deliver this fundamental refit of the UK's energy infrastructure. Without reform, emissions targets will be missed, in the long run customers will pay more for their energy and the likelihood of security failure will increase.
- 3. The cost of reforms and the impact on electricity prices are of concern to EI members, both for social and international competitiveness reasons. Of significant importance to EI members is the affordability to customers of new investment.

- 4. There is consensus between EI members that a low carbon incentive in the form of a feed-in tariff (FIT) is the most important measure to encourage new investment in the energy industry. There is differing opinion amongst EI members as to which FIT proposal best serves the needs of the investment community. This is due in part to the wide range of stakeholders with membership of the EI, but also due to the current lack of clarity as to how the alternatives would work in practice.
- 5. Many EI members believe that both supply and demand side elements can compete and should therefore be considered for FIT and capacity mechanisms on a level playing field. Therefore, further clarity is needed with regard to the details and practicalities of implementing the proposals, particularly concerning the FIT with Contract for Difference (CfD) and the proposed central agency.
- 6. El members feel there is an opportunity for DECC economists to demonstrate to stakeholders how FITs with CfD are designed to work. This would provide stakeholders with a better understanding of the FIT with CfD in action, whilst also acting to probe the model for any unintended consequences. The EI is well placed to host such workshop sessions, providing an independent platform for the Government and a cross-section of stakeholders to meet to discuss particular case studies. This offer has been made directly to the Energy Minister during a recent breakfast meeting hosted by the EI.

#### **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?

- 1.1. El members agree that, at current energy prices, the current market arrangements will not deliver the required investment necessary to deliver the range of low-carbon technologies required to meet environmental targets. There is therefore a need for change.
- 1.2. The changes to the electricity market must bring greater certainty and stability to those wishing to invest in the energy industry, both for incumbents and new investors alike. Investors need clear signals from Government in order to reduce uncertainty and risk.
- 1.3. Competition and market liquidity are required to deliver low carbon generation at the lowest costs to the consumer.

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

2.1. El members agree with the Government's assessment of the future risks to security of electricity supplies, a problem that will become especially apparent towards the end of the current decade as flexible thermal plant close and the level of intermittent renewable generation increases significantly. It should be noted there are two distinct issues to be tackled: security of capacity and security of fuel supply. In order to alleviate future risks, and given the long lead times for projects, it is crucial that a transparent policy framework is quickly put in place. This will provide the best opportunity to secure the investment required.

#### **Options for Decarbonisation**

#### Carbon Price Support

The EI has submitted comments specific to the carbon price support mechanism directly to the HM Treasury. In summary:

- 1. El members agree that the introduction of a carbon price floor is reasonable and robust, providing greater long-term support, stability and certainty for investors. However, this must be seen by the investment community to be a bankable option for it to be a useful mechanism and provide the signals needed by investors.
- 2. The issue of bankability is of critical importance to investors, incumbents and new entrants alike. Without greater stability and predictability for investors, the benefit of a carbon price floor would be much reduced and could even be counter-productive.
- 3. Greater certainty in the long-term price of carbon plays an important supporting role to the EMR proposals, enabling a lower cost of capital for developers whilst reducing the burden on the consumer.

#### 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)?

Whilst by no means an exhaustive list, in response to this question EI members consider the various advantages and disadvantages of the different FIT models. Many of the points raised here are considered in greater detail in the *analysis of packages* and *implementation issues* sections of this consultation response.

#### 3.1. Fixed FIT

(Pays one fixed tariff per unit of electricity, regardless of the wholesale price)

#### Advantages

- 3.1.1 Fixed FIT will achieve the Government's aim of providing greater long term certainty to investors.
- 3.1.2 Fixed FIT is a straightforward mechanism, easily understandable to investors.
- 3.1.3 Fixed FIT would be an extension of the existing FIT for small scale low carbon generation and is therefore a simpler concept for generators, particularly new entrants, to understand.

#### Disadvantages

- 3.1.4 Fixed FIT removes liquidity from the market, whereas a Premium FIT or FIT with CfD could increase liquidity, especially in respect of the CfD reference price market.
- 3.1.5 Fixed FIT provides no economic signal for plant dispatch, meaning higher costs for the consumer. The power price is unable to signal that delivered volume is not required.
- 3.1.6 Fixed FIT prevents generators from being exposed to the consequences of their actions (i.e. failure to deliver volume when required).

#### 3.2. FIT with Contract for Difference (CfD)

(Generators sell their electricity into the market, then receive a top-up payment, which is calculated as the difference between average wholesale price and agreed tariff level)

#### Advantages

- 3.2.1 FIT with CfD would provide the long term revenue certainty required by investors and generators.
- 3.2.2 The CfD would retain a market element, with generators continuing to sell into the wholesale market, maintaining liquidity and even increasing it as new low carbon plant is built.
- 3.2.3 Fit with CfD helps to guard the consumer against generator windfalls and excessive rents.
- 3.2.4 It should be remembered that the first 'dash for gas' CCGT construction in the 1990s was comprehensively financed by load-following CfD under the Electricity Pool arrangements at that time.

#### Disadvantages

- 3.2.5 The details of the FIT with CfD proposal still need to be determined. There is a risk that the perceived complexity of the mechanism could dissuade investment.
- 3.2.6 Government must be careful not to directly determine the generation mix because this will stifle innovation and increase costs to the consumer, something all parties are keen to avoid.
- 3.2.7 Under the FIT with CfD proposal, the envisaged central agency may have to take the volume risk should aggregators choose not to enter the marketplace.

#### 3.3. Premium FIT

(Pays a fixed premium on top of the variable wholesale electricity price)

#### **Advantages**

- 3.3.1 A Premium FIT is similar to the current Renewables Obligation (RO) system and therefore would be the easiest to implement, causing minimum disruption. It would also offer a smoother transition to the new arrangements for existing projects under the RO.
- 3.3.2 Under a Premium FIT some market risk would be left with generators, rather than it all being borne by consumers.

#### Disadvantages

- 3.3.3 In order for investors to lend, the risks associated with low carbon generation need to be minimised. The long-term electricity price affects the overall return, making the Premium FIT more unpredictable than the Fixed FIT / FIT with CfD options. There is concern that a Premium FIT would be too unpredictable to encourage investment.
- 3.3.4 There is the potential for under rewarding low carbon generation or over rewarding it, ultimately at the expense of the consumer. By not being able to guarantee the overall revenue received per MWh, a generous risk premium would have to be added to compensate investors for the risk of a rise in fuel costs or of a collapse in power prices. This would be at the expense of the consumer.

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

- 4.1. El members agree that there may substantial benefits from FIT with CfD but that much more is needed from the Government regarding the details and practicalities of the proposals. The complexities of how the mechanism will work need to be elaborated upon further.
- 4.2. However, EI members hold differing views as to a preferred mechanism. Views tend to depend on type of low carbon technology/plant supported by members as well as the company size, maturity within the electricity market and other such variables.
- 4.3. There is an opportunity for DECC to further explore the practicalities of FIT with CfD. This could be in the form of stakeholder workshops, providing DECC economists with the opportunity to run through particular case studies or worked examples of CfD scenarios for different technologies. The EI offers its services to facilitate such workshops, should this be something DECC is interested to do.

# 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?

- 5.1. As previously suggested in 4.1, there are many unknowns associated with the implementation of the FIT with CfD model, an inherent difficulty with any new system. El members wish to see more from the Government as to the details of how CfD will work in practice. Further clarity is also needed as to the nature of the envisaged central agency.
- 5.2. There is real concern amongst EI members that, towards the end of the decade and beyond, there is the potential for supply security to become a significant issue in the UK. In order to minimise this risk, it is accepted that the Government will have to play more of a role than has been the case to date. However, the level of Government involvement in the market under the CfD model should be minimal. EI members feel that the Government should avoid taking on volume or price risk.
- 5.3. Government should be careful to avoid setting the power generation technology mix when determining subsidy bands for the FIT. Choosing winners and losers has the potential to stifle innovation and increase costs to the consumer.

## 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?

- 6.1. The issue of sufficient market liquidity is of critical importance to allow the market to function properly. While near-term indices are liquidly traded, long term products are not. The choice of index under the preferred FIT with CfD model must consider this. The outcomes of the market liquidity review currently underway by Ofgem will be important to the success of this proposed policy.
- 6.2. Other key factors raised by EI members as to why market price signals are vital include the need for optimal plant dispatch, the need for demand-side response and the need for optimising the location of new plant, particularly the location of peak load capacity.

### 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?

- 7.1 The incumbent generators' balance sheets may not be able to deliver the scale of investment required. The greater the certainty provided by the new mechanism the more likely it is to encourage new entrants.
- 7.2 El members agree that, whichever mechanism is taken forward, it should be as simple as possible. The more complex the measure, the more difficult it is for investors to understand and the likelihood of unintended consequences is increased.

## 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 the existing investor base?

- 8.1. The impacts on investor confidence and finance availability are likely to depend on the levels set in the FIT, regardless of model chosen. However, because a FIT with CfD is a very different model to the RO or Premium FIT, this could potentially put off investors who have become comfortable with and have working relationships based on the RO.
- 8.2. Electricity generators are reliant on a robust investment framework being in place to secure the levels of capital investment needed to deliver economic, large scale, low-carbon projects. The issue of bankability is of critical importance to investors, incumbents and new entrants alike. Without greater stability and predictability for investors, the value of a FIT would be much reduced.
- 8.3. Currently, there is a lot of uncertainty amongst stakeholders as to the precise mechanics of the FIT with CfD proposal. Generators are concerned about how the reference price will be set and feel further clarity is needed.

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?

- 9.1 The EI membership agrees that, in the ideal world, all types of electricity generators should be treated equitably. Investment is needed in all forms of energy technology in order to meet the energy challenge, particularly from a security of supply perspective.
- 9.2 The reality is that generators invest in different technologies and different generating technologies are at different stages of development. Treating all equally gives an immediate advantage to mature technologies, even when they do not fulfil the requirements of society and Government policy. El members recognise that, even between new technologies, there will be a degree of bias in order to fulfil these requirements.
- 9.3 EI members see that different models of FITs provide different benefits to investors for different technologies. For example, whilst more mature, larger scale low-carbon technologies would favour FIT with CfD, new entrants are more likely to favour the simplicity of the Fixed or Premium FIT.

### 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?

- 10.1. As mentioned in response to question 6, greater market liquidity is of critical importance to allow the market to function properly. This is especially important under the FIT with CfD model which would be dependent on establishing a reliable reference price. This could make the outcomes of the market liquidity review currently underway by Ofgem important to the success of the FIT with CfD approach, depending on the choice of reference index.
- 10.2. In order for contracts to be effective, significant market liquidity is needed. EI members are unsure whether there are enough generators and suppliers to make this work for the UK on a stand alone basis without the entry of new service providers such as aggregators.

#### 11. Should a FIT be paid on availability or output?

11.1. The chosen design of the FIT should be made consistent with optimal dispatch of plant capable of being optimised, such as CCS, fossil, biofuels, etc. Payment on output alone may perversely incentivise sub-optimal dispatch. Any plant capable of being constrained-off could receive the FIT based on availability; other plant on output. Availability should be assessed under a strict regime to eliminate gaming. Careful design of a FIT with CfD will be needed to ensure the above objectives are met.

#### **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?

- 12.1 El members recognise the Government has attempted to put forward a balanced package and that there is a risk of losing that balance if one or more legs were to be taken away, given the complexities of the package. Whilst agreeing with the reasons to introduce an emissions performance standard (EPS), El members are concerned about the implications for supply security given the use of existing fossil fuel plant towards the end of the decade.
- 12.2 Members view the EPS as being the least valuable element in the package to stimulate low carbon investment.

## 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?

- 13.1 Existing UK law already requires all new coal fired power plant to be built with 300MW of CCS. EI members therefore doubt the necessity of creating additional legislation at this time.
- 13.2 El members agree that derogations for demonstration projects should be available. There then needs to be a clear transition plan for what happens subsequently.

## 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?

15.1 There is a potential security of supply issue here. If the environmental targets are set too high, upgrades and life extensions will not happen because the cost and expense incurred in extending plant life will be too great to make it economic to meet new environmental targets. In such instances, it is more cost effective to close plant early.

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

18.1. El members feel that, in the event of energy shortfalls, special dispensations could be given to ensure security of supply and maintain affordability to consumers. However, agreeing these up-front could undermine the policy.

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

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

- 19.1 Whilst recognising the benefits of introducing a capacity mechanism, EI members do not see this as important a measure as the FIT or carbon price support mechanisms. A capacity mechanism that rewards flexibility would foster innovation and be a natural compliment to the intermittent generation connecting to the grid.
- 19.2 EI members expect fossil fuels to provide much of the peak/marginal capacity. There are potential conflicting interactions between a peak capacity mechanism that rewards the flexibility of, for example coal fired generation, whilst simultaneously penalising coal under an EPS. There is concern that such measures could dilute flexibility.
- 19.3 The UK will build new fossil fuelled plant that will eventually all need CCS and which will run 'mid-merit' at some point. This poses a big challenge for generators. Even with a capacity payment, there is still a substantial amount of market risk.

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

20.1 El members support the introduction of a balanced package of mechanisms and agree that a capacity mechanism, within such a balanced package, could help address the issue of security of supply.

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

- A central body holding the responsibility;
- Volume based, not price based; and
- A targeted mechanism, rather than market-wide?
- 22.1 El members are cautious of supporting a targeted capacity mechanism. This is because a targeted mechanism removes the potential for scarcity rent and could potentially reduce the prices for the peak power product, thus disincentivising investment in new capacity and accelerating end-of-life for generation assets not included within it.

- 22.2 There is a history of targeted mechanisms that have not been 100% capable of fulfilling the role they were designed for, leading to further tweaks and changes to the system at a later date. Such tweaks and changes have evolved targeted mechanisms into more market-wide tools.
- 22.3 EI members would be interested to see further details of the central body designed to allocate capacity mechanism allowances and carry out other responsibilities detailed in the EMR consultation document.

# 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?

23.1 EI members feel that, while the preferred package of options could allow demand-side response, storage, physical interconnection and energy efficiency technologies, the EMR document does not go far enough to articulate the opportunities available and should do more to demonstrate the potential for interplay between these technologies and capacity payments.

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

25.1 The location of peak load capacity is important. The link between investment in generation and investment in the overall system should be acknowledged. Currently, most of the focus is on a high voltage network; attention is also needed on medium and low voltage level investment.

#### Analysis of Packages

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

- 26.1 El members agree there is a need to de-risk revenue streams, whilst prioritising the optimisation of generation plant and that there should be an incentive to optimise electricity dispatch. The current electricity market situation may not provide the investment needed for security of supply and to meet the UK targets for 2020 and beyond. Providing greater long-term security to generators will encourage new investment.
- 26.2 El members also agree that the preferred proposal put forward by Government is a balanced package of options that ought to encourage new investment in electricity plant and infrastructure.
- 26.3 A low carbon support mechanism in the form of a FIT, whichever option chosen, is regarded as a central pillar to drive forward the development of low-carbon technologies. A FIT of some kind is seen as a flexible tool that could address a number of potential objectives.
- 26.4 There are concerns from EI members that the Government is adding complexity on top of an already complex system. This will make it very difficult for new entrants unless further detail and information is provided, particularly in respect of the FIT proposals.

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

27.1. El members agree that Premium FITs could offer a viable alternative should the CfD mechanism not be practical. A Premium FIT is similar to the current RO system and therefore its implementation would be expected to cause minimum disruption.

### 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?

- 28.1. It is expected that, once the UK electricity sector reaches its decarbonisation targets, the new structure (with differentiated support for technologies) should be phased out and replaced by a more level playing field. El members are concerned that, over time, the vast majority of the market could become dictated by long-term contracts for low carbon electricity, leading to a potential situation where the market eventually ceases to operate.
- 28.2. Some EI members have argued that, even by 2040, gas will still be setting the marginal price, despite only being a small proportion of the overall electricity mix at this time. EI members would like further clarity on the issue of a contract system for mid-merit plant in a low-carbon world. Currently, as generation becomes more efficient, it pushes less efficient plant down to mid-merit. This may have implications for the concepts of peak, mid-merit and base-load power generation.
- 28.3. The EI membership agrees that, in the ideal world, all types of electricity generators should be treated equitably. Investment is needed in all forms of energy technology in order to meet the energy challenge, particularly from a security of supply perspective.
- 28.4. The reality is that different generating technologies are at different stages of development. Treating all equally gives an immediate advantage to mature technologies, even when they do not fulfil the requirements of society and government policy. There is recognition by EI members that, even between new technologies, there will be a degree of bias with respect to financial support in order to fulfil these requirements.
- 28.5. El members feel particular attention should be paid to practical issues during the transitional period. For example, there is a need to know how the renewables regime will work after the RO has been phased out in 2017. Unless the transition path is clearly defined, there could be a hiatus in investment as market participants wait for further clarity.
- 28.6. Some concern has been expressed by EI members that, with the UK market increasingly connected to Europe, gains made in the UK towards reduced carbon, lowered costs after decarbonisation has been achieved and enhanced security of supply could simply be 'exported' to Europe. This could mean UK electricity prices would not reflect reduced costs but rather the marginal export price to Europe.

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

29.1. El members see a low-carbon incentive mechanism, in the form of a FIT, as able to deliver the greatest level of new investment. Increased certainty in the long-term price of carbon would play an important supporting role to the Premium FIT mechanism, enabling a lower cost of capital for developers whilst reducing the burden on the consumer.

29.2. As discussed in 8.3 and 10.1, EI members foresee difficulty in establishing the reference price for the FIT with CfD. The Premium FIT is seen as a viable alternative to the CfD model.

#### 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?

- 30.1 EI members are clear that the proposed package will result in the interaction of complicated regulatory measures. The future market arrangements should not be any more complex than the current ones. There will be unintended consequences and EI members are keen to continue to work with Government to minimise the impact of these.
- 30.2 The cost of reforms and the impact on electricity prices are a concern to EI members, both for social and international competitiveness reasons. This requires transparency in policy setting.
- 30.3 As has been previously mentioned in 23.1, EI members would like to see more in the package to help build a business case for more physical interconnection. As discussed in 28.6, this would need to be regulated to ensure that capacity will be made use of in the UK and not sold elsewhere. This may require alterations to license conditions.
- 30.4 El members believe changes on the customer side of the meter are also a large part of the solution, but details as to how demand-side response, Smart Metering, demand reduction, etc. could work are missing from the consultation.
- 30.5 EI members are concerned about the costs of implementing as ambitious an EMR package as the current preferred option and feel that the Government should do more work or share existing analysis to justify those costs.
- 30.6 Concerns have been raised by EI members as to the possibility of windfalls for existing renewable energy systems, nuclear plants and, to a certain extent gas, at least while unabated coal is part of the energy mix. It will ultimately be the consumer who will pay for this. It is not clear from the EMR document, how excessive rents and/or windfalls will be avoided.

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?

- Can auctions or tenders deliver competitive market prices that appropriately reflect the risks and uncertainties of new or emerging technologies?
- Should auctions, tenders or the administrative approach to setting levels be technology neutral or technology specific?
- 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 different technology premiums on top?
- Are there other models government should consider?
- Should prices be set for individual projects or for technologies?
- Do you think there is sufficient competition amongst potential developers / sites to run effective auctions?
- 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?

- 31.1. Amongst EI members, there were many concerns about auctioning and it is not seen as a viable option at the current time for many reasons. Only once low carbon generation technologies become more established could competition between different generators in that sector make auctioning work.
- 31.2. El members do not feel that auctioning would encourage new market entrants: experience indicates that the complexity of the market confers advantages on incumbents in auctions, to the point that potential new entrants often do not engage at all. This is contradictory to the objective of encouraging new entrants.
- 31.3. It is likely there will not be enough competing projects to justify an auction. It should be noted that consumers are more interested in the cost of electricity rather than the provider incumbent or new entrant.
- 31.4. A single auction for all technologies could be a problem. Projects, locations, technologies, etc, do not have the same characteristics, therefore it is extremely difficult to have a level playing field. Significant investment could be exhausted competing for auctions.
- 31.5. The timing dislocation between successful bidding and project completion will make auctions extremely difficult to manage.
- 31.6. The example of the CCS competition process provides a stark warning as to the difficulties of an auction based system. This model was not practical and many CCS projects have fallen away in the UK competition. This is not a model to replicate.
- 31.7. However, some EI members do not see the alternative to auctioning as attractive either. Negotiation between Government and generators is unlikely to produce a good deal for consumers. Without an auction, those EI members have concerns for price discovery, again potentially disadvantaging consumers.

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

- 32.1 There are concerns that a central agency will not be able to deliver projects on the scale and in the time frame required to meet Government targets. El members feel more detail is needed as to the role and responsibilities of the proposed central agency.
- 32.2 As mentioned previously, there are concerns as to how the reference price will be established under the FIT with CfD approach.

### 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?

- 33.1. In order to minimise market distortion and unintended consequences a clearly defined roadmap and mechanism for the transition process is needed. In order to increase investor confidence, measures should not be retroactive.
- 33.2. As has been previously mentioned in this response, EI members would like to work with DECC economists to model through CfD scenarios. This would help stakeholders to understand the detail of the CfD, whilst also helping the Government to uncover some of the unintended consequences.

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

34.1. Due to the long lead times for projects, many investment decisions need to be taken very soon in order to secure supply towards 2020. El members agree that delays to planned investments in low carbon technologies should be minimised through the use of grandfathering arrangements and other measures to reduce investor uncertainty.

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

- 35.1. El members see the transition of the RO into the new arrangements as a sensible approach to give certainty to the change over period.
- 35.2. As a cautionary note, EI members believe the RO had begun to work and to make an impact in the investment community. Destabilising that progress is a risk which could create an investment hiatus. Whilst future changes to the RO were inevitable, the transition period needs careful management.
- 35.3. As noted above, the Premium FIT approach is most consistent with the current RO and would offer a smoother transition to the new arrangements for existing projects developed under the RO.

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. 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 lowcarbon support mechanism but before 1 April 2017 should have a choice between accrediting under the RO or the new mechanism.
- 36.1 El members agree it is sensible that, prior to 1 April 2017, the accreditation mechanism to be used should be a decision left open to the market.

#### Acknowledgements:

This submission was prepared by Gareth Parkes GradEI, Knowledge Manager, Energy Institute with contributions from EI members through various stakeholder events and briefings and a call for contributions. It was peer reviewed by Jo Evans, Lecturer in Economics, University of Surrey; Walt Patterson FEI, Chatham House; Paul Cuttill OBE FEI, Independent Consultant; Jeff Scott CEng FEI, Independent Consultant; Nick Perry MEI, Independent Consultant and James Harrison CEng FEI as well as members of the EI staff team.

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