4th October 2011

Matt Wieckowski
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Dear Matt

Possible models for a capacity mechanism

The Renewable Energy Association (REA) gives below its high-level views on the issues raised in your consultation on possible models for a capacity mechanism. Our members are involved in developing projects across the entire spectrum of renewable energy technologies and applications. These range from the smallest domestic systems, to transmission-connected projects of several hundred MW. The types of generation cover the full range, from intermittent, flexible and base load, and we are keen to ensure that, to the extent that each type of generation is capable of contributing to secure supplies, it is appropriately incentivised to do this.

As a trade association there are differences of views between our members but we thought it would be helpful to give you a majority view where there is one and if possible explain the reasoning why some members take that or a different view. We begin by giving a number of principles that we believe will help guide whatever system is adopted. We continue with a few high-level principles and then answer a number of the specific questions set, where we feel that there is sufficient consensus to be able to give a helpful response.

As an overarching observation we feel that it would be very useful for the Government to make a clear statement of the nature of the capacity shortage that it is trying to prevent. For example is it concerned about shortages lasting for only one or two hours per day or longer periods of shortage perhaps covering a period of several days of low wind speeds coinciding with high demand? It may well be that the answer is both but a clear statement on this would help guide people on the best way to move forward with the detailed design of whatever scheme is decided to adopt.

Principle 1 – there must be an appropriate credit for all generation (and demand) that contributes to system security

We do not think that it is appropriate to single out particular types of generation that contribute to security and others that do not. No generation is 100% reliable and if a truly intermittent generator is generating at times when capacity is scarce then its generation is just as valuable to the system at that time at that of any other type of generation. Obviously over a number of years we would expect an intermittent generator to be on average less valuable in terms of providing security than a non intermittent one and we would expect the income related to capacity to be scaled accordingly. Acceptance of this as a principle also avoids having to decide how to deal with generation / other resources that it might be difficult to categorise clearly. For example hydro generation with limited storage is neither entirely intermittent nor non-intermittent.

Principle 2 - There should be no "double dipping" and equally no non-recognition of capacity value

During part of the engagement process there has been widespread concern that parties receiving CFD type support should not also be able to benefit from any capacity payment as this would amount to being paid twice. We agree that parties should not be paid for the same thing twice but there are clearly alternatives ways of achieving this. The first is having a CFD payment that does not include a capacity mechanism component and allowing the generators to receive such a payment in the same way as other (non CFD beneficiary) generation. The second is to include the appropriate value of capacity in the CFD strike price and exclude CFD supported generation from any separate capacity remuneration. Many members feel that there is merit in the former approach as with an appropriate design of capacity mechanism it would give generation an incentive to be available over periods when capacity is tight.

It is equally important that all generation that provides some capacity benefit receives an appropriate value for this. It would be inequitable to decide that a particular type of generation provides no benefit and therefore receives no capacity related income unless this is truly the case.

This is clearly an issue that is applicable to all CFD supported generation, not just renewable resources.

Principle 3 – The mechanism should be as simple as possible with as little administrative burden as is compatible with a system that is fit for purpose

We recognise that some degree of complexity is inevitable but the mechanism should not have its complexity increased dramatically in exchange for what may be only a nominal increase in accuracy. We also recognise that a new institution may be necessary as part of any capacity arrangements or alternatively an increase in resource in another institution. However, the simpler the mechanism, the less additional resource would be needed for ongoing operation.

High level views

The majority of members believe the targeted capacity mechanism is flawed and support a market-wide mechanism in which all parties that can contribute to security are incentivised to do this.

The majority of our members do not support a targeted capacity mechanism as it essentially tries to pick particular generation or demand side management resources, which it does not believe the market will deliver, and provides a secure income stream for them outside the market. If a central body can judge what the market will provide, what is needed, and then purchases the difference it would be capable of judging what is best for the whole market. If this is the case, one might as well (if allowed by EU regulations) adopt a full single buyer model. We are not convinced that if some capacity is procured by a central body one will not be on a slippery slope of market failure and that body will have to procure an ever increasing share of the generation new build.

Essentially if one accepts the above reasoning one takes the view that providing a strategic reserve that is appropriate would be extremely difficult and complex and would therefore entail a significant administrative / bureaucratic burden. The minority of the membership that favours a strategic approach thinks that these concerns are overdone and that having a small and well-defined collection of generators / other resources that are "outside the main market" is actually a less complex arrangement than a market-wide capacity mechanism would be. Our difference of views is therefore substantially, but not completely, driven by our perception of the relative complexities of the two schemes.

The majority of membership that support a market wide mechanism would also make the point that the distinction between intermittent and non-intermittent generation is not as clear cut as is sometimes made out. No generation is 100% reliable and there are some types of resource that one could classify as either intermittent or not, for example hydro generation with limited storage. The extent that most emerging types of energy storage device and importantly probably all demand reduction can be relied on will depend on the length of time that it is asked to provide a demand reduction service. In the future "capacity crunches" may last for the traditional hour or two over winter darkness peaks or

for considerably extended periods if wind speeds are low. During any period when capacity is tight the value of all capacity that is generating (or reducing demand) is equal and it is inequitable to provide additional reward for just a subset of this capacity rather than incentivise all capacity to be available when there is a shortage.

The mechanism should not restrict the flexibility of any resource

The majority of the membership believes that if a resource is available it is neither economically sensible nor credible that in practice its use should be restricted. It is neither credible nor sensible for a central body under the targeted mechanism to procure capacity that is then not allowed to be used until the market price (however defined) reaches a set level. What happens if there is a transmission issue and (assuming the "market price" is defined GB-wide and not particularly high) there is a choice between cutting off demand in a part of the system and utilising the strategic reserve? It is neither credible nor desirable that the strategic reserve should not be used.

Once a resource is paid for it should be used to maximum economic benefit and the concept of having a strategic reserve that can only be utilised if a national price exceeds a certain level is deeply flawed.

As we have stated the above reflects the majority view of our membership. The minority that favour a last resort despatch strategic capacity option clearly regard it as credible to withhold resource from the market until a set national electricity price is reached and regard this option as the one that provides the least "distortion" to the remainder of the market.

There must be clarity over setting the desired level of security

Ultimately the desired level of security must be determined by the Government, (who may use Ofgem and / or other bodies to provide advice) and the Government must take responsibility for setting the level. Setting the level should not be confused with achieving the outcome, of course, which should be left to the market / whatever other arrangements are put in place for delivery.

We think that the description of how the level will be set is currently too vague. "*Looking at the cost of providing different levels of security*" does not set a clear framework for a decision to be made. We think that with all its imperfections saying that security should be provided to a level consistent with a particular value of lost load is probably the most sensible option. Determining a specific security level regardless of cost does not seem appropriate so setting / establishing by research an assumed value of lost load and letting that set the

level of security is probably the best system to apply to determine the required level of security.

This point is relevant both for the majority of members who would like a market wide mechanism and the minority who favour a strategic reserve.

We attach a pro forma responding to the specific questions asked.

We hope that you find these comments useful. Please let me know if you would like to discuss them further.

Yours sincerely

[redacted]

Chief Executive, Renewable Energy Association.

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	Renewable Energy Association
Address	Capital Tower 91 Waterloo Road
Town/ City	London
Postcode	SE1 8RT
Telephone	[redacted]
E-mail	[redacted]
Fax	

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

Please return by 30 September 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	No. It would require the central purchasing authority to predict not only what is required, but also what the market would provide without a capacity mechanism.

Consultation question	[page 168]
2	**How long should the lead time for Strategic Reserve capacity procurement be and why?**
Response	If this were adopted it would depend on the type of Strategic Reserve required. Different types would be optimum for very short run durations and periods of low wind and high demand. Generally any capacity should be purchased as late as possible, consistent with the build times of what is required.

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	If the course is taken of procuring plant that is not to be used in the market other than in times of national capacity shortage, then it is important that this plant is never used in the market, so the contracts must be for the life of the plant. We must remind you the majority of our members would oppose going down this route.

Consultation question	[page 169]
4	**Which criteria should providers of Strategic Reserve be required to meet?**

Response	See the answer to 2 above. The criteria should depend on exactly what type of reserve was needed.

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	The majority of our members think that this would be difficult particularly if it were intended to restrict the contracted storage and demand side response from participating in the market other than for its use as a strategic reserve.

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	We think that a last resort despatch with a price set just below VLL would minimise the plant that needed to be purchased

Consultation question	**[page 175]**
7	**How would the Strategic Reserve methodology and despatch price best be kept independent from short-term pressures?**
Response	The majority of our members do not think it credible that this is possible.

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. The terms of reference should be set by the government who may delegate the task to Ofgem or consultants.

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

Response	As it should only be used as a last resort, when every other resource has been deployed, it should be sold into the balancing mechanism.

Consultation question	[page 178]
10	**Do you have any comments on the functional arrangements proposed for managing a Strategic Reserve?**
Response	No

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 majority of our members do not.

Market-wide mechanism

Consultation question	[page 182]
12	**How and by whom should capacity in a GB market be bought and why?**
Response	This question can only be answered when the details of the final capacity mechanism design become clearer. Options include (1) suppliers or (2) a central agency and each has associated benefits and drawbacks in this role.

Consultation question	[page 183]
13	**What contract durations would you recommend for a Capacity Market?**
Response	They should be flexible, depending on what suits the buyer and seller of the contract.

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	Again these should be flexible. Plants with long construction times should be able to choose to sell a capacity contract before it is constructed, but equally it may go ahead in the knowledge that it will be able to secure one at a later date.

Consultation question	**[page 185]**
15	**Should there be a secondary market for capacity? Should there be any restrictions on participants or products traded?**
Response	Secondary trading is essential in a world with retail competition.

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	Ideally there should be the least central determination of these parameters that is possible. It is important that penalties for non availability should not be set at a level that discourages plant from participating in the arrangements.

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	In principle the reference market should be as close to real time as possible.

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	We are not able to answer this at the moment.

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	As noted, there are risks with each option for physical backup, but on balance the majority view of our membership is that option c) has the least problems. It would be ineffective to rely purely on the financial penalties within reliability contracts to ensure adequate supply, and it would also be inappropriate to use full name plate capacity.

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	

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	The alternatives are either to disallow plant in receipt of CFDs from participating in the capacity market or to exclude the expected level of capacity income from the CFD payments. The latter would give participants an incentive to maximise their capacity market income.

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	The key is to avoid discrimination in the rules so that the capacity mechanism can be contributed to by all potential participants.

Consultation question	**[page 199]**
23	**Do you have any comments on the functional arrangements proposed for managing a Capacity Market?**
Response	We do not think that the scheme should be based on a central determination of volume required as security should be driven by a centrally determined value of load not supplied, rather than a cost insensitive volume.

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	It should be established as soon as other elements of the new arrangements such as the first low carbon CFDs go live.

Consultation question	[page 199]
25	**What is the most appropriate design of Capacity Market for GB and why?**
Response	The majority of our members believe that a market-wide mechanism accessible to all resources that provide some level of security is appropriate.

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	Fundamentally a capacity mechanism replaces a very spiky price stream by a smoother one that in principle provides the same long term average price but makes it easier to invest in low load factor plant.

Consultation question	[page 211]
27	**Which Capacity Mechanism should the Government choose for the GB market and why?**
Response	See the answer to question 25.

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

☐x Other (please describe):

Trade Association

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