



Department for
Business, Energy
& Industrial Strategy

CAPACITY MARKET CONSULTATION – IMPROVING THE FRAMEWORK

July 2017

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The consultation can be found on the BEIS section of GOV.UK:

<https://www.gov.uk/government/consultations/capacity-market-consultation-improving-the-framework-detailed-proposals>

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Capacity Market consultation – improving the framework

The Capacity Market (CM) is designed to use competition to achieve a defined level of electricity security in Great Britain at the lowest cost to consumers.

In light of previous auctions and feedback from stakeholders, the Government is proposing a number of essentially technical changes to the CM Rules to improve the functioning of certain areas and better align segments of the Rules with the original policy intent. If enacted, the Rule changes would apply to new agreements only.

In summary, we are seeking views on:

- **Amending generating technology classes and the de-rating methodology related to storage Capacity Market Units (CMUs).** This is in response to concerns raised by stakeholders that the emergence and growth of battery storage in the CM has the potential to pose a risk to security of supply if those batteries are unable to generate for the full duration of stress events. The proposed change would ensure that storage capacity is rewarded appropriately for its contribution to security of supply and reduce the risk of insufficient capacity being secured to meet our reliability standard.
- **How delivery assurance can best be provided for unproven Demand Side Response (DSR)** awarded agreements in the four-year-ahead (T-4) auctions to provide the Government with the ability to replace any failing capacity through the one-year-ahead (T-1) auctions;
- Allowing Capacity Providers to **re-take a metering assessment** if necessary;
- **Shifting the planning consent deadline to January** to avoid the Christmas period;
- **Strengthening the arrangements relating to Satisfactory Performance Days (SPDs)** to improve confidence that Capacity Providers are physically capable of delivering as per their capacity obligations; and
- **Disaggregating some of the generating technology classes** to improve transparency, support analysis and allow the potential for more specific application of de-rating factors in future.

Impacts:

Most of the proposals are expected to have a minimal impact on CM costs for the majority of businesses. The Government supports the development of battery storage and DSR, which offers the potential for a cleaner, lower cost and more flexible power system; but wants this to happen in a way that is consistent with the continued achievement of high levels of security of supply through the CM. The proposal to amend the de-rating methodology for storage to ensure the integrity of the CM can be expected to affect revenues to some types of battery storage project; although, for the reasons outlined below (Section 1A), we think

that on balance the changes are unlikely to significantly affect deployment. Improving delivery assurance for Unproven DSR may also introduce new burdens, dependent on what options are taken forward. The Government would welcome any evidence from stakeholders as to the actual cost-impacts of the proposed changes to help inform our assessment in making final decisions and any implications for the business models for aggregators.

General information

Purpose of this consultation

The Capacity Market (CM) is designed to use competition to achieve a defined level of electricity security in Great Britain at the lowest cost to consumers.

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Respond by: 8 September 2017

Enquiries to:

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Consultation reference: Capacity Market consultation: proposals to the framework.

Territorial extent:

Great Britain

Additional copies:

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Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

If you want information that you provide to be treated as confidential please say so clearly in writing when you send your response to the consultation. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

We will summarise all responses and place this summary on the [GOV.UK website](http://gov.uk). This summary will include a list of names or organisations that responded but not people's personal names, addresses or other contact details.

Quality assurance

This consultation has been carried out in accordance with the [Government's Consultation Principles](#).

If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to:

Email: enquiries@beis.gov.uk

Detailed proposals

1. Ensuring the CM can accommodate new technologies

It is important for the Government to regularly review the design of the CM, making tweaks where necessary, to ensure it can appropriately accommodate the emergence and growth of new technologies – facilitating their participation on a fair and equal basis. This will ensure the CM can continue to meet its objective of securing, at least cost, reliable capacity which is available and able to respond when needed.

The 2016 T-4 (four year ahead) Capacity Market (CM) auction saw agreements awarded to battery storage for the first time (around 500MW) as well as significant growth in the amount of Unproven DSR securing agreements (around 1,400MW, up from around 450MW in 2015). As outlined in the Government's response to BEIS and Ofgem's recent call for evidence, "A Smart, Flexible Energy System",¹ the Government believes that flexible technologies such as storage and DSR have a vital role to play in ensuring the UK has a secure, affordable and clean energy system now and in the future. As such, the Government is keen to support the deployment of storage and DSR and their emergence and growth as cost-competitive technologies in the CM is to be welcomed.

Sections A and B below outline policy proposals aimed at addressing some specific challenges identified through stakeholder feedback in relation to both battery storage and DSR participation in the CM.

A. Short duration storage and security of supply

A number of industry stakeholders have flagged to both BEIS and Ofgem that the participation of batteries (and potentially other storage technologies) in the Capacity Market has the potential to pose a risk to security of supply if that storage can only generate for short time periods but are rewarded as if they could generate indefinitely.

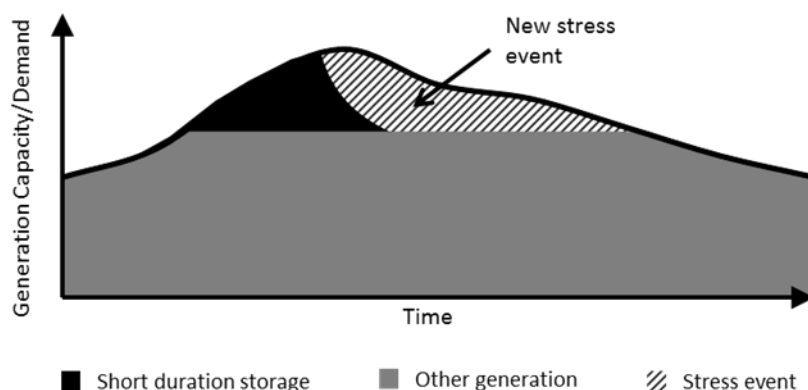
Battery storage technologies can be designed to generate for different durations to provide various power and energy services. For example frequency regulation such as Enhanced Frequency Response (EFR) can be delivered by a short duration battery of around 30 minutes, whereas services such as Black Start would require longer duration batteries.

The Government understands that, due to current economic and market signals, a large proportion of batteries participating in the CM are likely to be designed to discharge at their full connection capacity for only around 30 minutes to an hour. This may change in the future as business models develop and barriers to storage are removed, but at present there is a realistic prospect that short duration batteries could displace significant amounts of capacity that are able to generate for longer durations. This may make for a more efficient outcome, but only if the CM fairly reflects the performance of competing technologies. If short-duration batteries are rewarded as if they can generate indefinitely, this could create inefficient outcomes or even risks to electricity security.

The following paragraphs set out the issues in more detail:

¹ <https://www.gov.uk/government/publications/upgrading-our-energy-system-smart-systems-and-flexibility-plan>

Figure 1: Illustrative example showing the potential security of supply challenges that could arise if short duration storage were to displace more enduring forms of capacity



1. *Stress events may last longer than the duration of the battery*

Industry stakeholders have expressed concern over the market penetration of different duration storage in the CM and the impact on security of supply. This is supported by initial estimates from National Grid which suggest stress events, if they do occur, could last up to two hours on average, although few are expected to last more than four hours. Certain types of storage that cannot discharge for this long without recharging will therefore be unable to deliver on Capacity Obligations for the full duration of many stress events (Figure 1 provides an illustration of the potential challenges this creates). Whilst failure to deliver for the full duration of a stress event would likely lead to penalties, feedback suggests that industry expectations of the likely frequency and duration of stress events is such that this is largely discounted when making investment decisions.

Moreover, as time-limited storage capacity increases (displacing conventional generation) in the CM, the marginal contribution of short duration storage to security of supply is expected to fall as it fails to provide security for the entire distribution of possible durations of stress events.

2. *The declining performance of batteries over time reduces their contribution to security of supply*

Over time batteries are expected to degrade. The rate of this degradation depends on how they are used (depth of discharge/charge) and how often they are cycled (charged and discharged). As a result batteries will tend to exhibit power/duration fade in the absence of maintenance/upgrades. Degradation could therefore reduce the length of time for which a battery can discharge as well as the power at which it does so, potentially exacerbating the above risks.

3. *Some batteries may be less than fully charged at the start of a stress event if they are simultaneously participating in multiple commercial services*

It is understood that one of the key drivers of investment in storage is the ability to stack revenues. Some battery storage providers have managed to secure both EFR contracts and CM agreements in the most recent auctions and this is welcomed. Other batteries may be participating in energy price arbitrage or may have contracts to provide triad

avoidance services. Security of supply challenges could arise if some of these batteries are not sufficiently charged before the start of a stress event and are therefore unable to deliver on their capacity obligations for the duration of the event. The security of supply implications of these competing commercial incentives for batteries needs to be better understood, and feedback on this is welcome.

The challenges outlined above represent a risk that short duration batteries may be unable to deliver on their capacity obligations for the full duration of stress events. Ofgem received a number of change proposals seeking to address this as part of its recent consultation on amendments to the Capacity Market Rules, but indicated that it was minded to reject these so that National Grid and Government could complete their analysis on appropriate de-rating factors.²

The amount of battery storage already holding capacity market agreements is small enough to mean that security of supply implications are manageable and there are advantages in terms of speed of response (battery storage accounted for 500MW, or around 1%, of the total capacity procured in the 2016 T-4 auction); however, we understand there is significant interest in this sector with considerable potential for growth. We need to ensure that the CM operates in a way that fairly reflects the contribution of different technologies to security of supply. Without this, costs could be higher or achievement of reliability standards could be put at risk.

The Government therefore agrees with stakeholders that there is a need to take action to ensure that the CM continues to operate to achieve energy security at least cost. We are aware that other types of capacity may also struggle to fulfil their obligations for the full duration of longer stress events and will consider these issues further; however, for the reasons given above, our immediate priority is to ensure we have in place, ahead of the next round of auctions, arrangements which minimise risks raised by short duration storage such as batteries. The Government expects all flexible technologies including battery storage will play a more vital role in our electricity system now and in the future and is committed to ensuring that these new technologies compete with existing market participants on a level playing field.

Consultation Questions:

1. Can you provide evidence that current economic and market signals will tend to drive the deployment of batteries that can generate at full capacity for less than four hours? How might this change over time?
2. Do you agree with our assessment that, under the current rules, displacement of enduring capacity by short duration storage in the CM creates security of supply risks?

Description of proposed changes

The Government does not wish to introduce barriers to the participation of storage in the Capacity Market, and as such does not intend to follow the course of action suggested by some of the rule change proposals made to Ofgem to alter the testing regime so that all

²<https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-amendments-capacity-market-rules-2014>

Capacity Committed CMUs are required to demonstrate they can generate for multiple consecutive settlement periods. Nor do we believe that amending the penalty regime to strengthen penalties for CMUs that fail to deliver for the entire duration of a stress event is an appropriate response to this problem and could have wider, adverse impacts. Instead our intention is to ensure that storage is rewarded appropriately for its contribution to security of supply, and to incentivise operational behaviour that ensures storage is fully charged at the onset of a stress event.

To this end, we propose amending the storage technology class and taking duration into account when setting the de-rating factors for storage CMUs³ that will not be able to provide capacity for the full duration of probable stress events. These storage CMUs should then be able to deliver for significantly longer at their de-rated capacity than at their connection capacity. De-rating storage in this way will help ensure a level playing field for other capacity providers, and avoid the risk of insufficient capacity being procured to maintain our reliability standard of 3 hours Loss of Load Expectation (LoLE).

Amending technology classes

Since storage can be designed to generate for different durations, we propose breaking down the storage technology class into multiple categories, differentiated by the amount of time for which a CMU can generate at its full connection capacity without recharging i.e. its duration. The number of categories and the range covered by each will be decided following analytical work by National Grid over the summer (with an opportunity for input from stakeholders), but an example of how this might look can be seen in Table 1.

Table 1 – Indicative example of the proposed Generating Technology Classes for Storage

Energy Limited Storage: Minimum 30 minutes	<ul style="list-style-type: none"> • Conversion of imported electricity into a form of energy which can be stored, the storing [of] the energy which has been so converted and the re-conversion of the stored energy into electrical energy • Plants in this category can generate at their full connection capacity without recharging for at least the duration specified • Includes battery storage facilities and hydro Generating Units which form part of a Storage Facility (pumped storage hydro stations).
Energy Limited Storage: Minimum 1 hour	
Energy Limited Storage: Minimum 1.5 hours	
Energy Limited Storage: Minimum 2 hours	
Energy Limited Storage: Minimum 2.5 hours	
Energy Limited Storage: Minimum 3 hours	
Energy Limited Storage: Minimum 3.5 hours	
Storage: Minimum 4 hours	

The highest category would be for storage CMUs of sufficiently long duration that this has a negligible impact on security of supply (four hours in the above example).

Amending de-rating factors

The capacity of all market participants is de-rated according to their expected availability during stress events. At present, the de-rating factor of generating units is derived from historical performance data for all units in the same technology class. The storage technology class has a high de-rating factor (of around 96%), being largely based on the

³ This includes battery storage, but also other forms of storage such as pumped hydro and CAES.

good historical performance of pumped hydro storage. However, the main determinant of the availability of short duration storage during stress events is in fact the duration for which they can generate, not just their technical reliability.

We therefore propose taking duration into account when de-rating. Making this mechanistic change to the de-rating methodology will ensure equivalence in how the capacity market rewards short duration storage and other generating technologies for their respective contributions to security of supply.

The Government therefore proposes changing the de-rating methodology for all storage units that cannot discharge continuously for the full duration of probable stress events to take account of duration. We anticipate that storage with a sufficiently long duration (a minimum of four hours in the example given in Table 1) would continue to be de-rated following the same methodology as at present. It is expected that pumped hydro storage plants would fall into this category.

Other technology types already have separate de-rating methodologies to ensure their de-rating factors appropriately reflect their expected contribution at times of system stress. The interconnector de-rating methodology examines past and future modelled flows as a forecast for their likely availability including at stress events, whereas that for DSR is derived from the declared availabilities of all non-BSC Balancing Services during high demand settlement periods over previous winters.

The paragraphs below set out Government proposals in relation to shorter-duration storage. These proposals will be subject to further consultation on methodology by National Grid in accordance with the Delivery Body's responsibility to consult under rule 2.3.8. The work done by National Grid will be scrutinised by the Independent Panel of Technical Experts (PTE). The Government will take into account the responses from the National Grid consultation before making final decisions on these proposals and subsequent Rules changes. **Please contact us as soon as possible if you wish to be involved in any such engagement.**

The Government proposal is that CMUs within shorter-duration storage categories would be defined as "energy limited", and would be de-rated according to their Equivalent Firm Capacity (EFC). This is a measure of the amount of firm capacity that would be required to replace them to make the same contribution to security of supply, as measured by the Loss of Load Expectation.

We propose that the value of EFC for each category would be calculated using a simulation based assessment, similar to that already used to calculate the EFC of wind. The EFC simulation could be used to take into account additional factors such as the existing market penetration of storage in each duration category, interactions with other commercial revenue streams⁴, and the underlying reliability of the GB system if considered appropriate. Technical reliability would also continue to be taken into account. The EFC values would be updated for each year's auctions to reflect changes in market penetration and system reliability.

Identifying which duration category applies to a CMU

We propose that storage CMUs will be able to self-select, at prequalification, the duration category and associated de-rating factor that should apply to them. For this year's auctions, however, these rule changes will not be in place until after prequalification has taken place.

⁴ Although this is complicated by CM agreements and other commercial contracts having different start and end dates.

Therefore, for this year only, storage CMUs will be required to confirm which duration category they are in following the publication of the final auction guidelines which will include final details of the Generating Technology Classes for Storage and associated de-rating factors. Should their de-rating factor change from that that applied when they made their application, they will be able to withdraw from the auction no later than 10 working days before the first bidding round. If storage CMUs do not withdraw but fail to confirm which category they fall within, the lowest storage de-rating factor will be applied as the default position.

We are aware there is a potential risk that, in practice, storage technologies such as batteries may not be operated in a manner which guarantees they will be able to generate in line with their capacity obligation when required to. For example, they may not be fully charged at the start of a stress event or there may be market incentives to discharge their capacity in the run-up to the stress event. We would welcome your views on these risks and whether the CM penalty regime is sufficient to incentivise desired operational behaviour.

Consultation Questions:

3. Do you agree that de-rating factors for storage should be amended to reflect duration? Are there other technologies we should consider in future?
4. Do you agree with the proposed banding of duration categories?
5. Do you agree that we should take additional factors, such as participation in other commercial revenue streams, into account when calculating the values of EFC?
6. Do you have any evidence or sources of information about breakdown rates for short-duration storage that can be used to calculate their de-rating factors?

Verifying duration

To ensure capacity providers do not overstate their duration on prequalification, the Delivery Body will need to be able to gather evidence that storage CMUs can generate as claimed. The declining performance of batteries through time means that, for CMUs with multi-year agreements, this verification must provide assurance of performance for the full length of the CM agreement, not just in the first delivery year.

One option is to amend the testing regime such that on one occasion per delivery year, CMUs in all storage classes would be required to demonstrate that they can generate at their full connection capacity for a number of consecutive settlement periods (of 30 minutes each) equivalent to the lower bound of the duration category they are in. For example, a storage CMU in the 3 hour category would be required to generate for at least six consecutive settlement periods. Repeating this test each delivery year would have the effect of monitoring the performance of storage throughout the duration of its CM agreement. In line with the termination event proposed for Satisfactory Performance Days, failing this test would lead to termination of the CM agreement (see Proposal 2 below for further details including proposed fee level).

A second option, which could be introduced either separately or in conjunction with the first, is to require all storage CMUs to provide a copy of the OEM's guarantee (as enforceable by the capacity provider) stating the duration for which the battery can generate at its connection capacity. In the case of existing storage CMUs, the guarantee would need to be

valid for the full delivery year and provided at prequalification. In the case of multi-year agreements, the capacity provider would have the choice of providing:

- (a) at the time of the Financial Commitment Milestone (FCM), a single guarantee covering the full term of the agreement, or
- (b) a series of shorter guarantees which run consecutively to cover the full term of the agreement – the first guarantee would need to be provided at the time of the FCM with subsequent guarantees in place in advance of the relevant delivery years.

Failure to provide a valid guarantee at the required time would lead to termination of the CM agreement. It is proposed that the termination fee category for this new termination event be set at the same fee level proposed for failure of SPDs (see Proposal 2 below for details).

Consultation Questions:

- 6. Which is your preferred option for verifying duration? Please provide a justification.
- 7. Would all storage facilities, including pumped hydro, be able to provide a suitable guarantee(s), and would these be a reliable way of verifying duration on their own?

Streamlining the consultation approach

As we intend to streamline the approach taken to consulting on and revising methodologies under Rules 2.3.8 and 2.3.10, we will need to make some consequential amendments to the Rules to set out the new process for consultation and revision of methodology. We intend this new process to apply to the proposals concerning the changes to the Generating Technology Classes⁵ and revised de-rating methodologies.

Impact of the proposed changes

The primary objective of making the proposed changes is to ensure that sufficient capacity is bought, and to level the playing field between shorter duration storage and other CM participants. The expected impact on the CM is an increased confidence in future security of supply with the contribution from short duration storage appropriately valued.

The proposed changes are not expected to affect existing CM agreements (i.e. they will only apply to new agreements including those secured through the upcoming auctions in winter 2017). Impacts on longer duration storage, such as pumped hydro plants, should be limited given they can meet their capacity obligation over longer periods.

The changes could result in less CM revenue than some storage providers might have secured otherwise. This may encourage a shift in investment to longer duration storage, result in lost CM revenue being replaced with other revenue streams, or might discourage investment in storage more generally.

On balance, the changes are not expected to significantly affect storage deployment for the following reasons:

⁵ See Proposal 5 for other proposed changes to Generating Technology Classes

- Battery storage is a nascent technology with many potential uses (behind-the-meter, grid connected, co-located etc.) and as a result many potential business models/revenue streams are still being developed and tested, it is therefore expected that future business models will be able to adapt to these changes;
- Market participants may already have been expecting these proposed changes, so may have already factored this into their future investment decisions;
- The Government’s current understanding, is that the CM is a lesser source of revenue for batteries when compared to other sources of revenue such as EFR, as such the changes are not expected to significantly affect storage providers;
- One of the key barriers to storage deployment are the high upfront costs of investment, however battery costs have fallen significantly (e.g. average Lithium-ion prices have fallen by over 50% since 2012) and are projected to continue to fall;
- Finally, the work Government/Ofgem/other market participants are carrying out both now and in the future to remove barriers will help ensure the continued deployment of flexible technologies such as battery storage.

Although our proposed changes to the testing regime may make this more onerous for storage providers, we do not believe that this additional burden will be significant since they will only be required to demonstrate extended duration on one occasion per year. We would welcome views on the ability to provide OEM guarantees.

Further consideration of the impacts of these proposals will be undertaken using evidence gathered from the consultation. We will publish a detailed assessment of the impact of any rules changes that are taken forward.

Consultation Questions:

8. Do you agree that the changes will have the expected impacts? Please provide evidence to support your views.
9. Will the changes have other impacts that we have not foreseen? Please provide evidence to support your views.

B. Improving delivery assurance for Unproven DSR

Unproven DSR is recognised as facing different challenges to other forms of “new” capacity, and is therefore subject to a separate and in some respects lighter-touch set of requirements. For example, other capacity providers must verify their capacity to ensure it is genuine well in advance of the start of the Delivery Year (“DY”) whereas the metering and testing deadlines for Unproven DSR awarded agreements in T-4 auctions currently take place only just before the start as follows:

- a metering assessment to be conducted 4 months ahead of the start of the DY,
- if required, a request for a metering test and metering statement to be submitted 4 months ahead of the DY,
- a DSR test to be completed 1 month ahead of the DY, and
- if required, a metering test certificate to be submitted 2 weeks ahead of the DY.

These deadlines maximise the time available post-auction for aggregators to recruit the clients and components they need to fill their Unproven DSR CMU. This can mean, however, that where a DSR project fails, this is not known until very late in the day and does not provide the Government with any opportunity to replace any lost capacity through the T-1 auction. Other types of capacity have earlier milestones to provide confidence of delivery. For example, prospective generation CMUs must meet milestones well ahead of the delivery year, including the Financial Commitment Milestone 16-months following the T-4 auction.

Experience from the first Transitional Arrangements (TA) auction suggests that the non-delivery rate of Unproven DSR may be significant – 35% of Unproven DSR capacity winning an agreement failed to deliver⁶. This non-delivery rate is expected to decline over time, particularly as the industry becomes more conversant with the requirements and as a result of Government action (e.g. ongoing simplifications to the DSR metering and testing requirements and ongoing review of credit cover arrangements for Unproven DSR⁷). That said, there will remain some residual risk of non-delivery by Unproven DSR against which it would be prudent to take mitigating action. This becomes more important as the amount of Unproven DSR winning agreements in the T-4 auctions continues to grow.

A number of responses to both the October consultation on changes to the CM and the Smart call for evidence picked up on the security of supply implications created by the current DSR metering and testing deadlines. One suggestion made for improving delivery assurance was to bring these deadlines forward so that, to the extent possible, the existence or otherwise of the Unproven DSR is crystallised ahead of the T-1 auction for that delivery year. We would welcome views on any alternative proposals to provide this assurance.

Potential option

The Government has no wish to cut across the commercial development of this important resource, but at the same time would like to see clearer, earlier evidence of progress with the delivery of Unproven DSR CMU secured through a T-4 auction – this will help us make a robust assessment in time to replace any lost capacity at the point of the T-1 auctions. To this end, we would welcome views on options for how this assurance could be provided in a timely way. For example, one option on which we would like feedback is the possibility of bringing forward the deadlines relating to the metering and testing requirements for Unproven DSR awarded agreements in T-4 auctions as follows:

Deadline description	Number of months ahead of the start of the delivery year	Date
Metering assessment	21 months	15 January
Metering test request		
Metering test submission	18 months	1 April
DSR test	13 months	1 Sept

⁶ Further information on non-delivery will be available later this summer in respect of the 2014 T-4 and second TA auctions. This information will be used to inform a final decision.

⁷ <https://www.gov.uk/government/consultations/capacity-market-proposals-to-simplify-and-improve-accessibility-in-future-capacity-auctions>

These deadlines would:

- increase confidence in future security of supply by ensuring:
 - the Delivery Body has a clear indication of the number of Unproven DSR CMUs likely to be terminated for failing the metering requirements ahead of completing modelling on T-1 auction parameters; and
 - ensure Unproven DSR CMUs are Proven ahead of final confirmation of the T-1 auction parameters in the autumn.
- bring Unproven DSR into line with arrangements already in place for other capacity.

As noted earlier, the Government is aware, based on previous feedback from aggregators, that the introduction of earlier metering and testing deadlines might be problematic for some in the sector due to difficulty in recruiting clients/components this far ahead of the delivery year⁸. That said, Ofgem has recently confirmed its intention to proceed with proposals to enable aggregators to alter the DSR components of their CMUs (Of12) which could help facilitate the early sign-up of clients/components as it will give aggregators the flexibility to replace any that drop out. Moreover, now that a number of CM auctions have taken place and we are entering the delivery years and aggregators have a more established pool of clients and resources from which they can draw upon, earlier sign-up may be easier than previous feedback would suggest. We would welcome evidence on this point.

Any changes of this sort to the metering and testing deadlines would not affect existing CM agreements, to avoid interfering with commercial plans that may already be in train, and would be introduced to coincide with the implementation of the Ofgem proposals.

Consultation Questions:

10. We would welcome views on how we can best balance facilitating the participation of robust new DSR resources in the CM with the need to understand their delivery progress, and any likely failures, before it is too late to secure alternative replacement capacity?
11. Should the DSR metering and testing deadlines be brought forward as suggested to mitigate against the risk of non-delivery? If not, please outline alternative solutions.
12. We would welcome views and evidence on the likely impacts of the above option. For DSR providers: how would the suggested deadlines impact your ability to recruit DSR clients/components? Do the component reallocation proposals help or would you instead look to enter more capacity in the T-1 auctions?

⁸ For this reason it was anticipated that most Unproven DSR would participate in the CM via the T-1 auctions. The original CM design did not, therefore, focus on mitigating non-delivery risks relating to Unproven DSR secured through the T-4 auction.

2. Strengthening Satisfactory Performance Days

The Government proposes to amend rules on demonstration of satisfactory performance days (SPDs) and to introduce a new termination event for non-compliance in new capacity agreements.

CMUs are currently required to successfully complete three SPDs during the winter of the relevant delivery year (Rule 13.4.1) or, where applicable, the alternate means of demonstration set out at Rule 13.4.1B. Failure to meet this requirement results in suspension of capacity payments until such time as three further SPDs have been completed, either in the same delivery year or in a subsequent delivery year (Rule 13.4.1a).

As a consequence, CMUs could retain a capacity agreement indefinitely despite failing to demonstrate they can meet the SPD requirements. Moreover, given the three SPDs required can be demonstrated at any time from 1 October to 30 April, satisfactory performance could be demonstrated at the start of winter with no test in place to ensure that performance remains satisfactory by the end of winter.

In Ofgem's recent consultation on amendments to the Capacity Market Rules⁹, consideration was given to whether the current consequences for failing SPDs are sufficient to ensure reliability and sought views on whether additional penalties, up to and including a termination event, would be appropriate. BEIS is now taking this suggestion forward as we consider that it would be appropriate to strengthen arrangements relating to SPDs to improve confidence that Capacity Providers are physically capable of delivering as per their capacity obligations. This is in line with the tightening of the penalty regime carried out pursuant to our consultation in early 2016.

Description of proposed changes

In respect of future capacity agreements the Government proposes to amend the Rules relating to SPDs so that generally:

- CMUs must complete three SPDs during winter of relevant delivery year;
- at least one demonstration of satisfactory performance must occur in the period January to April of the relevant Delivery Year, to demonstrate that CMUs are able to meet their obligations across the whole of winter;
- failure results in suspension of capacity payments until three further SPDs are completed, in the same delivery year;
- failure to demonstrate the three additional SPDs after 1 May in that Delivery Year shall be treated as a termination event under the Capacity Market Rules.

It is proposed that the termination fee category for the new termination event be set at TF5, with the associated fee level of £35k/MW to ensure CMUs honour their commitments to make available the capacity procured in an auction. This is equivalent to loss of TEC for the delivery year, which the Government feels is a comparable failure to demonstrate ability to meet obligations.

Any requirement (currently under 13.4.1) to demonstrate three SPDs is doubled to six within the same period where a Capacity Committed CMU fails to respond to a system stress event in accordance with rule 13.4.4. For the purposes of the proposed termination event, such

⁹ <https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-amendments-capacity-market-rules-2014>

additional requirements, where incurred, would need to be completed within the relevant delivery year in the same way as the standard requirements of 13.4.1.

For New Build CMUs, it is proposed that the termination event will apply only at the end of the first full delivery year following achievement of the Minimum Completion Requirement. This is to ensure that the new termination event does not impinge on the processes set out in the Rules for completion of milestones by New Build CMUs.

If enacted, this proposal would incorporate any changes to the relevant rules made by Ofgem in their recent consultation¹⁰. We are also considering how the new termination event for SPDs should interact with secondary trading, and will take forward Rule changes as appropriate.

Consultation Questions

13. Do you agree that failure to demonstrate satisfactory performance within the relevant Delivery Year should be added to the list of termination events in the Capacity Market Rules?
14. Do you feel that the termination fee level for the proposed new termination event should be set as category T5, with a fee of £35,000/MW? If not, what category/fee level would be appropriate and why?
15. Do you agree with the proposal to require at least one SPD to be demonstrated in January-April of the Delivery Year?

3. Metering re-assessment

Earlier this year, the Government published a FAQ¹¹ which stated:

“Within the rules and regulations of the Capacity Market, all applicants must provide the Delivery Body with detailed line diagrams showing electrical configurations and metering arrangements of Generating Units or DSR CMU components in order that the Delivery Body can then consider whether or not a Metering Test and resulting Metering Test Certificate are required. Should a Metering Test Certificate be required, the Electricity Settlements Company as Settlement Body conducts a Metering Test. There are controls in place to ensure that certain metering configurations are scrutinised in detail.

It has come to our attention that there are, however, particular circumstances in which amendments to metering configuration are made after the Metering Assessment has been conducted or the Metering Assessment is corrected. In some cases metering arrangements that would not otherwise have required a Metering Test are put in place or such metering arrangements were in place but were wrongly described in the Assessment.

It is the policy intention that revisions to metering arrangements after the initial Metering Assessment should be set out in a revised metering assessment and should be considered by the Delivery Body on the same basis that the initial Metering Assessment is considered. That is that the Delivery Body should determine from the Assessment whether a Metering

¹⁰ <https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-amendments-capacity-market-rules-2014>

¹¹ <https://www.gov.uk/government/publications/capacity-market-rules>

Test Certificate is required. We therefore propose to consult on amending rules to clarify this point.”

The Government therefore proposes to amend the CM Rules to clarify that Capacity Providers can re-take a metering assessment where necessary. This approach is beneficial to participants by enabling them to correct any mistake present in the application for their first metering assessment. Moreover, should a participant wish to change its metering configuration, it would go through a metering re-assessment rather than facing an automatic requirement to provide Metering Test Certificate.

4. Planning consent

The Government proposes to amend the planning consents deadline for T-4 auctions, which typically falls between Christmas and New Year’s Eve, by a few days to avoid this time of year. The new deadline will fall in January.

5. Technology class

The Government proposes to disaggregate some of the current generating technology classes.

Following their March 2017 consultation, Ofgem announced amendments to the CM Rules to require the inclusion of both Generating Technology Class and Primary Fuel Type on the public CM Register. This increased transparency opens up information that was previously only accessible to the Delivery Body, supporting interested parties in performing their own analysis of the CM.

To maximise the benefit of this information being made available, we are seeking to revise how specific plant types are categorised. Generating Technology Classes are explicitly defined within CM Rules and are set out within a table in Schedule 3. There are currently eight defined classes, but a number of these cover more than one plant type. We propose amending the defined classes in Schedule 3 to achieve greater class granularity, please see indicative table set out below:

Current class specifications

Generating Technology Class
Oil-fired steam generators
OCGT and reciprocating engines (non-autogeneration)
Nuclear
Hydro
Storage
CCGT
CHP and autogeneration
Coal / Biomass

Revised class specifications

Generating Technology Class
Oil-fired steam generators
Open Cycle Gas Turbine (OCGT)
Reciprocating engines
Nuclear
Hydro (excluding tidal / waves / geothermal / storage)
<i>[See Section 1A for proposals relating to storage]</i>
Combined Cycle Gas Turbine (CCGT)
Combined Heat and Power (CHP)
Coal
Biomass
Energy from waste

Supporting greater disaggregation of generating technologies will result in a larger number of classes and allow for a more specific application of de-rating factors. We propose removing references to “Autogeneration” as a separately identifiable plant type to ensure that classification is based not on usage characteristics but on underlying generating technology.

We propose that the new, disaggregated generating technology classes will apply to the 2018 auctions.

Consultation Questions

16. We would welcome views on the following proposals:
- Proposal 3 - metering re-assessment
 - Proposal 4 - planning consent deadline
 - Proposal 5 - technology classes

