Energy for generations

Generation & Wholesale Markets

ESB GWM Response:

Integrated Single Electricity Market

(I-SEM)

Capacity Remuneration Mechanism

Detailed Design

Third Consultation Paper

SEM-16-010

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Contents

1. INTRODUCTION

ESB Generation and Wholesale Markets (GWM) welcomes the opportunity to submit a response to the Capacity Remuneration Mechanism (CRM) Detailed Design Third Consultation. The Consultation covers further key aspects of the CRM focussing on auction design, including auction frequency and volumes, market power, auction design, auction parameters, auction Governance, role and responsibilities, and other residual issues.

Section 2 below gives a summary of ESB GWM's main comments in relation to this Consultation. Detailed responses are given in section 3, following the format of the questions set out in the Consultation. In addition to our response to CRM 3, we also include at the beginning of section 2 our comments on the Emerging Thinking on CRM2 as set out by the RAs in SEM-016-010.

2. OVERALL COMMENTS

2.1 CRM Consultation 2 Emerging Thinking

2.1.1 Comments on Emerging Thinking set out in CRM Consultation 3

We set out our views briefly below regarding the RAs' Emerging Thinking from CRM Consultation 2 for long term contracts of up to 10 years for new capacity.

ESB GWM favours annual Reliability Option (RO) contracts for all capacity, and certainly until the market has bedded in and reliable prices are established. The existing SEM CPM has not provided multiple year certainty on capacity revenues and yet has attracted significant new entrant generation. Capacity investments in a competitive market are made with a significant element of commercial risk, and it is not the job of a CRM to remove all commercial risk for capacity providers. It is important to remember that the main objective of a CRM is to cover 'missing money' that capacity providers are unable to earn in the wholesale (and ancillary services) markets, and not necessarily to provide a long term hedge for capacity value.

Furthermore, long term contracts entail a regulated transfer of significant risk to consumers, well beyond what a commercial entity would likely take on in a similar situation, e.g. suppliers typically hedge not more than 3 years in advance.

Currently, I-SEM is considered to be oversupplied with capacity relative to an 8 hours LOLE security standard (unlike GB for example, where the Capacity Market (CM) was introduced in response to a perceived need to attract new entry). Even if long term contracts are considered to be a requirement for new entry, we do not see the immediate requirement to introduce these contracts, and there are significant risks in issuing long term contracts at prices established in an auction which is untested. Experience of capacity markets in the US suggest that a number of changes are required to nascent capacity markets before the prices become reliable, and longer term contracts in these markets were introduced at a later date. We have also witnessed in GB issues with the long term contracts awarded in the first capacity auctions (risk of non-delivery, the 'wrong' types of capacity). There is a very high risk of regret if long term ROs are issued in the first I-SEM CRM capacity auction. If the RAs do decide to pursue long term contracts, regardless of the evidence from international experience, we would expect assurances of how regret would be minimised.

As set out in section 2.4.3, buying different products in the same auction is counter to auction theory and may lead to new Capacity Providers being favoured over existing, leading to inefficient entry and exit. If a large new entrant were to clear in the auction then, in a small market like I-SEM, prices for following years may be reduced well below the true economic value of capacity, leading to unacceptable risk for existing Capacity Providers. In turn, this will lead to participants including large risk premia in their initial bids

driving up prices and costs to customers. It is important to emphasise that selectively offering long term contracts to some participants and not to others is not the free option that it might otherwise appear when designing a theoretical capacity auction on paper.

In our response to CRM 2, we argued that if the RAs do decide that multi-year contracts should be offered, then these contracts should be short term (e.g. up to three years) and all potential Capacity Providers should have a choice of contract length, to avoid any distortions in the market.

If 10 year contracts are offered to new capacity (which we disagree with for the reasons set out above) we believe that contracts of up to at least three years should be available to existing Capacity Providers making major refurbishments.

2.1.2 Comments on CRM 2 Emerging Thinking workshop

We are also taking this opportunity to provide initial comments on the additional Emerging Thinking presented at the workshop on 5th April 2016. Our comments are limited to high level points and are not intended to be comprehensive. We would welcome further engagement from the RAs on these points.

Cross border participation

We note that the interim model for cross border participation is proposed to be Interconnector Led (availability based). This option fails on grounds of equity, as it provides an advantage to interconnector capacity and does not hold it to the same standards as I-SEM capacity. The Interconnector Led option also leaves unanswered questions regarding how the interconnector owner will manage the risk associated with ROs, and the extent to which it is appropriate for the TUoS customer to underwrite these risks.

If this model is used, the de-rating factor for the interconnectors should be adjusted to recognise that the level of security being provided is lower than for I-SEM based capacity.

Secondary trading

A secondary market is required which allows for efficient and liquid trading of ROs to allow participants to re-allocate positions on a short term basis. We are unconvinced that the direction of travel set out by the RAs is likely to achieve this.

The RAs have set out that secondary trading of capacity above de-rated capacity would only be allowed for 6 weeks of the year. It is very difficult to see how there will be enough physical supply of secondary trading to cover typical outages. The RAs appear to be of the opinion that there will be plants without ROs which will want to secondary trade. This is a commercial decision entailing significant risk and as such the RAs should not expect the market to rely on this outcome (which may in fact be precluded by proposed market power mitigation measures on physical withholding).

In order for there to be sufficient volume in the secondary market, the RAs appear to expect Capacity Providers to trade the capacity between the expected load following RO volume and the full de-rated capacity. This has the following implications:

- In the load following formula set out in CRM Decision 1, the inputs to the load following calculation are (a) System demand, (b) Capacity without an RO (e.g. wind),(c) Operating Reserve Requirement and (d) Volume of RO sold. This is an easy calculation to make ex post but difficult to model and predict far enough in advance of real time to be useful for secondary trading.

- Selling the portion "above load following" introduces more complexity and risk for the generator and potentially could lead to a situation where a generator is exposed to more MW of RO than the nameplate capacity (which could occur if the forecast of load following is incorrect).

The RAs propose to *"Oblige dominant players to trade outages and to treat with others"*. This means that if any Capacity Provider wanted to buy or sell secondary ROs, a player deemed to be dominant would have to make an offer to contract with them. There is no definition of what volume the dominant player would be required to "treat" – the capacity of plant between nameplate and-de-rated capacity, the load following adjusted plant capacity, or even the capacity of plant without an RO (e.g. wind that has taken a commercial decision to not take on an RO)? This could see a party being exposed to unmanageable levels of risk for the presumed benefit of the industry at large, and is unacceptable.

We encourage the RAs to set out a clear volume-based example of secondary trading in the CRM 2 Decision, to demonstrate that there will be sufficient liquidity without relying on plant outside the market without an RO. We believe that the interactions between the markets rather than simply looking at capacity alone should also be considered in the analysis.

Stop loss

The proposed annual stop loss limit of 1.5x, combined with a Billing period factor of 0.5 means that a Capacity Provider could potentially lose up to 75% of the annual option fee in a single event. This imposes a significant risk on Capacity Providers which may be priced into risk premia in the auction.

Administered Scarcity pricing

There is a lack of clarity in how the Reduced Operating Reserve Requirement should be set. This was described as being a reduction below *"POR+SOR+TOR1+TOR2 (when these can't be replenished by RRD, RRS and RM1)"*. We note that Operating Reserve requirements (POR, SOR, TOR1, and TOR2) are not additive. It is also not clear whether these values refer to the amount contracted by the TSOs (e.g. in an auction) or to the amount of each service required at any point in time.

The timing and duration of any shortfall against this operating reserve requirement also needs to be considered. For example, what price is set if the Operating Reserve Requirement is only breached for the final 5 mins of a settlement period?

2.2 Auction frequency and volumes

2.2.1 Auction frequency

As set out above, we disagree with the need for long term contracts and favour an approach of annual contracts auctioned 1 year before delivery.

It is not obvious why a four year lead time is considered appropriate. Smaller units could be built more quickly (including DSUs) and it is not clear that 4 years is actually enough of a lead time for CCGTs, so arguably four years is not appropriate for either. If a longer lead time auction is chosen, then we agree that a T-1 auction is also required, since the longer the lead time the greater the risk of getting the volume requirement wrong.

The timing of the auction should be strictly set in advance (e.g. to within one month) to allow for participants to plan for their participation and align processes for making investment and maintenance decisions around this.

The transitional auctions should be held in sequence over a series of months in 2017 (e.g. one per month) ahead of the first T-4 auction. The advantage of this approach is that all Capacity Providers know their positions in order from 2017/18 through to 2020/21. The alternative approach could lead to Capacity

Providers holding a contract for 2017/18 only[1] when bidding into the first T-4 auction. This might discourage participation in T-4 or lead to bidding of higher risk premia to recognise uncertain revenues in 2018/19 – 2020/21 which could lead to inefficient outcomes.

If holding the transitional auctions sequentially before the T-4 auctions, any required Modifications would need to be progressed on a more rapid timescale. This may place a lower bound on the time between auctions. This would mean that there would be four auctions of relevant experience before any long term contracts are offered.

2.2.2 Auction volumes

The volumes held back from the T-4 auction for the T-1 auction should be limited to an expectation of the potential DSU capacity e.g. of the order of 200 MW, or 2-3% of the Capacity Requirement. We note that with a long lead time auction there is a risk that capacity is over-procured (if demand does not follow growth expectations, or growth in renewables is faster than forecast), and that DSUs therefore do not have the opportunity to participate.

In theory a larger amount of capacity could be held back for T-1 given the demand uncertainty, but only if Capacity Providers had a free commercial choice of which auction to enter. The RAs have proposed rules on mandatory participation which may limit this commercial freedom. For example, the proposals may go so far as to mandate participation unless planning to retire, and set penalties for not retiring. In this situation, Capacity Providers cannot take the option of waiting until T-1 and therefore all capacity (excluding DSUs) needs to be procured at the T-4 stage.

Again, we believe this is an example where the over-arching desire to facilitate new entry, whilst important in the longer run when new capacity might be needed, has led to insufficient consideration of the downside risks associated with these aspects of policy design (long lead time, long term contracts, non-homogeneous product design).

Paragraph 3.7.1 of the consultation suggests that "*if projections of future capacity in 4 years' time are such that no new contracts are required, the SEM Committee may cancel the T-4 auction for that year*". This is potentially confusing as it is not clear whether this refers to any contracts starting in that Delivery Year, or only new contracts for new capacity. A better way to represent this is that if the outcome of the calculation in paragraph 3.1.6 is negative, no T-4 auction will be held – we request that the SEM Committee confirms that this is the intention. In any case, if this situation were to occur, it means that new capacity has taken up most or all of the volume in earlier auctions which (absent a sudden and unprecedented reduction in technology costs or efficiency improvements) would indicate a market failure with large volumes of inefficient plant exit.

2.3 Market power

Market power is a feature of all electricity markets, where the need to instantaneously and simultaneously balance supply and demand across the network can impart temporal or locational market power to small and large players alike. Consequently, efficient market design should avoid the creation of signals or opportunities to exercise market power, as well as consideration of measures to mitigate market power. In this, I-SEM is no exception.

It is clearly prudent to design the auction to reduce any participants' ability to exploit market power. The consultation paper proposes to mitigate market power through a number of ex-ante interventions, complimented by the European ex-post regulatory framework.

[1] This assumes that the first T-4 auction is held after the first transitional auction. The RAs have proposed a date of June 2017 for the first transitional auction, but have not explicitly said whether the first T-4 auction will be held before or after this.

We would argue that a number of the measures proposed as ex-ante market power mitigation measures are in actual fact essential features of any efficient market design. These include the auction price cap, the sloped demand curve, and potentially rules on adjusting the demand requirement for capacity that chooses not to participate. This efficient market design applies to all participants and is intended to create the right incentives on all parties. The RAs should get this design right first, and then consider if there is any case for further ex-ante interventions.

It is vitally important that any ex-ante measures are proportionate and symmetric, and pancaking is avoided[2]. If this is not the case, the auction's design may undermine the very competition it is trying promote.

An example of pancaking of measures is designing an auction to favour new entry, in order to promote competition, and then introduce further bidding restrictions on existing participants which at best may be redundant, but at worst undermine the competition we are trying to promote. Another example, is introducing a downward sloping demand curve without recognising the impact it has on pivotality. These examples highlight that the package of measures requires careful consideration and evaluation. The RAs should also be cognisant of the pancaking of measures across CRM, DS3 and energy markets, and the potential for interventions in one market to create inefficient outcomes in another.

The RAs' consultation paper has a clear preference for mitigating market power through ex-ante interventions in all circumstances. The RAs have very powerful and effective ex-post regulatory tools at their disposal and the power to investigate and take enforcement actions against any market abuse[3]. They are also proposing that specific anti-gaming clauses may be included in the CRM contractual rules. Striking the right balance between ex-ante and ex-post measures will be essential to make sure the overall package is proportionate, and that the value of capacity in I-SEM can be revealed by competitive processes, as envisaged in the EU Integrated Electricity Market (IEM), and not by regulators who will have imperfect information on costs and market risks.

As stated in our response to the market power consultation, we continue to believe that the ex-post measures provide a sound basis for investigation and enforcement by the RAs. The impact of ex-post monitoring and enforcement should not be underestimated.[4]

2.3.1 Market definition

Defining the applicable market is the essential first step to any assessment of market power, and is fairly straight-forward in the case of the I-SEM CRM. We agree that product, geography and time are the right dimensions to define the I-SEM capacity market auction. We agree the product dimension is the annual forward capacity product, in I-SEM a Reliability Option.

We note that the geographical dimension of the relevant market has been too narrowly defined as the island of Ireland. It should be broader than this given that cross border participation (in some form) is required to satisfy State Aid requirements. Given the CRM emerging thinking on an Interconnector Led approach, the relevant market's geography should explicitly include the interconnected capacity to GB. As a more coordinated European solution develops, we expect the geographic definition of the relevant market to widen further.

The time dimension is relevant, since the competition varies between transitional, T-4 and T-1 auctions. In the T-4 auctions, the presence of new entrants in the auction increases competition. In the shorter lead

[2] Section 2.1 and appendix 1 of our response to the market power consultation paper (SEM-15-094) set out our reasons why we believe that any mitigations should also be consistent with principles of EU law and the Irish Better Regulation principles.
[3] See Article 101 and 102 of the Treaty on the Functioning of the European Union and the Regulation (EU) No 1227/2011, Regulation on Wholesale Energy Market Integrity and Transparency (REMIT).
[4] See appendix 1 of our response to the market power consultation (SEM-15-094).

time auctions this may not be possible (although there may be additional competition from DSUs, aggregators and small scale technologies such as fast to deploy smaller engines). However, the auction is predicted to be oversupplied in any case so this will provide a degree of competition.

2.3.2 Market power metrics and assessment

The consultation document puts forward a range of competition metrics to measure market power in the I-SEM capacity auction. We would caution on over relying on these metrics as they are imperfect tools and have a number of shortcomings. A brief consideration of these is set out below. Section 3.5 of our response to the market power consultation (SEM-15-094) and our response to the DS3 competition metrics consultation (SEM-15-068) provide a more detailed explanation of our concerns about these metrics. We also note that the RAs have highlighted a number of these limitations in their respective consultation papers.

- Market shares and the Herfindahl-Hirschman Index (HHI) measure market concentration at a particular point in time, which is a challenge for a forward looking procurement exercise like the capacity market auction. They do not capture competitive pressures from new entrants, which is key in the context of the capacity market.

- The HHI is a sum of squares calculation of market shares and is vulnerable to changes in plant ownership. If a participant were to purchase another the market concentration would increase even though there has been no actual change in the composition of the market itself. This could adversely impact another participant who is not part of the transaction.

- The Pivotal Supply Index (PSI) is a simple binary measure of whether a generator's portfolio is pivotal to supply being able to meet demand in certain market. There are a number of effects that this measure cannot account for. A downward sloping demand curve reduces pivotality in the price setting region of the auction (and an auction price cap is the ultimate limitation on pivotality). The lumpy unit size means it is not always clear whether economic withholding is beneficial, even to a pivotal supplier – it would be a risky strategy to employ. Lastly, there are many reasons why a participant would not necessarily wish to exploit a pivotal position. The participant's assets may lack the necessary flexibility to respond to a system stress event and manage the risk of holding a Reliability Option. The assets may be costly to run, have uncertain operating hours over the year or fit with the chosen operational profile. The PSI will not recognise this. The three party supplier test also suffers from these setbacks.

- The Residual Supply Index (RSI) measures if a generator is pivotal across the hours in a year. It would be difficult to apply this to an annual procurement exercise such as the capacity market auction or DS3 system services.

Therefore these metrics are either irrelevant and/or inapplicable to the consideration of market power in the CRM (as in the case of RSI and HHI), or overly simplistic (in the case of PSI).

The consultation paper acknowledges that the information necessary to determine if any participant has market power (according to these metrics) is not yet available since it will be necessary to:

- Establish specified de-rating factors for each plant;

- Calculate the de-rated Capacity Requirement; and

- Complete the Qualification process to know which new plant is entering the auction.[5]

[5] SEM-16-011, p. 35.

The RAs applied a structure, conduct and performance (SCP) framework to assess market power in their November 2015 consultation paper. We support the use of this framework but believe the assessment in that consultation had overly focused on the structural element and did not given sufficient weight to the conduct or performance elements. We think the SCP framework is also appropriate to apply to the I-SEM capacity market auction.

We agree with the RAs that it is prudent to assess if market power exists once the above information is available. However, given the above limitations to assessing if structural market power exists at this point in time (or even with the above information available) it appears prudent for the RAs to place greater emphasis on the conduct and performance elements. As mentioned above, the deterrent that ex-post measures, especially REMIT, provide should not be underestimated.

The indicative analysis put forward in the consultation suggests that ESB and other participants may be pivotal in the transitional auctions (notwithstanding that the auction is likely to be heavily oversupplied, and that the metrics ignore sloping demand curves and the potential for new entry). If the RAs analysis shows there is market power exists for ESB or any other participant there should be no presumption that that party would have the incentive to exploit it. We are concerned that if ex-ante interventions are locked into the auction design at this stage it may be disproportionate and could inadvertently interfere with the competitiveness of the auction. Such an outcome would not be in consumers' interest.

2.3.3 Market power mitigation measures proposed

We believe that any auction design must consider how to achieve the most economic outcome for consumers, which includes disincentives to exploit any market power. A balance needs to be struck between a comprehensive and proportionate set of measures that mitigate the potential exercise of market power and allowing competition in the auction to evolve. To help find this balance we would suggest applying the following principles to consider the need and design of any such measures.

- **Evidence Based Decision Making:** Any mitigation must be supported by credible evidence of a detrimental impact on competition and consumers;
- **Proportionate:** Any mitigation must be objectively applied to all participants in a non-discriminatory manner and be proportionate to the problem it aims to solve;
- **Facilitate competitive entry/exit:** Price signals must reflect fundamentals and be dynamic and must allow competition to evolve;
- **Transparent:** Mitigations should be achievable, easily understood and not overly complex;
- **Consistent (no duplication):** Any mitigation must not duplicate existing regulations and be consistent with the wider regulatory framework (IEM, REMIT, Competition Law, and the design of I-SEM).

In the sections below we provide a view on each of the proposed measures put forward in the consultation paper, noting that the majority of these are really concerned with efficient market design rather than explicitly with market power mitigation.

Rules on physical withholding: making bidding mandatory

The SEM Committee has already reached a decision on the broad principle of mandatory bidding for existing dispatchable non-firm Capacity Providers. Recognising this, it is important to ensure that the opt-out procedures are appropriate. The valid reasons for opting out of the CRM auction include:

- Planned retirement of capacity
- Excessive risk of holding an RO (the RAs have recognised this for intermittent generators, but this may also apply to storage with energy-limited deliverability)
- Expectation of future opportunities: enter a future T-1 auction,
- Expectation of future opportunities: to provide cover to the market by taking on secondary obligations.

The latter three options are commercial decisions and hence (absent any Bid Limits), Capacity Providers making this decision could exit at the relevant price. However if Bid Limits are enforced, it is important that Capacity Providers have the option to not participate, without the risk of penalties in future.

We note that there may be reasons why a Capacity Provider may plan to close, but then at a later date choose to opt into a future auction for the same delivery year. For example, the forecast revenues from energy and DS3 System Services may have increased such that the Capacity Provider is now expected to be competitive in the CRM. Therefore the rules should not preclude this and no penalties should be imposed.

Rules on physical withholding: Adjusting the capacity requirement down for physical withholding (non-bidders)

A decision has been made in CRM 1 to adjust for capacity that does not bid. However, if a Capacity Provider has stated an intention to retire, then it is clear that the Capacity Requirement should not be reduced since this capacity is not expected to be available in the Delivery Year.

We note that there appears to be an intention to adjust the Capacity Requirement if existing Capacity Providers chose the lower end of the tolerance range in de-rating factors. Given that this represents the Capacity Provider's view of the likely performance of a generator and the risk in the RO, the Capacity Requirement should not be adjusted. It is worth emphasising that holding a RO is the equivalent of selling a naked call option which is one of the riskiest trading products. Capacity Providers will need to consider carefully how ROs can be managed within their internal risk controls and processes. There is the risk of the RAs taking too simplistic a view of economic withholding without full appreciation of the commercial realities of managing a complex product such as an RO. Furthermore, it is not clear how the capacity requirement could be adjusted in this way, since it will not be known which providers will be successful ahead of the auction.

Auction price cap

We support the concept of an auction price cap. This has been used extensively in other capacity markets around the world. Our comments on the level of the Auction Price cap are in section 2.5.

Bid Limits for Existing Capacity Providers

ESB GWM is unconvinced that bid limits are required, and of all the market power mitigations proposed is most concerned about these. There is a risk that bid limits move the market towards regulated pricing since a bid limit can be construed as the RAs communicating an appropriate clearing price for the auction.

As we have discussed above, the RAs are proposing some significant modifications to best practice auction design in order encourage new entry. This comes at a cost to efficient auction outcomes, and therefore careful consideration is needed whether further interventions are appropriate in the form of bid limits, or if they are to be included whether the cost of skewing the auction design in favour of new entry is therefore warranted.

The basis on which to set bid limits is not clear and would require the RAs to take a view all the costs and revenues of potential marginal Capacity Providers, including the option value of the RO (the risk taken on by a Capacity Provider), energy and DS3 margins earned, as well as the going forward costs. There is a risk that the RAs set too low a bid limit in a desire to reduce costs for customers in the near term. However, if it is set low, it will likely just become a low regulated capacity price. Such an outcome would pose a significant risk of under recover of costs by generators and could lead to unplanned closures or side contracts for plant that is needed by the system. It may also stifle growth in demand side response, which is a very valuable resource particularly in a system with growing penetration of intermittent renewables. In the longer run this would lead to higher costs to customers. Further discussion of the challenges of setting bid limits is in section 2.5.

If the RAs are concerned about the bidding of Capacity Providers, a better approach would be to set out explicit rules allowing the RAs/auction monitor to, before announcing the result of the auction, have access to the details behind the last accepted and first rejected bids in the auction. This will provide confidence that participants have not economically withheld capacity. This will obviously require the development of a detailed bid / business case to justify the price bid into the auction by these Capacity Providers, but in our view the RAs have the power to ask for this anyway under REMIT and this would just formalise the process. On this basis there should be no requirement for bid limits at all and the auction should deliver an efficient outcome with minimal regulatory intervention.

However, if bid limits are to be set, they should be applied to all existing capacity on an equal basis. There should be no discrimination between market participants since if the limit is appropriate for one party it is appropriate for all. Should the RAs' analysis of the Three Pivotal Supplier test show that all suppliers fail this test then if bid limits are to be applied it would be sensible to apply bid limits to all participants. Setting bid limits for some but not all participants may lead to inefficient procurement in which Capacity Providers without bid limits bid high prices and do not clear in the auction, whereas those that are bid-limited do clear (even though they could potentially be less efficient/higher cost). An implication of this is that the market share of the players considered dominant could be increased, to the detriment of creating a more competitive market environment in the future.

Sloping demand curve

We agree with the proposal to include a sloping demand curve, as part of an overall design for an efficient auction that recognise the values of security of supply to consumers. We cover this in more detail in section 2.5. Sloping demand curves also mitigate the risk of exploitation of market power, and this needs to be recognised in the calculation of competition metrics used to justify any further ex-ante market power mitigation measures.

Prohibitions on provision of aggregation services by dominant capacity providers

There is no basis for a prohibition on provision of aggregation services by ESB or any other player. The RAs have presented no evidence that there is a market power issue, and are proposing disproportionate regulation. The RAs have not set out a theory of harm – it is not clear how dominant players acting as capacity aggregators is going to lead to higher prices in the auction. This appears to presume that dominant players bid aggregated parties into the CRM auction at higher than the value the aggregated parties would be willing to accept. In reality, bids for aggregated capacity will be determined mainly by the aggregated parties, with only limited adjustments for e.g. pooling of risk.

By preventing ESB or others from acting as Capacity Aggregators, the RAs are reducing competition in the aggregation market and therefore potentially leaving these smaller capacity providers worse off. In addition, the RAs must take account of existing contractual positions.

In CRM Decision 1, the SEM Committee set out decisions on Capacity Aggregation which included that *"there will be no maximum limit for the size of intermittent renewables plant that can participate via a Capacity Aggregator."*

ESB GWM has existing PPA arrangements with wind generators. Whilst in some cases these are direct SEM pool participants, there is a clear steer from the decision above that these could participate in the I-SEM CFRM in an aggregated form. ESB (and the wind farms) would be commercially disadvantaged if it did not have the option to manage these existing contractual relationships via acting as a Capacity Aggregator.

The prohibition would conflict with the derogation on wind not having to participate in the market on a unit-by-unit basis – does this mean that all ESB's wind farms would have to be bid in individually whereas other parties would be able to aggregate their wind portfolios? An aggregated wind portfolio has more diversity than individual assets and hence, as a portfolio it may be possible to bid a higher volume into CRM than the sum of individual assets.

Information strategy

We are in favour of greater transparency in the auction process. Our detailed views are set out in section 2.4.7.

Market monitoring

SEM has a history of robust market monitoring via the Market Monitoring Unit, and fully support the continuation and expansion of this role in the CRM. We fully support robust market monitoring, and view ex-post regulation as the primary approach to mitigate market power given the more dynamic and interrelated nature of I-SEM in comparison to SEM. It is important that the Market Monitoring Unit is sufficiently resourced for the increased duties it will hold in the new market, which will include REMIT.

2.4 Auction design

2.4.1 Auction format

ESB GWM has a preference for a Descending Clock auction, for the reasons of transparency and in particular for the information it provides bidders regarding common value uncertainty (such as risk associated with RO difference payments). We note than in GB, this form of auction was successful in bringing prices in an oversupplied auction down to a level below what most commentators had expected.

The evaluation of the auction designs (sealed bid vs. descending clock) has focussed on the ability of the auction to mitigate perceived market power and achieve the lowest price. We do not agree that Sealed Bid auction is necessarily more prone to abuse of market power; this would need to be assessed as part of the overall design and package of measures.

The other main aim of an auction is to procure an efficient mix of capacity. In our view this objective is best served by a Descending Clock for the reasons for the increase price discovery of common value uncertainties that this allows.

We note that the RAs suggest that a Sealed Bid auction may be marginally more practical and simpler. However, since the RAs/TSOs are considering a highly complex auction design in DS3 to procure a lower value of services (in annual €m terms), this criterion does not appear to be important to the SEM Committee.

2.4.2 Structure of bids

We are in favour of the supply function approach, which will provide participants with greater flexibility in constructing bids and may mitigate some for the issues around winner determination for discrete bids ("lumpiness").

2.4.3 Winner and price determination with contracts of different lengths

We noted in our response to CRM Consultation 2 that if multi-year contracts are issued, this creates challenges for the auction design. It is important to consider how the additional value to a capacity provider of a long term agreement (and additional cost to consumers) is taken into account in the auction. If contracts of widely differing lengths are to be offered, a mechanism is required for fairly reflecting the additional risk on consumers for taking on long term contracts. It is essential that there is a level playing field with equitable arrangements for all capacity. We note that DECC's recent consultation on reforms to the GB Capacity Mechanism has ruled out a Price Duration Equivalence methodology as being unworkable. Our view is that the default in this situation is not to simply ignore the different value of different contract lengths, but to exclude long term contracts from the auction. We note that the RAs have eschewed simplicity in other areas of auction design, and therefore do not accept that long term contracts are mis-priced just because it is too hard to find the appropriate discount factor.

The Dot.Econ report on DS3 auction design also notes the issues with auctioning different products in the same auction.

ESB's view is that Option 3 has the right functional form (long term contracts are awarded contracts priced at a discount to the auction clearing price). Option 2 appears to favour new entrants, and Option 4 requires forecasting of future capacity prices. We therefore recommend that should the RAs pursue long term contracts (which believe is the wrong decision as discussed above), they consult further on developing a methodology for Option 3.

2.4.4 Pricing rules

We agree that pay-as-clear is clearly the correct approach for the CRM auction and consistent with international precedents and standard practice.

2.4.5 Lumpiness and discrete bids

We are in favour of a simple marginal pricing approach which clears the marginal bid. This is consistent with the SEM Committee's logic for selecting an 8 hours LOLE standard. In CRM Decision 1, the SEM Committee said:

The 8 hour LOLE is the "worst case" security standard for planning and procuring capacity. Capacity tends to come in large lumps (e.g. 200MW) meaning that as capacity is added, the actual LOLE will be lower than 8 hours.

This clearly implies that the auction should never procure a lower level of capacity than that which would meet an 8 hours LOLE security standard. Of the options set out for winner determination, only Option 1 (accept marginal bid) would be consistent with this.

If the SEM-C were to revisit the security standard decision, for example by selecting a security standard of 3 hours LOLE as most respondents favoured (or to calculate a security standard based on the relative values of net CONE and VoLL), then it may be possible to consider alternative approaches to winner determination. In this case, Option 2a: net welfare may be appropriate.

We strongly disagree with any proposal to accept out of merit bids. This complicates the auction process, potentially provides opportunities for gaming, and leads to "unhappy losers" (which is one of the flaws of

Dot.Econ's proposed DS3 auction design). Paying out of merit bids more than in merit bids leads to distortions to the marginal value of capacity. The auction will also be harder to validate and audit in a manner than convinces participants.

To extend the energy constraints analogy, if out of merit bids are accepted ("constrained on") then should in merit bids that are not accepted be paid the difference between their bid and the clearing price ("constrained off")?

We also note that the use of multiple PQ pairs per unit may mitigate concerns about lumpiness in the auction.

2.4.6 Tied bids

In our view, the tie break rules should be as follows:

- Bid with shorter contract clears before bid with longer contract
- Random selection should be used as a final decider

Under our favoured option for winner determination (accept marginal bid) the net welfare function is not used and therefore it would not be appropriate to introduce this for a tie break situation.

Tie breaks are more likely in a sealed bid auction, since in a descending clock auction participants have more ability to make small adjustments to exit prices to avoid this scenario – which may then lead to a lower clearing price.

2.4.7 Information policy

We support greater transparency in the auction process and therefore we are in favour of the total amount of excess capacity being published. This would automatically occur at the start of a descending clock auction in any case. We agree that publishing the total capacity qualified would incentivise cost reflective bidding. The high level of excess supply in the GB auction was a clear indication that prices may outturn lower than previous expectations.

We agree that the identity of winning capacity should be disclosed at the end of the auction.

2.4.8 Bidder communications

Existing competition law clearly prevents collusion between parties. However, clear rules on bidder communications may have some merit and rules preventing public announcements of clearing price expectations appear to be sensible. We note that bid limits by the RAs could potentially have the same effect of setting a price expectation.

Bidder communication rules should not limit announcements on plans for capacity retirements or life extensions.

2.5 Auction parameters

2.5.1 Demand curve

As set out in section 2.3.3, we agree with the need for a demand curve in the capacity auction. In our view, the demand curve should reflect the shape of changes to LOLE at different levels of de-rated capacity. From an auction price cap, prices should decline steeply until an inflection point at net CONE. Price should decline less steeply after the inflection point (since LOLE decreases at a slower rate). This is

analogous to the convex demand curve described in the Western Australia paper referenced[6] by the RAs at the CRM 3 industry forum.

Given the CRM 1 Decision that the minimum capacity procured would be that to meet an 8 hours LOLE standard, the auction price cap should be set at this point. The slope of the demand curve should then reflect the expected change in LOLE between this point and net CONE (which could be set at say 3 hours LOLE). The demand curve should then have a gentler slope to reflect the lower decrease in LOLE as more capacity is added.

The proposal that is alluded to of making the demand curve somehow a function of the availability of long term contracts appears to create a circularity between setting the demand curve and clearing the auction. The desire to buy more long term capacity if it is cheaper suggests a view of future auction clearing prices – which is the reason that Option 4 of the winner determination for long term contract is ruled out by the RAs. This proposal should therefore be discounted from further consideration.

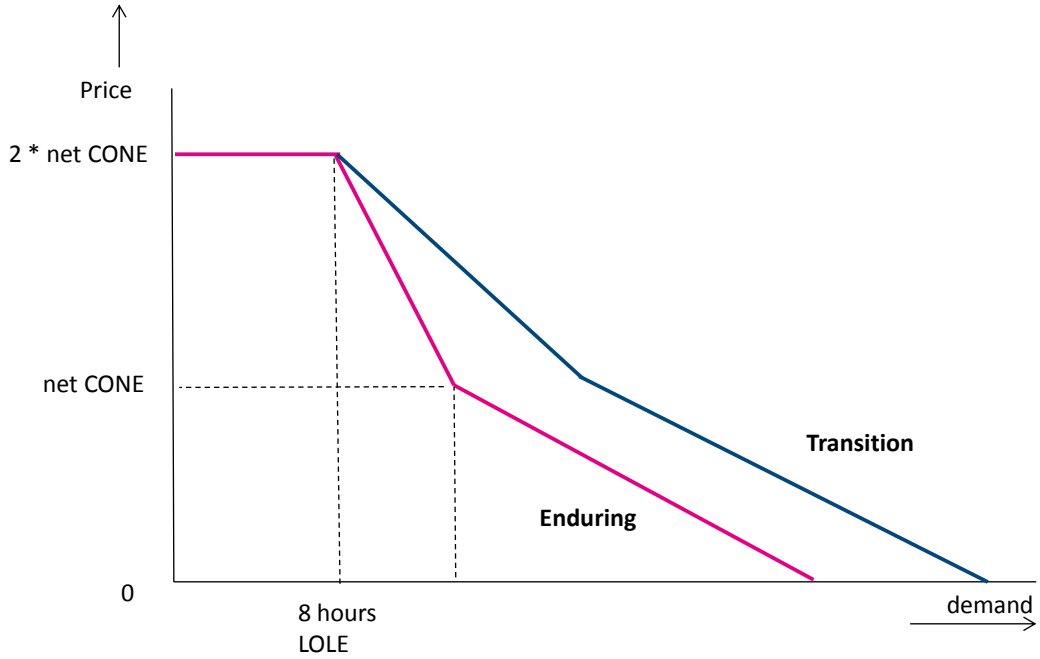
Transitional issues

We agree that the central point on the demand curve should be increased in the transitional years to ensure that capacity required in 2020/21 does not close in a transitional year such as 2017/18. The demand curve would therefore be shallower in this period.

Based on these considerations, we have included a simple example of a potential demand curve in Figure 1 below. Although we have not proposed a width for the demand curve, we note that EirGrid's analysis (as presented in CRM Consultation 1) suggests that the difference between an 8 hours LOLE security standard and a 3 hour security standard is approximately an additional 220 MW of (non-de-rated) capacity. This suggests to us that a reasonable demand curve is unlikely to cover a range of more than say 400-600 MW in total.

[6] *Position Paper on Reforms to the Reserve Capacity Market Mechanism*; Government of Western Australia Department of Finance, Public Utilities Office

FIGURE 1 – POSSIBLE DEMAND CURVE FORMS



2.5.2 Auction price cap

We agree with a price cap set above net CONE. Since net CONE is an administratively set estimate, rather than a value derived from the market, it is important that there reasonable allowance for variations from this value. A cap of 2 * net CONE seems appropriate and provides some symmetry to the demand curve.

The Net CONE value itself should not be based on the SEM CPM BNE calculation, since this unit is not a viable new entrant in I-SEM. The calculation should be reviewed in light of I-SEM. For example, the hurdle rate used in the calculation should be higher to reflect the increased risks of the I-SEM CRM such as RO difference payments.

2.5.3 Bid limits

As set out in section 2.3.3, we do not believe that bid limits on existing plant are required or appropriate, and we have proposed an alternative under which participants make their bid calculations available to the RAs their capacity is either the marginal capacity, or the lowest price capacity to not receive a contract

However, if bid limits are to be set, they should be applied to all existing capacity on an equal basis. There should be no discrimination between market participants since if the limit is appropriate for one party it is appropriate for all. As set out in section 2.3.3, the use of bid limits for some participants and not for others could lead to inefficient auction outcomes.

There is no rationale for technology specific bid limits since the RAs' stated concern is the potential for market power on a portfolio basis. The RAs make no reference to concerns over the bids of specific technologies. In our view a technology neutral approach avoids charges of discrimination and is more likely to be consistent with State Aid requirements. We also believe that technology specific limits could lead to perverse outcomes in the technology mix awarded contracts.

We recognise that the ongoing costs of the BNE that have been presented are simply a convenient example for the consultation, rather than a relevant value for developing bid limits. These costs are clearly

inappropriate as a basis for setting bid limits since the going forward cost of the BNE are likely to be significantly lower than the costs of existing Capacity Providers.

We suggest that the RAs/CRM Delivery Body gather the relevant going forward cost data from industry, via a Call for Evidence or similar process, in advance of setting auction bid limits.

However, the bid limits should not simply be based on going-forward costs but should also include a significant allowance for the risk associated with holding the RO i.e. the risk of making difference payments (both covered payments when the Capacity Provider delivers at times of prices in excess of the Strike Price and uncovered, where the Capacity Provider is not generating (or curtailing load) when the RO is exercised. This will require the RAs or the CRM Delivery Body to develop and present forward modelling of price volatility for DAM, IDM and BM, and consider the correlation between plant outages and price spikes. We believe that this is an inappropriate role for the RAs/CRM Delivery Body and is best left to the market to determine (via the competitive auction process).

If bid limits are imposed, it is important that there be a process for submitting evidence to allow for bids above the Bid Limit, as set out in paragraph 4.7.21 of the consultation.

2.6 Auction Governance

Broadly speaking, ESB GWM endorses the proposed governance arrangements, subject to our comments below.

We note that the CRM Governance will be split across the CMC and TSC. Although we understand the rationale for this, we are concerned that, for example, having two separate modification processes could lead to inconsistencies being created, or dependencies which lead to delays in modifications to one or both codes. We ask the RAs to consider a number of "test case" changes that would need modifications across the TSC and CMC, and ensure that the modification arrangements are workable in this context.

Whilst the consultation paper addresses the governance arrangements applying to the CRM Delivery Body in the execution of its obligations under the CMC, we feel that it falls short of limiting the TSOs' influence in the overall design. In particular we note Eirgrid's ownership of EWIC and its central position as CRM Delivery Body in proposing parameters and structures relevant to I-SEM's capacity market, and its role in the operation of the markets that supply the prices that feed into the triggering of difference payments. As such we believe that the TSO should be removed from influencing the treatment of interconnectors (eligibility arrangements, de-rating factors, etc.) within the CMC.

2.7 Residual issues

2.7.1 Strike price

We agree with the inclusion of carbon price in the formula for setting the RO strike price. As written, there may be an issue with the units of the carbon parameter. The carbon parameter should be tonnes of CO2 per MWh thermal fuel input for the fuel type. As written, the formula double counts the efficiency conversion for CO2.

We note that the formula needs to be expanded to include FX rates for the fuels used. Any timing issues related to FX in settlement of the RO vs. the setting of the strike price need to be considered.

The use of a monthly forward price for gas opens up a potential exposure for gas fired generation since DA gas prices will often outturn higher than the End of Month value for the relevant Month Ahead contract. Although we understand the desire for simplicity in this formula, practical considerations for trading hedging, valuation and risk management, and the potential advantage to suppliers, we note that this may increase risk premia in auction bids. ESB's own simple analysis of historic Day Ahead and NBP gas prices against the End of Month value for the Month Ahead contract shows that this can be managed

through a lower reference efficiency. Our analysis suggests that a value of 10% would be appropriate and lead to only a small number of periods in which the generation cost at 15% efficiency would exceed the Strike Price.

We do not object to the proposed Governance of the data sources for the Strike Price formula. The Consultation is not explicit about governance for the formula itself. We propose an annual review to ensure that this formula is still appropriate – for example if the cost structures change such that another form of generation becomes price setting and needs to be included in the formula.

2.7.2 Socialisation

The Socialisation Fund is required because of the flawed design of the RO that protects poorly performing suppliers from market signals at the expense of suppliers in balance.

The Supplier contribution rate should be set independently of the main capacity charge, and that socialisation fund contributions should be recovered via a flat per kWh charge across all periods.

In our view the Suspend and Accrue option is more appropriate since this will maintain incentives on Suppliers to balance or risk being exposed to an immediate shortfall.

3. RESPONSES TO CONSULTATION QUESTIONS

Auction frequency and volumes

Question number	Question detail	Response
3.2.1	Do respondents agree with the proposed approach for transitional auctions, T-4 auctions and T-1 auctions? If not, please explain.	We disagree with the need for long term contracts and favour an approach of annual contracts auctioned 1 year before delivery. It is not obvious why a four year lead time is considered appropriate. Smaller units could be built more quickly (including DSUs) and it is not clear that 4 years is actually enough of a lead time for CCGTs, so arguably four years is not appropriate for either. If a longer lead time auction is chosen, then we agree that a T-1 true up auction is required, since the longer the lead time the greater the risk of getting the volume requirement wrong GWM does not agree with the proposed approach for the transitional auctions. It is imperative that the transitional period before 2021 is procured before the T-4 auction for delivery in 2021. GWM would therefore like to suggest that the transitional auctions are held in sequence in June 2017 before the T-4 auction. This will perhaps take the form of a T-1 auction for 2017/18 in June 2017, followed on a monthly basis (for example) by a T-2 auction for 2018/19, then the T-3 auction for 2019/20 and a T-4 auction for 2020/21. The first enduring T-4 auction would then follow. This will allow for participants to know their RO contracted position for Oct 2017- Sept 2021 before the T-4 auction. The volumes held back from the T-4 auction for the T-1 auction should be limited to an expectation of the potential DSU capacity e.g. of the order of 200 MW, or 2-3% of the Capacity Requirement.
3.2.2	What is respondents view in relation to the flexibility around the timing of the T-1 and T-4 auctions?	GWM seeks fixed dates (e.g. to within one month) for the both the T-1 and T-4 auctions. This will allow for financial forecasting to be updated each year on a given date once the auction is completed. A fixed auction date will also allow for a target date to be established annually for qualification to the auction. This will enable a clear timeline plan for new entry and existing plant to qualify for auction.

Market power

Question number	Question detail	Response
4.8.2	Do respondents agree that market power is a material concern in the I-SEM CRM? If no, why not? Should the SEM committee be concerned with unilateral market power, the potential for collusion or both?	Measures to mitigate market power are a key consideration in the design of all electricity markets, and I-SEM is no exception. It is clearly prudent to design the auction to reduce any participants' ability to exploit market power. However, we would emphasise that the RAs have a number of ex-post measures available to them. Any ex-ante measures should recognise this and be proportionate. Any intervention potentially detracts from a competitive outcome.
4.8.3	Do respondents think that the overall market power control framework and package of mitigation measures set out in this section is comprehensive and proportionate? Are there any additional market power concerns that the SEM Committee should be focussing on? Should the SEM Committee bar any existing firm transmission access intermittent generator which has opted out of an auction (on grounds of retiral) from bidding in subsequent auctions, if it subsequently does not retire and/or apply other sanctions?	ESB GWM is concerned that as a package the measures are disproportionate and will harm competition. Specifically: • **Bid limits.** ESB GWM believes that bid limits on existing plant will harm competition and potentially lead to inefficient outcomes (sections 2.3.3 and 2.5.3). The proposals for bid limits do not sufficiently consider the lengths that the RAs are going to in order to promote competition through new entry. • **Mandatory participation**. This should allow for reasonable opt outs including for planned retirement of capacity, and for expectation of future opportunities in the T-1 auction or as a secondary provider. • **Restrictions on Capacity Aggregators**. This measure is unjustified by the RAs and would damage competition. The idea of banning of any existing firm transmission access intermittent generator which has opted out of an auction on grounds of retiral does not appear to make sense, since this capacity is not mandated to enter in the first place. We assume that this should read existing firm transmission access *non*-intermittent generator. In which case, our response is that this capacity should not be penalised since market conditions may have changed since the T-4 auction. This is one of the hazards of holding the auction many years in advance.

4.8.4	Do you think that firm transmission access plant which has bid at a certain point within the tolerance band in the T-4 auction (below the maximum) should be allowed to bid more capacity (up to the top of the tolerance band) in the T-1 auction?	Yes, there is no reason to disallow this since views on reliability may evolve over time. Capacity Providers should also be able to offer this additional capacity in the secondary market.
4.8.5	What metrics should be used to assess whether a capacity provider is dominant, for the purpose of either applying other bid limits and /or controls on aggregation (the approach to setting the level of bid controls is discussed in section 6)?	The consultation document puts forward a range of competition metrics to measure market power in the I-SEM capacity auction. We would caution on over relying on these metrics as they are imperfect tools and have a number of shortcomings. Any competition metrics should correctly recognise the potential for new entry, and the impact of the sloping demand curve on pivotality. For the purposes of the CRM, pivotality measures likely to be more appropriate since they are simple and do not suffer from the weakness of HHI, namely that it is vulnerable to changes in plant ownership. If a participant were to purchase another the market concentration would increase even though there has been no actual change in the composition of the market itself. This could adversely impact another participant who is not part of the transaction.
4.8.6	Should associated businesses of dominant/pivotal generators (e.g. their Supply arms) also be prohibited from acting as Capacity Aggregators too?	No. There is no basis for this intervention in the retail market. As set out in section 2.3.3, the RAs have not made an evidence-based case for intervention. The proposed restriction should not exist on any party. It would have the unintended consequence of reducing competition in the aggregation market. .
4.8.7	Should there be a prohibition of ESB and other dominant generators providing aggregation services?	There is no basis for a prohibition on provision of aggregation services by ESB or any other player. The RAs have presented no evidence that there is a market power issue, and are proposing disproportionate regulation. All generators should be allowed to provide capacity aggregation services. Smaller I-SEM participants will benefit from this services. If an I-SEM participant would seek to use ESB as an aggregator they should not be prohibited from doing so.

Auction design

Question number	Question detail	Response
5.9.2	Which auction format (simple sealed bid, multiple round descending clock, combinatorial format, i.e. Option 1 to 3 in Section 5.2) do you think is most appropriate for the transitional auctions, T-4 and T-1 auctions, and why?	GWM has a preference for a descending clock auction. A descending clock auction allows for price discovery during the capacity auction. The paper has outlined the RAs concerns of market power during a descending clock auction. We do not agree that Sealed Bid auction is necessarily more prone to exploitation of market power; this would need to be assessed as part of the overall design and package of measures. The format of the auction should be the same for all auctions: transitional auctions, T-4 and T-1 auctions. This will allow all capacity reliability contracts for a given year to be procured in a similar format, and build familiarity with the auction design.
5.9.3	Do you have any preference for the structure of bids for the auctions? Explain your rationale.	GWM has a preference for a supply curve function Qi(Pi) to be submitted per unit to the auction. This will provide participants with greater flexibility in constructing bids and may mitigate some for the issues around winner determination for discrete bids ("lumpiness").
5.9.4	Do stakeholders agree with the proposed approach of adopting Option 3b to deal with the lumpiness/discrete bid problem? If not, please explain why not, and your preferred alternative approach.	GWM strongly disagrees with the RA's proposed approach of adopting Option 3b to deal with the lumpiness/discrete bid problem. The marginal bid should be chosen at all times, with no out of merit units being chosen. If out of merit units are chosen and receive a contract over units that were in merit but larger in MW size this is a distortion of the capacity market. The only option consistent with the SEM Committee's decision on the security standard is Option 1. If the SEM-C were to revisit the security standard decision, for example by selecting a security standard of 3 hours LOLE as most respondents favoured (or to calculate a security standard based on the relative values of net CONE and VoLL), then it may be possible to consider alternative approaches to winner determination. In this case, Option 2a: net welfare may be appropriate. The lumpiness issue may be mitigated in part by if a supply function is used to bid a unit in the form of a Pi(Qi) function – although it will depend on whether this approach is used by auction participants. Our views on each proposed option are set out below: • **Option 1: accept marginal.** ESB G&WM's favoured approach. This would be consistent with the view that 8 hours LOLE should be the absolute minimum security standard met in the auction. • **Option 2a: net welfare assessment of marginal bid.** The net welfare approach to accepting or rejecting the

		marginal bid is theoretically correct only if a) the security standard is calculated as a function of the trade-off between VoLL * LOLE and net CONE and b) the slope of demand curve reflects the rate of change in LOLE at different levels of capacity. For the avoidance of doubt, the approach should be based on net social welfare – the sum of the change in both producer and consumer welfare from accepting the marginal bid. In any case, this option cannot be used unless the security standard is increased from 8 hours LOLE. • **Option 2b: rules based.** The rules based approach is somewhat arbitrary. As above the central capacity requirement needs to reflect a higher security standard than 8 hours because auction might under-procure. • **Option 3a: least cost.** ESB GWM strongly disagrees with approaches based on optimisation. It is an unnecessary complication to a simple auction, reduces the range of design options available (for example it is not clear how a descending clock auction would work based on optimisation) and does not appear to have international precedents in capacity auctions. It leads to out of merit bids being accepted, and pricing is no longer simple. Bids that are deeply in merit could potentially be rejected under this approach, leading to unhappy losers. • **Option 3b: net consumer welfare.** We strongly disagree with the RAs' favoured option of optimisation based on net welfare. It is an unnecessary complication to a simple auction and does not appear to have international precedents in capacity auctions. It leads to out of merit bids being accepted, and pricing is no longer simple. • **Option 3c: social welfare.** We strongly disagree with the option of optimisation based on social welfare. It is an unnecessary complication to a simple auction and does not appear to have international precedents in capacity auctions. It leads to out of merit bids being accepted, and pricing is no longer simple.
5.9.5	Do stakeholders agree with the approach of setting the clearing price based on the highest accepted in-merit winner, and paying any out of merit winners based on a pay-as-bid basis? If not, please explain why not, and your preferred alternative approach.	GWM agrees with the RA's proposal that the clearing price should be set based on the highest accepted in-merit winner, however GWM does not agree with the proposal to choose an out of merit winner. All units should be paid at least their bid price with the clearing price set at the last in merit MWs. While GWM are strongly against the awarding of a contract to out of merit units, in this event pay as bid should be used to remunerate this unit.

5.9.6	Should the SEM committee introduce a sloped demand curve, either as a market power control, or for other reasons?	GWM is strongly in favour of the use of a sloped demand curve. The demand curve should reflect the shape of the value of increased security of supply, based on VoLL and LOLE. A shallower demand curve should be used for the transitions period 2017 to 2021.
5.9.7	Winner Determination. Do you agree with winners being determined purely on price offered for each Capacity Delivery Year?	No. Our view is that the default in this situation is not to simply ignore the different value of different contract lengths, but to exclude long term contracts from the auction. Until the auction design is bedded in and prices are reliable, we believe the risk of regret from awarding long term contracts is extremely high. In ESB GWMs' view, if long term contracts are included in the auction then Option 3 is most appropriate and the RAs should consult on developing this methodology further. • **Option 1: winner determination with no adjustment.** This approach is too simplistic and does not recognise risk transfer to consumers and risks distorted outcomes and inefficient exit of existing capacity. • **Option 2: winner determination with discount rate adjustment.** This option is described in SEM-015-105a as allowing the TSO to express a preference for deferred expenditure. This is not applicable to the proposed CRM auction, where all contracts start delivery in the same year. Any discount rate approach applied to the CRM auction would need to recognise the value of the increased certainty to investors. • **Option 3: adjustment for contract length**. A form of this option is likely to be most appropriate, and we recommend that the RAs consult further on developing a methodology for this option. • **Option 4: Expectation of future prices.** We agree that this is too sensitive to forecasting approach and assumptions – and the outcome is a result of the expectations calculated so this is circular

5.9.8	Winner Determination. Do you agree that the auctioneer should be able to accept “out of merit” bids to manage the lumpiness problem or should only in merit bid be accepted? What rules should be used to determine whether the marginal bidder is accepted (if only in-merit bids can be accepted) or to determine which out of merit bid should be accepted?	The auction should be pay as clear in all circumstances. No out of merit generation should be chosen and awarded a contract. As no out of merit winners should be chosen, there is no requirement to pay them a different price.
5.9.9	Price determination. Do you agree that it appropriate to pay auction winners on a “pay-as-clear” basis, with this uniform clearing price being based on the highest accepted in-merit bid price? Should any out-of-merit winners be paid a different price to in-merit winners?	The auction should be pay as clear in all circumstances. No out of merit generation should be chosen and awarded a contract. As no out of merit winners should be chosen, there is no requirement to pay them a different price.
5.9.10	How do you think the lumpiness/ discrete bid issue should be dealt with?	The marginal bid should be accepted at all times. If units can bid a supply curve function the "lumpiness" issue may be reduced. A unit should be able to bid a range of prices for various quantities therefore breaking its unit into smaller bids.
5.9.11	Do you have any comments on the treatment of tied bids?	ESB GWM agrees that rules are needed to establish what is the process to select the winner is in the circumstance of tied bids. Shorter contracts should be chosen in favour of longer term contracts in all circumstances and random selection used as a final decider.

5.9.12	What is the appropriate level of information to be provided: before qualification; between qualification & the auction start; between rounds in the case of multiple round auction; and after the end of auction?	GWM is strongly in favour of information being published and made available to all in the market. We support greater transparency in the auction process and therefore we are in favour of the total amount of excess capacity being published. This would automatically occur at the start of a descending clock auction in any case. We agree that publishing the total capacity qualified would incentivise cost reflective bidding. The high level of excess supply in the GB auction was a clear indication that prices may outturn lower than previous expectations. A breakdown of Qualified existing capacity, new capacity and DSUs should be published ahead of the auction, along with the total installed and de-rated capacity of any We agree that the identity of winning capacity should be disclosed at the end of the auction.
5.9.13	Are any additional restrictions on bidder communications (over and above existing competition law) required?	Existing competition law clearly prevents collusion between parties. However clear rules on bidder communications may have some merit. Rules preventing public announcements of clearing price expectations appear to be sensible. We note that bid limits by the RAs could potentially have the same effect of setting a price expectation. Bidder communication rules should not limit announcements on plans for capacity retirements or life extensions.

Auction parameters

Question number	Question detail	Response
6.5.2	Do you have any comments on the overall scope/ process of auction parameter setting outlined above?	The auction parameters and the timing for publication as set out in Consultation appear to be reasonable. With the exception of bid limits which we do not believe to be necessary or proportionate.
6.5.3	If a sloped demand curve is introduced, what principles should be used to determine the slope of the demand curve, and the range within which the demand curve is sloped?	As set out in section 2.3.3, we agree with the need for a demand curve in the capacity auction. In our view, the demand curve should reflect the shape of changes to LOLE. Buying less than the security standard should see a rapid increase in price, whereas as buying more should lead to a more gradual reduction in price (since LOLE increase at a slower rate). Given the CRM 1 Decision that the minimum capacity procured would be that to meet an 8 hours LOLE standard, the auction price cap should be set at this point. The slope of the demand curve should then reflect the expected change in LOLE between this point and net CONE (which could be set at say 3 hours LOLE). The demand curve should then have a gentler slope to reflect the lower decrease in LOLE as more capacity is added.
6.5.4	If introduced, should the sloped demand curve be different for the transitional period?	We agree that the central point on the demand curve should be increased in the transitional years to ensure that capacity required in 2020/21 does not close in a transitional year such as 2017/18. The demand curve would therefore be shallower in this period.
6.5.5	What impact do you think the sloped demand curve will have on competition?	The sloped demand curve is in effect providing an additional source of competition, which is beneficial. It significantly reduces any incentive to withhold capacity.
6.5.6	Do you agree with the requirement for an Auction Price Cap? What principles should be used to determine the level for the Auction Price Cap/ what level should it be set at?	We agree with a price cap set above net CONE. Since net CONE is an administratively set estimate, rather than a value derived from the market, it is important that there is reasonable allowance for variations from this value. A cap of 2 * net CONE seems appropriate and provides some symmetry to the demand curve.

6.5.7	Do you agree with the requirement for other Bid Limits?	We do not believe that bid limits are required or appropriate, and we have proposed an alternative under which participants make their bid calculations available to the RAs their capacity is either the marginal capacity, or the lowest price capacity to not receive a contract. The basis on which to set bid limits is not clear and would require the RAs to take a view all the costs and revenues of potential marginal Capacity Providers, including the option value of the RO (the risk taken on by a Capacity Provider), energy and DS3 margins earned, as well as the going forward costs. There is a risk that the RAs set too low a bid limit in a desire to reduce costs for customers in the near team. However, if it is set low, it will likely just become a low regulated capacity price. Such an outcome would pose a significant risk of under recover of costs by generators and could lead to unplanned closures or side contracts for plant that is needed by the system. It may also stifle growth in demand side response, which is a very valuable resource particularly in a system with growing penetration of intermittent renewables. In the longer run this would lead to higher costs to customers.
6.5.8	Should the other Bid Limits be applied at the same level to all existing non-intermittent firm transmission access generators, or should the limits be technology specific?	If bid limits are to be set, they should be applied to all existing capacity on an equal basis. There is no rationale for technology specific bid limits since the RAs' stated concern is the potential for market power on a portfolio basis. The RAs make no reference to concerns over the bids of specific technologies. In our view a technology neutral approach avoids charges of discrimination and is more likely to be consistent with State Aid requirements. We also believe that technology specific limits could also lead to perverse outcomes in the generation mix awarded contracts. If bid limits are imposed, it is important that there be a process for submitting evidence to allow for bids above the Bid Limit, as set out in paragraph 4.7.21 of the consultation.
6.5.9	Should the other Bid Limits be applicable to all bidders, or just dominant/ pivotal generators?	There should be no discrimination between market participants since if the limit is appropriate for one party it is appropriate for all. As set out in section 2.3.3, the use of bid limits for some participants and not for others could lead to inefficient auction outcomes.

6.5.10	What principles should be used to determine the level for the other Bid Limits/ what level should they be set at?	The bid limits should not simply be based on going-forward costs but should also include a significant allowance for the risk associated with holding the RO i.e. the risk of making difference payments (both covered and uncovered). This will require the RAs or the CRM Delivery Body to develop and present forward modelling of price volatility for DAM, IDM and BM, and consider the correlation between plant outages and price spikes. This will require the RAs or the CRM Delivery Body to develop and present forward modelling of price volatility for DAM, IDM and BM, and consider the correlation between plant outages and price spikes. We believe that this is an inappropriate role for the RAs/CRM Delivery Body and is best left to the market to determine (via the competitive auction process).

Auction Governance

Question number	Question detail	Response
7A	Do you agree on the proposed role of the TSOs with respect to the auctions?	As stated in (C), in light of Eirgrid's ownership of EWIC and its central position as CRM Delivery Body in proposing parameters and structures relevant to I-SEM's capacity mark, we propose that the TSO should not be involved in the proposal or setting of parameters from which it (or another entity within its parent organisation) can benefit commercially. Part of the independent auction monitor's role could be to oversee the role of the TSOs and to ensure against potential conflicts of interest.
7B	Do you agree on the requirement for an independent Auction Monitor and its proposed roles and responsibilities? If not, please specify what changes you would make? Should this role be combined with the role of SEM/I-SEM Market Auditor?	We support the proposal to appoint an independent auction Monitor and Auditor. Given the requirement for the independent auction monitor to bring additional skills and experience in capacity auctions from other markets, we propose that the independent auction monitor should be involved in the oversight of parameter setting, so that these may be set at values consistent with the design aims of the CRM. Experience from capacity auctions in other markets could reveal useful insights into the risk factors impacting flawed outcomes and as such, it would be a missed opportunity not to bring this intelligence into the I-SEM auction process. The RAs have not set out a rationale for combining the role with the I-SEM Market Auditor. There does not appear to any reason to prevent this, but neither does there appear to be strong logic for doing so other than potential efficiencies in procurement of these services.

7C	Do you agree with the SEM Committee's proposed approach to managing conflicts of interest in the Capacity Market Code? Are any other steps appropriate to ensure that any actual or perceived conflicts of interest are managed?	Whilst the consultation paper addresses the governance arrangements applying to the CRM Delivery Body in the execution of its obligations under the CMC, we feel that it falls short of limiting the TSOs' influence in the overall design. In particular we note Eirgrid's ownership of EWIC and its central position as CRM Delivery Body in proposing parameters and structures relevant to I-SEM's capacity market, and its role in determining the prices that feed into the triggering of difference payments. As such we believe that the TSO should be removed from influencing the treatment of interconnectors (eligibility arrangements, de-rating factors, etc.) within the CMC.
7D	Do you have any comments on the proposed auction governance arrangements?	Broadly speaking, ESB GWM endorses the proposed governance arrangements, subject to our comments elsewhere in this section.
7E	Do you have any views on the model and process for making modifications to the Capacity Market Code?	The modification process, whilst different from the existing TSC process, appears justified.
7F	Do you think that disputes in respect of the Capacity Market Code should be resolved by a similar process to TSC disputes? Should there be a separate panel for Capacity Market Code dispute resolution?	We agree that disputes in respect of the Capacity Market Code should be resolved by a similar process to TSC disputes. We agree that there should be a separate panel for CMC dispute resolution. We note the need for more detail on the process ahead of an issue reaching the stage of Dispute. An example is the appeals process for rejected Qualification applications. In the first GB auction, the CM Delivery Body initially rejected a large number of applications which were later accepted on review/appeal.

Residual issues

Question number	Question detail	Response
8A	Do you agree with the proposed approach to incorporating the carbon price into the Strike Price formula?	We agree with the inclusion of carbon price in the formula. As written, there may be an issue with the units of the carbon parameter. The carbon parameter should be tonnes of CO2 per MWh thermal fuel input for the fuel type. As written, the formula double counts the efficiency conversion for CO2.

8B	Do you agree with the approach of moving to a month-ahead index?	The use of a monthly forward price for gas opens up a potential exposure for gas fired generation since DA gas prices will often outturn higher than the End of Month value for the relevant Month Ahead contract. Although we understand the desire for simplicity in this formula, practical considerations for trading hedging, valuation and risk management, and the potential advantage to suppliers, we note that this may increase risk premia in auction bids.
8C	Do you agree that a reference thermal efficiency of around 15% is appropriate? If not, why not?	If a Month Ahead index is used, the thermal efficiency should be reduced to 10% to account for the exposure risk for gas-fired generation.
8D	Do you agree that the appropriate oil price is the Heavy Fuel Oil price?	Since the function looks at the maximum of all Capacity Providers considered, the formula should include both Heavy Fuel Oil and Gasoil.
8E	Do you agree with the principles/criteria set out in Section 8.2.28, that the SEM Committee proposes to use to choose between data sources for fuel and carbon prices, exchange rates?	Yes, these principles appear to be appropriate.
8F	Do you agree with the proposed governance/ process for changes to fuel and carbon prices, exchange rates and transport adders used in the calculation of the Strike Price?	We do not object to the proposed Governance of the data sources for the Strike Price formula. The Consultation is not explicit about governance for the formula itself. We propose an annual review to ensure that this formula is still appropriate – for example if the cost structures change such that another form of generation becomes price setting and needs to be included in the formula
A	Do you agree with the proposed approach for setting the Supplier's contribution rate? If not, please explain.	The Supplier contribution rate should be set independently of the main capacity charge, and that socialisation fund contributions should be recovered via a flat per kWh charge across all periods.
B	Do you have a preference as to which option (Suspend and Accrue or Immediate Additional Charge) should be applied to socialisation of any shortfall in Reliability Option difference payments? If not, please explain.	We prefer Suspend and Accrue, since this will maintain incentives on Suppliers to balance, e.g. by engaging in demand response activities.