CALL FOR COMMENTS ON THE EY REVIEW OF THE PERFORMANCE OF THE SEM CRM SEM-22-054

SSE Response

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Introduction

SSE welcomes the opportunity to respond to this consultation seeking comments on the review of the CRM completed by external consultants, SEM22-054.

For the avoidance of doubt, this is a non-confidential response.

Who We Are

SSE is the largest renewable energy developer, operator, and owner in Ireland's all-island Integrated Single Electricity Market. Since entering the Irish energy market in 2008, SSE Group has invested significantly to grow its business in Ireland, with a total economic contribution of €3.8bn to the State's economy over the past five years. We have also awarded over €9 million to communities in the past 10 years as part of our community benefit programme.

SSE is building more offshore wind energy than any other company in the world right now. We are currently constructing the world's largest offshore wind energy project, the 3.6 GW Dogger Bank Wind Farm in the North Sea, a joint venture with Equinor and Eni. This is in addition to Scotland's largest and the world's deepest fixed bottom offshore site, the 1.1 GW Seagreen Offshore Wind Farm in the Firth of Forth, a joint venture with TotalEnergies, which reach first power in recent weeks. In the most recent Scotwind process, SSE Renewables was awarded the rights, along with partners Marubeni Corporation (Marubeni) and Copenhagen Infrastructure Partners (CIP), to develop what will become one of the world's largest floating offshore wind farms off the east coast of Scotland.

We plan to bring our world-leading expertise in offshore wind energy to here with plans to deliver over 3 GW of offshore wind energy in Irish waters, starting with our Arklow Bank Wind Park Phase 2 project off the coast of Co. Wicklow.

Through our SSE Thermal business we continue to provide important flexible power generation to help ensure the security of the state's electricity supply. SSE's power station Great Island is Ireland's newest combined cycle gas turbine (CCGT) power station and one of the cleanest and most efficient on the system, generating enough electricity to power half a million homes. The acute need for flexible generation in Ireland has been demonstrated over the last twelve months, with EirGrid's most recent generation capacity statement showing that a shortfall in generation capacity was a significant risk this coming winter and for a number of winters to come, resulting in emergency measures being implemented by the CRU and Government.

While existing power stations continue to play a critical role on the system, SSE view the future of dispatchable thermal generation as being abated thermal, with Carbon Capture and Storage, hydrogen or other low-carbon fuels being the primary options. SSE have over 5 GW of zero and low carbon thermal under active co-development in the UK.

We will continue to evaluate opportunities to bring our expertise and investment in decarbonised flexible generation to Ireland, but it is vital that the state, regulator and TSO provides appropriate investment landscape to unlock such developments.

Executive Summary

We have considered and provided both general and detailed comments to the consultants' review of the Capacity Market, as well as the call for comments in the covering SEM Committee paper.

Under general comments we have provided comments under the following headings:

- *Market signals and assumptions*: where market signals and assumptions fail to realise the investor perspective, the materiality of penalties in this market and that the CRM price caps are a significant market signal

- *Security of supply*: where recent capacity publications make it clear the size of the capacity gap this framework must swiftly and appropriately encourage investment
- *Accountability*: where we support the signal for improvements by TSO and CRU
- *Scope*: other areas the SEMC and/or CRM report should consider for improvement (BNE, Capacity Requirement, Price Caps, Interconnectors)

In detailed comments, we have considered each of the recommendations discussed and have sought to provide some measure of prioritisation to the recommendations suggested.

An initial key message we would like to convey is that we welcome the review of the CRM. We have long advocated as a member of industry for the reform of this framework. We are strongly supportive of the EAI response to this consultation. SSE also welcomes that the report highlights areas where the TSO and RAs can improve processes, activities, and methodologies in the CRM. We have pointed to other areas of process and methodology which could also be improved on.

Our chief concern with the suite of recommendations outlined is to understand how any of these would be implemented, in what order, within what timeframe, effecting which future Capacity Auctions and with what additional process impacts e.g., requiring updates to State Aid rules, changes to information packs etc. We would appreciate a clear and published roadmap of planned activity relating to this workstream. As we outline, given the clear security of supply crisis and lack of capacity delivered by this market framework to date, it is critical that well-considered improvements are urgently made to the CRM to secure future capacity.

Where we can support some of the recommendations proposed as outlined in the next section, we also stress the investor landscape that should have been accounted for and the potential challenges that should be considered with implementation. It is a critical flaw that the report does not adequately demonstrate an understanding of investor needs, priorities, and risks. This can most clearly be seen in the report's approach to scarcity, incentivisation, market signals and barriers to entry. Conclusions in the report relating to these factors risk double-penalising market participants and overlooking both the strong exit signals existing in this market framework and the underlying causes of low volume scarcity events.

Whilst we welcomed the opportunity to engage with the RAs following the publication of this paper, the lack of investor perspective during the course of the EY review period has led to an omission of key design factors that affect investor decisions:

- *Best New Entrant*: We will engage with the separate BNE consultation, but the fact remains that Best New Entrant is an entry signal that could have better shaped recommendations in the EY report.
- *Price Caps*: The EY report does mention that price caps should be removed. We note that this option is not under consideration for the SEMC paper. We would strongly consider that addressing price caps is a single, critical factor that needs to be achieved following the CRM review. It would not only address the current failure for delivery but also future proof the CRM when considering it as a vehicle to realise capacity to replace emergency generation and ageing plant and to realise future generation that will be flexible and potentially capable for conversion to meet carbon targets.
- *Capacity Requirement calculation*: The paper recommends an adjustment factor to account for non-delivery. We are strongly in favour of this. However, the broader context of how this parameter is calculated and transparently articulated, is not considered. The fact of a reducing Capacity Requirement and the lack of clear methodology should have been considered in the EY report.
- *Interconnectors*: The continued participation of interconnectors in the CRM fundamentally, has not been considered. The consultation rather signals considered refinement of the flagging of interconnector actions without any data to demonstrate the need, outcome, and rationale for this change. Instead, the scale of impact, lack of competition in interconnector trades, or the true value of interconnectors at times of scarcity has been overlooked in the review.

Finally, to reiterate, the biggest failing of this report is that it overlooks the investor perspective, at a time when investment is urgently needed not only to keep the lights on, but to realise the future ambitions of a more fuel diverse market.

General Comments on the EY Report

Below we have identified general comments and observations to the report.

MARKET SIGNALS & ASSUMPTIONS

We consider that market signals have been insufficiently considered in the report. This could well be due to lack of background analysis to support the published report. However, we consider that even if this were the case, the report does not demonstrate an understanding of the following:

- The auction process in the Irish SEM as distinct from the Capacity Market process in GB. We note reference to “descending clock auctions” and “performance testing”, which are all features of the GB capacity market model, not features of the distinct SEM CRM. There is a concern that there may be resulting misunderstandings with the operation of the CRM.
- The CRM is one of a patchwork of revenues that are **all** needed to encourage entry into the market. The investment needs of a project do not change despite differing dispatch or emissions requirements (i.e., the amount of ancillary services ultimately needed from a 100MW plant does not change the investment being needed to still deliver a 100MW unit. Equally, the amount of constraint or curtailment faced or run hour limitations imposed, does not alter the fact that investment needs to be based on final Maximum Export Capacity intended). The report does not acknowledge the interrelated nature of different market and the impact this has on CRM price caps and market signals where other revenue stream values are being eroded. Where other revenue streams are being eroded[1], there is increased reliance on the CRM to recover a larger share of investment value, yet price caps remain stagnant. This omission risks undermining the whole market design with respect to credible investor signals for entry and retention.
- The assumptions relating to CCGT units not entering the market bear several inconsistencies. It is theorised (but should have been easily evidenced), that load factors for CCGTs could be a barrier for entry. The Capacity Requirement has experienced a downward trend over subsequent auctions and does not appear to account for non-delivery. Yet the risk of a CCGT cannibalising the Capacity Requirement given a higher load factor for such projects is not even considered or evidenced. This could have easily been analysed and considered in the report as a reason that these types of projects have not yet developed. Instead, the degree of capital investment required for such projects and the level of existing level of price caps are dismissed with the assumption that once awarded, a CCGT will benefit from higher inframarginal rents (IMR). These assumptions fail to understand how generators respond to price caps, the longer investment horizon for a CCGT, how bids drive the clearing price of an auction and the cannibalising potential of higher load factor projects.
- On the subject of IMR, the methodology underpinning this assumption is unclear. IMR is an extremely subjective predictor of success since it is based on the individual commercial behaviour of a market participant. Without a clear methodology to demonstrate the view that all CCGTs irrespective of differing behaviour could all benefit from high IMR in this market, this statement is unverifiable.
- IMR assumptions also appear not to account for the effect (in reducing IMR), of increased wind penetration or interconnection on both the load factor and running profile for a CCGT were it to enter the market.
- Lastly, if CCGTs are what is aspired to be encouraged into this market, then market design needs to change significantly, including the specific areas outlined here. The fuel mix and project type entering this market is entirely due to the market design and market calibration of the CRM. The project types also entering the market are the units that are most flexible and most able to support increased wind penetration whilst remaining financeable even if running only at times when wind is low.

ACCOUNTABILITY

The report goes into some detail in relation to the responsibility of various stakeholders to improve or implement process or design changes to improve the current operation of the Capacity Market. We welcome the actions identified. We have further observations to offer:

[1] As we have seen in the proposal from EirGrid to reduce the value of DS3 system services up to 2025; as we can see demonstrated by the inflationary challenges demonstrated by an adjustment to the APC last winter; additional derating factors for annual run hour limited plant as applied for the forthcoming T-4 2026/27.

- It is worth noting that for market reform to be effective, it must be on the basis of shared responsibility and transparency. Market reform must be done in a way to involve industry at every step of the development.
- It is incumbent on the SEMC to consider the benefit to future customers as well as immediate impact to current customers—otherwise the price signals in the current market framework will not be suitable for the future that Regulators and Government are seeking to procure, i.e., delivery of 2GW flexible gas-fired generation[2], hydrogen conversion of existing CCGTs[3], supporting diversity of lower carbon fuel sourced generation or carbon abated generation to tackle carbon budgets.
- Like with system services, the capacity market must signal the value and benefit to consumers[4], given that Ireland has environmental ambitions and security of supply needs, that capacity must also deliver.
- It is clear from the report that capacity delivery is falling short of expectation and therefore, there is an urgent responsibility to review and consider price signals to encourage, rather than deter investment. This is especially true where current security of supply measures being instituted will remain in place until such time as new capacity arrives to replace it[5].
- There is a responsibility for constraints and curtailment to be mitigated to improve participation given in certain auctions it has been demonstrated that the capacity requirement for specific constraint regions was not even minimally fulfilled.
- There is also an urgent need for meaningful incentives on the TSO to ensure the swift, well-considered and well-planned delivery of network infrastructure.

SCARCITY AND SECURITY OF SUPPLY

Scarcity is a well-covered theme in this report. It is worth setting out the security of supply landscape currently, where in our opinion, investment and importantly delivery of new capacity cannot come soon enough:

- To date only 100MW of the 700MW of awarded new capacity has the prospect of delivery, as outlined in the report.
- The recently published GCS anticipates capacity deficits for each of the next 10 years, with the anticipated shortage more pronounced in the short to medium term.
- The Government and RAs have signalled a programme of security of supply measures for immediate mitigation of supply scarcity and preparing a future system that will maintain security of supply. This includes the assumption that the CRM will encourage sufficient investment to see the delivery of 2GW of new flexible gas-fired generation.
- When reviewing the reliance on interconnector imports, we can see that interconnectors only provided 130MW on import during times of stress (during the 42 most stressed periods over the last two years). The average flow on the ICs in either direction was also 13MW during the period. This demonstrates the actual volume of benefit of the ICs at times of system stress.

The value placed on interconnectors and renewables has not been balanced by a realisation that conventional generation (and ancillary services) will be needed at scale to support these ambitions. This signals a real need for concerted effort to ensure procurement of domestic generation for domestic resilience. And that this procurement is accompanied with strong market signals, support for delivery and clear understanding of what is being sought to be procured for the future. The report or consultation do not demonstrate this urgency and the priority that needs to be placed on recommendations that will ensure investment and delivery of future capacity. Furthermore, the CRM design does not consider the need to support carbon abatement measures taken during design or retrospectively to contracted projects to meet emissions targets. This is a very real concern for future investment that is not provided for in CRM design.

[2] gov.ie - Policy Statement on Security of Electricity Supply (www.gov.ie)
[3] gov.ie - Review of the security of energy supply of Ireland's electricity and natural gas systems (www.gov.ie)
[4] Paragraph 75: SEM-14-108 DS3 System Services Decision Paper | SEM Committee
[5] CRU Publishes Security of Supply Information Note - Commission for Regulation of Utilities

SCOPE OF THE REPORT

Best New Entrant & Price Caps

On the 19 October, the SEMC published a consultation proposing a new Best New Entrant reference plant. We note the coincidence that this new reference plant is now proposed to be a CCGT, which aligns with commentary in the EY report of no perceived barriers and expected high IMR returns for CCGTs in the current market framework. This fundamentally underestimates the powerful signal that the BNE as the reference plant, the "unit to beat" represents to the market. It is notable that the price is lower, where the EY report has demonstrated that at current higher price caps, ~500MW has failed to be delivered even at more attractive guaranteed revenues, and especially, no CCGT has been delivered in this market. Insofar as demonstrating what drives participant behaviour in auction and how unreasonable it is to dismiss investment risk, Best New Entrant interaction with the CRM review has not been demonstrated in recommendations.

With respect to price caps, we note that the EY report considers the removal of price caps, but this is not a recommendation considered in the SEMC consultation. We would be in favour of an urgent review of price caps. Price caps remaining rigid achieve the following:

- Remain slow to recognise the changing fuel mix needed where climate ambitions need to also be fulfilled for a future that should already be targeted in the T-4 2026/27 to have any chance of achieving 2030 targets
- Underestimate the level of investment jeopardy in this market given constraints, low infrastructure development, lack of firm access, dispatch down risk associated with RO difference charges and planning challenges (where we have seen conventional generation have planning rejected)
- Encourage greater use of the exception of USPC which in turn undermines these price caps by failing to represent the true price of projects
- Risk setting an unrealistic price which leads to non-delivery, as we have seen demonstrated in EY's review of the market since 2018

Capacity Requirement calculation

The paper suggests an adjustment factor for non-delivery and further scrutiny on forecasting to calculate Target Volume. We would be strongly in favour of this mechanism to account for non-delivery over any additional penalties for non-delivery. It is most critical for the Capacity Requirement to provide a true reflection of what capacity is needed, taking account of capacity that fails to deliver as expected. However, this recommendation stops short in examining the market signal of the Capacity Requirement and how this market signal is hampered by lack of transparency. Also, again where a CCGT is referenced as a suitable investment opportunity, consideration of the decreasing Capacity Requirement over time would demonstrate that CCGTs could well risk cannibalising MWs in ever tighter capacity margins. Therefore, the report would have benefited from further consideration of the Capacity Requirement in its recommendations about barriers to entry for CCGTs.

Interconnectors

It can be well-demonstrated as above (and in Appendix 1), that interconnectors have a lower benefit than could be expected during stress periods. Reliance on interconnectors above domestic capacity in the market is not an area considered extensively enough in the report, where at the same time, the de-rating factors of these large in-feeds have a displacing effect of interconnectors in the CRM.

In our view, it is imperative that there is very careful consideration of the participation of interconnectors in the CRM, especially now with the future expansion of interconnectors connected to Ireland. Interconnectors participation must be calibrated in such a way that they:

- Facilitate increased development of renewable energy to support increasing local demand (not neighbouring exports)
- Are not detrimental to Ireland's domestic security of supply (where there is a risk at times of stress that neighbouring system stress is more likely to be imported).
- Are not detrimental to the entry and retention of domestic generation (interconnectors should be assumed at zero to ensure sufficient domestic resilience)
- Do not have a displacing effect that crowds out new domestic generation
- Provide a benefit to the consumer (incl. in relation to security of supply).

- Are strategically located to avoid network pinch points and avoid displacement of local generation
- Are appropriately de-rated in the CRM to avoid the displacement effect in auctions. We note that in the CEPA report accompanying the BNE consultation, the consultants are clear that interconnectors are in fact not ideal candidates for CRM markets[6]. We see strong logic for their conclusions and would recommend that de-rating be aggressively applied to interconnectors if they are to remain in the CRM. This would provide the headroom for the targeted 2GW of flexible gas-fired generation to replace ageing plant and temporary emergency generation.

As we note above, it is important to note that increasing interconnectors could potentially undermine the investment in domestic firm dispatchable capacity, which is critical for ensuring security of supply. This is because higher levels of interconnection (and increased renewables) will potentially reduce operational opportunity for generation, moving it from baseload running, or peaking profile, to running very little as back-up. The EY report and BNE consultation demonstrate an ambition towards entry of CCGTs. There is even less investment case specifically for CCGT generation running at low load factor and infrequently due to increased interconnection and increased wind penetration. The necessary investment signals for flexible or baseload generation even with increased interconnection, wind penetration and 95% SNSP, have not been sufficiently considered in the EY report.

RESPONSE TO SEM COMMITTEE CALL FOR COMMENTS

CRM recommendations already in progress	
SEMC update on related work	**SSE comment**
TSOs have implemented an enhanced monitoring process for new capacity coming through the capacity auctions since T-3 2024/25. Through this enhanced monitoring, which includes expert advice on power generation delivery, deliverability risks associated with the new projects are assessed which enables early indication of non-delivery.	We understand that this is a workstream that is already underway to ensure that non-delivery can be captured in good time. Without understanding the details of this framework, we cannot be certain of its suitability. SSE would welcome is sight of this monitoring process to ensure that whilst it can review and correctly enable early indication of non-delivery, it will not place undue burden on participants. In addition, whilst we can welcome this process, we would far prefer to ensure that this process is joined up with better forecasting of the Capacity Requirement and setting of the Demand Curve. We would support the immediate consideration and implementation of an adjustment factor in the calculation of the Capacity Requirement (as recommended in the consultants' report). Statistically, we can see that the capacity requirement has reduced over time, where at the same time termination of expected capacity has meant that expected capacity has not been met. Given the capacity requirement has decreased over time despite non-delivery, it gives little comfort to industry that the effects of unexpected non-delivery of capacity have been adequately accounted for.
The SEM Committee increased the performance security rate and termination charges for any event that occurs 13-24 months prior to the beginning of the capacity year for the T-4 2025/26 auction.	We note this measure in the recent CRM parameters decision paper for T-4 2025/26. As mentioned in our response to this paper, we welcomed the intention to see to motivate better delivery, but felt it was perhaps not the right mechanism to target, especially when considering smaller capacity providers for whom these charges could be prohibitive.
A SEM Committee consultation (SEM-22-036) on interim and enduring solutions to enable energy payments in the Balancing Market for DSUs was published on 4 July 2022.	We note this measure from the recent consultation on this matter. As per our response to this consultation, we made it clear that DSUs need to be monitored first to ensure correct and demonstrable responsiveness at times of system stress. This review of performance should be completed first, before energy payments are

[6] Best New Entrant Study 2022 (semcommittee.com)

	implemented. We also commented on the significant burden that these payments place on already high Imperfections Charges since the SEMC decided to use this mechanism for the funding of these payments to DSUs.
A SEM Committee consultation (SEM-22-030) was published on 6 July 2022 seeking stakeholder responses on circumstances in which Capacity Market Units can be available and in-merit, but not dispatched as well as application of non-performance difference charges to such units.	We provided a detailed response to this consultation earlier this year. We are also taking the opportunity to engage with the CRU on this separate consultation. We welcome the view that exposure to Non-Performance Difference Charges is being examined, hopefully with a view to better targeting this material penalty. We have provided further comments in this paper to reconfirm that these penalties are not immaterial, not ineffective and not trivial. Therefore, additional recommended performance levies being proposed by the consultants' report are inappropriate.
The SEM Committee has initiated studies to re-calculate the Volume of Lost Load (VoLL) and the Cost of New Entry (CONE). These will feed into the re-evaluation of the reliability standard.	We acknowledge that this workstream was on the work plan for the Regulatory Authorities. However, to be frank, this review and consultation on the re-evaluation of the reliability standard, Loss of Load Expectation and other inputs to the Best New Entrant methodology cannot come soon enough. Industry has been clear for a long time that where there are specific issues in the CRM and a large degree of them stem from these specified parameters which set market entry signals and overall transparency regarding reserve requirements and system scarcity. The new proposed Best New Entrant plant is completely out of step with a future that will see the delivery of 7GW of offshore wind and a 95% SNSP ambition. The proposed IMR purported to be earned by the proposed CCGT disregards the impact that increased wind will have on a CCGT's load factor and running regime. Furthermore, a CCGT with no route for decarbonisation either at existing price caps as suggested by the EY report, or at the new lower price caps proposed by the BNE consultation, fail to support the mandated carbon budgets, renewables targets and emissions limits. Furthermore, the current Loss of Load Expectation is out of step with our European neighbours and does not promote the degree of system efficiency and accurate reflection of system scarcity as we should expect to be able to drive investment by industry or the TSO. Therefore, we are responding to the BNE consultation robustly and encourage an urgent consultation on the VOLL (with a view to clearly considering a reduction in the Loss of Load Expectation). We believe these mechanisms well calibrated, could help to create a clearer picture of scarcity before any change may be needed to ASP.
The RAs are considering a TSO paper to introduce a System Services product with a longer lead time and duration.	We understand that this paper is not related to Future System Services Arrangements. It would be our view that as suggested by the consultants' report, there must be a clear and swift implementation of an ancillary services market that is suitable for both new and existing providers, and which provides longer duration contracts. We would welcome further details on the next stages in the System Services Future Arrangements. The reasons that longer duration contracts are immediately necessary is many-fold: 1. Longer duration contracts put simply, provide a strong investment signal for new entry for all types of generation that can provide these services.

	2. Long duration contracts have the benefit of smearing the return on investment across a longer time period, which should help to drive down prices for the benefit of customers 3. If the Regulatory Authorities agree with the consultants' report that they can see no impediments to the development of CCGTs in this market, then they must consider the investment time horizon for such a project, which is more like 20 years than 10 years. In order for such investment, there needs to be a realistic future set of complementary revenue streams to encourage such a longer-term investment. This would include longer duration certainty regarding system services contracts (as well as longer duration certainty in the CRM).
Recommendations to CRM design—under consideration	
Recommendation	**SSE response**
Greater transparency of target setting through a panel of technical experts (PTE) assessment of EirGrid recommendations, with findings published, and explanation of process by which TSO forecasts are translated to Target Volume to procure in capacity auctions.	There is very little detail regarding this recommendation. It would appear reasonable in principle to ensure the accuracy of TSO forecasts regarding the Target Volume. The rationale for the need for technical experts is not demonstrated. Further detail would be welcomed to define the expected benefit and outcome of It is worth noting that Target Volume does not appear to be defined under the CMC. But we would understand the Target Volume relates to the final Capacity Requirement for auctions to signal the amount needed to be procured. We consider that there should be greater transparency of the overall process to identify volumes to procure in capacity auctions. This would include the opportunity for greater transparency of the Capacity Requirement and Demand Curve methodologies that would also require the EirGrid forecasts as inputs. This is an area that has been overlooked in the report, but it is an important step in relation to the Target Volume and its use.
More explicit accounting of non-delivery in setting target volume, with two options for implementation: 1. Introduce process to monitor progress reports for early indication of non-delivery; OR 2. Apply a standardised adjustment to the capacity requirement to account for the likelihood of non-delivery and review inputs to adjustment % periodically.	We would be in favour of a notional mechanism to account for the probability of non-delivery as part of the Capacity Requirement. It would be our view that market systems must follow the laws of efficient, flexible, economic and dynamic markets that have mechanisms to be responsive to changes (e.g., capacity requirement adjustment factor to take account of non-delivery of some portion of capacity). Therefore, dynamic review of this as part of a more dynamic review of the Capacity Requirement is to be welcomed. We will respond in more detail to the separate Capacity Requirement consultation however, the following must be considered: • Risk apportionment in the capacity requirement needs to be appropriate • there has been insufficient consideration overall of the trends in the Capacity Requirement across auctions and how these feeds into the Demand Curve calculation, in the report • The capacity requirement methodology has not been assessed in the EY report to consider or explain the decreasing capacity requirement from auction to auction—and how this will hope to attract future capacity in place of the ~500MW that failed to deliver • The capacity requirement volume has not been considered in the EY report with respect to comments about the ability of CCGTs, with higher load factors, to enter the market and not risk cannibalising a large share of a small capacity requirement

Increase lead time to at least 4 years from the announcement of auction results to start of the relevant capacity delivery year.	This is a very important step to ensure realistic delivery. However, we expect it may require some adjustments within State Aid and where CCGTs are expected to enter this market, the delivery year needs to be considered based on realistic and investor-led input on reasonable timeframes to ensure reliable delivery. What should also be considered in this context is the expected rate of return. 10 years for 3.5 years for delivery should be reviewed in case there is a knock-on impact on 10 years return. We will also comment on this with respect to the separate BNE consultation, but the EY recommendations around CCGTs completely overlook that such a large capital investment needs a far longer period of return than 10 years. The risks associated with such a significant project have not been alleviated by the current CRM framework which has meant that CCGT developments have not been more commonplace in auctions since the CRM commenced in 2018.
Requirement of new prospective capacity to have all necessary consents to prequalify for auction. This remedy is potentially of less importance if auction lead times are extended.	SSE can appreciate the usefulness of such a recommendation in principle. However, there are several factors to consider: • Consents being secured prior to qualification will help to ensure high degree of certainty in delivery but will likely have a disproportionate impact on auction design. • Consents are related to each other and often need to be applied for in sequence, rather than in parallel, which extends delivery timeframes: e.g., planning would rely on a secured grid connection, planning brings with it the need for certainty regarding environmental impact as well. All of this can take time and will affect the TSO and CRU processes with respect to awarding of grid connections. • Consent timeframes are currently excessively prolonged. Unless there is reform of the processes around these external consents, it would be difficult for some of these consents to be secured in a reasonable timeframe ahead of an auction. Whilst this recommendation may appear intuitive and in principle could helpfully resolve issues around identifying projects with the most chance to deliver, the report has not had the full benefit of exploring the consents framework in detail to understand the challenges that would be faced in implementation.
Increase performance securities following the auction	We would reference the recent CMC modification *CMC_10_22: Introduction of New Remedial Action in the Event of Third-Party Delays*. Industry responded to make the case that where delays were outside the control of developers, this should not be unreasonably used as grounds for penalties or termination of capacity contracts during delivery. We would not want this same risk of delay to be grounds for future higher performance securities. The higher the penalty does not make these externally driven issues any more achievable by a developer.
A permissive approach to requests for extensions from new build projects.	The analysis of the report cites the specific reasons for the high degree of terminations of capacity contracts. The conclusion is that process rigidity was at fault and that requests for extensions should be more permissive. Requests for extensions could be reasonably attributed to delays caused by third parties and for these externalities, we support the EY view towards this process. However, at the same time as the EY report and reasonable outline of the need to demonstrate some support to developers to ensure delivery, the SEMC has rejected CMC_10_22 with some following rationale:

	2.3.2. Whilst a significant number of respondents supported the implementation of the proposed modification, the SEM Committee continue to have concerns around potential implications should the modification be approved in its current form. *2.3.3. The Committee are not only concerned that the modification fails to take account of the contingency they would expect to form part of any Implementation Plan but that by removing many of the penalties which arise if capacity is not delivered in a timely fashion, an incentive is created to submit more optimistic Implementation Plans than is currently the case.* *2.3.4. As mentioned in several consultation responses, the Committee note that third party delays may be outside the control of developers. However, concern remains that attempting to address this issue and mitigate potential consequences through the implementation of this modification could ultimately lead to a weakening of incentives to conclude projects in timely manner. Given the current capacity challenges, this would be an unfavourable outcome.* These diverging views have resulted in a stalemate. On the one hand, the EY report clearly demonstrates the reasons for terminations and the high degree of lost capacity, ~500MW since 2018. It demonstrates effectively that the current framework has done little to ensure delivery through rigid penalty and that despite rigid penalty, ~500MW has still failed to deliver. The SEMC consultation is considering recommendations that relate to reviewing these processes. However, at the same time the SEMC consider with CMC10_22, that any perceived loosening of the current set of the same delivery incentives will contribute to even greater volumes of failed capacity. This perspective fails to acknowledge that the prize at the end of delivery, which usually motivates a project to complete, is the return on significant capital investment. However, the delivery challenges faced including timescales for delivery and external delays are not sufficiently acknowledged in the process to date—which the EY report has called out. In our view, process improvements also in the EY report to help ensure greater likelihood of deliverable projects being awarded at auction should allay fears around Implementation Plans. We would strongly encourage this modification is reviewed with respect to addressing the concerns it raises, for future auctions.
Recalibrating the administrative scarcity pricing function so BM pricing better reflects market scarcity and causes a higher frequency of periods with prices above the RO strike price.	There is no demonstrated evidence of the benefit of increased frequency of scarcity events. Where constraints and curtailment, schedule and dispatch are all in the control of the TSO—units have limited ability to respond if the TSO has dispatched a unit down. Whilst there remains a significant blanket risk of RO penalties which would fall before scarcity pricing would occur, true scarcity cannot be demonstrated (except by those who may not face the same Reliability Options penalties). Therefore, unless this very systemic issue is addressed, exposing units to RO strike prices simply to artificially increase scarcity to be able to meet the level of administered scarcity is unsustainable. We agree that all things moving towards economic signals in market and dispatch, the market should adequately demonstrate scarcity.

	However, it is still have not been demonstrated why increased scarcity will have benefit for the CRM. We can suggest that where scarcity will provide a clear signal and incentive on the TSO to procure more capacity, deliver more infrastructure, or deliver reduced constraints—this could be a useful signal. We also would consider that if increased scarcity events will help to recalibrate the administering of the CRM towards procurement for security of supply, this could be a useful signal. By recalibrating of the CRM, we mean the following: • A capacity requirement that reflects the true capacity need taking account of potential non-delivery, high load factor units that could cannibalise the capacity pot. • Procurement of unconstrained capacity on the basis of resilience and security of supply such that units being procured will be flexible and supportive to the system. • A CRM that procures a mix of size and technology of generation that will improve system resilience such that it addresses the current issue that on a regular basis a large unit on outage causes disastrous system tightness and demonstrates a lack of system resilience. • Capacity procurement that acknowledges the interrelated nature of revenue streams in this market and seeks with the CRM signal only to encourage procurement and delivery at a reasonable return, but does not seek to undercut the necessary other revenue streams in the market, i.e., DS3, IMR, etc. Where all these are addressed and scarcity events are frequent, this will sharpen that signal towards the right actions: second order capacity procurement in a constrained basis to reflect additional challenges, infrastructure development, system services procurement.
Refining the principle of flagging interconnector actions from SEM BM prices to drive prices that are more likely to exceed the RO strike price and more reflective of the value of generation.	There is no clarity as to why more prices above the strike price is a welcome, reasonable or needed outcome. At present, RO strike price triggering is occurring at times that are often counterintuitive. Furthermore, the strike price can be triggered by non-generation/non-contracted participants when the RO strike price is meant to be solely a security of supply signal. If the focus for reviewing the flagging of interconnectors is to improve economic dispatch, it is more reasonable to first demonstrate that dispatch of interconnectors is economic (and competitive), before refining the flagging of these actions. Currently, countertrades are not competitively struck by virtue of various trade price options offered to the TSO. Given the size of the SEM (which is small) and the in-feed volume of interconnectors to the market (which has a large impact); interconnectors always have the potential to disproportionately effect cash-out. So long as prices for these trades continue to disproportionately impact the market, we cannot consider it prudent to refine flagging of interconnectors. We would also point to the fact that this recommendation assumes that interconnectors would help to reflect the value of generation. This is an inaccurate conclusion due to: • Interconnectors import prices from a neighbouring jurisdiction—which intuitively distorts the value of local generation given their

	impact on cash-out is made up of neighbouring prices effects as well. • Interconnectors can displace the flow of local generation to meet local demand, when prices are more favourable in the neighbouring jurisdiction. • Interconnectors are always system actions based on the TSOs Balancing Market Principles Statement. Where Electricity Balancing Guidelines starts to be implemented, there would be more benefit in reassessing interconnector actions. Taken together, the starting point for reassessing flagging actions on interconnectors is flawed and bears significant further consideration and calibration of other aspects of market design and trading behaviour before it can be reconsidered. Finally, in our view, this report fails to consider the incentives needed on the TSO to better reflect true scarcity, i.e., encouragement to utilise best efficient offerings in the market, even if this is reserve requirement vs IC trades, TSO moving to dispatch as closely in line with economic price. Without a clear picture of when reserve requirement should be efficiently exhausted to maintain economic dispatch, there is never a true picture of scarcity. This is needed as a starting point to be able to confirm that insufficient scarcity events have occurred and to explain why more strike price or scarcity events should occur in this market.
Greater monitoring of technology performance in stress events to inform future de-rating factor setting	Where de-rating is based on performance during scarcity—it may make sense for more monitoring to inform de-rating factors on an ongoing and more dynamic basis.
Applying administrative penalties for non-delivery to plants in specific locations where an amber alert has been raised and a plant is unavailable.	We would not be comfortable with a double penalty alongside the RO charges. This undermines the materiality of RO difference charges faced by generators. There is an assumption that penalties faced by capacity contracted units are immaterial, as evidenced by recommendations relating to additional performance-related penalties. At the same time, the report comments on the fact that the degree of penalty faced by generators is in fact considerable when compared to other jurisdictions. Yet the report still recommends further administrative penalties. In the face of these conflicting messages, we would consider this is not a priority recommendation. It would be more favourable to get the calibration of the RO incentive right. It is worth also being aware that SEM-22-030 clearly acknowledges the materiality of the penalty structure in this market, given that it is seeking to understand whether the RO difference charges are effectively being applied in the right circumstances. Such a recommendation also further concentrates the focus on locational constraints, where in fact there is an obligation on the TSO to reduce constraints demonstrably year on year. Where this is achieved, having specific penalties on a locational basis would make little sense. Finally, this recommendation also conflicts with the ambition for infrastructure development to reduce the pressure for new builds in specific locations (which is of higher priority). The CRM design was for unconstrained auctions to be held and for the pure procurement of

	capacity for security of supply. Where it continues to concentrate locational constraints, it undermines the original design ethos for unconstrained procurement.
Implement a baseline methodology for assessing the contribution of DSUs in reducing energy demand.	We would provide comments to any consultation relating to this recommendation. We would not consider this is of priority where it is still necessary to monitor and analyse DSU contribution to date in order to consider the provision of energy payments to these parties.
Pay DSUs for negative generation up to the RO strike price.	As above. We can see the rationale for this recommendation, but it needs to be based on background analysis that has an appropriate handle on the level of responsiveness and performance of DSUs to date. In the market at present, DSUs are rather incentivised more not to respond given how they are separately settled. Until this is resolved and DSUs face same market signals with penalties and benefits—it is unreasonable to remunerate them to any level.
Determine energy-only stack within balancing market and compensate generators if instructed not to run for system reasons.	In principle this would be a reasonable and useful market mechanism to be able to address the external risks that generators face where they are not dispatched. This could be a suitable priority for implementation, however, without detail of whether this stack could realistically be developed in systems, we cannot be certain of its applicability in the near to medium term. We would encourage this to be explored further given its potential benefit. We would also consider that where an energy-only stack could be usefully isolated, it may be a mechanism to address the applicability of RO difference charges since energy and system actions should be effectively separated with this measure, in separate stacks.
Greater focus on delivery of infrastructure to enable more competitive all-island market and to reduce pressure for new builds to be situated in particular locations.	This is a significant and long-standing priority for all generators in the market. Slow, delayed or missed infrastructure build out poses a significant impediment to delivery of new capacity. This is due to the degree of constraints that would be faced by prospective generators, the lack of certainty regarding grid firm access and the real concern that the full potential of generation connected to the grid is not being realised. Rather than only a focus on greater interconnection, the paramount focus of the TSO must be delivery of grid infrastructure, the reduction of constraints and the optimisation of generation to its full potential. A security of supply situation, such as we are experiencing now, must be better mitigated in the future by the ability to connect and realise the full potential of local generation across the island, via the strength of its infrastructure. We concur with the conclusions of the report that this area is a priority, will have a positive impact at auction and will help dilute any perceived locational advantages.

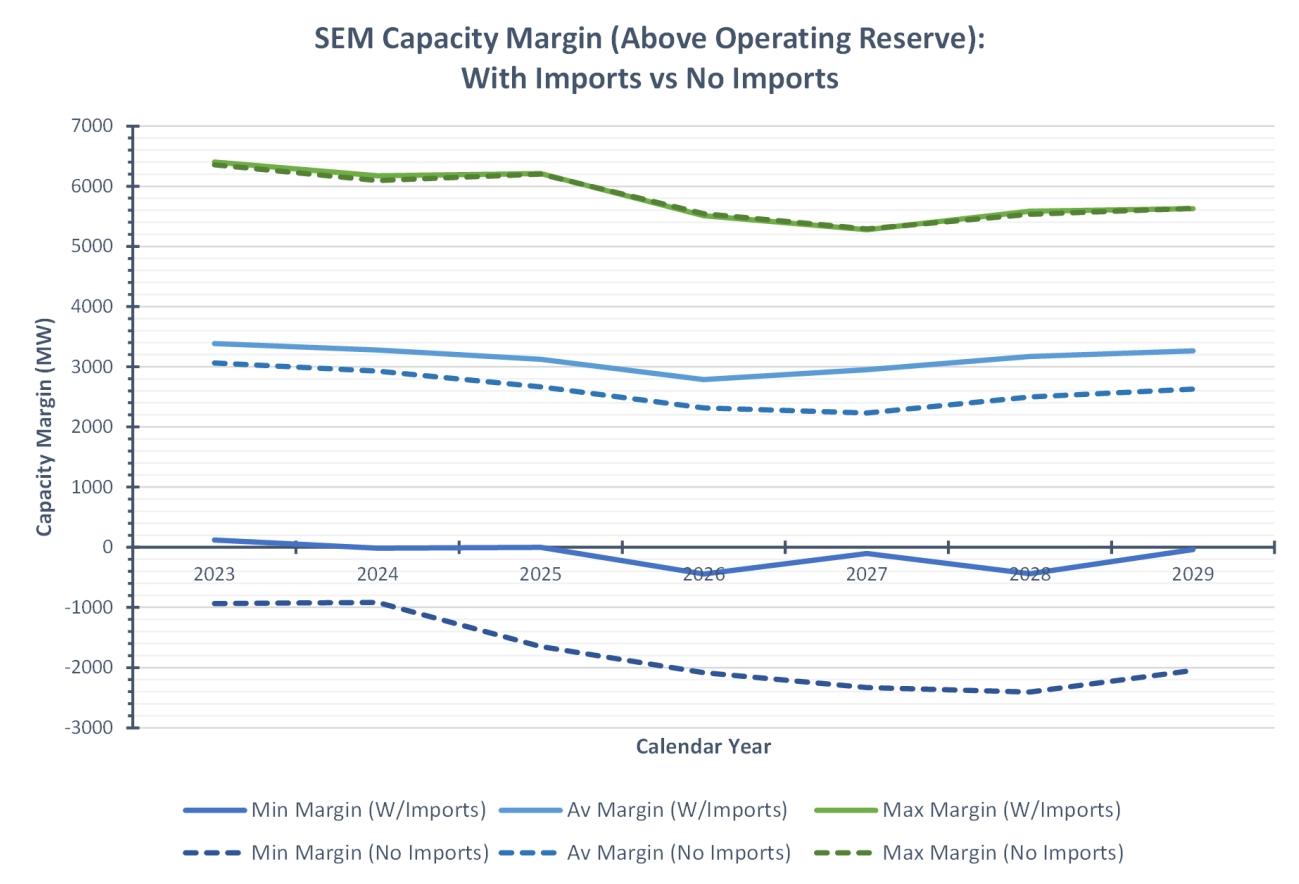
SUMMARY

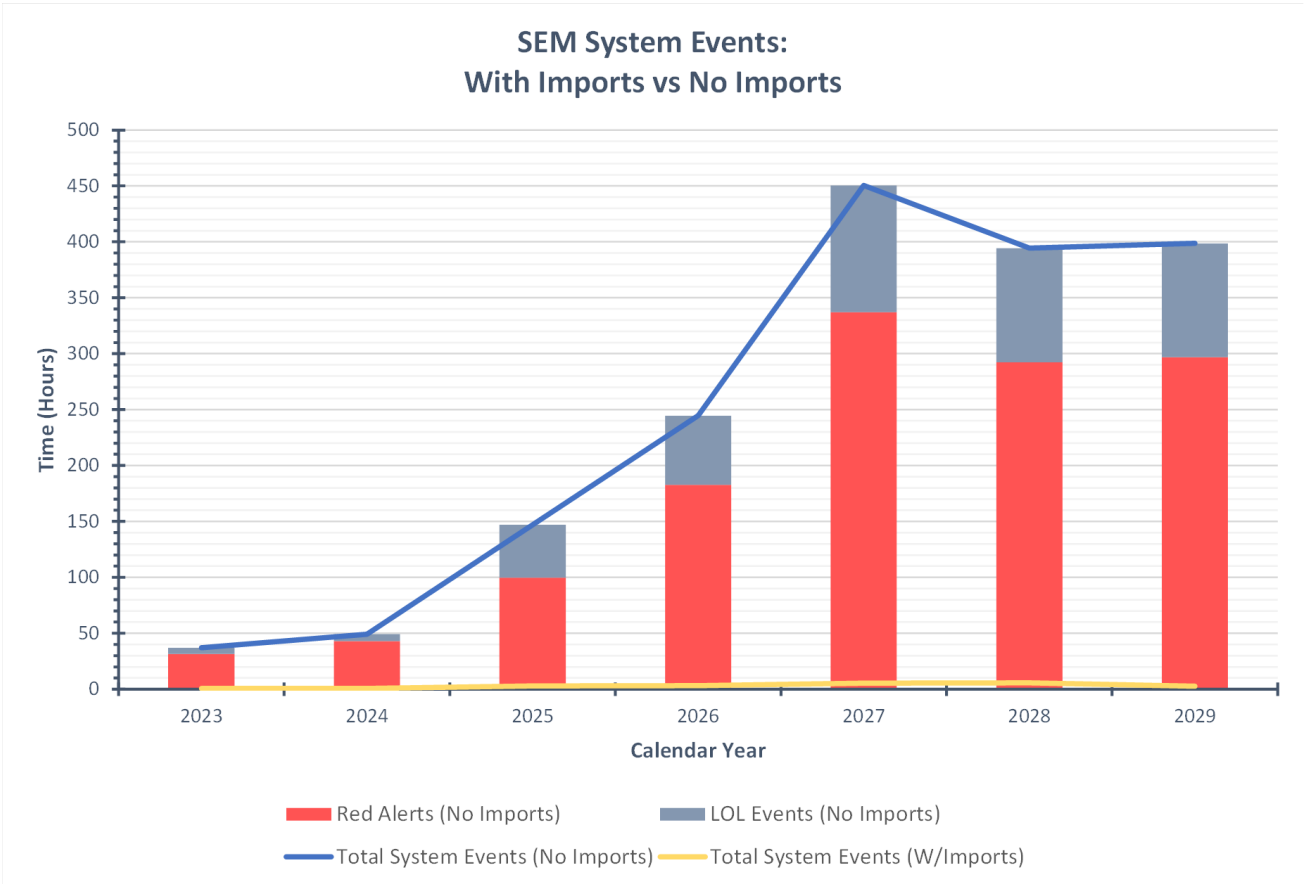
In conclusion, we would appreciate in the first and immediate instance, some indication of the use of this report and the recommendations enclosed with respect to future Capacity Auctions. Industry requires as much certainty as possible for future investment, even where at the same time, we can welcome many of the recommendations being suggested.

As we have clearly articulated, this strategy paper is a step in the right direction but requires detailed consideration of priorities and roadmap for delivery. Finally, whatever approach is taken, the investor approach, security of supply dilemma and environmental ambitions in Ireland must be considered intrinsic to what the CRM should be seeking to achieve in the medium and long term.

APPENDIX 1: ANALYSIS OF INTERCONNECTORS

We have used publicly available data as drawn from such publications as Generation Capacity Statement and market data. We have examined data from the past two years.




SEM System Events:
With Imports vs No Imports
Time (Hours)
500
450
400
350
300
250
200
150
100
50
0
2023
2024
2025
2026
2027
2028
2029
Calendar Year
Red Alerts (No Imports)
LOL Events (No Imports)
Total System Events (No Imports)
Total System Events (W/Imports)