DEPARTMENT OF ENERGY & CLIMATE CHANGE

Consultation on Possible Models for a Capacity Mechanism

Response form

Responses are welcome by email or post. You may find this document helpful for structuring your response, but can reply in a separate document if you prefer. If replying in a separate document please make clear which questions you are answering.

Respondent Details	
Name	[redacted]
Organisation	Low Carbon Developers
Address	Swan Yard, 9-13 West Market Place
Town/ City	Cirencester
Postcode	GL7 2NH
Telephone	[redacted]
E-mail	[redacted]
Fax	

Tick this box if you are requesting non-disclosure of your response. ☐

Please return by 4 October 2011 to:

Department of Energy & Climate Change,
Electricity Market Design – Security of Supply
4th Floor, Area D
3 Whitehall Place,
London, SW1A 2AW

You can also submit this form by email to:
DECC.capacity.mechanism@decc.gsi.gov.uk

Consultation questions

Note: the references in square brackets refer to page and figure numbers in the consultation document where more information can be found, and the questions are set out in context. The consultation document is Annex C of the Electricity Market Reform White Paper, and is available here:
http://www.decc.gov.uk/en/content/cms/consultations/cap_mech/cap_mech.aspx

Targeted mechanism

Consultation question	[page 167]
1	**Does this table [see Figure C3] capture all of your major concerns with a targeted Capacity Mechanism? Do you think the mitigation approach described will be effective?**
Response	LCD believe the most important issue with a targeted capacity mechanism is the level of market distortion caused by the trigger price of the reserve. The dangers of 'missing money' and the 'slippery slope' syndrome are the key factors to be mitigated in designing a targeted mechanism. A despatch price set at VoLL would avoid these issues but also gear the mechanism towards a low cost, low efficiency plant base and would not encourage the deployment of progressive technologies in this market. LCD also believe that the potential for conflict between the existing balancing services provided by National Grid and a new capacity mechanism is high. Mitigation of this risk would involve the combining of the two or rather a refinement of the existing system to provide longer STOR contracts with larger capacity.

Consultation question	[page 168]
2	**How long should the lead time for Strategic Reserve capacity procurement be and why?**
Response	The lead time for capacity availability should be calculated on a case by case basis depending on the type of technology in question and the length of the contract. Some providers may tender facilities that are already operational and/or have physical backing and/or operational data, lead times for these providers can be very short giving high levels of control over the level of reserve. Other technologies will require longer lead times and contract terms given the level of investment required to construct the plant. Looking at the issue from the consumer's point of view, longer lead times whilst providing more accurate estimates of availability and reducing risk of being caught short, also reduce the level of control and flexibility held by the procurement body and may not provide the consumer with maximum value for money.

Consultation question	[page 168]
3	**Should the length and nature of contracts procured by the Strategic Reserve procurement function be constrained in any way?**
Response	Again LCD believes that contract length should be decided on a case by case basis or a technology banding. Longer contracts provide more certainty for investors but also exclude the procurement body from exploiting shorter-term market dynamics. This issue is directly linked to how DECC wishes the strategic reserve to be utilised. If the service is to be used on a regular basis then longer contracts attract more investment leading to newer, more sophisticated plant. Should the service be used very rarely then short lead times and contracts will lead to old and cheap plant being brought into the reserve.

Consultation question	[page 169]
4	**Which criteria should providers of Strategic Reserve be required to meet?**
Response	Once again this question can only be answered with more detailed explanation of how DECC envisages the strategic reserve operating. If the reserve is designed to be used very rarely in times of prolonged low wind then important criteria would include low availability fees and sustained availability stretches. If the reserve were envisaged to be used regularly at peak load times then availability time and ramping rates would be more important. LCD believes that in order to specify detailed criteria for reserve providers DECC must clearly define the role it sees the strategic reserve playing in the electricity market.

Consultation question	[page 169]
5	**How can a Strategic Reserve be designed to encourage the cost-effective participation of DSR, storage and other forms of non-generation technologies and approaches?**
Response	LCD believe that DSR and other 'nega-watt' capacity should not be included in the strategic reserve. As described above the nature of the utilisation of the strategic reserve will define the types of technology that will be procured. Advanced technologies such as DSR and storage have had a vast amount of R&D over the last 15 years and it would not be wise to limit their use to times of extreme pressure on the national grid. National Grid already operates an effective frequency response service with large industrial customers and this serves to fill the role of DSR in peaking capacity. The role of more high tech, integrated DSR and storage should be employed to its full potential all the time and be used to reduce the required size of the reserve rather than act as a part of it.

Consultation question	[page 175]

6	**Government prefers the form of economic despatch described here. Which of the proposed despatch models do you prefer and why?**
Response	LCD prefers the VoLL despatch price model. This model has less potential to distort the market as there is no danger of 'missing money'. It also provides greater investor confidence than the economic despatch model; whilst VoLL may change over time and is difficult to calculate, it is so high that it will rarely be reached. This means that investors can base business models on the assumption that there will be no revenue from utilisation payments, only from availability fees therefore there is no fluctuation in income depending on despatch price and short term market pressures such as sudden increases in oil price. This provides a far more robust revenue stream. The economic model has the potential to distort the market by removing a portion on the wholesale market's revenue and is also subject to short term pressures. The economic model is also very vulnerable to decreased investor confidence as the price will have to be reviewed and the mechanism for this must be very careful not to allow changes over a shorter term than the contract length. This in turn means that consumers cannot benefit from potential price decreases in the market.

Consultation question	[page 175]
7	**How would the Strategic Reserve methodology and despatch price best be kept independent from short-term pressures?**
Response	By using a VoLL based despatch price model the Strategic Reserve would not be influenced by changes in oil price because VoLL is so high that the effect is minimal.

Consultation question	[page 175]
8	**Do you agree that a Strategic Reserve should be periodically reviewed? If so, who would be best placed to carry out the review and how often should it be reviewed?**
Response	Yes, LCD believe that the Strategic Reserve must be reviewed every year. There has been much talk of a new independent body being created to carry out this review. LCD believes that given the existing knowledge and systems in place through the current balancing mechanism, National Grid and Ofgem should jointly manage and review the Strategic Reserve. However, the review of despatch price must be carefully managed in order to maintain investor confidence. LCD believe that investors will create business models that work on any reasonable set despatch price. How that price is reviewed and adjusted is of far greater importance than the actual level it is initially set at.

Consultation question	[page 176]
9	**Into which market should Strategic Reserve be sold and why?**

Response	The decision on whether the Strategic Reserve should be sold into the day ahead market or the balancing mechanism again highlights the importance of cooperation and integration with National Grid, Ofgem and the current mechanisms in place. If the Strategic Reserve is to operate separately to the existing balancing services, it may have to be sold into the day ahead market to avoid conflict over pricing. Selling into the day ahead market also allows for more accurate estimates of when the Strategic Reserve will be required and to what level.

Consultation question	[page 178]
10	**Do you have any comments on the functional arrangements proposed for managing a Strategic Reserve?**
Response	Current National Grid and Ofgem balancing services must be fully integrated into the management of the Strategic Reserve to avoid duplication of effort and conflict over bidding to provide capacity. This is to provide consumers with the best value for money.

Consultation question	[page 179]
11	**Given the design proposed here and your answers to the above questions, do you think a Strategic Reserve is a workable model of Capacity Mechanism for the GB market?**
Response	The strategic reserve has inherent problems in its design that mean LCD do not think it is a workable model for a capacity mechanism in the UK. This is due to market distortion and the lack of incentive for progressive technologies. This model favours old, cheap fossil fuel plants.

Market-wide mechanism

Consultation question	[page 182]
12	**How and by whom should capacity in a GB market be bought and why?**
Response	LCD believe that in order to integrate the current balancing services with a capacity mechanism a central body must buy capacity in an auction. It provides the most accurate and efficient system as the correct amount of capacity can be purchased and reduces the need for secondary market transactions.

Consultation question	[page 183]
13	**What contract durations would you recommend for a Capacity Market?**

Response	The contract duration must be calculated on a case by case basis whereby the buyer decides the appropriate length of contract depending on the technology in question and whether the plant is existing or yet to be built. A sliding scale of contract length is the only way to ensure certainty for investors and buyers whilst avoiding the possibility of over procurement.

Consultation question	[page 184]
14	**How long should the lead time for capacity procurement be? Should there be special arrangements for plant with long construction times?**
Response	A sliding scale would have to be employed again. Existing plant or well established plant can be procured on a very short lead time. Plants with longer construction times should be allowed greater lead in times.

Consultation question	[page 185]
15	**Should there be a secondary market for capacity? Should there be any restrictions on participants or products traded?**
Response	There is a benefit to a secondary market in that it creates security of supply and allows smaller players and new technologies to enter the market but there must be careful management of the trading that occurs in the secondary market tom ensure that consumers are not paying the commissions of capacity trading brokers rather than for the capacity directly.

Consultation question	[page 186]
16	**What are the advantages and disadvantages of making a central, administrative determination of (i) the capacity that can be offered into the market by each generator; (ii) the criteria for being available; and (iii) the penalties for non-availability? In outline, how would you suggest making these determinations?**
Response	

Consultation question	[page 191]
17	**How should the reference market for reliability contracts be determined and what would be an appropriate reference market if it is set by the regulator? How could any adverse effects of choosing a particular option be mitigated?**
Response	

Consultation question	[page 192]
18	**For a Reliability Market, how should the strike price be determined? If using an indexed strike price, which index should be used?**
Response	The ideal solution would be to index the strike price to a technology specific index for each technology. This would incentivise renewables and provide them with a viable alternative market to the FiT or ROC market. The cost of this may be high but much of this work has already been done in the introduction of the premium FiT.

Consultation question	[page 193]
19	**For a Reliability Market, what level of physical back up (if any) should be required for reliability contracts and how should it be monitored?**
Response	Regulatory de-rated capacity is the only level of backing that will fully protect the market from speculative investors selling contracts without investing in the capacity. The cost of monitoring this will be high. A refinement of the existing STOR monitoring and backing evidence could reduce the cost of this aspect.

Consultation question	[page 194]
20	**Do you agree that a vertically integrated market potentially raises issues for the effectiveness of a Reliability Market? If so, how should these issues be addressed?**
Response	LCD believes that the vertically integrated market does have potential for inefficiency given the internal transfers of paybacks however the enforcement of penalties for lack of availability or capacity can police this issue. This is another reason why a central body must be involved with the procurement of capacity and the monitoring of its availability.

Consultation question	[page 195]
21	**What could we do to mitigate interactions between a Capacity Market (especially if a Reliability Market) and Feed-in Tariff with Contract for Difference without diluting the effectiveness of either?**
Response	LCD believe that generators claiming FiTs CfD should be able to operate in a reliability market as well as the wholesale market. However the generator should only receive the higher of the two payments when selling power into the reliability market rather than receiving both. This may limit the participation of FiT generators in a reliability market to times when the reliability market reference price is very high but LCD believes this is the only way to prevent double selling of the capacity and overpayment reducing value for money to the consumer.

Consultation question	[page 196]
22	**How can a Capacity Market be designed to encourage the cost-effective participation of DSR, storage and other non-generation technologies and approaches?**
Response	DSR and storage technologies should be used to reduce the requirement for a capacity mechanism rather than operating as part of it. They should be incentivised through premium FiTs and not be forced to operate only in times of grid pressure. National Grid already operates an effective frequency response service as part of the balancing service; this can be adapted to fulfil future capacity requirements as well as current short term demand.

Consultation question	[page 199]
23	**Do you have any comments on the functional arrangements proposed for managing a Capacity Market?**
Response	National Grid and Ofgem should manage a capacity market. LCD believe that a refinement of the current STOR contracts would be the most effective way to ensure future resource adequacy as well as short term operational security. It is essential that a central body administers this service to avoid speculators, unreliable capacity and overpayment to vertically integrated suppliers.

Consultation question	[page 199]
24	**Do you think that a trigger should be set for the introduction of a Capacity Market? If so, how do you think the trigger should be established, and how should it be activated?**
Response	LCD believe that a trigger should be employed with a lead time varying from 1 year to 4 years based on forecasts of capacity and demand. A trigger provides consumers with better value for money as they are not paying for a service that is not required.

Consultation question	[page 199]
25	**What is the most appropriate design of Capacity Market for GB and why?**
Response	LCD believe that a centrally managed capacity market is essential to oversee accountability and penalty enforcement. This is essential with the 6 large vertically integrated suppliers in the UK to ensure there is a real obligation to provide capacity when required. De-rated capacity backing is required to avoid speculative investors bidding for and selling contracts without investing in capacity. A strike price dependant on technology would allow compatibility with FiT/ROC schemes for low carbon technologies. LCD's view is that the most important issue in the design of the capacity mechanism is the integration of the new system with the existing balancing

	services provided by National Grid and Ofgem. In LCD's opinion the most cost effective way to the consumer of ensuring future capacity would be to upgrade the existing systems in place by creating longer and larger capacity STOR contracts administered in the same way by the same body.

Capacity mechanism Assessment

Consultation question	[page 210]
26	**What are your views on the costs and benefits of a Capacity Mechanism to industry and consumers?**
Response	A capacity mechanism will hopefully ensure that blackouts are avoided in the future. However, unless the introduction of the mechanism is carefully managed, the cost to the consumer could be very high through inflated bills due to over procurement of capacity, slippery slope syndrome or overpayment of reserve generators. The danger to industry lies mainly in the potential for the capacity mechanism to distort the market by capping wholesale prices. There is also significant risk involved with the term of contracts and lead times for procurement of plant. Investor confidence must be considered at every level. It is LCD's view that a refinement of existing STOR and other balancing services should be carried out in order to allow it to address resource adequacy as well as its current role of addressing short term operational security.

Consultation question	[page 211]
27	**Which Capacity Mechanism should the Government choose for the GB market and why?**
Response	LCD believes that DECC needs to accurately define how the Capacity mechanism will be used and what role it will fulfil in order to make a properly informed decision on how the Capacity mechanism should be structured. Based on assumptions and comparisons of existing capacity mechanisms which are very rarely utilised it is LCD's opinion that a market wide approach is the only way to encourage progressive technologies to take part in a capacity mechanism. A strategic reserve which excludes plant from participating in the wholesale market and is rarely used encourages the cheapest and least efficient form of plant to be procured, namely old coal or old OCGT. In order to encourage low carbon generation plant must be able to operate in both markets whilst claiming FiTs or ROCs and not being penalised for doing so. This would provide an excellent opportunity for tidal lagoons. Tidal lagoons are able to provide reliable and regular renewable energy at scale.

	They also have the capacity to store energy and generate at a specific time. This means lagoons could operate within the wholesale market for the majority of the time under a specific incentive scheme until such a time where a strike price is reached or an option call is made causing the lagoon to flip from wholesale generation to capacity market generation. This type of highly flexible, reliable generation is the most cost effective way of stabilising the future energy needs of the UK. The existing balancing services provided by National Grid work well and there is a significant danger of conflict between the existing systems and the proposed capacity mechanism. LCD believe that a more cost effective and efficient solution to the problem of future capacity would be to refine the current frequency response and STOR services. This would involve longer STOR contracts and larger STOR plants being procured but essentially operating under the same system and management. LCD believes this would offer the best value for money to the consumer.

Please select the category below which best describes who you are responding on behalf of.

- ☐ Business representative organisation/trade body
- ☐ Central Government
- ☐ Charity or social enterprise
- ☐ Individual
- ☐ Large business (over 250 staff)
- ☐ Legal representative
- ☐ Local Government
- ☐ Medium business (50 to 250 staff)
- ☒ Small business (10 to 49 staff)
- ☐ Micro business (up to 9 staff)
- ☐ Trade union or staff association
- ☐ Other (please describe):

Thank you for taking the time to let us have your views.

The Government does not intend to acknowledge receipt of individual responses unless you tick this box. ☐