ESB International
ESBI Energy Innovation

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Electricity Market Reform Team
Department of Energy and Climate Change

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Electricity Market Reform – ESBI response

ESB International is pleased to respond to DECC's consultation on fundamental reform to the electricity markets. The proposals contained in the consultation could transform the appearance and operation of the markets in which we participate. The issues in the consultation are therefore critical to our business and the customers we serve.

Our response provides a brief overview of ESB International and a high-level response to the issues and proposals arising from DECC's consultation. Responses to the specific consultation questions posed are then contained in an appendix.

ESB International

ESBI brings together our worldwide generation, engineering and related services businesses.

In GB, ESB International (ESBI) has been a developer and operator of independent Combined Cycle Gas Turbine (CCGT) generation projects in the GB market for almost 20 years. We will own, operate and trade Corby power station from May of this year and developed the 850MW plant at Marchwood, which was commissioned late in 2009. We are also at an advanced stage with our latest 860MW development at Carrington which is intended to become operational early in 2015. Additionally, we own and operate the 406MW Coolkeeragh plant in Northern Ireland. We are also developing further large-scale CCGT developments at other locations across GB.

In addition to increasing our conventional generation fleet, we continue to grow our position in the UK wind market. Our operational and development portfolio will be around 165MW by 2012, comprising: the 24MW West Durham Wind Farm in Northern England; the 20MW Hunters Hill; and 15MW Crockagarron projects in Northern Ireland. Additionally, we are currently constructing what will be England's largest on-shore wind farm, at 66MW, at Fullabrook in Devon and we expect to start construction of our 38MW Mynydd y Betws Wind Farm in South Wales later this year. We are also active in the ocean energy

sector.

With increases in physical interconnection and implementation of the EU Target Model under the Regional Markets Initiative, our operations in Ireland will become more closely linked with the GB market.

Summary of views

HM Government has come to the view that, in order to meet its energy policy objectives of security of supply, decarbonisation and affordability, it must reform the current electricity markets. The carbon reduction targets are stretching and will require unprecedented levels of investment from industry participants, which Government anticipates will not be forthcoming under the current market framework. As such, it has proposed a suite of changes that will facilitate the delivery of its goals.

Of the proposals contained in the consultation, we note that some aspects of reform were significantly more advanced than others. In particular, we find the proposals for the introduction of a capacity mechanism lacking in critical detail and therefore it has been difficult to formulate a comprehensive view on a favoured approach. We recommend that DECC presents more detail, in light of responses to its consultation and at the earliest opportunity in order that industry participants can provide more comprehensive views and better understand DECC's thinking. This is critical at a time when industry players are making significant investment decisions which will contribute to policy objectives being met.

Whilst we may not agree that reforms are immediately required in all the areas in which they are proposed, we do see the rationale for Government seeking changes in some areas. We would seek that any reforms be robust and durable to the challenges that they will inevitably face in the forthcoming years. This will be a key factor in limiting any transitional investment hiatus.

Below is a summary of our high-level views on the changes proposed in DECC's consultation.

- **Markets can deliver** – we are strongly of the view that liquid and competitive markets must play a central role in delivering energy policy.
- **Improved wholesale liquidity is key** – the current bilateral market structure will deliver many of the required investment signals, if liquidity is improved. This is particularly important for

encouraging new entrant developers and new sources of finance.

- **Investment must not be delayed** – if policy targets are to be met, there must be no hiatus in investment. Market reform has created uncertainty that can be seen to be delaying investment decisions in all types of generation technologies. DECC must ensure this uncertainty is removed as soon as possible in order that developers can be assured of the market arrangements in which they are making investments.
- **Identify market deficiencies** – we seek that Government be explicit in the market deficiencies it is attempting to remedy with each of its reforms.
- **Feed in Tariffs** – we believe the existing Renewables Obligation has successfully delivered significant increases in renewable generation, however we recognise the Government's intentions with regards the introduction of a FiT. Of the models proposed, we would favour the Premium FiT model.
- **Emissions Performance Standards** – Whilst, in general, we would prefer changes in generation mix be encouraged by positive incentives; if an EPS is to be introduced we support the form proposed by DECC.
- **Security of supply requirements** – We are of the view that the objectives underlying the introduction of a capacity mechanism are not properly defined. We believe that the issue that should be addressed is one of flexibility, not a requirement for additional generation to meet peak demand, i.e. generation adequacy.
- **Targeted capacity mechanism** – A liquid wholesale market, in association with a less opaque system for transmission ancillary services, could deliver the flexible capacity required. However, if Government believes the market requires further assurances then a properly considered, transparent reward for capacity could be introduced.

Market liquidity

The competitive market has delivered many benefits for consumers since its introduction in 1990. We believe that the market, perhaps with some evolutionary changes, is capable of delivering Government's energy policy objectives. However, improving liquidity in the market is critical in order that the appropriate signals are provided to participants in the market to deliver the generation required to meet Government's goals. We note that Ofgem are aware of the lack of liquidity in the forward markets. A project has been underway for some time to monitor liquidity with a view to introducing measures to improve it if no

discernable change was forthcoming from industry. We are somewhat disappointed that a "wait and see" approach has been adopted over the last two updates (a period of 12 months). Considering its importance to delivering Government's objectives and interaction with many aspects of the EMR proposals, we would ask DECC to consider bringing specific proposals with respect to liquidity improvement within the scope of EMR. This would provide investors with the clarity and confidence they require rather than waiting for an undefined point in time when Ofgem may decide that intervention is required.

In a move to a FiT regime, we note that DECC has not included proposals to maintain a supplier obligation to purchase output from renewable generators. Therefore, future renewable generators will be required to sell output competitively in the wholesale market. In order for these offtake purchases to be at a level that supports the increase in renewable penetration, liquidity in the wholesale market will be an important consideration. We would seek for DECC to be mindful of this interaction.

Emissions Performance Standard (EPS)

DECC has proposed the introduction of an EPS to place a regulatory limit on the amount of carbon dioxide that a generator can release into the atmosphere. As proposed, the EPS is designed to halt the development of the most polluting forms of thermal generation, except when subject to carbon abatement measures. In particular the EPS will halt the development of coal-fired generation, without Carbon Capture and Storage (CCS).

Whilst we support the form of the EPS as proposed in DECC's consultation, we would instead prefer to see the focus on incentive-based mechanisms to assist in the development of low-carbon generation rather than applying mandatory limits to existing generation. Notwithstanding, we welcome the clarity that the proposed form of EPS brings to existing sites and those projects currently in development with regards the EPS that will be applied to the life of the project. The proposal provides certainty that a plant will only be subject to the emissions limit in the EPS at the time the plant received planning consent. This reduces some investment risk and therefore should help facilitate the development of cleaner, flexible generation plant that will be required in the generation mix in the future. To this end, we would not wish to see DECC revisiting its proposals to "grandfather" the EPS in future rounds of legislation. This would significantly undermine investment decisions and harm the GB market's attractiveness as a place to build new generation plant.

CCS technology could play a key role in facilitating the achievement of Government's policy goals. We therefore agree that DECC must look at introducing measures that ensure CCS development is not curtailed by the EPS. However, these measures should not provide blanket exemptions for plants that are trialling CCS technology, as this could result in the unintended consequence of coal plants using small-scale CCS trails to avoid the impacts of the EPS. A mechanism needs to be developed that ensures any emissions not concerned in the development of CCS are included within the plant limits under the EPS.

Feed in Tariffs (FiT)

In order to better support the development of low-carbon technologies, Government has proposed to introduce a FiT to replace the existing Renewables Obligation (RO). The RO has provided a relatively stable and transparent basis for the significant increase in renewable generation that has been seen in recent years. This capacity is making a key contribution to the achievement of the legally binding targets for carbon reduction and overall renewable generation penetration.

At the highest level we would prefer to see the current RO maintained as the key support mechanism for renewable generation. It provides a stable, bankable form of support that is well understood by developers and financiers and the increase in renewable generation is testament to this. We recognise, however, that in the move to a significantly lower carbon economy, other low carbon forms of generation particularly nuclear and CCS, will make an important contribution to achieving carbon targets and that the RO would not be suitable for providing support to such technologies. We therefore understand the rationale for DECC's proposal to change to a FiT mechanism of support.

Of the three models proposed: fixed; premium; and contract for difference (CfD), we agree that the fixed FiT model would not be suitable (for all the reasons stated in DECC's consultation) and should be discounted at the outset. Of the remaining models we prefer the premium FiT model with the following attributes:

- Administered price (ie no auctions or tenders) for reasons identified below
- Different premiums for different technologies
- Paid on output

The premium FiT model could provide a framework for supporting low carbon technologies that is similar to that which is already used and has been shown to deliver. Investors are used to the levels of risk and returns that the RO provides. In order to maintain, or indeed increase, current levels of investment, we think that a FiT that in some ways is similar to the RO would be preferred and would lessen the risk of an investment hiatus that could result under the CfD FiT model.

The CfD model has the ability to remove significantly more risk by effectively creating an administered rate of return for low-carbon generation. We do not agree that the entire market risk should be removed from generators and that some wholesale market risk, as assumed under the premium FiT, should be carried by those generators benefitting from the FiT. We would argue that this is a more appropriate division of risk between generators and consumers.

In order for generators to maximise the value of the premium provided under that model, a liquid wholesale market is key. Therefore, any move to introduce a FiT must be made alongside a programme of improvements to wholesale market liquidity. Any improvements in liquidity will also help provide signals to developers of flexible conventional generation that is required to mitigate the effects of significant amounts of inflexible capacity (such as wind and nuclear) which will be seen in the future generation mix.

We are strongly against the use of auctions or tenders to determine the level of support provided under any FiT. Previous experience has shown that auctions or tenders have had unintended and detrimental effects. In particular the auction process under the Non-fossil Fuel Obligation, which was used to support the development of renewables during the 1990's, resulted in many development projects losing out on support whilst others were forced to bid costs which were unrealistically low in order that they could enter the scheme, only to be unable to deliver projects for the level of supported secured in the auction.

Further, we are unsure how an auction process could fit with the development and financing of renewable projects. Developers will not commit significant resources to early stage development without knowing the level of support that may eventually be provided to the project; similarly a developer cannot speculatively enter an auction without doing that early development work. In light of these uncertainties, it is impossible to see the point at which project finance could be negotiated due to the number of material uncertainties

arising from an auction.

For one of the key technologies to receive support under the FiT – nuclear – we cannot see how an effective auction can be conducted with only a very small number of parties bidding. Although we agree that the level of support provided for individual technologies should be different, we would not support a FiT that used different mechanisms for calculating those technology differentials. We would therefore not want an auction for some technologies and an administered premium for others. In summary, our preference is for a premium FiT with an administered mechanism used to calculate premiums for individual technologies.

We welcome DECC's view that support provided under the RO to existing projects and those developed pre-2017 should have that support be grandfathered to the full life of the projects in a similar manner to the RO. We do think, however, that DECC needs to provide significantly more detail and assurance that investments will be "kept whole" whilst the two support mechanisms are in place. We seek that DECC issues further proposals on how it plans to ensure investments receive the return envisaged at the time of commitment but are of the view that calculating a headroom for the remaining life of the project would be our preferred approach.

Finally, we are concerned that the nature of low-carbon support under the devolved administrations has not been properly considered. Of particular importance to us is the impact that reform of the RO could have for Northern Irish renewable generators. The Northern Ireland RO (NIRO) supports significant amounts of renewable generation (particularly wind), which makes a significant contribution to the UK's low-carbon targets. Renewables support is a devolved matter and as such we would urge DECC to consult directly with the Northern Irish Assembly to ensure projects supported by the RO are treated in a similar manner to those in England and Wales. In addition, we seek that DECC be mindful of the fact that Northern Irish renewable output is not sold in the GB market, but in the Irish Single Electricity Market (SEM). Given that the level of a premium FiT will be determined in relation to historic, present and forecast prices in the GB market it is not certain that this framework would provide appropriate price support for renewable generation in Northern Ireland. Such concerns would apply equally to a CfD FiT, especially if the reference market underpinning the CfD FiT was not accessible to NI generators.

Capacity Mechanism

We note with concern DECC's proposals to introduce a capacity mechanism. Whilst we recognise the Government's concern behind the proposals is to ensure the highest level of security of supply for customers during a period when the current generation stock will undergo significant change, we have deep concerns that an ill-considered approach could materially undermine the competitive market and the many benefits it has brought to consumers.

We feel that it is essential to correctly define the defect which the capacity mechanism is intended to address. Our interpretation of the consultation is that DECC's purpose is to address ultimate system capacity, as opposed to flexibility. DECC's consultation alludes to a capacity mechanism being introduced to provide additional peak capacity, which the market may otherwise not deliver. We are strongly of the view that the market is delivering the new capacity required to meet future demand peaks. However, in a market containing significantly more inflexible low-carbon generation, there will be a requirement for increased amounts of flexible conventional generation. Indeed market signals have led to the construction of a significant tranche of new gas-fired capacity in recent years. We would therefore seek for Government to look again at the issue it is attempting to remedy in introducing a capacity mechanism; be that increased peak capacity margin or increased volumes of flexible generation. Any changes should be consistent with solving those two very separate issues.

The preference expressed by DECC is for a targeted mechanism whereby payments are only provided to a small proportion of the generation market. It is our belief that for a subset of generation participating in the market to receive capacity payments could undermine the viability of generation not in receipt of such payments. This would likely lead to a "slippery slope" effect whereby all generation outside of other support mechanisms (such as the FiT scheme) would transition to a dependency on the capacity mechanism payments.

DECC state that a targeted mechanism along similar lines to the model employed in Sweden, whereby capacity is only called upon when other market mechanisms have failed to deliver secure supplies, is a model that could work in GB. Whilst we recognise the intention of the model, we note that the Swedish generation mix is significantly different to the one in GB and the model may therefore not be appropriate, nor create the required signals for the GB market. Further, we note that the Swedish regulatory authorities are undertaking a fundamental review of the arrangements with a view to introducing material changes in

light of perceived deficiencies in the capacity mechanism as it currently stands. We would be concerned if these developments were not considered by DECC in determining a possible capacity mechanism for GB.

It is our opinion that the introduction of any kind of universal capacity mechanism could require a fundamental redesign of the wholesale market, which is an undertaking that should be avoided unless clear and demonstrable benefits to consumers can result. If, however, Government remains determined to introduce a last-resort mechanism to secure a higher level of capacity mechanism then we would suggest that any capacity mechanism should be carefully designed to preserve the stable operation of the current market. As such we believe that a last-resort capacity mechanism should have the following characteristics:

- That the System Operator (SO) should dispatch the relevant plant and should dispatch only in absolute adherence to a set of publically stated guidelines which describe the timeframe, the likelihood and extent of a forecast capacity shortfall required to justify use of each category of last resort plant.
- Where the last resort capacity has been dispatched by the SO, it is critical that those parties in the BM who are 'short' at the relevant time should be subject to an additional balancing payment which is much higher than that which they would also face within the BM from the System Buy Price (SBP). Thus, any party assessing its risk management framework would prefer to use generation existing in the market, than see their exposure managed by the last-resort capacity in the capacity mechanism.
- The mechanism should not operate so as to reduce liquidity in the wholesale.
- Whilst the role of demand side response in system balancing must be developed much more fully in the future, we do not believe that demand flexibility can form part of the last-resort capacity without undermining the need to maintain the mechanism wholly external to the market.
- The viability of providing capacity across interconnectors should be explored as it could lead to more efficient solutions.

We discuss provisions for providing additional flexibility and an expanded role for the SO in our response to specific questions below.

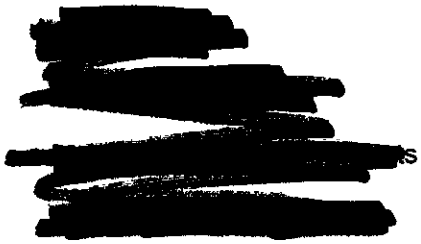
Conclusions

Of the suite of reforms proposed by Government, we believe some are valid and could meet deficiencies in the market arrangements currently in place and assist in the achievement of policy objectives. To this end, we welcome the clarity contained in the EPS and agree that a premium FiT could facilitate greater penetration of low-carbon generation. However, we do not agree that the market will fail deliver the peak capacity, or the flexible conventional capacity that will be required in the future. We believe that improvements to liquidity in the wholesale markets, accompanied perhaps by some relatively minor evolutionary changes to the way the SO operates, could deliver Government's requirements. As such we do not agree that a capacity mechanism is needed.

Perhaps most importantly, however, is that clarity is provided to investors at the earliest opportunity in order that critical investment decisions can be made with as much certainty as possible in the shape of the future market framework.

I hope you find these views of use. Should you wish to discuss them or any of the issues raised herein in more detail, please do not hesitate to contact me.

Yours sincerely,



Appendix 1: Answers to specific questions in DECC consultation

This section provides answers to specific questions raised in the DECC's consultation.

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?*

Whilst the current market has made great progress in delivering the low-carbon generation required to meet policy goals, it will not deliver the significant additional volumes expected to be necessary, nor is it likely that the required rate of progress will be met. Although mechanisms such as the RO have delivered increased amounts of renewable generation, they are likely not to be appropriate mechanisms for delivering all forms of other low-carbon generation, in particular nuclear and CCS. In general, therefore, we agree with Government's assessment of the market's ability to support investment in low-carbon generation.

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

We do not agree with the assessment of future security of supply. DECC has stated that it believes the main risk to security of supply is the market's ability to deliver a satisfactory level of capacity margin at times of system peak. We would suggest that, in a scenario of large levels of intermittent generation together with increased amounts of inflexible low-carbon generation, system flexibility is perhaps a more important risk. Notwithstanding, we believe that the current market arrangements can and will deliver appropriate levels of both peak capacity margin and the flexible capacity required in the future, if it is allowed to function properly and liquidity is significantly improved.

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, we agree with Government's assessment of the three FiT models discussed in the EMR consultation. However, we believe that the premium FiT provides a more appropriate apportionment of risk between generators and Government (and ultimately consumers) than the FiT with CfD model.

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

We do not agree that a CfD-based FiT would be the most appropriate model to introduce. Our preference is for a premium FiT model.

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?*

Whilst we welcome DECC addressing the issue of risk, we do not agree that all market price risk should be removed from the generator. In our view, the substantial removal of all market price risk could result in inefficient outcomes for customers and possibly some distorted incentives for certain parties. Further, it could lead to adverse impacts on the functioning of the traded wholesale market, particularly when very a significant proportion of generation capacity are benefiting from the CfD. This could increase the risk of protracted negative prices which would harm the integrity of the wholesale market. While risk reduction is beneficial to attracting new investment, the inclusion of a degree of market risk should assist in maintaining the traded wholesale market in a similar form as exists today.

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?*

The price signal influences dispatch decisions, albeit to the extent that different technologies are able to determine when they will dispatch (eg some renewable technologies will dispatch irrespective of market price in order to avail of the available support mechanisms). These price signals are important in ensuring the decisions made by market participants are economic and efficient. Further the price signals inherent in the market are important to security of supply by creating the signal to those generators that are able to respond to provide sufficient capacity to meet times of increased demand.

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?*

We have not been able to quantify the impact of the Government's proposals on cost of capital for many

of the low-carbon technologies and as such are not able to provide specific views 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 and the existing investor base?*

We agree that each of the models of FiT could reduce the cost of capital for low-carbon generation.

9. *What impact do you think the different models of FiTs will have on different types of generators (eg 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 impact on many market participants, particularly those operating outside of the FiT regime will depend on the detail that is yet to be determined. We are of the view that the premium FiT will best facilitate the wholesale market as exists today, albeit with measures to ensure liquidity is improved. As such, we believe that model will provide the best opportunity for new entrant and existing independent gas generation which most rely on the signals provided by the wholesale market.

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?*

We have proposed the premium FiT partly because it removes the risks associated with defining a reference price. If Government decides to proceed with a CfD FiT, we currently do not have a view what index should be used, except to state the index should relate to a reference market that the wind developer can actually access.

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

In our preferred model of the premium FiT, it is most appropriate to determine payment on output.

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?*

Yes, we agree with Government's assessments.

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?*

We favour Option 2, an EPS annual limit of 450gCO_2/kWh. Applying this lower limit could have impacts for the development of CCS technology, particularly for coal plants and we would therefore seek for Government to design exemptions or derogations that allowed the development of CCS to continue whilst ensuring emissions associated with non-CCS development output is counted within the annual EPS limit.

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

We agree with Government's proposals to grandfather from the point of consent and therefore that the EPS should apply to new plants, only for the effective operational life of the plant.

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?

The EPS should apply to the point the effective operational life of the plant is reached and should not be extended in the event that they undergo upgrades or life extension works.

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

The three yearly review as specified in the consultation has its benefits in that it will better take account of the actual development timescales and costs of CCS technology than attempting to make forecasts now. However, we are concerned that the relatively short three year review period could introduce increased uncertainty and therefore risk to those developing generation that could be captured within a future lower EPS level.

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

We do not have any views on how biomass should be treated for the purposes of the EPS.

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

Whilst we recognise the rationale for allow exceptions to the EPS in the event of long-term or short-term energy shortfalls, we are very much of the view that they should not be included within the EPS. This is due to the very negative impact it could have on signals for developing new, much cleaner flexible plant that could mitigate any supply short-fall. The market is delivering significant new capacity and this investment should not be jeopardised by uncertainty arising from such concessions.

Options for market efficiency and security of supply

19. *Do you agree with the Government's assessment of the pros and cons of introducing a capacity mechanism?*

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 stated in the narrative provided in our response, we do not agree that a capacity mechanism is required in the GB market. We believe that the current market, with some evolutionary changes (such as those discussed in DECC's consultation) and much improved liquidity can, and will, deliver the secure electricity supplies required in the future.

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

We think the proposed form of targeted mechanism described in the consultation would have material impacts on the wholesale market and price. The proposed form of targeted mechanism would inevitably depress wholesale prices as proportionally more capacity therefore sought its return from the mechanism. This effect would be compounded to the extent that it would be impossible for generators to participate solely in the wholesale market without support from a capacity payment. We have outlined below a framework for how a targeted mechanism could be introduced and not impact the functioning of the

wholesale market.

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.*

No, we would prefer to see no capacity mechanisms introduced and a focus instead put on ensuring an appropriate market for flexibility is developed..

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?*

Whilst the role of demand side response in system balancing must be developed much more fully in the future. Demand already plays a key role in the balancing market and as such we find it difficult to see how this demand capacity could participate in a last-resort model, without undermining the need to maintain the mechanism wholly separate external to the market.

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

- Last-resort dispatch: or
- Economic dispatch.

We have already expressed that we do not see a rationale for introducing a capacity mechanism, however if Government were to introduce a targeted mechanism we are strongly of the view that it should be a tightly designed last-resort dispatch model.

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

There is economic rationale for introducing locational elements to any capacity mechanism; however on balance we believe the complexities of any such scheme would likely outweigh the benefits.

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?*

In our view, a package with carbon price support, premium FiT and an EPS is appropriate and could assist in delivering policy objectives. We do not see a need for a capacity mechanism.

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

See answer to question 26, above.

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?*

Any reforms introduced to the market to support certain types of generation or the way generation is dispatched will have consequential effects. For example, support mechanisms for renewable generation will require additional electricity transmission to be built, often in remote areas where wind and ocean resources are often best.

Another aspect which should be taken account of is the impact that any reforms will have on other commodity markets, in particular gas which will likely fuel the thermal generation which will provide flexibility to mitigate inflexible low-carbon generation.

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

At the highest level, the three mechanisms designed specifically to encourage the development of low-carbon generation; FiT; carbon price support; and EPS could work well together although market advantages given by each should be considered when determining levels of support provided under others. We are concerned that the complexity of the CfD FiT, in particular regarding the implicit support within the strike price relative to the market index, may negate some of these benefits. As such, we believe that the simpler premium FiT would provide a better support mechanism. As stated previously, we would seek for the support mechanisms to have as limited an impact on the wholesale market as possible in order that appropriate signals are provided to investors.

Implementation issues

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

The most significant risk is uncertainty arising from change to the existing RO regime and the introduction of a capacity mechanism will have the opposite effect to that intended by creating a protracted investment hiatus whilst investors wait to better understand the fundamental market changes that they constitute. This will undoubtedly have the effect of jeopardising the achievement of Government's objectives. In this regard, we do not think that the premium FiT carries the same level of risk as the CfD FiT, as it is the closest in operation to the current RO mechanism.

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?*

We are strongly against the use of auctions or tenders to determine the level of support provided under any FiT. Previous experience has shown that auctions or tenders have had unintended and detrimental effects. In particular the auction process under the Non-fossil Fuel Obligation, which was used to support the development of renewables during the 1990's, resulted in many development projects losing out on support whilst others were forced to bid costs which were unrealistically low in order that they could enter the scheme, only to be unable to deliver projects for the level of supported secured in the auction.

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

An administrated approach should set support levels that are 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 technology different premiums on top?*

The suggested method (market-wide CfD with technology specific premiums) seems unnecessarily complex. Rather than attempting to amalgamate the two FiT options to mitigate issues evident in one or the other, the administratively simpler premium FiT model should be adopted. A qualified neutrall body

should be tasked with determining benchmark costs associated with deploying low-carbon technologies in an open and transparent manner. These costs should then determine the level of support afforded under the premium FiT.

- *Are there other models Government should consider?*

See bullet above.

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

Prices should be technology specific.

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

For one of the key technologies to receive support under the FiT – nuclear – we cannot see how an effective auction can be conducted with only a very small parties bidding. Although we agree that the level of support provided for individual technologies should be different, we would not support a FiT that used different mechanisms for calculating those technology differentials. We would therefore not want an auction for some technologies and an administered premium for others.

- *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?*

If an administered approach was adopted, Government could periodically assess the effect the FiT was having on low-carbon deployment and adjust up or down as it saw necessary. We would, however, wish for Government to be mindful of the effect that the threat of future adjustments to support mechanisms could have on investor signals and confidence.

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

The primary change would be the establishment of a qualified neutral body responsible for the determination and management of the FiT.

The role of the SO should also evolve to ensure more transparency is adopted in its role of procuring services for balancing the electricity transmission system. We believe further attention should be paid to how costs associated with balancing actions are targeted.

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?

We are of the view that a premium FiT would result in minimal market distortion as it would best complement a liquid wholesale market.

If Government remained of the view that securing a higher level of capacity margin is critical, then we would suggest that any capacity mechanism should preserve the stable operation of the current market. As such we believe that a capacity mechanism should have the flowing characteristics:

- That plant benefitting from the capacity mechanism should be explicitly precluded from participating directly in the Balancing Mechanism (BM).
- That the System Operator (SO) should dispatch the relevant plant and should dispatch only in absolute adherence to a set of publically stated guidelines which describe the timeframe, the likelihood and extent of a forecast capacity shortfall required to justify use of each category of last resort plant.
- Where the last resort capacity has been dispatched by the SO, it is critical that those parties in the BM who are 'short' at the relevant time should be subject to an additional balancing payment which is much higher than that which they would also face within the BM from the System Buy Price (SBP). Thus, any party assessing its risk management framework would prefer to use generation existing in the market, than see their exposure managed by the last-resort capacity in the capacity mechanism.
- The mechanism should not reduce liquidity in the wholesale market. Indeed, where possible it should help drive better liquidity and wholesale price discovery.
- The role of demand side response in system balancing must be developed much more fully in the future. Demand already plays a key role in the balancing market and as such we find it difficult to see how this demand capacity could participate in a last-resort model, without undermining the need to maintain the mechanism wholly separate external to the market.
- The viability of providing capacity across interconnectors should be explored as it could lead to more efficient solutions.

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

We believe that the risk of investment hiatus has been underestimated and that there is a significant risk should Government go ahead with its preferred package.

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?*

At the highest level, maintaining the RO would be our favoured approach however in the event that it is changed in favour of a FiT, we generally agree with the principles described in the consultation.

36. *We propose that accreditation under the RO would remain open until 31 March 2017. The Government's ambition 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 accredited 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.*

We favour the second option; all new renewable capacity accredited 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.

37. *Some technologies are not currently grandfathered under the RO. If the Government chooses not to grandfather some or all 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?

We do not have strong views on how this section of generation should be treated, however we agree with Government in so much as support mechanisms should not provide undue windfalls to generators. As such we support the second option of carrying out an "early review" if evidence is provided of significant change in costs or other criteria as in legislation.

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*

Our preference is for a headroom calculation to be used.