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Response to: Capacity Market and Emissions Performance Standard Review, Call for evidence
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Uniper

Uniper is an international energy company with around 12,000 employees and operations in 40 countries. In the UK, Uniper operates a flexible and diverse generation portfolio, sufficient to power around six million homes. With our seven-strong fleet of power stations and our flexible, fast-cycle gas storage facility, we support the energy transition and make a tangible contribution to Britain's energy supply security.

Uniper also offers a broad range of commercial activities through its Engineering Services division, while the well-established Uniper Engineering Academy delivers high-quality technical training and government-accredited apprenticeship programmes for the utility, manufacturing and heavy industry sectors, at its purpose-built facilities near Nottingham.

We are pleased to contribute to the call for evidence. We have addressed each of the questions in turn below. Our views in summary:

- The Capacity Market (CM) is one of the key pillars of the enduring market framework, alongside the energy wholesale and flexibility markets. Although there are aspects that could be improved, the CM is supporting the transition to a lower carbon energy mix.
- Although direct participation of non-GB capacity is the preferred solution, addressing the interconnector de-rating methodology is an important priority.
- Cap and floor interconnectors should be excluded consistent with the exclusion of plant in receipt of low carbon support.
- Participation of wind and solar capacity not receiving a subsidy should be allowed, and be subject to equivalent obligations as for other types of technology and capacity provider.
- There is a case for strengthening delivery penalties.
- The penalty regime should be the same for all participants irrespective of technology type and applied to capacity with multi-year agreements, as well as existing capacity, to incentivise delivery.
- The Proven and Unproven DSR categories should be replaced with a single DSR category that is subject to the same rules as other capacity providers.



CM Review

1. Do you believe there is a need to maintain the CM? What conditions would be necessary for the CM to be withdrawn?

The CM is one of the pillars of the enduring market framework, alongside the energy wholesale and flexibility markets. The auction results show that the CM has secured a cost effective and diverse range of capacity. Although there are aspects that could be improved, the CM is key in enabling the energy transition.

The CM is essential to ensure sufficient capacity is available to meet GB demand all year round. Flexible and baseload capacity will continue to be needed as the transition to an increasingly lower carbon, but weather dependent, generation mix proceeds. The economic viability of that capacity, such as gas fired power stations, is dependent on securing a CM agreement.

The latest central power scenarios from the Committee on Climate Change assume approximately 96TWh from gas generation in 2030, between 24-29% of generation in its latest scenario's¹. This compares with 133TWh in 2017, approximately 40% of generation². Analysis by Carbon Trust and Imperial College³, in support of BEIS' Smart, Flexible Energy System policy recognised that gas fired power stations would continue to be needed through to 2050, although load factors could decline by as much as 95% over that period. To ensure a sufficient level of flexible, baseload capable plant needed for security of supply, the CM will continue to be needed to cover the costs of continued availability of gas fired generation over the next decade and beyond.

2. Do you believe the current objectives of the CM remain appropriate?

Yes, for the reasons outlined in response to Q1.

3. Do you think the arrangements outlined in section 3.1 are adequate to ensure sufficient capacity is secured through the auctions to deliver security of supply?

The auction parameter setting process could be improved by requiring National Grid to consult on its Capacity Report ahead of its review by the expert panel, so that the views of industry can be taken in to account. The parameters and target setting processes could potentially be streamlined, and adhere to a fixed annual timetable.

4. What are your views on the split between the T-4 and T-1 auctions and the amount of set aside?

We support the current approach, with the move to shift more volume to the T-4 auction. Originally higher volumes were reserved for the T-1 auction to give time for turndown DSR to develop, and Transitional Arrangements auctions held with the same aim. In practice, growth in DSR is predominantly behind the meter generation / storage technology, which has been successful in the T-4 auctions.

¹ Figure 2.7, Reducing UK Emissions, Progress Report to Parliament, Committee on Climate Change, June 2018

² BEIS Energy Trends, March 2018

³ Chart 6, An Analysis of Electricity System Flexibility for Great Britain, Carbon Trust and Imperial College London, November 2016



Although the T-4 timescales provides a mid-term planning function to secure replacement capacity, we do not agree that buying more in the T-4 auction reduces new build non-delivery risks. Functioning secondary trading arrangements need to be in place to ensure obligations are delivered, particularly in relation to late New Build or Unproven DSR delivery.

The auction approach could be improved further and under delivery risks mitigated by:

- placing the construction/proving milestones of late or non-delivering capacity providers ahead of the T-1 auction prequalification timescales and making this information available to the market;
- and applying the non-delivery penalty regime to capacity providers with multi-year contracts where they underdeliver or are late in a Delivery Year, which incentivises secondary trading.

5. Has the CM been successful in supporting investment in capacity (new and existing), both directly and indirectly? If not, please identify any changes that need to be made.

Yes, it has been successful in ensuring existing plant continues to be available whilst supporting the introduction of new and distributed technologies. The CM has failed to buy any large scale new build plant, buying instead: lower capital expenditure, small scale peaking (reciprocating engine) plant; behind the meter technology; and interconnectors. Some of that growth is due to market distortions.

Based on year of construction⁴, and expected technical lifetimes, our analysis suggests that there could be approximately 24GW of plant (around a quarter of GB's generation capacity) closing over the next decade as older and less economic power stations retire, triggering the need for larger volumes of replacement capacity.

Market distortions need to be addressed to ensure sufficient capacity is available that is flexible and can also run at high output for an extended period to cover all demand scenarios throughout the year. These distortions continue to artificially lower the price of some technologies, for example interconnectors, and behind the meter technology. This includes inconsistent and inappropriate de-rating factors, for example where planning permissions are based on limited running hours to comply with emissions standards, the constraint on running is not reflected in the de-rating factors applied.

6. Do the current 1,3 and 15 year agreement lengths support investment in capacity and do they deliver against the objective of cost-effectiveness?

The level of competition for long term contracts in the auctions shows that these are attractive to support investment. 15-year contracts in particular have been sought by new build developers where they are eligible to apply for them.

There have been some notable early defaults in 3 and 15-year capacity contracts awarded in the first T-4 auction. It is however, in our view, too early to judge the overall effectiveness of long duration arrangements as we are only now entering in to the first T-4 delivery year. There is currently insufficient market information on the level of under or late delivery of New Build capacity.

However, to mitigate the risk of defaults, the timing of when T-4 new build/extended duration contract under delivery or defaults are notified should be in sufficient time to allow any shortfall

⁴ Source: Carbon Brief, <https://www.carbonbrief.org/mapped-how-the-uk-generates-its-electricity>



to be bought in the T-1 auction. Prompting timely disclosure should be incentivised by the termination penalty regime.

Price duration equivalence formed part of the Electricity Capacity Regulations but was removed in the 2016 amendment as it has not been used. The intent of the price duration equivalence was to balance greater long-term costs to the consumer of entering into multi-year agreements compared to existing capacity on single year agreements. The application of price duration equivalence should be revisited as this would be expected to improve the long-term cost effectiveness of the CM.

7. Should penalties be adjusted to strengthen incentives for delivery during stress events? If so, how should penalties be adjusted? Please provide a view on the methodology and factors to consider when setting penalties.

The penalty regime should be the same for all participants irrespective of technology type.

Currently some capacity types can reduce their penalty exposure post auction (e.g. New Build and Unproven DSR) and some are not exposed to penalties in the event of late delivery (e.g. New Build). In the case of interconnectors subject to a cap and floor, the penalty is less effective as the floor caps the losses of that interconnector. The delivery penalty regime should also be applied to New Build capacity (Unproven DSR, new cap and floor interconnectors and new build generation), in the same way as it is for existing generation.

There is a case for strengthening delivery penalties. Our initial assessment is that: the penalty cap may be too low; the rate at which a capacity provider can lose its income on a monthly basis could be increased; and it may also be worth considering applying a premium to the annual penalty cap, perhaps at the level of the current late delivery termination fees, in order to increase the incentive on capacity providers to support effective secondary trading.

We would also argue that there is significant scope to simplify termination penalties and that overall these should be focussed on the period up to the delivery period, with non-delivery penalties being the key mechanism for all technologies beyond this.

A robust secondary trading and volume reallocation regime is a critical element of the market framework in ensuring capacity obligations are met. Where new or unproven capacity underdelivers or is delivered late, the remaining capacity providers' obligation is effectively increased via the ALFCO formula. Non-delivery penalties must ensure all capacity providers are equally incentivised to trade out of obligations that they cannot meet.

The requirement in the current rules for the Delivery Body to cancel all secondary trades associated with CM Agreements held by terminated CM Units is a significant barrier to secondary trading and should be removed.

8. Do the current arrangements relating to credit cover and delivery milestones provide sufficient incentives / assurance that capacity will be delivered, with particular reference to DSR?

No, as the rules allow significant scope for late or under-delivery without penalty exposure. The long stop date provides 18 months for later delivery in the event of delays to the financial completion or substantial completion milestones for prospective CMU's. Factoring in the termination notice and appeal timeframe it could be two years before the capacity provider is exposed to a financial penalty. In this time there is currently no opportunity for existing providers to meet the short fall in capacity through secondary trading.



DSR CMU's have the flexibility to reduce contracted capacity to a minimum of 2MW ahead of delivery. They also face less onerous progress reporting and termination regimes compared to Prospective CMU's.

Where late / under delivery or potential default is not visible until after the T-1 auction New Build, Refurbishing, Interconnectors under construction and Unproven DSR should be incentivised to secondary trade. The late or partial delivery flexibility should be removed. Penalties should be applied from the contracted Delivery Year. If a provider expects to be late it should be exposed to the penalty or seek to trade out its under delivered obligation.

In relation to credit cover, in March 2017 Government found⁵ that there was insufficient evidence to revise the level of credit security required from DSR providers from £5k/MW to £10k/MW. As we outline in response to Q.15, there should now be a single DSR category that is treated consistently with other capacity providers. As part of this the level of credit cover required for DSR should be aligned with other participants.

9. Do the termination events and fees need to be adjusted to create the right incentives for delivery? If so, how? Please provide a view on the methodology and factors to be considered.

The range of termination penalty events and fees should be simplified and be designed to incentivise behaviours which ensure availability of capacity and delivery on the obligation.

The relevant termination rates should reflect the timeframe of the termination event and the ability of the Delivery Body to secure replacement capacity. Changes should allow for partial termination where the full contracted capacity is not delivered, where the shortfall is subject to a termination event and fee. For multi-year contracts, the level of termination fee should also reflect the number of years remaining on an agreement.

The potential for a capacity provider through its company structure to become insolvent to avoid a termination liability needs to be removed, perhaps through a requirement for annual credit support for multi-year contracts to cover the expected CM revenue for each year.

Post T-1 auction there should be a focus on supporting effective secondary trading to manage non-delivery risk.

There needs to be greater transparency in the termination process, with more visibility against delivery milestones and whether termination proceedings have commenced. This will provide more market information to all participants to understand the potential for under-delivery and whether this provides an opportunity to offer replacement capacity, either in T-1 timescales or through secondary trading or over delivery. This will promote effective competition and support security of supply.

Where termination payments are made these funds should be added to the penalty pot to enable these funds to be allocated to capacity providers that over-deliver. This will help to address the issue of existing providers increasing ALFCO as a consequence of other participants' default.

⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/601209/Government_Response.pdf

10. Do any other changes need to be made to ensure delivery of capacity by the different types of technology?

There are a number of aspects relating to satisfactory performance and de-rating that should be addressed in order to provide more delivery assurance.

Satisfactory performance requirements for interconnectors should be to demonstrate operation at its rated import connection capacity, consistent with other technologies, rather than a non-zero flow above 1MW. Interconnector projects benefitting from cap and floor regulation should be ineligible consistent with plant in receipt of low carbon support.

There is a clear discrepancy in the derating factors that apply to limited duration technologies that are directly connected to a network compared to the same technology that is behind the meter and is declared as components of DSR. It is unacceptable to set the derating for half hour limited duration storage that is directly connected to a network at just under 18%, whereas the same technology behind the meter may be eligible for 86%.

11. To what extent does the CM design ensure capacity resources are used in the most effective manner during stress events? Do you have any ideas on how it can further be improved?

CM Notices give a signal to the market to be ready for a potential stress event. Notwithstanding our comments on the potential to strengthen the delivery penalties and incentivise secondary trading, the current penalty regime does provide an incentive to deliver in a stress event. This is combined with volume reallocation which gives an incentive for over-delivery of a portfolio or to make it available for trading.

Appropriate and realistic de-rating factors are key to ensuring delivery for the entire duration of a stress event.

12. Do the de-rating factors correctly recognise the contribution made by different technologies to security of supply? What changes need to be made?

The approach to derating factors is focussed on winter peak periods. Embedded plant is incentivised to run in this period to receive Triad payments. Care must be taken that this approach does not lead to over procurement of embedded capacity targeted to run for the Triad period and subsequently not available should there be a stress event in the summer. For example, peak demand on the transmission network for winter 17/18 was reached on 1st March 2018, which falls just outside the winter season and the Triad period.

The recent BEIS reviews of Transitional Arrangements auctions stated that there was evidence of DSR providers overfilling CMU's by way of insurance for under or non-delivery of any one component. This implies that DSR providers are not confident that their current de-rate factors can be met.

Potential changes to de-rate factors need to be considered in the context of ongoing changes being made to Connection Capacity selection rules and to Satisfactory Performance Testing. Whilst we support the intent of offering capacity providers more flexibility in defining CMU de-rated capacity we are concerned that doing this by adjusting connection capacity may undermine the process for defining technology de-rate factors, as well as the process by which the auction Target Capacity has been defined. A better approach could be to allow capacity providers flexibility to opt for a de-rate factor below the technology class value specified, where they are concerned about their ability to deliver in a stress event. This



approach supports de-rating factors as it will provide the Delivery Body with feedback as to whether the market has confidence in the centrally defined values.

13. Do you think there are there sufficient safeguards in place to reduce the risk of over-procurement? If not, what changes could be made to further reduce the risk of over-procurement?

The auction parameter setting process to determine the Target Capacity ensures sufficient capacity is procured for a Delivery Year. Combined with the T-4 and T-1 auction process, robust secondary trading arrangements would reduce the risk of non-delivery or defaults. However, there may be a higher risk from under-procurement, which would be of more concern.

14. Do you believe that the auctions have been sufficiently liquid to date and to ensure strong competition? If not, how could we improve liquidity and competition?

The auctions have been sufficiently liquid, as the amount of prequalified capacity in each auction to date has been significantly above the required Target Capacity, and has in turn driven strong competition.

Competition could be improved further by addressing market distortions that impact the CM, such as;

- the treatment of interconnectors,
- remaining embedded charging benefits, particularly in relation to behind the meter sources; and
- moving DSR on to the same footing as other capacity providers.

Uniper's proposal to facilitate additional capacity from Existing Providers⁶ that have upgraded capacity between T-4 and T-1 timescales would also enable more available capacity to compete in the T-1 auction, thereby increasing liquidity and competition.

15. What further changes are needed to better facilitate the participation of new, innovative or smart technologies, including from DSR, in the CM?

The CM arrangements have intentionally been more accommodating for DSR providers, particularly the Unproven DSR category, to encourage innovation.

The Transitional Arrangements auction that was limited to turn down capacity highlighted the limited availability of this type of capacity. The Unproven DSR category in the main auctions has provided an opportunity for further innovation in the market, whether for turn down DSR or behind the meter generation or storage. The limited information available however suggests that most of the capacity awarded agreements is generation and storage. There are also examples in the Capacity Register where some developers have secured capacity agreements for Unproven DSR and have subsequently transferred those agreements to new generating CMUs. This undermines the intention and purpose of the Unproven DSR category.

As the review of the CM is contemplating changes that would relate to the 2019/20 auction cycle, in the case of the T-4 auction this would be the 2023/24 Delivery Year. With the growing maturity of DSR it would now be appropriate to remove the Proven and Unproven DSR categories and simply have a single DSR category that is subject to the same market rules as

⁶ CM Rule Change Proposal ref CP341



other capacity providers. To improve transparency, DSR providers should also be required to declare the technology type associated with a DSR CMU component. This would then enable more appropriate de-rating factors to be applied.

In the case of batteries, the amendments introduced at the end of 2017 to the CM to better (or more accurately) incorporate Limited Duration capacity were a prudent example of regulation maintaining pace with new technology developments.

16. How could we go about allowing augmentation of batteries?

We do not think this is required. There is no reason why batteries should be treated differently to other technologies. Any issue with projects meeting their capacity obligations due to degradation of performance is a maintenance issue. Alternatively, capacity providers could opt for shorter obligations to accommodate the realistic expected life of the relevant assets, or the potential for future upgrades.

If there is scope to increase the capacity once an obligation has been awarded, then a new CMU could be created with separate metering on site. Otherwise, the changes we have proposed to bid additional capacity into T-1 or use for secondary trading could be adopted⁷.

17. Please provide any other ideas on how to improve cost effectiveness of the CM.

We refer to a number of potential ideas that could improve the cost effectiveness of the CM. These are:

- Enabling participation of additional capacity from Existing Providers upgrading between T-4 and T-1 timescales;
- Reviewing the use of price duration equivalence for multi-year contracts; and
- Addressing the market distortions we have highlighted in our response.

18. What are the main distortions in competition that need to be addressed to ensure a level playing field in the CM auctions?

The treatment of behind the meter capacity versus embedded capacity. The lack of transparency of behind the meter technology has resulted in the application of incorrect de-rating factors. In the case of a half hour battery this results in an 86% de-rate factor for behind the meter compared to just under 18% for a directly connected equivalent limited duration storage provider. The continuation of embedded charging benefits for behind the meter sources means that they continue to receive over £50/kW more than other embedded capacity providers with a direct connection to a distribution network for Triad running. The CM Supplier Charge adds a further £9/kW to behind the meter providers.

Embedded benefits for behind the meter projects should be brought in to line with the changes implemented to directly connected distribution projects. We note that this is currently being considered as part of Ofgem's Targeted Charging Review.

Small scale reciprocating engine sites can seek to utilise banks of smaller engines in combination to be exempt from the EU ETS and requirements of the Medium Combustion Plant Directive (now transposed in to UK law⁸). By contrast large plant are explicitly required to meet relevant BREF standards when seeking multi-year agreements. EU ETS participation

⁷ CM Rule Change Proposal ref CP341

⁸ The Environmental Permitting (England and Wales) (Amendment) Regulations 2018



should be an eligibility requirement for capacity providers with carbon emissions. Compliance with MCPD provisions should be an explicit requirement in the Extended Years Criteria for projects of that size seeking a multi-year agreement.

Under the current arrangements DSR providers have substantial flexibility in how they meet their contracted volume, through the component change allowance and requirement to only deliver 2MW as minimum up to one month before the Delivery Year. This gives significant competitive advantages to DSR compared to other categories of capacity provider. DSR should now be a single category in its own right, with equivalent treatment to New Build capacity ahead of the start of the Delivery Year. As we outline in response to Q7, we also propose the application of the non-delivery penalty regime to multi-year contracts, as well as DSR, for any under delivery of contracted capacity from the start of the contracted Delivery Year; this would incentivise secondary trading.

Interconnectors and associated market arrangements continue to be a source of significant market distortions, which we have set out in response to Q.28 below.

19. Are there distortions in the interaction of the various markets (wholesale, ancillary, CM) or their charging arrangements which impact the effectiveness of the CM?

We provide information on this aspect in our responses to Q.18 and Q.28.

20. How could the CM better complement the decarbonisation agenda, whilst still ensuring technology neutrality?

Competition through technology neutrality in the CM in conjunction with other policy drivers on decarbonisation, such as emissions trading, enables cost effective delivery of the decarbonisation agenda.

Equivalent requirements on smaller scale technologies as for larger technologies would ensure that carbon and air quality goals are not inadvertently undermined. EU ETS participation should be an eligibility requirement for all capacity providers with carbon emissions. Compliance with MCPD provisions should be an explicit requirement in the Extended Years Criteria for projects of that size seeking a multi-year agreement, as the equivalent BREF standard is already specified for large plant.

21. Should wind and solar be allowed to participate in the CM? Why?

The CM is technology neutral and unsubsidised renewables should be classed as eligible. There needs to be a clear definition of unsubsidised wind and solar capacity, which would include not being in receipt of the Renewables Obligation, Contract for Difference or Feed in Tariff regimes.

Out of subsidy wind and solar generators are highly likely to have reimbursed their original capital expenditure and with zero dispatch cost would be assumed to continue to operate profitably irrespective of CM eligibility. Allowing this capacity into the CM is not therefore anticipated to change the volume of other capacity required.



22. What factors need to be considered to enable renewables to participate in the CM whilst ensuring security of supply?

Participation of unsubsidised wind and solar generation will need a suitable technology class definition and must be subject to the same consistent overall obligations as any other type of technology class and capacity provider.

An appropriate approach to determining de-rating factors will need to be considered. This may need to take in to account locational differences of the available resource. The approach to de-rating wind and solar should be consistent with market assumptions on renewables being available at peak times, such as in their treatment for transmission/distribution charging purposes and assumed contribution in the Security and Quality of Supply Standard.

Wind and solar capacity should be subject to the same information and delivery obligations as other Existing Capacity applicants, with the same application of the non-delivery penalty regime, ability to volume reallocate or secondary trade and termination events.

23. What factors need to be considered to enable the participation of hybrid projects in the CM?

The participation of hybrid projects requires some consideration. However, our initial view is that hybrid projects can be accommodated under current rules. Clearly appropriate de-rating would need to be applied.

24. What factors need to be considered when developing the de-rating methodology for wind and solar? What approach could be taken to de-rating hybrid CMUs?

For wind and solar the relevant equivalent firm capacity should be considered, and learning from other markets where there is a higher volume of renewables in the generation mix.

Hybrid CMUs should be treated consistently with individual technologies submitted as separate CMUs. Doing otherwise will potentially introduce new market distortions.

Future hybrid CMUs can compete in the same way as hybrid OCGT/coal CMUs have competed in previous auctions, through aggregated de-rate factors.

25. For co-located projects, do you think that all components of the site (both the CM eligible and the non-CM) will be able provide their full capacity during the system stress event due to local distribution or transmission network constraints?

This depends on individual connection arrangements. Whether it is a hybrid project or not; opting for a lower level (or non-firm) connection security on the electricity network should not exempt the CMU from non-delivery penalties.

The unavailability of the transmission network, as set out in the Connection and Use of System Code, already provides grounds for a CMU to be alleviated of its obligation.

26. What lessons can be learnt from the participation of renewables in other overseas CMs?

The Irish Single Electricity Market has a higher percentage of renewables in its generation mix than the GB market. The Irish CM has already had to consider the impact of additional MW of



renewable capacity contribution to security of supply. This has shown, in a similar way as Limited Duration Storage and interconnectors, that there is a saturation effect from increasing renewable capacity contribution. The Irish CM may therefore provide some insight in to participation of wind and solar in the GB CM.

27. Is the current de-rating factor methodology for interconnectors appropriate for assessing their contribution to security of supply? Are there any particular challenges or risks you wish to highlight?

Interconnection of markets is an important part of ensuring diversity of energy sources and can offer flexibility. However, interconnectors must be able to compete with other technologies on a consistent basis and only where they offer a comparable service.

An interconnector does not provide generation capacity; it only provides transmission of the electricity from sources of generation. Electricity flows across interconnectors according to market signals, and not in response to capacity market obligations.

We believe that there are opportunities to improve the current approach.

Historic performance of interconnectors may not adequately reflect the potential future performance and the current approach may therefore overstate their contribution. In this regard we would observe:

- historic availability should place a cap on maximum de-rate factors in evaluating modelled scenarios;
- increasing de-rate factors in higher demand scenarios is inconsistent with the 3-hour Loss of Load Equivalent aim of the CM; and
- export, or negative, periods should be included in the evaluation of de-rate factors.

In our view, more emphasis should be placed on modelled results of forward looking scenarios, with the methodology providing better consideration of:

- the potential effect of the growth of interconnection on their contribution to security of supply;
- availability of spare capacity to flow to GB from interconnected markets;
- interconnector contribution against weather patterns and demand;
- the effects of changes in policy and recognised market distortions, such as carbon pricing differentials and treatment of BSUoS charging; and
- changes in the generation mix that may impact on the direction of flow, particularly as interconnected markets decarbonise their own generation mix and increase weather dependent generation.

We support the Panel of Independent Technical Experts calls for National Grid to clarify their modelling assumptions. As part of a streamlined annual process National Grid should consult on its Capacity Report ahead of its review by the expert panel, so that the views of industry can also be taken in to account.

Enabling more flexibility in the approach to determining the interconnector de-rating methodology may enable National Grid to take account of factors that other commentators⁹ have observed to more accurately reflect the contribution from interconnectors. Going forward

⁹ Ref Aurora (<https://www.auroraer.com/wp-content/uploads/2018/05/Aurora-Energy-Research-Energy-security-in-an-interconnected-Europe.pdf>) and LCP Lane, Clark and Peacock LLP <http://www.lcp.uk.com/>



the Rules could require National Grid to consult on its interconnector de-rating methodology and for it to be approved by Ofgem.

28. What other factors need to be considered to ensure that interconnectors and domestic capacity providers compete on a level playing field? Please provide ideas on how any issues you have identified can be addressed.

Large or transmission connected GB generation is subject to Balancing Services Use of System Charges (BSUoS). As interconnectors and non-GB generation do not pay this charge, UK generators earn less than a similar continental generator would earn for the same service. The change in flows on an interconnector and the corresponding actions National Grid may be required to take can also impact on BSUoS costs, which are only borne by parties in GB paying BSUoS. Classified as network, interconnectors are also not subject to Transmission Network Use of System (TNUoS) charges and interconnector owner's do not see the metered volume adjustments for transmission losses, unlike GB generation.

The continuing direct participation of interconnectors with cap and floor arrangements undermines competition in the CM. An interconnector with a cap and floor arrangement is not directly exposed to non-delivery in a stress event as the penalty will feed through to the reconciliation of its revenue under the cap and floor. If the non-delivery penalty results in a loss that exceeds the floor, consumers underwrite the non-delivery penalty. Cap and floor interconnectors should be excluded from participating in the Capacity Market consistent with the exclusion of plant in receipt of low carbon support.

The unilateral application of the UK's Carbon Price Support tax distorts prices between GB and interconnected markets. As fossil fuelled GB generation bears this cost, but interconnectors as a proxy for the non-GB capacity do not, it ensures that fossil fuelled generators in GB will continue to be at a competitive disadvantage in the capacity auctions. We continue to prefer to see carbon pricing through a market mechanism, such as the EU ETS.

We believe that there should be consistent treatment of interconnectors in the arrangements. A number of CM Rules changes raised this year¹⁰ provide examples of where the arrangements are not equivalent. For instance, satisfactory performance requirements for interconnectors should be the same as other technologies, not just non-zero flow above 1MW for three half hour periods.

The risk of interconnectors participating in two neighbouring CMs should be addressed. By contrast currently GB generators can only participate in their domestic CM. There is already evidence¹¹ that aggregate CM de-rated capacity of UK-Ireland interconnectors can exceed the physical capacity of the cables.

29. How could we facilitate direct participation of overseas capacity in the future?

As far as possible, non-GB capacity should be treated the same as GB capacity. Although there may be difficulties in practice, around satisfactory performance and metering data, these could be overcome. This would cover metered data for evidence of performance, agreements subject to English law, and require non-GB capacity to operate and demonstrate ability to export to GB at times of GB system stress.

¹⁰ CM Rule Change Proposals Ref CP260, 294, CP331, CP332

¹¹ Eirgrid / SONI 2018-19 T-1 auction result and GB 2017-18 T-4 auction cycle prequalified capacity



Straight-forward enforcement of penalties on non-GB capacity can be facilitated by making capacity payments at the end of the Delivery Year net of any penalties incurred. The level of non-GB capacity procured in the CM auction should be capped by the capacity of interconnection available to deliver it to the GB market.

30. To what extent do the current institutional arrangements support an effective change process? Please provide suggestions on how issues can be addressed.

It would be helpful if some of the detail were removed from the Regulations and put into some form of more open and flexible governance. One option would be to move this element of the Regulations into the Rules where possible. This would reduce the current circular interaction, with two separate processes, between changing Rules and Regulations and vice versa.

An open governance, rolling change process as with the Industry Codes, facilitated by a code administrator, with Ofgem as the decision maker could be more efficient than the current annual process.

An open governance approach could prevent a big rush of ideas to hit deadlines associated with an annual window, smooth out peaks and troughs in work load, and would provide an incentive for people to raise issues which they think are important, as they will need to put in the effort to see them through.

Whether or not changes were ready for a particular CM auction round/delivery year would be dependent on when the change proposal was raised and how simple it was to develop, assess and implement. A recommended implementation date could then be made to the body responsible for deciding, such as Ofgem, whether a change should be implemented or not.

31. To what extent do the defined and allocated roles and responsibilities support effective administration and delivery of the annual processes related to pre-qualification, delivery and payments? Please provide suggestions on how issues can be addressed.

There remains a potential loop hole in the settlement flows of the Capacity Market Supplier Charge arrangements¹², whereby a Supplier default results in a reduction in payments to capacity providers, with no ability to make up any shortfall. This could reduce the actual income to capacity providers. The interpretation of the Rules as implemented in the settlement system mean that once a Supplier's credit security is drawn down there is no mechanism to recover any subsequent shortfall in Supplier payments. Perversely if a Supplier is in temporary default and makes good any shortfall, the income is refunded to Suppliers and not paid to capacity providers. The Supplier mutualisation obligation should be complete so that there is no gap so that capacity providers payments are equal to their obligation, as is the case with the contract for difference regime.

Capturing metered data for pre-qualification is simple once set up, although time consuming to complete all the forms and submissions. Satisfactory Performance Testing data is again simple when set up and fairly straightforward to submit.

Due to the number of bodies involved there are multiple interfaces and handovers. This can make it difficult to find ownership for end-to-end responsibility. An example would be capacity agreements where the delivery body is responsible for maintaining the register but the

¹² Regulation 7 and Schedule 1, paragraph 5, The Electricity Capacity (Supplier Payment etc.) Regulations 2014



settlement body is responsible for financial transactions and it is not clear who is responsible for ensuring consistency between the two.

Where several bodies have a part to play in a process it is harder to optimise the overall efficiency of that process. An example is the publication of rules and release of guidance. Ofgem are responsible for the rules timetable but the Delivery Body cannot finalise guidance until the rules are published. It may be more efficient for providers if the rules were published earlier to allow more time to prepare guidance.

These issues could be addressed by looking at processes from an end-to end perspective, working to an established streamlined annual timetable and allocating a responsible party that providers can go to with queries or recommendations that relate to any part of the process.

The recent mock stress event has highlighted a number of issues in determining participants ALFCO and subsequent difficulties with the ability to undertake Volume Reallocation in particular. These may be addressed through clearer processes but there may also be a need to clarify some aspects of the Rules and Regulations.

32. Please provide any suggestions you have for improving the management of fraud and error risk.

The checks carried out by Delivery Body depend upon statutory information that has been provided to UK authorities. There may be a weakness in checking non-UK companies involved in the CM where the information is gathered in a different way.

Error risk could be reduced if the Delivery Body and EMRS use the data already available to them through industry data flows to pre-populate and cross check data required/supplied in CM processes.

33. Are there any lessons from overseas capacity mechanisms that could be useful in improving the GB CM?

We understand that the French CM is considering enabling direct participation of non-domestic capacity. This may provide some insights as to how the GB market could do the same.

Emissions Performance Standard Review

34. To what extent has the EPS been achieving its objective? Please provide evidence to support your views.

Since its introduction through the Energy Act 2013 and the Emissions Performance Standard Regulations 2015, the EPS has achieved its overall objective by preventing new coal fired power station coming forward, or existing coal-fired generation plants extending their operational life (by replacing or adding a main boiler), without being equipped with Carbon Capture and Storage (CCS) technology. The aims of the EPS are further supported through the Carbon Capture Ready (CCR) requirement, introduced in 2008 prior to the EPS, which since 2009 requires applicants to demonstrate to the Secretary of State a proposed development can meet this.

However, the recent growth of decentralised generation contracted through the CM auctions has in part undermined the objectives of moving towards a low carbon generation portfolio that



this legislation has sought to produce. The majority, if not all, of this plant is below 50MW, much of which utilises diesel as its fuel source. This plant is exempt from the requirements of EPS and CCR. A further distortion is evident as much of this plant is below 20MW which can be exempt from the EU ETS. Measures should be put in place that ensure a level playing field for all plant as we move towards a low carbon generation mix.

35. Is this current objective of the EPS still appropriate? Could it be achieved in a way that imposes less regulation?

Policy stability and predictability is important to enable long term investments in the energy sector. Carbon pricing through the EU ETS and the carbon price support tax is already in place to control the emissions of carbon from fossil fuel power stations. Policy changes need to be within the government's overall strategy for carbon reduction.

36. Have any issues arisen in the operation of the EPS which should be considered?

None that we have identified.