



Energy for  
generations

Generation & Wholesale Markets

ESB GWM Response:  
Integrated Single Electricity Market  
(I-SEM)  
Capacity Remuneration Mechanism  
Detailed Design  
Consultation Paper  
SEM-15-044

17<sup>th</sup> August 2015



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# 1. INTRODUCTION

ESB Generation and Wholesale Markets (GWM) welcome the opportunity to submit a response to the Capacity Remuneration Mechanism (CRM) Detailed Design Consultation. The Consultation covers certain key aspects of the CRM including the Capacity Requirement, Product Design, Eligibility, Supplier Arrangements and the Institutional Framework.

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.

## 2. MAIN COMMENTS

### 2.1 Capacity requirement

ESB GWM's view is that the I-SEM security standard should be set at 3 hours LOLE, for the following reasons:

- Appendix A of the consultation (TSO Capacity Adequacy Standard Analysis) indicates a net benefit to consumers if I-SEM moves to a 3 hour LOLE standard. The only scenario in which the benefits of a reduced LOLE (at VoLL of €11,000/MWh) are exceeded by the costs of the additional capacity, is that in which the highest ever BNE peaker value of €87/kW/yr is used. Such a high capacity price is unlikely in a competitive auction, particularly given that SEM is currently over-supplied with capacity relative to a 3 hour LOLE standard.
- I-SEM is interconnected to GB (and potentially France in the future), both of which have a security standard of 3 hours LOLE. Ireland may be at a potential disadvantage in the European harmonised model with an 8 hours LOLE security standard. This difference signals a greater need for capacity in GB than I-SEM which may lead to a bias towards imports to I-SEM from GB which may be inefficient in the long run. At a principle level two harmonised markets should have a single security standard, and indeed this is one of the principles contained in the EU state aid guidelines.
- As Ireland develops into a digital economy, the RAs need to consider the potential cost to the economy if there was a loss of load event in the all island market. Having a high quality power supply is a huge benefit to Ireland when looking to attract large hi-tech companies with large power demands (such as data centres). A black out or perceived higher risk of black out could have a major impact on foreign direct investment.

#### De-rating factors

ESB GWM is in favour of the de-rating approach for accounting for unreliability of capacity. This should be on a generic plant / technology basis rather than plant-specific. Generators should be allowed to bid below de-rated capacity into the CRM auction which would reflect the operator's expected view of the planned operation and reliability of that plant. The use of historical availabilities in a small market like the SEM introduces a risk of skewing de-rating and hence consideration of wider global benchmarks is appropriate.

We note that in Section 4.4 of the Consultation, reference is made to "abuse of potential market power". Market power is the focus of a separate I-SEM work stream and should not be considered (in a necessarily incomplete manner) in the current context.

A correctly designed CRM and associated auction should be attractive to potential capacity providers, which will ensure that the auction is competitive.

## Demand uncertainty

The CRM should aim to procure capacity to meet a worst case event therefore we can see merit in the “Worst Case Scenario” being used to determine the forecast demand. If a scenario / sensitivity approach is adopted (such as in GB), there should be full transparency and consultation around how the ‘optimal’ scenario underpinning the final capacity requirement is selected. That ‘optimal’ scenario / sensitivity should take all plausible scenarios including the worst case into account.

Given the procurement of capacity a number of years ahead (e.g. four years) there is the potential for step changes in the level of demand due to new sources of demand such as electrification of heating/transport. The forecast (and the timing of auctions) should also take into account that procuring capacity in near term if a previous forecast turns out to be too low is likely to be more expensive since there will be reduced options for additional capacity.

## 2.2 Strike price

ESB GWM supports adopting a floating strike price as it avoids the risk of commodity prices driving reference market prices up and unnecessarily triggering the RO when marginal plant is out of merit (and therefore capacity is not scarce). To avoid the need for capacity providers to include a risk premium in their CRM bids, under either the floating or fixed options, there needs to be:

- A clear indexation formula that accounts for commodity prices, FX and CPI,
- Clear governance process to review and amend the strike price, and
- A codified principle that the RO strike price shall at all times at least exceed the short run generation costs (fuel, carbon and Variable Operations & Maintenance) of the marginal generator<sup>1</sup>.

## 2.3 Reference market

ESB GWM favours the Day Ahead Market (DAM) as the Market Reference Price (MRP). This aligns with the reference market for CfDs and FTR, and promotes efficient day ahead scheduling. We do not agree with the RAs’ concern that with a DAM MRP capacity providers may not be adequately incentivised to be available at times of system stress, since with a well-functioning Balancing Market (BM) and imbalance pricing coupled closely to the DAM there are strong incentives for RO option holders to deliver at times of system stress (see section 2.4 below)

## Intraday market

While the intraday market may in theory properly reflect near-term scarcity, ESB GWM is not in favour of the intraday market being the RO reference market, due to the lack of a single IDM price. Furthermore, the XBID project has overcome numerous set-backs but considerable uncertainty remains about its progress and timing, which could be after I-SEM goes live.

## Balancing Market

As with the intra-day market, the potential advantage of using the BM as the RO reference market is that it reflects near-term scarcity and thus provides strong delivery incentives. However there are significant risks with using the BM as the RO reference market: it could create incentives for market participants to spill and therefore drain liquidity from forward markets; forecasting BM prices is difficult, therefore some form of

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<sup>1</sup> We note that under I-SEM market prices will no longer be directly related to generator Short Run Marginal Costs (SRMCs) in a mechanistic manner. However the principle that a generator will not be dispatched unless it can recover these costs remains.

market warning would likely be required before RO pay outs are triggered; and the BM price must reflect the actual 'energy' actions taken by the TSO<sup>2</sup>. In general, GWM have difficulty supporting the BM as the reference market due to the outstanding uncertainty on the BM design.

### Day-Ahead Market

The DAM price may be preferable in terms of ensuring liquidity remains in this market. It would also align the RO mechanism with the forward CfDs, as per the HLD. While the DAM may not capture all near-term scarcity (which may become increasingly important as the level of intermittent generation on the system increases), in our view there are strong market and administrative incentives in place in I-SEM to ensure delivery at times of stress. We discuss this further below.

### Hybrid Options

The hybrid options add significant complexity. There may be potential perverse incentives on market outcomes, as a hybrid option may change the ratio traded in each market by counterparty with every settlement period. Both options would need to be carefully examined for potential gaming opportunities.

- Blended market price option: we agree that this option provides weak incentives and these are weaker than the DAM option.
- Split market price option: we see some merit to this option as it reflects what generators have sold into the DAM, IDM and BM. However the complexities of this approach need to be worked through to determine if there are benefits to it. We believe there needs to be clear benefits of adding further complexity to the RO's design. In particular, hedging strategies for baseload and mid-merit generation and for suppliers will be made more complicated.

## 2.4 Physical performance incentives

We recognise that the RAs are seeking to provide strong delivery incentives to capacity providers under the CRM. Even if the RO is referenced to the DAM, in our view the emerging I-SEM design as well as retention of existing administrative mechanisms will provide strong delivery incentives:

- The RO mechanism referenced to the DAM provides strong incentives to trade in the DAM.
- The new BM is expected to provide strong incentives on market participants to balance their positions ahead of gate closure, and participation in the BM will be mandatory. GWM is in favour of strong imbalance prices, but considers that a transitional period may be required.
- We anticipate that the I-SEM design will enable wholesale prices to rise to reflect scarcity, providing a strong incentive for market participants to target output into periods of high demand (which are more likely to coincide with periods of scarcity).
- To deal with concerns around scarcity in 'shoulder periods' coinciding with low wind output, the SEM design currently allows for the coordination of scheduled maintenance periods by the TSO.
- There is a requirement in the current SEM design for market participants to declare their actual availability, combined with periodic testing to verify capability, and penalties for poor availability. These requirements around availability declarations are strengthened by obligations under REMIT.

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<sup>2</sup> It is therefore important that the methodology for setting imbalance prices removes system actions and is therefore "unpolluted"

- There are additional performance incentives for providers of ancillary services, both under existing arrangements as well as under the new DS3 arrangements.

Taken together, these market and administrative mechanisms should provide sufficiently strong delivery incentives to all plant (including peaking plant that may not have sold forward). Additional ‘US-style’ administrative penalties should not be required, and would lead to unnecessary complexity. They would also go against the initial HLD in which the RO itself was intended to provide the primary delivery incentive under the CRM. In our view the RAs should have confidence in the effectiveness of the I-SEM market design, rather than seeking to fix perceived issues that have not yet been observed.

As we move towards a more market-based set of wholesale arrangements, ESB urges the RAs to avoid an unnecessary ‘patchwork’ approach with overlapping administrative obligations and penalties. The greater the risk introduced by such arrangements, the greater the potential for higher costs for consumers as capacity providers seek to price in these risks into their capacity auction bids.

## 2.5 Comments on areas for future consultations

We note that a number of key aspects of the design are reserved for later consultations. There are clearly interactions between the different elements of the design and given these open issues it is not possible to be definitive in the responses to the areas that have been explored in the consultation. We encourage the RAs to continue to consult on the design features of the CRM and to consider interactions with the Electricity Trading Arrangement (ETA) and DS3. In our view BM price formation and scarcity pricing is best dealt with in the ETA work stream rather than under the CRM.

The design for cross border participation should be carefully considered in both the security standard and in the de-rating factors and rules for participation. There is the potential for inconsistency between the treatment of interconnection in the demand scenario(s) and the rules for participation cross border (whether interconnector- or generator-led).

The auction design and timing is critically important to the success of the CRM and we encourage the RAs to publish views on this as soon as practically possible. We note that the consultation indicates that the RAs are considering multi-year capacity agreements, but that the length of such agreements will be consulted on in Consultation 2. 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.

ESB GWM would also welcome formal clarification in respect of whether the CRM or DS3 represents the ‘commitment market’ i.e. which auction will occur first, and therefore in which auction are plants committing to term-bound presence in the market. This would also signal where the issue of ‘missing money’ gets addressed.

## 3. RESPONSE TO QUESTIONS

### 3.1 Capacity Requirement

Question	Answer
2.6.1	
A. Feedback on our minded to position in retain the all-island security standard of 8 hours LOLE	<p>I-SEM should set a security standard of 3 hours LOLE, not the current 8 hours.</p> <p><b>Net benefit to consumers</b></p> <p>Appendix A (TSO Capacity Adequacy Standard Analysis) indicates a net</p>

	<p>benefit to consumers if I-SEM moves to a 3 hour LOLE standard. The only scenario in which the benefits of a reduced LOLE (at VoLL of €11,000/MWh) are exceeded by the costs of the additional capacity, is that in which the highest ever BNE peaker value of €87/kW/yr is used. Such a high capacity price is unlikely in a competitive auction; particularly given SEM is currently over-supplied with capacity relative to a 3 hour LOLE standard.</p> <p><b>Interconnection</b></p> <p>I-SEM is interconnected to GB (and potentially France in the future), both of which have a security standard of 3 hours LOLE. Ireland may be at a potential disadvantage in the European harmonised model with an 8 hours LOLE security standard. This difference signals a greater need for capacity in GB than I-SEM. One outcome may be an overall inefficiency with a bias towards imports to I-SEM from GB that would not exist if security standards were harmonised. At a principle level two harmonised markets should have a single security standard, and indeed this is one of the principles contained in the EU state aid guidelines.</p> <p>We note that the harmonisation of the Interconnectors will be covered in consultation 2, however it is important this is considered alongside the security standard and the capacity requirement.</p> <p><b>Economic impact</b></p> <p>As Ireland develops into a digital economy, the RAs need to consider the potential cost to the economy if there was a loss of load event in the all island market. Having a high quality power supply is a huge benefit to Ireland when looking to attract large hi-tech companies with large power demands (such as data centres). A black out or perceived higher risk of black out could have a major impact on foreign direct investment.</p> <p><b>Short term view</b></p> <p>The system is currently operating to a security standard that is higher (more secure) than 8 hours LOLE as there have been no black outs, and we would argue that it is effectively operating to a zero hours LOLE. There is enough capacity in the island to maintain a standard of 3 hours LOLE. Setting it to 8 hours will create an exit signal to participants. We note that the exit of a large unit on a small island system can have a big impact and therefore the auction should be designed to “round up” marginal capacity to keep it on the system.</p> <p>With a lower security standard, there is a greater risk that capacity exits in the first year of the I-SEM, but then needs to be replaced in future auctions. Therefore a short term benefit to consumers may be offset by a longer term cost.</p>
<p>B. Comments from respondents as to their preferred method of accounting for unreliability</p>	<p>ESB GWM is in favour of the de-rating approach for accounting for unreliability of capacity. This should be on a generic plant / technology basis rather than plant-specific.</p>

<p>of capacity in determining the capacity requirement, along with reasons behind their preference.</p>	<p>Generators should be allowed to bid below de-rated capacity into the CRM auction which would reflect the operator’s expected view of the planned operation and reliability of that plant.</p> <p>The use of historical availabilities in a small market like the SEM introduces a risk of skewing de-rating, hence consideration of wider global benchmarks is appropriate.</p>
<p>C. Feedback on the options presented in relation to accounting for demand forecast uncertainty, along with rationale behind any position.</p>	<p>The CRM should aim to procure capacity to meet a worst case event therefore we can see merit in the “Worst Case Scenario” being used to determine the forecast demand. If a scenario approach is adopted (such as in GB), there should be full transparency and consultation around how the ‘optimal’ scenario underpinning the final capacity requirement is selected. That ‘optimal’ scenario should take all plausible scenarios - including the worst case - into account.</p>
<p>D. Feedback on our minded to position to base the capacity requirement for the CRM on a single capacity zone.</p>	<p>ESB GWM supports the single bidding (price) zone envisaged under the ETA and that this should also apply to the CRM.</p> <p>The Guideline on Capacity Allocation and Congestion Management requires a technical and economic assessment of the ETA bidding zones and sets out a process to review the efficiency of that configuration. Any evaluation should follow this course.</p>
<p>E. Detail of any other considerations respondents felt that we should take account of when determining the capacity requirement for the CRM.</p>	<p>It is essential the CRM, as a minimum, procures an amount of capacity that satisfies the security standard. I-SEM has a lumpy profile such that a decision not to purchase the marginal unit could be detrimental to security of supply (as a large plant may decide to exit the market) and place the overall success of the CRM at risk.</p> <p>Clearly, accounting for interconnection will be a key input to this process, so that should be considered alongside discussion on the security standard and capacity requirement.</p> <p>The RAs made the choice to not rely on the TSO’s LOLE calculation for the assessment of the correct security standard. The arguments presented are that on the basis of evidence from GB that much of the LOLE would be managed without a significant impact on load and that true VoLL is uncertain. However, the optimal approach to setting the demand requirement, as described in the consultation and presented as a worked example at the industry workshop, would rely on LOLE estimates and a VoLL value to set the optimal scenario. This appears to be inconsistent and we encourage the RAs to set the security standard with reference to the value of avoided lost load.</p>

### 3.2 Product Design

Question	Answer
<p>3.10.1</p> <p><b>General Point:</b> ESB GWM has found it difficult to form definitive answers to a lot of the questions raised in</p>	



<p>this chapter, as there is still a lot of uncertainty about the Energy Trading Arrangements (ETA). It is not appropriate to be consulting on the formation of the imbalance price (i.e. scarcity pricing) in the CRM consultation. Imbalance price formation should be dealt with holistically under the ETA work stream.</p>	
<p>A. The approach to setting the reliability Option Strike Price:</p>	<p>We note that in I-SEM, prices will no longer be directly related to a generators' Short Run Marginal Cost (SRMC) in a mechanistic manner, however generators will need to recover at least these costs when operating. In principle, the RO strike price should exceed the highest SRMC, such that if the RO is called 'the marginal plant' can (or could have) run and cover its SRMC. Our key concern is that the actual system marginal SRMC may diverge from the RO strike price as commodity prices or exchange rates move over time. This could create positions under the RO that are not able to be hedged through sales in the RO reference market.</p>
<p>a) Should we adopt the "floating" Strike Price approach, which is indexed to the spot oil or gas price?</p>	<p>ESB GWM supports adopting a floating strike price as it gives more certainty that the RO strike price will be sufficiently high to prevent any out of merit order options being called. To avoid capacity providers from including a risk premium in their CRM bids, under either the floating or fixed options, there needs to be :</p> <ul style="list-style-type: none"> <li>• A clear indexation formula that accounts for movements in commodity prices, FX and CPI,</li> <li>• A clear governance process to review and amend the strike price, and</li> <li>• A codified principle that the RO strike price shall at all times at least exceed the system SRMC.</li> </ul> <p>There are two options available to achieve this objective:</p> <ul style="list-style-type: none"> <li>• <b>Floating strike price:</b> The floating strike price would follow fuel indices and vary as the fuel index moves. The energy market that the call option references will follow the fuel indices. In order to not be exposed to a different pay out on the call option than received in the energy market, equivalent movements of price should arise in both. If the strike price is fixed and the fuel prices move significantly and are reflected in the energy market but not the strike price, this may mean large pay-outs that are not backed by revenue from the energy market. The choice of index is also important, as a movement in relative commodity prices may lead to a change in the most expensive marginal generation type and thus the relevant fuel price index. We anticipate that a margin above system SRMC would still be required (albeit lower than that for the fixed price option below).</li> <li>• <b>Fixed Strike price with a regular review:</b> It is unlikely that there is a financial product to back the call option based on a fixed strike price. The best hedge is being available to generate when needed in the reference market and earning revenue, or in the DA market receiving a contract to generate and revenue, that can be paid out in the call option difference payment. Therefore under this option, there would need to be regular reviews to reset the strike price to reflect changes in long-term commodity prices as well changes to the reference plant type itself. There would need to be a sizeable margin above the</li> </ul>

	<p>expected market reference prices to account for within-year movements in commodity prices.</p>
<p>b) How do we choose the reference unit? Should it be based on actual plant on the system or a hypothetical best new entrant (BNE) peaking unit as currently used for setting the Annual Capacity Payment Sum?</p>	<p>Given the principle mentioned above in A, ESB GWM believes the reference unit should be based on a hypothetical proxy rather than an actual plant. We believe that the use of the BNE is inappropriate, since the BNE in the existing CPM is the lowest priced available new capacity, whereas in the I-SEM CRM what is required is a proxy for the most expensive marginal cost of generation. These are unlikely to be the same.</p> <ul style="list-style-type: none"> <li>• <b>Actual plant:</b> It would be difficult to pick an actual plant. There is a risk that actual plant would have to disclose a substantial amount of commercial data to the market. The actual plant used for the reference unit may change over time.</li> <li>• <b>Hypothetical BNE proxy:</b> For transparency reasons the hypothetical plant may be preferable. However, use of the BNE may force the exit of cheap existing capacity which nevertheless is inefficient in marginal generation cost terms relative to the BNE and therefore may be out of merit in periods when the MRP exceeds the strike price</li> <li>• <b>Hypothetical non-BNE proxy:</b> This option involves establishing a proxy for the true high marginal cost plant on the system, which could be but is not necessarily a BNE. This could be done by establishing a formula using a low efficiency generator. As set out in the Consultation, ISO NE employs such an approach.</li> </ul> <p>GWM favours the hypothetical non-BNE proxy. Irrespective of the chosen approach it is important the principle mentioned above in A, that the RO strike price is sufficiently high to ensure that no out of merit order options are called, is adhered to.</p>
<p>c) Should we grandfather this reference unit where a multi-year RO is sold by new capacity?</p>	<p>The key aspect here is investor certainty. The formula to derive the reference unit should be transparent, stable and set a proxy for a true high marginal cost plant including a reasonable margin. There appears to be no reason to update this formula regularly which should make it fit for purpose if multi-year RO are sold to new capacity. We note that the length of RO contracts is still to be consulted on.</p>
<p>B. The Implementation of scarcity pricing in the I-SEM Balancing Market?</p>	<p>For the reasons set out below in section (C) ESB GWM does not think the BM should be the RO reference price.</p> <p>BM price formation and scarcity pricing is best dealt with as part of the ETA work stream. More information would be helpful before forming a view. Administrative scarcity pricing is only valid if prices cannot else rise to VoLL. We encourage the RAs to provide evidence that such a market failure is likely to exist under the new arrangements.</p> <p>We note that the RAs' assessment of GB imbalance pricing would be more relevant if rather than using prices based on the current PAR 500 methodology, the PAR 1 prices (as generated by ELEXON for assessment of the code changes to implement Ofgem's EBSCR reforms) were considered.</p>

	<p>As discussed below, we think the RO combined with the ETA provides a strong incentive for generators to deliver.</p>
<p>C. The choice of market reference price options from amongst the options presented and consistency with key objectives</p>	<p>Given current information, GWM favours the DAM as the MRP for the RO. However, we note that we are awaiting decisions on the ETA consultations relating to the BM price formation and scarcity pricing.</p> <p>In principle, the RO reference market should reflect system scarcity, as well as provide ample liquidity that enables participants to manage and hedge their exposure to RO pay outs. Below we provide brief comments on each of the options presented in the consultation document:</p> <p><b>Intraday market</b></p> <p>While the intraday market may in theory properly reflect near-term scarcity, GWM is not in favour of the intraday market being the RO reference market, due to the lack of a single IDM price. Furthermore, the XBID project has overcome numerous set-backs but considerable uncertainty remains about its progress and timing, which could be after I-SEM goes live.</p> <p><b>Balancing Market</b></p> <p>As with the intra-day market, the potential advantage of using the BM as the RO reference market is that it reflects near-term scarcity and thus provides strong delivery incentives. However there are significant risks with using the BM as the RO reference market: it could create incentives for market participants to spill and therefore drain liquidity from forward markets; forecasting BM prices is difficult, therefore some form of market warning would likely be required before RO pay outs are triggered; and the BM price must reflect the actual 'energy' actions taken by the TSO. In general, GWM have difficulty supporting the BM as the reference market due to the outstanding uncertainty on the BM design.</p> <p><b>Day-Ahead Market</b></p> <p>The DAM price may be preferable in terms of ensuring liquidity remains in this market. It would also align the RO mechanism with the forward CfDs, as per the HLD. While the DAM may not capture all near-term scarcity (which may become increasingly important as the level of intermittent generation on the system increases), in our view there are strong market and administrative incentives in place in I-SEM to ensure delivery at times of stress. We discuss this further below.</p> <p><b>Hybrid Options</b></p> <p>The hybrid options add significant complexity. There may be potential perverse incentives on market outcomes, as a hybrid option may change the ratio traded in each market by counterparty with every settlement period. Both options would need to be carefully examined for potential gaming opportunities.</p> <ul style="list-style-type: none"> <li>• Blended market price option: we agree that this option provides</li> </ul>

	<p>weak incentives and these are weaker than the DAM option</p> <ul style="list-style-type: none"> <li>Split market price option: we see some merit to this option as it reflects what generators have sold into the DAM, IDM and BM. However the complexities of this approach need to be worked through to determine if there are benefits to it. We believe there needs to be clear benefits of adding additional complexity to the RO's design. In particular, hedging strategies for baseload and mid-merit generation, and for suppliers will be made more complicated</li> </ul> <p>We recognise that the RAs are seeking to provide strong delivery incentives to capacity providers under the CRM. Even if the RO is referenced to the DAM, in our view the emerging I-SEM design as well as retention of existing administrative mechanisms will provide strong delivery incentives:</p> <ul style="list-style-type: none"> <li>The RO mechanism referenced to the DAM provides strong incentives to sell power forward to ensure a hedge against RO pay outs.</li> <li>The new BM is expected to provide strong incentives on market participants to balance their positions ahead of gate closure, and participation in the BM will be mandatory. GWM is in favour of strong imbalance prices, but considers that a transitional period may be required.</li> <li>We anticipate that the I-SEM design will enable wholesale prices to rise to reflect scarcity, providing a strong incentive for market participants to target output into periods of high demand (which are more likely to coincide with periods of scarcity).</li> <li>To deal with concerns around scarcity in 'shoulder periods' coinciding with low wind output, the SEM design currently allows for the coordination of scheduled maintenance periods by the TSO.</li> <li>There is a requirement in the current SEM design for market participants to declare their actual availability, combined with periodic testing to verify capability, and penalties for poor availability. These requirements around availability declarations are strengthened by obligations under REMIT.</li> <li>There are additional performance incentives for providers of ancillary services, both under existing arrangements as well as under the new DS3 arrangements.</li> </ul> <p>Taken together, these market and administrative mechanisms should provide sufficiently strong delivery incentives to all plant (including peaking plant that may not have sold forward).</p>
D. Whether the RO volume and/or the additional performance	ESB GWM does not agree that the RO volume should be load following.

<p>incentives should be load-following</p>	<p>As a financial option, the RO volume for each capacity provider should be invariant through the duration of the option. Capacity providers will need to manage the risk of the RO being called, for example through secondary trading and financial products.</p> <p>ESB GWM does not believe additional physical performance incentives are required, but if these are imposed then they should be load following, to avoid generators having an incentive to over-deliver (spill) in outturn to avoid penalties. This could lead to significant additional balancing actions being taken by the TSO.</p>
<p>E. The requirement for, and design of additional performance incentives, including:</p>	<p>As we set out above, in our view there are projected to be sufficiently strong delivery incentives under the I-SEM design, particularly if some of the administrative mechanisms under the current SEM design are retained. Additional ‘US-style’ administrative penalties should not be required, and would lead to unnecessary complexity. They would also go against the initial HLD in which the RO itself was intended to provide the primary delivery incentive under the CRM.</p> <p>As we move towards a more market-based set of wholesale arrangements, ESB GWM would urge the RAs to avoid an unnecessary ‘patchwork’ approach with overlapping administrative obligations and penalties.</p> <p>ESB GWM considers the principles in para 3.9.1 are reasonable if such additional incentives are deemed to be required. Any additional measures should apply equally to all capacity providers.</p>
<p>a) The form of additional incentives;</p>	<p>As set out above, ESB GWM is not in favour of additional administrative penalties under the CRM.</p>
<p>b) Scarcity based triggers for performance incentives</p>	<p>If additional performance incentives are defined, the RAs need to define what a scarcity event is before ESB GWM can decide whether to have scarcity based triggers for performance incentives.</p>
<p>c) Caps and floors on incentives;</p>	<p>If additional performance incentives are defined, ESB GWM would support Caps and Floors. Any such measure should be symmetric and proportionate to and complement the strong delivery incentives that are already in place.</p>
<p>d) Performance incentives for renewables and DSUs;</p>	<p>If additional performance incentives are defined, ESB GWM would support performance incentives for renewables and DSUs to ensure equal treatment.</p>
<p>e) Performance incentives during the pre-commissioning phase;</p>	<p>ESB GWM is strongly in favour of performance incentives during the pre-commissioning phase. Incentives should be large enough to mitigate against “bed blocking”.</p>
<p>f) Detail of any other</p>	<p>ESB GWM suggests the RAs consider further the treatment of generators</p>

<p>considerations respondents feel that we should take account of when determining policy in relation to product design.</p>	<p>that are instructed by the TSO (e.g. for ramping or being held back for reserve) as it relates to applying penalties under the RO. The need to ‘make whole’ generators which have been instructed by the TSO could complicate settlement depending on the chosen MRP.</p> <p>There is a risk these additional administrative penalties create a second ‘reference market’ if performance is delivery based. This may create a perverse incentive in the RO. If physical performance incentives are deemed necessary, we therefore encourage further exploration of options, in particular availability based incentives.</p> <p>Any additional administrative penalties must complement and work cohesively with the RO pay-out and imbalance pricing and settlement (cash out). Avoiding any duplication is essential. These penalties must also link to a generator’s outturn behaviour. ESB GWM asks the RAs to carefully consider the imposition of such measures.</p>
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### 3.3 Eligibility

Question	Answer
<b>4.12.1</b>	
A. The options presented in relation to the eligibility of plant supported through other mechanisms;	<p>ESB GWM is in favour of all plant being eligible to take part in the RO and that there should be no special rules for any plant type.</p> <p>It is recognised that the risks established under the RO are difficult to manage for intermittent plant. This may have implications for the capacity volume procured (e.g. if wind plant opts out) and/or the CM clearing price (e.g. if wind plant opts in but includes a significant risk premium). These issues will need to be considered as part of the detailed auction design.</p> <p>We note that intermittent generators would benefit from liquid secondary trading in order to manage their exposure to the RO.</p>
B. The options for eligibility of demand side and storage providers	<p>Energy storage should be treated similarly to all other plant types. They should however have a technology specific de-rating factor.</p> <p>Demand side should be eligible, on the same basis as generation. Therefore, from an equity perspective, GWM would argue for Option 1 which treats generation in the same way as demand. In the case of DSUs which are Quarter Hourly meter and face a pass through pool price (or the equivalent wholesale price exposure under I-SEM), Option 1 is the only equitable option.</p>
C. Do you have a view on the technology vs plant specific approaches to de-	<p>ESB GWM is in favour of de-rating on a generic plant / technology basis rather than plant-specific.</p> <p>Generators should be allowed to bid below de-rated capacity into the CRM auction which would reflect the operator’s expected view of the</p>

rating?	planned operation and reliability of that plant.
D. Do you have a view on the historic, projection or hybrid approaches to de-rating?	The use of historical availabilities in a small market like the SEM introduces a risk of skewing de-rating, hence consideration of wider global benchmarks is appropriate.
E. Do you have a view on grandfathering of de-rating factors?	As above in our response to A(c), the key aspect here is investor certainty. The System Operator should follow an established process to determine if plant de-ratings are still fit for purpose.  We note that grandfathering for multi-year contracts could introduce an inconsistency between the TSO's current best view of de-rating for capacity already contracted, and the basis on which multi-year capacity is paid.
F. Do you have a view on options presented with respect to the non-firm generation?	The TSO should provide evidence on the likely coincidence of system stress and constraints to establish whether it is indeed true that non-firm generation is unlikely to be constrained when required.  Assuming that this evidence supports the hypothesis above, non-firm generation should be eligible to take part in the RO, with the same de-rating factor as firm generation of the same capacity type.
G. What evidence should an aggregator be required to show physical backing?	An aggregator should provide evidence of physical capacity. Contracts should be in place between the generator and the aggregator. Aggregators should be required to provide these contracts as evidence.
H. Should there be a maximum size of unit that can bid into the RO auction via an aggregator, and if so what is that threshold?	It seems sensible to apply a de-minimis threshold to both generators participating in the RO and the maximum capacity that can participate via an aggregator. ESB GWM agrees with limiting aggregation to de-minimis generation (<10MW) and/or intermittent renewable generation. Generators above this threshold should be able to compete on level playing field.
I. Should there be a minimum size below which a capacity provider may not bid directly into the RO auction, and must bid via an aggregator? If so what is that threshold?	Yes. It seems appropriate that the de-minimis threshold should be no larger than 2MW.  Existing generators which participate in SEM should be able to participate directly in the CRM. This would be facilitated by a de-minimis threshold at 2 MW.
J. What pre-qualification criteria should be applied?	Existing plant should be incentivised to take part and win a contract in the RO auction by virtue of their capability to deliver at times of system stress. There should be no extra checks on environmental compliance required.

	<p>Credit worthiness should be covered via collateral posting requirements.</p> <p>ESB GWM has a preference for a stringent regime of milestones to be reached and significant penalties for non-attainment for new builds to prevent “Bed Blocking”.</p>
<p>K. Detail of any other considerations respondents feel that we should take account of when determining policy in relation to eligibility.</p>	<p>There needs to be a clear mechanism to deal with plant opting out of the CM, both in terms of adjusting the capacity requirement as well as ensuring that the opted-out plant delivers on its stated intention (i.e. to close or stay online).</p> <p>In addition, there should be a mechanism for successful capacity providers to ‘exit’ from their capacity agreement if circumstances change unexpectedly (e.g. forced failure or type fault). Options include secondary trading and potentially a year-ahead auction to procure the lost volume.</p>

### 3.4 Supplier Arrangements

Question	Answer
<b>5.8.1</b>	
<p>A. Whether the recovery of CRM option fees from suppliers should be on a flat, or profiled basis</p>	<p>ESB GWM does not support a flat option fee recovery from suppliers. GWM have a preference for the current SEM approach profiled across all hours to be used rather than focusing on specific hours as used in GB. Specific profiling could incentivise inefficient load shifting behaviour to avoid or reduce contributions to the CRM.</p>
<p>B. Whether the supplier credit cover arrangements for the I-SEM CRM should be broadly similar to those under the SEM, and whether/what credit cover arrangements should be introduced for capacity providers</p>	<p>ESB GWM has a preference for streamlining the provision of credit cover. Netting of all credit arrangements should be performed wherever possible. Cross company netting should be considered and credit arrangements should be put in place centrally across all work streams CRM, ETA and DS3.</p> <p>Methods other than letters of credit should be considered for I-SEM.</p>
<p>C. Whether the costs of exchange rate variations (arising from differences in the €/\$ exchange rate at the time capacity is procured and its subsequent delivery) should be borne by capacity providers or mutualised across the</p>	<p>ESB GWM recognises that it may not be possible for a market participant to manage long term exchange rate risk and hence this would need to be managed by the market operator. This would require the development of an FX trading function in the MO which will impose costs and risks on the market.</p> <p>We note the duration of RO contracts will be subject to a future consultation by the RAs, this is key to determining the FX rate costs.</p>



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### 3.5 Institutional Framework

Question	Answer
<b>6.8.1</b>	
A. Are the above outlined governance arrangements suitable for implementation of the I-SEM capacity mechanism?	ESB GWM agrees with the overall governance arrangements as described in this section, however paragraph 6.3.15 is missing from the consultation.
B. Which options for contractual arrangements are the most appropriate as assessed against the listed criteria?	ESB GWM has a preference for the “Rules Based Model”. ESB GWM views this as better for transparency, whereas the “Separate Options Model” would lead to separate contracts by counterparty. The “Rules Based Model” is also consistent with the current SEM approach.
C. Are implementation agreements required for new entrants participating in the capacity auctions?	In ESB GWM's view, implementation agreements are required for new builds as there is a need for strong incentives for participants to build out if they have won a RO contract in the auction. To avoid “Bed Blocking”, penalties are required.