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# Call for comments on the EY review of the performance of the SEM CRM

## **EirGrid & SONI response**

2 November 2022



## Executive Summary

EirGrid, the Transmission System Operator (TSO) in Ireland, is required to publish forecast information about the power system, as set out in Section 38 of the Electricity Regulation Act 1999 and Part 10 of S.I. No. 60 of 2005 European Communities (Internal Market in Electricity) Regulations.

SONI, the TSO in Northern Ireland, is required to produce an annual Generation Capacity Statement (GCS), in accordance with Condition 35 of the Licence to participate in the Transmission of Electricity granted to SONI by the Department for the Economy (DfE).

Collectively EirGrid and SONI are referred to as the Transmission System Operators (TSOs). The TSOs prepare an annual report that forecasts the likely electricity generation required to ensure that supply and demand are balanced over the next ten-year period, based on expected electricity supply and demand. This report is called the Generation Capacity Statement (GCS). In accordance with requirements, EirGrid prepares a GCS for Ireland and SONI prepares a GCS for Northern Ireland. A joint paper is then developed into an overall All Island Generation Capacity Statement incorporating the GCS for Ireland and the GCS for Northern Ireland.

The Commission for Regulation of Utilities (CRU), which regulates the electricity system in Ireland, is responsible for the security of supply of electricity in Ireland. The Utility Regulator (UR) in Northern Ireland approves the GCS prepared by SONI. Collectively the CRU and the UR are referred to as the Regulatory Authorities. Each Regulatory Authority (RA) prescribes the methodology the TSOs use to prepare the GCS in Ireland and Northern Ireland respectively. The Single Energy Market Committee (SEMC) is the decision-making authority for all matters related to the integrated Ireland and Northern Ireland electricity market (the 'Single Electricity Market') and contributes to the combination of the Ireland GCS and Northern Ireland GCS into the All-Island GCS.

We welcome and look forward to engaging in the independent review being conducted by Dermot McCarthy on behalf of the Minister to understand how the present situation occurred. The SEMC's "Call for Comments on the EY Review of the Performance of the SEM CRM" (the "SEMC Review") and the 28 June 2022 EY Report (the "EY Report") upon which the SEMC Review is based, offers an opportunity to reflect on the role of the Capacity Remuneration Mechanism (CRM) process in this regard. It is important to note that the EY report, while being consulted upon by the SEMC, was commissioned by CRU and therefore a number of items are addressed from an Ireland perspective.

EirGrid has been on the record noting that the current CRM mechanism is not fit for purpose. A functioning CRM is a vital component of ensuring the right balanced portfolio of capacity is invested in and connected to the grid. A number of circumstances have resulted in us arriving at this critical juncture in our capacity adequacy outlook. Since 2016, the Generation Capacity Statement has clearly signalled a tightness in the balance between supply and demand and that existing plant will close due to environmental regulations and the need for new replacement capacity. In 2021 there was an additional event where two large generators were forced off the system causing short term issues in managing capacity. This is a separate matter and should not be conflated with the functioning of the CRM system. Whilst these units returned to service, a separate circa 650MW of capacity that was scheduled to connect under the CRM withdrew. The withdrawal of that capacity triggered the need to re-assess system adequacy in Ireland and EirGrid as a result in accordance

with Regulation 28 of SI 60 of 2005 issued correspondence to the CRU in June 2021 outlining the threat to security of supply and the measures required to be taken to address that threat. This letter followed correspondence issued by EirGrid to CRU in March 2021 outlining security of supply concerns.

The current situation is a result of insufficient capacity being secured through the CRM and hence our conclusion that it is not fit for purpose. We further elaborate on this position through a number of key observations on the EY report which are outlined in principle below and further elaborated on across the remainder of this submission.

- The correct investment signals are required to incentivise the balanced portfolio of generation to ensure a secure power system while delivering on the Irish Government's and Northern Ireland Assembly's policies on renewable integration and decarbonisation ambitions. All the evidence suggests that the investment signals deployed to date have failed and that failure to address the same is likely to have implications for generation adequacy for the foreseeable future.
- There are clearly issues with the performance of the current CRM design and its ability to secure the necessary capacity to maintain security of supply. This has been unmistakably demonstrated by the circa 650MW of capacity procured through the CRM auction process since 2018, that has subsequently terminated their awarded capacity and as a consequence has failed to deliver critical capacity needed for security of supply. Only 12MW of gas capacity has been delivered. We agree with the findings of the EY report that robust assessment of the potential delivery risks and identification of barriers to delivery are critical elements to both supporting the delivery of projects and ensuring CRM volumes can be calculated taking into account these risks.
- There is an emergency security of supply challenge in Ireland that threatens to endure for a number of years as well as short term capacity concerns in Northern Ireland. This has serious implications for both security of supply and sectoral targets for the reduction of carbon emissions for Ireland and Northern Ireland where carbon budgets are currently being considered. This cannot be viewed as a success.
- In our view, the CRM is incentivising the type of technology which does not meet the current or future needs of the electricity system in Ireland or indeed the Irish Government's and NI Assembly's decarbonisation targets, such as low-cost, inefficient and high-emission plant, low performing demand side units and short-duration batteries.
- We agree with the findings in the report that the capacity reliability standard (loss of load expectation, LOLE), which is set by CRU, should be reviewed, as a matter of urgency, to ensure it is appropriate for the electricity system in Ireland. Ireland currently operates to a higher risk standard than Northern Ireland and the majority of Western European countries.
- We fundamentally refute the statement that the GCS did not clearly signal to the market the capacity deficit. The GCS has consistently, since 2016, signalled a tightness in the balance between supply and demand, that existing plant will close due to environmental regulations

and the need for new replacement capacity. This has been publicly acknowledged by third parties.

- The GCS methodology, which is prescribed by the RAs, is however in need of review. This has commenced under the umbrella of the National Resources Adequacy Assessment process. In seeking to address some of the current shortfalls, since 2019 the TSOs have included additional sensitivity analyses to reflect the changing electricity system.
- There is transparency around the calculation of the TSO recommendations for capacity requirements to be secured via the CRM defined in a publicly available methodology, SEM-18-030a “I-SEM Capacity Market: Methodology for the Calculation of the Capacity Requirement and De-rating Factors”.
- However, we agree with the report findings of the need for greater transparency around the SEMC decisions. Such decisions have consistently failed to provide supporting argument as to why EirGrid and SONI recommendations for new generation capacity have been apparently arbitrarily discounted and where no factoring has been included to take account of the inevitable attrition which will ensue for development projects of this nature. We would strongly contend that the installation of an independent panel of experts is neither justified, efficient or in keeping with the RAs’ respective obligations or vires.
- In our view there are a number of apparent misunderstandings, inconsistencies and inaccuracies in the report which we have addressed through a review in Annex 1 to this submission. The SEMC recommendations outlined at a high level in its consultation document, which appear predicated on the basis and findings of the EY report should therefore, in our view, be further reviewed in light of this.
- The TSOs welcome the focus on aiming to attract new investment in the right technologies into the CRM but remain concerned that the measures suggested will not be sufficient to encourage new capacity to consent in advance of auctions, will not incentivise investment in the right type of technology aligned with Government targets and a secure transition, will not adequately incentivise existing plant to continue to invest, and will not provide sufficient certainty to support sustained economic growth.

EirGrid and SONI look forward to continuing to engage with SEMC, the RAs and other stakeholders in reviewing the performance of the CRM to ensure that all stakeholders can have a system that will ensure security of our electricity supply and enable the vital transition to a decarbonised electricity system.

We note a series of proposals in the SEMC’s call documentation accompanying the EY report. Firstly, we propose that it is more prudent to establish our position on the EY report on which it is assumed the recommendations are based in the first instance. Secondly, we would note that in our view there is insufficient detail in the SEMC paper on which to comment on, but we look forward to further engagement with the SEMC as this detail develops. Finally, we are engaged in the review being conducted by Dermot McCarthy on behalf of the Minister and we look forward to the outcome from this review process.

# EirGrid and SONI response to the Call for comments on the EY review of the performance of the SEM CRM

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The Commission for Regulation of Utilities (CRU), which regulates the electricity system in Ireland, is responsible for the security of supply of electricity in Ireland. The Utility Regulator (UR) in Northern Ireland approves the GCS prepared by SONI. Collectively the CRU and the UR are referred to as the Regulatory Authorities. Each Regulatory Authority (RA) prescribes the methodology the TSOs use to prepare the GCS in Ireland and Northern Ireland respectively. The Single Energy Market Committee (SEMC) is the decision-making authority for all matters related to the integrated Ireland and Northern Ireland electricity market (the 'Single Electricity Market') and contributes to the combination of the Ireland GCS and Northern Ireland GCS into the All-Island GCS.

We welcome and look forward to the outcome from the independent review being conducted by Dermot McCarthy on behalf of the Minister to understand how the present situation occurred. The SEMC's "Call for Comments on the EY Review of the Performance of the SEM CRM" (the "SEMC Review") and the 28 June 2022 EY Report (the "EY Report") upon which the SEMC Review is based, offers an opportunity to reflect on the role of the Capacity Remuneration Mechanism (CRM) process in this regard. It is important to note that the EY report, while being consulted upon by the SEMC, was commissioned by CRU and therefore a number of items are addressed from an Ireland perspective.

Our response is set out across four sections, firstly some key background context, secondly some key observations on the EY report, thirdly an explanation of the differences between the GCS development process and the determination of a capacity requirement for the CRM and finally in Annex 1 we have conducted a more detailed factual review and comment on the EY report.

## Key Background

Since 2012, Ireland’s electricity demand has shown consistent growth, as has been forecast by EirGrid, based substantially on the strong performance of the Irish Economy and it is reasonable to assume that such growth will continue, enabled by economic policy, population growth and the decarbonisation of our energy system. The total growth in peak and overall demand for electricity in Ireland over the last 5 years has been 9%. It should be possible for a functioning CRM mechanism to plan for and deliver the necessary generation capacity to support such reasonable growth.

The demand forecasts contained in the Generation Capacity Statements have been demonstrated to be highly accurate, with an average of only 2% deviation for the temperature corrected peak demand based on a review of the GCS since 2016. This is further demonstrated in Figure 1.

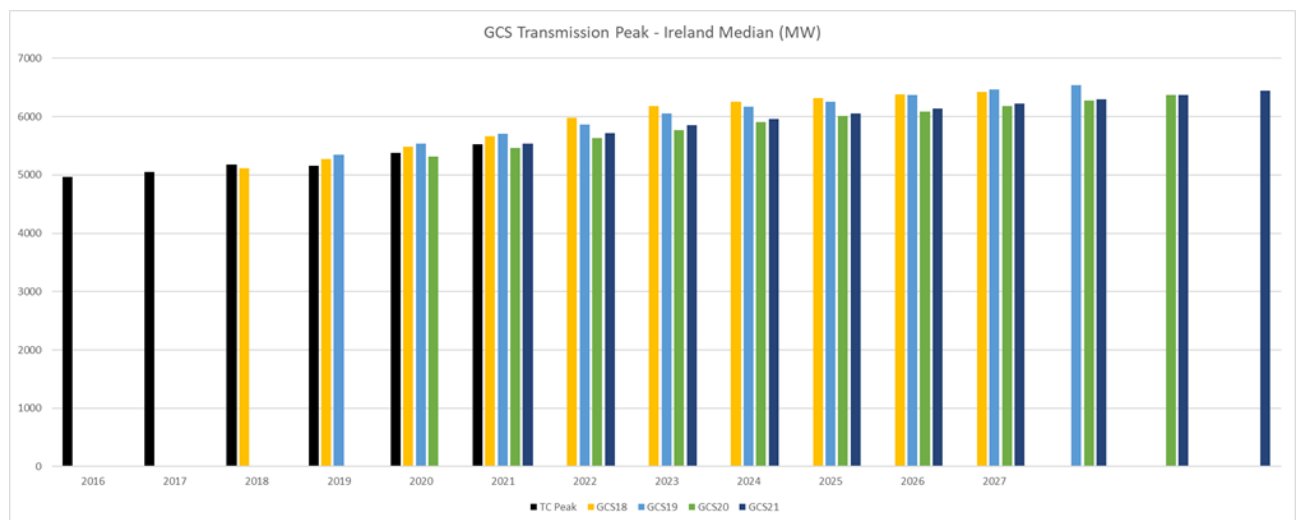


Figure 1: Graphical representation of the Actual and GCS forecast system peak

It is clear that new capacity to meet this clearly forecasted need has not delivered. Circa 650MW of capacity had withdrawn by the date of the SEMC Review and more is expected to withdraw imminently. There is also a need for the SEMC to give consideration to the impact of inflation on the projects that have been approved in the more recent auctions to ensure they are incentivised to deliver.

Existing plant performance has declined substantially during the CRM period, for a number of reasons including environmental regulations. In addition, for a number of auctions insufficient capacity has been available to qualify to meet auction requirements. Both of these factors, even of themselves, demonstrate that the CRM is in urgent need of reform.

The RAs have, on many occasions, approved a lower volume of capacity than recommended by EirGrid and SONI, without the transparent and evidence-based justification to support the lower volume (see Table 2 in the Annex). The need for new capacity to deliver is clear and the lack of same has necessitated a number of emergency measures in Ireland as per the CRU’s Security of Electricity Supply – Programme of Actions.

It is imperative that we secure new capacity to ensure the security of our electricity supply, but we also have to secure the very necessary transition to renewable and low carbon energy. The CRM is incentivising the type of technologies which do not meet the current or future needs of the electricity system in Ireland or Northern Ireland or indeed the Irish Government's and NI Assembly's decarbonisation targets, such as low-cost high-emission plant, low performing demand side units and short-duration batteries,

Mindful of this range of clear issues with the current CRM, EirGrid and SONI have given careful consideration to the SEMC's "Call for Comments on the EY Review of the Performance of the SEM CRM" and the 28 June 2022 EY Report upon which the SEMC Review is based.

The SEMC Review, based on the EY Report, sets out a range of recommendations that the SEM Committee is considering. It is difficult to meaningfully comment on these recommendations without fully understanding the SEMC's own analysis and intended outcome from each beyond that which we have highlighted in our review of the EY Report. We are of the view that there are a range of apparent misunderstandings, inconsistencies and inaccuracies in the report which we have addressed through the review in Annex 1 to this submission. The SEMC recommendations outlined at a high level in its consultation document, which appear predicated on the basis and findings of the EY report should therefore, in our view, be further reviewed in light of this. Furthermore, the independent process being conducted by Dermot McCarthy offers the potential for further reflection from a holistic perspective, with reference to the needs from an Ireland perspective both now and into the future.

We trust that SEMC will provide further information on any intended new measures in due course.

## **EY Report Review**

Firstly, it is important to note that there are a number of the key findings from the EY Report that the TSOs could support in principle, and indeed have been calling for some time such as the need to review the LOLE standard for Ireland, which is set by the RAs, (*"one of the highest"*) and separately the need for greater transparency of RA adjustments in setting the capacity requirement. The LOLE for Ireland is shared by only Lithuania with all other European countries adopting more rigorous standards. In our view this is not an appropriate level for Ireland considering the profile of our economy and the level of foreign direct investment today and into the future.

However, the report contains a number of findings where we consider inaccuracies, inconsistencies or misunderstandings of the process manifest. We have conducted a review which can be found in Annex 1, to illustrate the same. Some of the key observations we would make are:

- The opening judgement in the EY Report is that the "CRM has been successful against a range of metrics" except for a projected "2GW shortfall by 2030" in the context of the security of supply challenge in which we find ourselves. EirGrid cannot agree with this comment. Given the clear and immediate issues for security of electricity supply in Ireland, including emergency procurement of 650MW temporary generation this year, and the short-term concerns in Northern Ireland, this does not withstand analysis.
- The EY Report contends that the GCS did not clearly signal to the market the capacity deficit. Since 2016, the GCS has consistently signalled a tightness in the balance between supply and demand and the need for new capacity. The earlier T-4 capacity auctions attracted significant

interest from new capacity and significant volumes of capacity were awarded, but subsequently the new capacity providers terminated their contracts.

- The EY report makes a number of references to the revision of demand over time in the GCS:
  - We disagree with the statement: *“It is unclear why the GCS has applied downward revisions to demand over time while also identifying an increasing future capacity shortfall.”* The TSOs recognise that median demand forecasts were downwardly revised across the GCS 2019- 2028 and GCS 2020-2029. We note that EY identify in their report that the rationale for the demand changes were clearly articulated by the TSOs, through this transparent process. The TSOs’ therefore dispute that it was “unclear why the GCS applied downward revisions...”, since EY note this was due to a refinement in data centre demand forecasting.
  - The EY Report suggests there is a lack of clarity when demand forecasts are reducing, and the shortfall gap is increasing. For the TSOs, a critical factor we need to continually reflect on is what is happening across various market segments to inform our forecasting. If we do not refine our forecasts to align with historical trends for data centre and other growth, we could potentially over-estimate the capacity shortfall at additional cost to the end user.
  - As outlined in the Key Background section and Figure 1, our forecasts have been highly accurate in relation to demand.
- There are clear misunderstandings of the underlying methodologies relating to the GCS and volume setting. EirGrid/SONI analysis is clearly misunderstood in several sections.
  - The GCS is a reliability report based on a forecast of demand and expected generation over the decade. The capacity market on the other hand takes the demand input from the GCS amongst other considerations to create a volume requirement to ensure sufficient capacity is procured to maintain a reliability standard that includes demand and operational security requirements. We have included a section later in this submission to specifically outline the methodologies for each.
  - The EY report notes the need for greater transparency in the setting of the capacity requirement. The Generation Capacity Statement (GCS) and Capacity Market (CM) TSO capacity forecast requirements are subject to strong governance and the mechanisms for each are transparently defined in a publicly available methodology, SEM-18-030a “I-SEM Capacity Market: Methodology for the Calculation of the Capacity Requirement and De-rating Factors”<sup>1</sup>. However, we agree with the need for greater transparency around the RA decisions. In this regard we would argue that the installation of an independent panel of experts is neither justified, efficient or in keeping with the RAs’ respective obligations and vires.
  - Aside from the transparency and signalling of the capacity requirement, the EY Report takes issue with the quality of the capacity requirement forecast. It is very unclear to EirGrid and SONI, and consequently likely to be very unclear to other stakeholders, how an impact score of 5 could be given in response to the following question: ‘1.2: Did the TSO accurately forecast future capacity requirements?’

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<sup>1</sup> SEM-18-030a “I-SEM Capacity Market: Methodology for the Calculation of the Capacity Requirement and De-rating Factors



- The report incorrectly states that the difference between the TSO Capacity requirement recommendation and the GCS is that the GCS does not account for operational requirements or transmission outage planning.
- It is worth noting that the change in capacity requirement analysis by EY in the report is shown on an aggregated all island basis in the main body of the report and only shown on a locational basis in an appendix. This does not adequately illustrate the significant differences in TSOs requested volumes for Ireland and what was approved by the SEMC.
- There are quite a number of potential remedies that are, in our view, either incomplete or could be counterproductive.
- It is notable that the EY Report and SEMC Review makes limited reference to the need for a clear signal being provided by the SEMC in terms of the level of demand growth that is considered reasonable in the context of Government policy in Ireland and Northern Ireland, and that should be supported by the CRM in the coming years. It would provide very useful insight to many stakeholders to understand the SEMC thinking in this regard.
- In our view, the EY Report and SEMC Review provide insufficient analysis as to the limited number of new conventional plant that either have consents (such as planning and environmental) or are seeking to consent plant in advance of capacity auctions, despite the fact that such information is publicly available and through dialogue with developers. We agree with the findings of the EY report that robust assessment of the potential delivery risk and identification of barriers to delivery are critical elements to both supporting the delivery of projects and ensuring CRM volumes can be calculated taking into account these risks.
- The EY Report recommends that planning permission is a requirement to qualify for an auction however there is no evidence or analysis provided as to how projects will be encouraged to seek consents in advance of an auction, how such will be funded and the legal implications of such an approach.

As noted earlier, in our view, the EY report doesn't adequately address the difference between the role of the Generation Capacity Statement and determination of the capacity requirement for capacity auctions. The next section clarifies the difference between the two approaches.

## **Overview of GCS and Capacity Requirement**

The EY report incorrectly attributes the difference between the GCS and capacity requirement as only a series of additional operational requirements, of which transmission outage planning is one. The actual difference is that the capacity auction requirement is based on the construction of adequate portfolios using marginal de-rating factors while the GCS compares actual portfolios to demand forecasts with the difference being expressed as conventionally de-rated capacity.

The Generation Capacity Statement not only forecasts demand it also provides a TSO forecast on existing and future capacity, which includes thermal generation, renewable capacities, storage, DSU and interconnection. This generation forecast process is a transparent process which gathers information from market players and accounts for new capacity that clears through the auction processes. There are several factors that impact the generation forecast. These are transparently highlighted in the GCS 2021-2030 and include lower than expected existing power plant performance (availability), non-delivery of new capacity for future auctions, earlier retirement of power plants and implementation of clean energy package changes in capacity markets. In addition, the All-island Generation Capacity Statement is both an annual license requirement, in accordance with the RAs'

methodology and annually reviewed by the RAs and subject to a regulatory approval process (in the case of SONI).

One of the main purposes of the Generation Capacity Statement is an informed assessment, in accordance with the methodology and LOLE reliability standard set by the RAs, on the adequacy of demand versus supply. The adequacy process uses a scenario type approach with different levels of demand against what we know is available capacity in terms of generation, storage, demand side response and interconnection for future years. The surplus / deficit of capacity against demand gives an indication on the performance of the power system against the reliability standards set by the CRU and DfE for each jurisdiction and the all island system.

The Capacity Market TSO capacity requirement is not a simple forecast of electricity demand. It is a complex process that is governed by regulatory approved decision paper *SEM-16-082 ("Capacity Requirement and De-Rating Factor Methodology Detailed Design Decision Paper")*. The TSO capacity requirement process uses the Generation Capacity Statement demand and portfolio forecasts as inputs. These are translated into a "de-rated" capacity requirement that weighs risks using RA supplied parameters, while factoring in a range of other assumptions, such as embedded generation and non-market renewables amongst others.

The final TSO recommendation of capacity requirement also includes adjustments to cover operational security requirements, other performance and modelling related factors to ensure sufficient volumes of capacity is identified to ensure reliability standards are achieved, so that demand is balanced and operational security requirements are met. It is therefore this volume setting process which takes inputs from the Generation Capacity Statement and outlines the volume of capacity required for the various capacity auctions. The full details of the TSO's capacity requirement recommendation is transparently shared with the RAs for each auction.

## Conclusion

We welcome and look forward to engaging in the independent review being conducted by Dermot McCarthy on behalf of the Minister to understand how the present situation occurred. The SEMC's "Call for Comments on the EY Review of the Performance of the SEM CRM" (the "SEMC Review") and the 28 June 2022 EY Report (the "EY Report") upon which the SEMC Review is based, offers an opportunity to reflect on the role of the Capacity Remuneration Mechanism (CRM) process in this regard. Our submission will be made available to the Dermot McCarthy process in parallel with this consultation process.

EirGrid has been on the record noting that the current CRM mechanism is not fit for purpose. A functioning CRM is a vital component of ensuring the right balanced portfolio of capacity is invested in and connected to the grid. A number of circumstances have resulted in us arriving at this critical juncture in our capacity adequacy outlook. Since 2016, the Generation Capacity Statement has clearly signalled a tightness in the balance between supply and demand and that existing plant will close due to environmental regulations and the need for new replacement capacity.

In 2021 there was an additional event where two large generators were forced off the system causing short term issues in managing capacity. This is a separate matter and should not be conflated with the functioning of the CRM system. Whilst these units returned to service, a separate circa 650MW of capacity that was scheduled to connect under the CRM withdrew. The withdrawal of that capacity

triggered the need to further assess our security of supply position and EirGrid as a result communicated the implications for the power system and the need for action to ensure sufficient capacity. CRU then commenced its security of supply programme. One of the critical components of this is the securing of emergency temporary generation which EirGrid is in the process of securing under legislation introduced by the Minister for the Environment, Climate and Communications.

The current situation is a result of insufficient capacity being secured through the CRM and hence our conclusion that it is not fit for purpose. In this response EirGrid and SONI have outlined elements of the SEMC Review that can be supported. There are however a clear number of shortcomings to the EY Report and clear risks that the review being undertaken by the SEMC will be insufficient to attract the right type new capacity in the right locations, incentivise investment in existing plant and provide for sustainable economic growth.

EirGrid and SONI look forward to continuing to engage with SEMC, the RAs and other stakeholders in reviewing the CRM to ensure that we can have a system that will ensure security of our electricity supply and enable the vital transition to a decarbonised electricity system.

## Annex 1

### Factual Review and comment

The table below contains details of the TSOs factual review and comment on the EY Report. Please note that these are the main comments noted by the TSOs to assist the SEMC in its consideration of the EY Report and should not be read as endorsement or otherwise of the sections not commented upon by the TSOs.

Page	Report Ref/Text	TSOs' Comment
5	<p><b>EY finding:</b>  <i>'The findings of recent GCS publications have not clearly signalled to the market the identification of growing concern around a capacity deficit'</i></p>	<p>The TSOs cannot agree with this statement.</p> <p>There was clear and transparent communication on demand changes and adequacy results throughout GCS publications and in regular discussions with the Regulatory Authorities in advance of and after publication. The need for new capacity was clearly signalled to the market from the GCS.</p>
5	<p><b>EY finding:</b>  <i>'The process by which the target volume to procure is set is opaque and does not clearly signal to developers the growing need for capacity'</i></p>	<p>The TSOs disagrees with this statement.</p> <p>The SEMC govern the SEM capacity market. The Capacity Market Code provides clear rules that the capacity requirement should satisfy the SEM security standard and is set by the RAs.</p> <p>The rules make clear provision that the TSOs should provide a minimum level of capacity for local capacity constraints to satisfy future conditions or limits of the power system.</p> <p>Therefore, the TSOs affirm that the capacity requirement roles are clear and for each auction the TSOs have clearly communicated to the RAs the all island capacity requirement as part of the Initial Auction Information Pack (IAIP) and the volumes to satisfy the jurisdictional requirements managed</p>

		<p>using the local capacity constraint (LCC) areas as part of the Final Auction Information Pack (FAIP).</p> <p>However the following is not clear; why the RAs chose on many occasions to reduce the LCC capacity requirement down for Ireland related local capacity constraints (LCCs)?</p> <p>The capacity requirement for the all island Initial Auction Information Pack (IAIP) tends to be approved in its entirety; whereas the Final Auction Information Pack (FAIP) volumes differ compared to what the TSOs recommend are indeed required to satisfy the SEM security standard.</p> <p>We therefore agree that further transparency is required around the manner in which the RAs and SEMC finalise the capacity requirements of each of the of the jurisdictional local capacity constraint areas.</p> <p>In addition, it needs to incentivise investment in the balanced portfolio of generation to ensure a secure power system while delivering on the Irish Governments and Northern Ireland Assembly’s policies on renewable integration and decarbonisation ambitions.</p>
5	<p><b>EY finding:</b>  <i>‘Projects without planning and environmental consents were qualified for the auction which were unlikely to be deliverable in time for the start of the capacity delivery year, absent significant coordinated action on the part of a range of state bodies.’</i></p>	<p>The TSOs disagree with this statement.</p> <p>The capacity market code set by the SEMC clearly sets out the complete set of rules by which the TSOs administer in full accordance with the qualification process as is outlined in the Capacity market code and the relevant capacity market code agreed Procedure 3 - Qualification and Auction Process.</p> <p>The RAs review the system operator qualification decisions with the power to accept or reject the TSO qualification decision.</p> <p>The TSOs note to meet the capacity needs identified there were/are not enough credible projects that meet all the SEMC qualification criteria,</p>
6	<p><b>EY’s question:</b>  <i>‘1.2 Did the TSO accurately forecast future capacity requirements?’</i></p> <p><b>EY finding:</b>  <i>Impact Score 5</i></p>	<p>The TSO cannot agree that an impact score of 5 is justified.</p> <p>The TSOs fundamentally refute the statement that the TSOs did not accurately forecast future capacity requirements. Since 2016, the GCS has consistently, signalled a tightness in the balance between supply and demand, due to growing demand, to deteriorating plant availability and some existing plants closing due to environmental regulations; thereby highlighting the need for new replacement capacity.</p> <p>The TSOs did accurately forecast the future capacity needs, via the Generation Capacity Statement and in the TSO submissions to the SEMC in all auctions. The demand forecasts contained in the Generation Capacity Statements have been demonstrated to be highly accurate, with an average of only 2% deviation for the temperature corrected peak demand based on a review of the GCS since 2016. This is demonstrated in table 1 below:</p>

Table 1 – GCS accuracy checks GCS 2016 to 2021

	Historical		Median Scenario - Tx Peak					
	Exported Peak	Temp Corrected Peak	GCS16	GCS17	GCS18	GCS19	GCS20	GCS21
2016	4752	4969	4994					
2017	4940	5047	5070	5080				
2018	4910	5178	5112	5190	5120			
2019	5007	5153	5146	5300	5270	5350		
2020	5348	5375	5196	5400	5480	5540	5320	
2021	5346	5529	5241	5490	5660	5710	5460	5540

Difference from Temp Corrected Peak

	GCS16	GCS17	GCS18	GCS19	GCS20	GCS21	Average	Min	Max
1 year ahead	-0.5%	-0.7%	1.1%	-3.8%	1.0%	-0.2%	-0.5%	-3.8%	1.1%
2 year ahead	-0.5%	-0.2%	-2.3%	-3.1%	1.3%		-1.0%	-3.1%	1.3%
3 year ahead	1.3%	-2.9%	-2.0%	-3.3%			-1.7%	-3.3%	1.3%
4 year ahead	0.1%	-0.5%	-2.4%				-0.9%	-2.4%	0.1%
5 year ahead	3.3%	0.7%					2.0%	0.7%	3.3%

The issue at hand is that the SEMC reduced the volumes sought by the TSOs to satisfy the security standard for each jurisdiction's Local Capacity Constraint areas for each auction. See table 2 below

Table 2 Results of the capacity market, 2017 -2021 – Ireland only

Capacity auction	TSO Net Required Quantity	RA Net Approved Volume	Difference	Awarded Capacity	Surplus / Deficit
T-1 2018/2019	5,260	5,260	0	6,076	816
T-2 2019/2020	5,570	5,570	0	6,269	699
T1 -2020/2021	5,736	5,616	-120	5,732	4
T2-2021/2022	5,704	5,616	-88	5,618	-86
T4-2022/2023	5,680	5,537	-143	5,664	-16
T4-2023/2024	5,269	4,841	-428	5,398	129
T4-2024/2025	5,434	4,551	-883	4,520	-914*
T1-2022/2023	1,248	1,124	-124	987	-261*

\*This auction bought all available capacity

The TSOs welcome increased transparency to the industry on how the SEMC adjust the Capacity requirements sought in the auctions.

6 **EY question:**  
*'1.3 Did RA's make appropriate adjustments to TSO recommendations?'*

**EY finding:**  
Impact Score 5

The TSOs believe the impact score of 5 is correct; however the TSOs argue this has more significant impact than the EY finding for the question "1.2 Did the TSO accurately forecast future capacity requirements"

The RAs did not make appropriate adjustments, for a number of auctions the amounts sought by the TSOs have been adjusted by the SEMC.

The process for the Final Auction Information Pack (FAIP) adjustments is not transparent to the industry and the TSOs welcome more transparency on RA changes to the volumes, and other capacity market parameters.

6 **EY question:**  
*2.1 Did the auctions attract sufficient participation?*

**EY finding:**  
Impact Score 5

**EY's remedy**

The TSOs agree that the auctions did not attract a sufficient number of credible projects, that are deliverable under the current Capacity Market Construct, this is demonstrated by the current security of supply crisis.

	<i>Greater investment in infrastructure to enable more competitive all-island market and reducing pressure for new build to be situated in particular locations.</i>	The TSOs consider that EY's main remedy should not only be on infrastructure investment, but also strong controls around project delivery and the maturity of project proposals into the pre-qualification process.
6	<b>EY Questions</b> 2.2 Are bidding restrictions on existing plants prompting plants to close sooner?  <b>EY Finding</b> Impact score 1	The low score does not bring to light the fact that the current construct of the CRM is providing an exit signal rather than an investment signal.
6	<b>EY Question</b> 2.3 Have new build projects been appropriately pre-qualified for auctions?  <b>EY finding</b> Impact score 3	The TSOs consider that the impact score of 3 is low:  As noted previously there are rules and agreed procedures as set by the SEMC to guide the qualification process.  The TSOs want to clearly state that there are issues with the current pre-qualification rules and the level of the associated risk both through the planning and construction phases into the out-turn operational performance; such as lower than expected availability of energy limited technologies.  The TSOs view EY's assessment of the feasibility of their remedy as 'high' as doubtful given the challenges to consenting faced by new projects in Ireland. In the long term the remedy of requiring all relevant consents may be useful but in the short term it may further reduce the investment pipeline in Ireland.
7	<b>EY Question</b> 3.3 Is there sufficient monitoring of new build projects' progress against milestones?  <b>EY finding</b> Impact score 3	The TSO consider the impact score of 3 is too low.  Historically, monitoring has been a light touch monitoring in line with the SEMC capacity market code rules, where the party developing the project provide implementation progress reports (IPRs) to the TSOs and RA – this has clearly not worked, and a lack of independent review of IPRs should we suggest be reflected in a higher score.  In recent times, the TSOs have established a more rigorous monitoring approach by putting in place an independent third party to assess the progress on projects; giving an earlier insight on delivery, minimising risk of unforeseen adequacy gaps. This approach has given a more realistic picture of project performance. The TSOs also recommend an appropriate incentive mechanism to enhance delivery during and after construction.
7	<b>EY Question</b> 3.4 Have the RA's made appropriate decisions on requests for extensions by new build projects?  <b>EY Finding</b> Impact score 4	The TSOs consider that this impact score is too low.  TSOs recommend the measures are strengthened so that decisions on extensions are there to support effective and timely delivery of new capacity. We need to avoid the situation where in the past RAs decisions on requests for extensions may have led to new build projects pulling out and now coming back at higher cost.
7	<b>EY Question</b> 3.2 'Are the incentives for delivery too low to ensure new capacity is actually built'  <b>EY Finding</b> Impact 3	The TSOs are unsure as to why EY have given this such a relatively low impact score of 3:  The vast of majority of new capacity for the capacity year 22/23 has not delivered. 611 MW of capacity out of 748 MW has terminated.

		If the performance security had been much stronger this capacity would remain in place, and the current security of supply concerns would be much reduced.
8	<p><b>EY Question</b> 4.2 Are there adequate incentives for DSUs to be reliable?</p> <p><b>EY Finding</b> Impact 4</p>	<p>The TSOs are of the view that the impact score should be increased to 5 and remain consistent with the score given to question “4.1: Are there adequate incentives for generation to be reliable?”</p> <p>Furthermore, the listed changes to DSU incentives are scored as being very high in terms of feasibility. The TSOs recommend a proper solution for DSU energy payments would need a meter quantity and not just a dispatch quantity. This would constitute a major project. For these reasons, the TSOs consider the feasibility assessment to be overly optimistic.</p>
12	<p><b>EY statement:</b> <i>‘The SEM RA’s determine the volume of capacity to procure with input from the AI Generation Capacity Statement’</i></p>	<p>The TSOs are of the view that this statement is not fully complete, as the GCS demand forecast is only one element of the capacity requirement. The TSOs are obliged under the SEMC’s Capacity Market Code to calculate a capacity requirement that satisfies the security standard, this process takes into account the jurisdictional elements of the SEM, and a range of technical parameters that will influence the TSOs capacity requirement recommendation to the RAs for the capacity years in question.</p> <p>The final decision on capacity requirement does however lie entirely with the RAs and SEMC.</p> <p>As noted, GCS provides the demand forecast input but this only one part of a wider range of inputs as set out in SEM-16-082 that are required to ensure the TSO capacity recommendation satisfies the SEM security standard.</p>
12	<p><b>EY statement:</b> <i>‘Extensions can be applied for where delivery is delayed’</i></p>	<p>Extensions are bounded by the SEMC rules within the capacity market code. As it stands this is true only for Substantial Financial Completion under the Capacity Market Code.</p> <p>At present there is no clear mechanism for the Longstop Date to be extended, for a project that could be viable but for 3<sup>rd</sup> party delays outside the control of the developer.</p>
12	<p><b>EY statement:</b> <i>‘Providers subject to penalties if fail to generate in a stress event’</i></p>	<p>The RO has clearly been shown to be ineffective with market price rarely going above the strike price.</p>
13	<p><b>EY statement:</b> <i>‘Auction prices have cleared significantly lower than previous administratively set capacity prices’</i></p>	<p>An effective functioning Capacity market will tend towards the net CONE, a lower clearing price during time of scarcity means there is a high risk that there is insufficient value in the market to drive new investment.</p>
13	<p><b>Fact checks</b> <i>‘The volume weighted average auction clearing price... is well below the BNE peaker cost...’</i></p>	<p>Fact check: The €92,300/MW/year should be referred to as “Net CONE” and not “BNE peaker”</p> <p>Also “CONE” legend in chart should be “Net CONE”</p>
13	<p><b>EY statement:</b> <i>‘The CRM has outperformed the reliability standard of 8hrs/year’</i></p>	<p>The report does provide evidence that the current CRM has led to the SEM outperforming the reliability standard.</p> <p>Over the past number of years, the SEM has benefited from a surplus of generation, however as the SEM market evolved to target a reliability standard, margins have decreased as the market aims to buy just enough capacity to meet the standard.</p>

		Furthermore, SEM power plants are ageing, availability of plant is decreasing, and environmental legislation means units are closing earlier than expected. Historically the risk of expected load shedding was low, however now we see from our GCS adequacy studies the loss of load expectation is trending up and in fact there is potential for the risk of load shedding expectation to grow exponentially.
14	<i>EY only reference the GCS2021-2030 to note ISEM Capacity deficits</i>	EY focus their attention on the GCS 2021-2030, however, the TSOs want to make it clear, since 2016 we have been indicating the tightness in the system margins and the need for investment in new generation capacity.  In any event, the TSOs note that the deficit of capacity in forward years is clearly presented in GCS 2021-2030 as referenced in the EY Report.
15	<b>Factual accuracy check</b> <i>'No CCGTs have been successful in auctions'</i>	The TSOs agree there have been no new CCGT units that have been successful in Ireland.  However, EY's statement is not correct, since existing CCGTs do clear in the auctions.
20	<b>Factual accuracy check</b> <i>'The decrease in the total capacity requirement... has caused the TSO to downward revise its forecasts of future capacity requirements. This is questionable given an estimated capacity deficit in 2026'</i>	The TSOs consider that the EY report presents no evidence that the forecasts are incorrect, providing no basis for determining whether they are questionable or not.
21	<b>EY statement:</b> <i>'Maximum number of hours per year where expected load can exceed capacity' '... 8 hours could have demand exceeding supply'</i>	The stated definition of Loss of Load Expectation as being a maximum number of hours where load can exceed demand per year is not correct.  LOLE is a probabilistic measure of the expected number of hours per year where load exceeds available capacity. The mathematics means there is always some probability that load will exceed capacity.
22	<b>EY statement:</b> <i>'It [GCS] differs from TSO capacity requirement recommendations as it does not account for elements such as operational requirements or transmission outage planning  Only median demand levels illustrated.'</i>	The TSOs consider that EY misinterpret the purpose of the GCS and its relationship to the Capacity Market requirement.  The All-Island Generation Capacity Statement (GCS), is an annual report from EirGrid and SONI examining the likely balance between electricity demand for the next 10 years.  The demand chart illustrated on Page 22 provides a partial view of the demand and input parameters of the capacity requirement process which are the low and high demand forecasts.
22	<b>EY statement:</b> <i>'...due to a methodological change in forecasting of data centres...'</i>	The TSOs note that any changes to the demand forecast are as a result of using the best available data at a point in time, all changes are worked through with relevant stakeholders and are subject to regulatory approval.
22	<b>EY statement:</b> <i>'In GCS 2017/18 a flat level of probability to a data centre was applied...'</i>	This statement may be construed as a negative decision on the part of the TSOs, however the TSOs stand by the fact that it was a correct decision to innovate our data centre forecasting techniques to reflect the historical and future expected growth trends of the sector after meaningful stakeholder engagement with the datacentre operators/developers and the CRU and the UR.



23	<p><b>Factual accuracy check</b>  <i>Change in capacity requirement</i></p> <p><i>Use of median demand level as a comparison</i></p>	<p>In this context of the information presented by EY, the TSOs want to clearly state that the median demand level is not the correct measure for comparison to auction capacity requirements.</p>
23	<p><b>Factual accuracy check</b>  <i>'TSO's recommendation adjusts GCS for capacity already contracted, non-market participation and any other relevant changes'</i></p>	<p>This statement is factually incorrect.</p> <p>As per SEM-18-020a, there is a published SEMC procedure to calculate capacity requirement and de-rating factors.</p> <p>The TSO capacity recommendation is derived by taking a least worst regrets approach to what is required to meet the SEM security standard; taking a range of technical inputs, that includes but not limited to the GCS low and high demand scenarios.</p> <p>The TSOs follow the rules that the capacity requirement should satisfy the SEM security standard; but the final say on the auction capacity requirement volumes are set by the RAs and ultimately approved by SEMC.</p>
24	<p><b>EY Question</b>  <i>1.2 Did the TSO forecast future capacity requirements?</i></p> <p><b>EY conclusion</b>  <i>'The GCS forecast total peak requirement for Ireland has decreased significantly from levels published in 2019, however given a capacity deficit of 2GW in 2030 has been projected, it is unclear if the downward revision was appropriate.'</i></p> <p><i>'Substantial scope for improvement'</i></p>	<p>The TSOs refute the claims that the GCS forecasts are inaccurate, historical temperature corrected demand performance clearly shows that our planning forecasts are within 2% accuracy.</p> <p>Therefore, we do not understand how there is room for "substantial scope for improvement".</p>