Energia Response to SEM Committee Consultation Paper SEM-22-054

Call for Comments on the EY Review of the Performance of the SEM CRM

2 November 2022

Executive Summary

The primary purpose of a capacity remuneration mechanism (CRM) is to retain required existing capacity and incentivise investment in both new and refurbished capacity to maintain security of supply. Energia, along with wider industry, have been calling for a review of the CRM for some time given concerns about its performance in meeting these objectives.

Whilst Energia would agree with some of the observations made in the EY report (for example adjusting the capacity requirement to account for non-delivery risk and increasing the auction lead times for delivery of new capacity) we do not consider it to be a complete and robust analysis for reasons explained in this response. In summary, it does not adequately reflect the views of investors and plant operators; it does not identify all of the underlying problems, in fact there are fundamental omissions in the report; and some of its proposed reforms risk creating undesirable exit signals.

Fundamental Omissions in EY Review

Surprisingly the EY Review fails to identify any problem with bidding restrictions on existing plants despite targeted contracting mechanisms being needed in Ireland and Northern Ireland because the capacity market failed to provide adequate remuneration to existing plants critical to security of supply. There is also no recognition in the EY Review that the treatment of existing capacity has a material bearing on incentives (and required returns) for investment in new capacity. The treatment of existing capacity needs attention on a number of fronts, as discussed further below.

- ECPC - given expected capacity shortfalls over the coming years, there is not only a need for investment in new capacity but also a continued need for considerable existing generation to support the low carbon transition. As explained in this response, there is a strong, logical and justifiable case for the ECPC to be adjusted upwards for all future auctions to ensure that existing plants can recover their net going forward costs.
- USPC - the USPC process does not adequately allow for the risks, limitations and challenges of projecting future costs, revenues and level of generation over fours' years ahead; its treatment of unavoidable future investments is flawed; and it adopts an overly narrow definition of net going forward costs. It is therefore not a valid substitute for setting the ECPC too low.
- Plant Refurbishment - the auction rules will continue to discourage refurbishment and plant upgrades unless they allow such investments to benefit from long-term contracts. This is a glaring omission in the EY Review and is particularly pertinent in the context of acute security of supply concerns and difficulties experienced in delivering new capacity.
- Locational Signals - the State aid decision for the CRM notes the importance of locational signals for incentivising generation and transmission capacity in constrained areas, but yet we see no recognition of this or suggested market reforms to address these concerns in the EY Review.
- EY Case Study on Termination of Awarded New Capacity - EY's analysis does not contemplate the broader implications of awarded new capacity being able to terminate and more profitably participate in a future auction and whether this should

be permitted given its potential implications for security of supply and competition. This is an important issue that warrants further consideration.

Concerns with EY Proposals

We have the following key concerns with the proposals recommended by EY:

- Recalibrating the ASP function – analysis shows that projected availability for generators in general is not a key contributory factor to capacity deficits and the EY proposal to recalibrate the ASP function will not result in improved availability as intended. Rather it will increase the risk of penalties to generators when they are already facing a significantly greater risk due to the capacity deficit that has emerged from other failings of the CRM.
- Refine flagging interconnector actions from BM prices – this will reverse a previous RA approved decision and, as above, will not improve capacity reliability as intended.
- Apply administrative penalties for non-delivery to plants in specific locations – the CRM cannot penalise generation in certain locations when the additional value of capacity in these locations is not recognised on the revenue side as well. This is not possible (a) for contracts already set and (b) going forward, with the current bid restrictions.
- Greater monitoring of technology performance in stress events to inform future DRF - whilst we note the rationale of monitoring to inform future DRF the implication that DRFs should be set based on availability during stress events is flawed, as there is a correlation between low availability and stress events - hence availability will be lower than average during stress events.

EY Proposals that Energia would broadly support

Energia broadly supports the following EY recommendations:

- Move to a tighter reliability standard in line with other European markets – Energia has previously called for 3-hour LOLE security standard in line with GB and France.
- More explicitly accounting for the risk of non-delivery in target setting - in terms of adjusting for non-delivery risk, the volumes procured should allow for attrition whilst still meeting capacity requirements, otherwise there is a greater risk to security of supply and of moral hazard coming into play. Monitoring for early indications of non-delivery, whilst welcome, should not be considered a substitute for procuring a contingency for projects that fail to deliver, as seems to be implied on page 6 of the EY Report.
- Greater transparency and oversight of target setting through panel of technical experts – Energia would welcome this initiative and believe that it could usefully be extended to other areas of the CRM (including but not limited to the vetting of qualification applications and the determination of appropriate interconnector de-rating factors, noting the potential / perceived conflict of EirGrid as TSO and interconnector owner / investor). A panel of technical experts could also be used to provide oversight and third-party assurance more broadly (covering, for example, the calculation of TLAFs).

1. Introduction

Energia welcomes the opportunity to respond to the SEM Committee's Consultation Paper (SEM-22-054) on Call for Comments on the EY Review of the Performance of the SEM CRM (the "Consultation Paper"). Energia, along with wider industry, have been calling for a review of the CRM for some time given concerns about its performance in retaining and delivering required capacity to meet security of supply requirements. Before providing detailed feedback, it is first important to establish the key principles of our response in this introduction.

Firstly, as the primary purpose of a capacity mechanism is to retain existing capacity and incentivise investment in both new and refurbished capacity, it goes without saying that any review is meaningless unless investor and plant operator views are adequately taken into account. Unfortunately, EY did not engage directly with investors and plant operators to understand their perspectives during the course of their review. Instead EY only spoke to staff members of trade bodies without speaking to the organisations being represented. This is a significant shortcoming of the process that should be recognised and remedied; and is something that the Electricity Association of Ireland (EAI) called out in correspondence to the RAs in April 2022[1].

Secondly and related to the above, it is very important to correctly identify the underlying problems and their root cause based on expert understanding, experience and rigorous analysis. Any proposed reforms should then be evidence based, proportionate and targeted, having regard to any unintended consequences. We find that many of the suggested remedies in the EY review (particularly in relation to incentives for generation to be available) do not meet these standards.

Thirdly, none of the reforms proposed should be retrospective in effect. Changing the price of already awarded capacity contracts should not be contemplated under any circumstances, and we note that this is subject to a separate proposed modification and Call for Evidence[2]. Similarly, imposing material adverse changes to the risk profile, revenues or costs applicable to capacity providers after auctions have taken place for the period(s) in question, particularly those unlikely to have been anticipated, should be avoided. Some of the proposals in the EY report (for example amending the ASP mechanism or applying administrative penalties on plant in specific locations) would materially increase the risk profile of holding reliability options that cannot be reflected in capacity auction bids because of restrictive bid limits and / or because the auctions for the relevant periods have already taken place. Such proposals, if implemented, may well have the undesirable effect of creating inefficient exit signals.

Whilst Energia would agree with some of the observations made in the EY report (for example adjusting the capacity requirement to account for non-delivery risk and increasing the auction lead times for delivery of new capacity), we do not consider it to be a complete and robust analysis for reasons explained above. Namely, it does not reflect the views of investors and plant operators; it does not identify all of the

[1] 29 April 2022, noting that "Any review is fundamentally incomplete unless investors views are taken into account".
[2] Mod_07_22 v3 and SEM-22-071

underlying problems, in fact there are fundamental omissions in the report; and some of its proposed reforms risk creating undesirable exit signals.

We note that the SEM Committee have identified in the Consultation Paper which proposals they have: (i) already started to progress (via separate consultations); (ii) are minded to progress; and (iii) do not intend to consider further at this time. For the avoidance of doubt, any proposals that the SEM Committee are minded to progress must be consulted on separately. We would also urge the SEM Committee to reconsider the findings and recommendations in the EY report having regard to its material omissions, lack of supporting analysis, and risk of unintended consequences identified in this response.

The remainder of this response is structured as follows. Section 2 addresses the proposals already being progressed, Section 3 responds to those minded to be progressed and Section 4 identifies significant omissions in the EY Review that must be addressed. Also included in Appendix 1 is a summary table outlining each of the proposals from EY and the position of the SEM Committee and Energia on each of them.

1. Proposals SEMC are already progressing

As identified in the Consultation paper, a number of proposals within the EY review have already been progressed or are in the process of being progressed through separate consultation processes. These include the proposals to:

- *Move to a tighter reliability standard in line with other European markets;*
- *Increase Performance securities following auction or to be lodged prior to auction;*
- *Increased monitoring (taskforce involving RA, TSO, Gov Dept.) to flag issues and address barriers;*
- *Pay DSUs for negative generation up to RO strike price to help improve incentive;*
- *Greater monitoring of technology performance in stress events to inform future DRF and single DRF for DSU regardless of size;*
- *Make ancillary service contracts more accessible to new build by creating ancillary service contracts with longer lead time and duration in line with CRM and procure products in single integrated auction process.*

As these have already progressed or are progressing through separate consultations we have limited our comments in this response to the Appendix summary table. Where separate consultation processes are either ongoing or forthcoming, we will comment on proposals within those specific responses. At this point we would however re-iterate our previous communicated view that the current 8-hour LOLE security standard is inadequate to meet the requirements and expectations of consumers and corporates in Ireland and Northern Ireland and this needs re-visited with a view to adopting a 3-hour standard in line our closest neighbours, GB and France. We would also emphasise that equal access to longer term ancillary services contracts for new and existing plant will be critical to minimising costs for consumers[3].

[3] For further details reference NERA presentation to the RAs dated 21 October 2021, which was appended to Energia's response to the DS3 SSFA High Level Design consultaiton. .

2. Proposals SEMC are Minded to Progress

The Consultation Paper outlines a number of proposals that the SEM Committee are minded to progress following the receipt of industry feedback on the EY Review. We set out our comments on these below:

1. Was sufficient Capacity procured in the capacity auctions?

- *Greater transparency of target setting through panel of technical experts assessment of EirGrid recommendations and explanation of process by which GCS forecasts are translated to target volumes to procure;*
- *More explicit accounting of non-delivery in target setting:*
  (i) Introduce process to monitor progress reports for early indication of non-delivery; OR
  (ii) Apply standardised adjustment to capacity requirement to account for likelihood of non-delivery

Energia strongly supports greater transparency and consultation in relation to capacity procurement volumes, including *all* adjustments made (including for demand uncertainty, reserves, DSU participation, new capacity delivery risk, ARHL adjustments, and availability risk) to the demand curve and LCCA requirements along with detailed explanations for same. Greater transparency should also be provided *before auctions* in relation to qualified capacity (including, but not limited to, adjustments for ARHL plant, the application of negative DECTOLs, technology class changes, opt-outs, and terminations) to help reduce the level of information asymmetry in auctions.

Establishing a panel of technical experts to oversee this process would be welcomed and indeed could usefully be extended to other areas of the CRM (including but not limited to the vetting of qualification applications and the determination of appropriate interconnector de-rating factors, noting the potential / perceived conflict of EirGrid as TSO and Interconnector owner / investor). A panel of technical experts could also be used to provide oversight and third-party assurance more broadly (covering for example the calculation of TLAFs).

The methodology used to determine the capacity requirement needs to be sufficiently robust, taking into account the risk of non-delivery of new capacity, the greater impact of generator outages in our small, isolated, and highly constrained power system with a high penetration of renewables, and the implications of having run hour limited capacity on the system. In terms of adjusting for non-delivery risk, the volumes procured should allow for attrition whilst still meeting capacity requirements, otherwise there is a greater risk to security of supply and of moral hazard coming into play. Monitoring for early indications of non-delivery, whilst welcome, should not be considered a substitute for procuring a contingency for projects that fail to deliver, as seems to be implied on page 6 of the EY Report. Energia would also discourage withholding capacity procured in the T-4 auction for the corresponding T-1 auction, particularly in constrained areas. This will artificially lower T-4 auction prices and discourage new entry by reliable generation, in favour of DSU capacity which has proven to be less reliable. To provide the required degree of security in advance, it would be prudent not to withhold any demand at T-4 in constrained areas and ensure

the capacity requirement methodology sufficiently accounts for the risk of non-delivery of new capacity.

2. Did capacity auctions attract sufficient participation?

- *Greater investment in infrastructure to enable more competitive all-island market and reducing pressure for new build in particular locations*
- *Requirement of new build to have all necessary consents to pre-qualify for auction*

Energia supports the need for investment and development of grid infrastructure (including firm access) to deal with constraints on the power system and notes the emphasis placed on resolving grid constraints (both in the context of State aid approval and submissions made to the EU in compliance with Regulation 2019/943). There is also a need for a rolling pathway / future outlook for grid connection and what the system can accommodate at technical levels. Investors need at least 24-month visibility before qualification for an auction in terms of what the system can support. However, until such time as grid infrastructure has been developed and constraints have been resolved, transmission constraints should be included within the auctions. This is clearly justified for Dublin and Northern Ireland where there are local transmission capacity delivery constraints affecting security of supply. Whilst constraints remain on the system Energia does not support allowing new capacity seeking a multi-year contract to compete with existing capacity for a pay-as-bid Reliability Option. This would be clearly inefficient given the intention of resolving grid constraints and would further exasperate the existing bias (through longer term contracts and higher bid limits) in favour of new entry, notwithstanding the greater risk of non-delivery due to consenting, connection and construction delays.

In terms of new build having all necessary consents to pre-qualify for auctions (as recommended by EY), it is important to recognise that the CRU have waived the requirement for a connection offer in successive auctions. Energia supports having all necessary consents to pre-qualify and as per above, noting that this includes planning and connection offers, this requires clear visibility on system capabilities / limitations in respect of grid connection. Greater scrutiny and vetting at the qualification stage will also help ensure New Capacity with greater certainty over delivery will participate in the auction.

3. Did new capacity procured get built?

- *Increase lead time to at least 4 years from announcement of results to start of capacity delivery year;*
- *RAs take more permissive approach to requests for extensions from new builds*

Energia supports the proposal for auctions to take place in a timelier manner and at least 4 years' before the start of the capacity year. This is a relatively simple change that should easily be introduced and will support viable New Capacity projects delivering for the start of the relevant Capacity Year.

Energia is also open to the concept of a more permissive approach to request for extensions from the RA's. However, the scope for extensions, including any extensions permitted, should be fully transparent and clearly set out in the Capacity Market Code and any additional flexibilities should only apply on a forward-looking basis applicable to capacity awarded in future auctions to protect the integrity of the

competitive auction-based process[4]. Given the limited detail on this proposal in the EY Report further clarity would be required through separate consultation to provide more detailed comments.

4.1 Was the capacity procured of sufficient value – are there adequate incentives for generation to be reliable?

As a preface to addressing the issues and recommendations, it is important that the root cause factors for capacity deficits are clearly understood. Recommendations and actions should mainly focus on addressing the key factors impacting on the deficits.

Capacity Deficit - GCS 2022-2031

The latest Generation Capacity Statement (GCS 2022-2031) reports the projected capacity deficits in Ireland[5] as follows:

Year	2022	2023	2024
Median Demand	-380	-530	-940
8th-quartile (estimated)	-458	-644	-1114
High demand	-510	-720	-1230

Table: MW capacity deficits (Ireland) for 2022/23/24. Deficits for Median and High Demand scenarios are taken directly from the GCS;

Based on the GCS, EY report and other published information, it is apparent that two key factors contributing to the current and projected deficits are as follows:

Issue	MW impact (2022/23)
New capacity procured, but terminated	-513
Tarbert "on outage" for all of 2022/23	-590 (nominal)

These are the key factors and had these events not occurred, a capacity deficit would not be projected for the coming period. Other factors, such as DSU performance, are of less significance while demand growth is generally lower than the forecast in GCS 2018 & 2019 on which the CRM procurement quantities for the T-4 auctions for 2021/22 and 2022/23 would have been based.

Generation availability performance

Deteriorating generation availability performance is cited as a significant contributory factor to projected capacity deficits, and much of the focus in the EY review is on strengthening penalties for underperformance. However, analysis indicates while generation availability forecasts at a "system level" may be deteriorating, it is incorrect

[4] Any retrospective adjustment to the terms for delivery of new capacity already awarded would clearly provide an unfair advantage to market participants that were successful in the capacity auctions and discriminates against those who were unsuccessful due to their pricing of risk or who chose not to participate (due to the lack of such risk mitigants at the time of the auctions).

[5] Although GCS 2022-31 also identifies capacity issues for Northern Ireland, the situation in Ireland remains more acute and is therefore used for illustration here. A similar analysis could be undertaken for NI.

to attribute this to all generators. Rather the deterioration in projected availability applies only to specific generators or generator classes.

In each annual GCS, the TSOs present the projected availability assumptions for each resource class (DSUs, gas turbines, steam turbines, hydro, pumped storage etc.). These assumptions are understood to be used for CRM purposes (capacity requirement, DRFs etc.) and also for the capacity adequacy projections in the GCS[6]. Focussing on the "gas turbine" and "steam turbine" classes, which are the most impactful from a capacity adequacy perspective[7], the following patterns can be observed from the availability projections in successive GCS[8]:

Forced (%)	GCS 2018	GCS 2019	GCS 2020	GCS 2021	GCS 2022
Gas Turbine	3	3.4	4.7	4.7	5.1
Steam turbine	9.2	9.2	12.2	12.2	14.2

Scheduled (wks)	GCS 2018	GCS 2019	GCS 2020	GCS 2021	GCS 2022
Gas Turbine	3	3	2	2	2
Steam turbine	3	3	3	3	3

Availability	GCS 2018	GCS 2019	GCS 2020	GCS 2021	GCS 2022
Gas Turbine	91.4	91.0	91.6	91.6	91.3
Steam turbine	85.6	85.6	82.7	82.7	80.9

It can be observed that the availability projections used by the TSOs for the "gas turbine" class have not shown any deterioration – the availability figures remain consistent in the TSOs' latest projections. There is something of a shift from Scheduled to Forced outages (about 2%), which does have some impact on capacity adequacy[9]. It can be observed that the DRFs for this class of plant have reduced by about 0.04 over the period, which reflects this shift, as can be seen from the following sampling:

Year of auction		2019	2019	2020	2021	2021	2022
Used for CRM:		T-1 19/20	T-4 22/23	T-4 23/24	T-1 22/23	T-4 24/25	T-4 25/26
Derating factors							
DSU (50 MW)		0.918	0.899	0.889	0.886	0.884	0.884
Gas T. (400 MW)		0.881	0.874	0.861	0.842	0.842	0.842
Hydro (20 MW)		0.903	0.862	0.866	0.888	0.886	0.886
Steam (240 MW)		0.860	0.820	0.781	0.769	0.769	0.769

While major outages of two CCGT units did contribute to low availability in 2021, the TSOs recognise this as an anomaly and have discounted the availability data from 2020 and 2021 for the purposes of forecasting future performance.

In summary:

- Gas Turbine plant availability projections are consistent and are not declining (although there is a slight shift from Scheduled to Forced, which is addressed through the DRF mechanism).
- Steam Turbine performance is very significantly reduced.

[6] The assumptions used for the GCS evaluation may be more detailed e.g. at plant or generation unit level, however it is assumed they are consistent with the assumptions used for CRM as adopting differing assumptions would be illogical.

[7] For context, there is 7 GW+ of installed gas turbine plant, and 2 GW+ of steam turbine plant.

[8] The figures in the top two tables (Forced outage % and Scheduled Outage weeks) are directly from the GCS. The Availability figures in the 3rd table are calculated from the FOR and SOR data.

[9] This "shift" may be due in part to the challenges which some generators have faced in acquiring scheduled outage slots from the TSOs. This had been difficult at times due to general and/or localised capacity shortfalls. Also generators have cooperated with the TSOs to reschedule their outages, though incurring some risk of additional forced outages as a result.

- The forecasted capacity deficits are arising not from the performance of generation plant in general, but only of specific plants. It would be entirely inappropriate to apply changes which impact on plants in general, when only certain plants/plant classes are showing performance deterioration.

Energia has only completed this analysis at level of plant "class", as that is the extent of the data available. It is recognised that there may be changes in performance of individual plants or units within the classes, which we are not in a position to analyse. However, it is clear from the limited data available, that the "gas turbine" plant as a class, in aggregate is expected to continue to perform to consistent availability levels.

EY Proposals

Clearly EY have not identified the root cause of the issue regarding capacity deficit and generator availability in their review. Despite this they have proposed the following remedies to address the issue:

- *Recalibrate ASP function so BM pricing better reflects market scarcity and causes higher frequency of periods with prices above RO strike price;*
- *Refine principle of flagging I/C actions from BM prices to drive prices that are more likely to exceed RO strike price*

The EY review (Pg 47) notes that *"BM prices do not correlate well with issue of amber alerts"*, inferring that this indicates an absence of price responsiveness to scarcity events. However, almost all the amber alerts are related to local shortages. This was discussed at some length on foot of SEM-21-042[10]. As the Amber alerts examined relate to local scarcities, this is weak evidence (at best) of a lack of correlation between BM prices and system-wide scarcities. In addition, the Amber alerts are analysed only up to January 2021 so there is limited analysis upon which to be basing any proposals.

Furthermore, where the above proposals intend to seek to amend the pricing formulation *to "cause higher frequency of periods with prices above RO strike price*, we would note that in respect of generators:

- This will not improve generator availability. There are already substantial incentives for generators to be available at all times, and particularly during scarcity events.
- There is an inherent assumption that generator availability performance is a significant contributory factor to forecasted capacity deficits, and as shown in the analysis above, this is not valid. Projected availability for the "Gas Turbine" class (7GW+ capacity) remains consistent. The "Steam Turbine" class (2GW+ capacity) does appear to be deteriorating, although the impact will reduce as some of the plants close in the near future.
- If measures are required to address specific plants where there is a performance deterioration, then measures should be targeted, rather than generic. It is inappropriate to introduce changes which affect capacity providers which are performing to expected levels, particularly if those measures are "one-sided", i.e. resulting in increased penalties for the same level of performance, while not allowing any offsetting adjustment to revenue to cover the additional cost.

[10] Discussion Paper and Call for Evidence on Scarcity Pricing and Demand Response in the SEM; 26 May 2021

In respect of the impact of increased prices promoting demand response/reductions we would note:

- Again, it has not been strongly evidenced that the existing pricing mechanisms will not result in higher prices in the event of general scarcities (as noted above, the analysis is limited periods between January 2020 to January 2021 which were almost all due to localised events).
- It would be inappropriate to seek to inflate prices to demand in the event of localised scarcities, as this would increase costs and provide demand response incentives to all demand, most of which will be of no benefit to resolving the localised scarcity event.

EY have also put forward another proposal to address what they perceive to be an issue with plant availability as follows:

- *Apply administrative penalties for non-delivery to plants in specific locations where an amber alert has been raised and plant unavailable*

Energia considers that there is merit in considering that plant in specific locations which are subject to local capacity shortages, has an additional capacity value over other plants. However, any additional penalties which may be applied to reflect that value, must also be recognised in provision of additional revenue. In the absence of that, any additional penalties on plant due purely to its location, is clearly unduly discriminatory.

While a potential new plant may be able to reflect those costs into its bids in CRM auctions, existing plants are prohibited from doing so (both for plants already under contract, or bidding in future auctions due to the bidding rules and USPC formulation).

Any changes in this regard must be balanced, with increased costs or risks reflected in increased revenue to cover those costs and risks.

A further important point to note is that even in the absence of any of the suggested changes in pricing arrangements and penalties, capacity resource providers are already facing significantly increased risk due to the failure (for whatever reasons) of the CRM to procure adequate capacity.

Due to the capacity shortfall, the number and duration of scarcity events are likely to significantly exceed the design level, and the level which generators anticipated when entering into CRM contracts. The TSOs estimate that LOLE (Loss of Load Expectation) for Ireland of 53 hours for the 5 months of winter 2022/23. This is approximately ten times the design level of 8 hours per year. It can be expected that hours of scarcity will see a similar or larger increase. Hence:

- Generators are already facing significantly enhanced risks from CRM than anticipated at time of auctions/contracting.
- RO scarcity events are likely to be more frequent and of longer duration.
- A generator will see higher RO penalties for the same level of availability performance. Even a generator performing at its expected level of availability, will incur higher penalties through circumstances over which it has no control.
- The increased risk is not reflected in past CRM pricing (and currently cannot be reflected in future CRM bidding due to price caps).
- The elevated risk is likely to be still more acute in localised areas where there has been under-procurement.

Increasing the risk further by increasing penalties is simply not appropriate. Generators are already facing higher risks and penalties, and consequently higher incentives to be available, without any further changes in the mechanisms which would result in still higher, unwarranted penalties.

A final proposal from EY in this section that SEM Committee intend to progress is:

- *Greater monitoring of technology performance in stress events to inform future DRF*

Energia disagrees with this proposal. Whilst we note the rationale of monitoring to inform future DRF the implication that DRFs should be set based on availability during stress events is flawed, as there is a correlation between low availability and stress events - hence availability will be lower than average during stress events. We will comment more specifically on this in our response to SEM-22-075.

4.2 Was the capacity procured of sufficient value – are there adequate incentives for DSUs to be reliable?

- *Implement baseline methodology for assessing contribution of DSU in reducing energy demand*
- *Determine energy only stack within BM and compensate energy providers (including DSU) if instructed not to run for system reasons*

The performance of DSU capacity has been widely noted as an area of ongoing concern in relation to capacity shortfall and security of supply. In that regard Energia support steps targeted at addressing this issue including clear methodology for assessing contribution of DSU in reducing energy demand.

We also support the principal of an unconstrained energy stack within the BM and that capacity providers get compensated if they are not run for any reason thereafter. However, the wording of the proposal from EY is not clear on exactly on what is intended. Clarity is required around this including what will be flagged as a system action and ensuring units are compensated if not ran for any reason.

3. Fundamental omissions in EY Review

Surprisingly, the EY Review fails to identify any problem with bidding restrictions on existing plants on the basis that

> *"No evidence was found that pricing restrictions prompted existing plant from shutting prematurely".*

There is no reference in the EY Report to the targeted contracting mechanisms that were put in place in Ireland and Northern Ireland because the capacity market failed to provide adequate remuneration to existing plants critical to security of supply. This is a clear and significant omission in the EY Review. There is also no recognition in the EY Review that the treatment of existing capacity has a material bearing on incentives (and required returns) for investment in new capacity. The treatment of existing capacity needs attention on a number of fronts, as discussed further below, including that the ECPC leaves little scope to recoup lost DS3 revenues so maintenance of existing efficient plant that can play a key role in the decarbonisation transition will become increasingly challenging. This is a serious concern considering existing security of supply issues which has not been discussed in the EY Report.

Existing Capacity Price Cap (ECPC)

The capacity market rules are inherently biased against existing capacity in favour of new capacity, both in terms of contract duration and bid limits. On the latter note, existing capacity is restricted to bidding at 0.5 x Net Cone, whilst new capacity can bid up to 1.5 x Net Cone. The capacity auction rules prevent the clearing price in the auction rising above ECPC unless new capacity enters the market and sets the clearing price. However, because new capacity is awarded a 10-year contract whereas existing capacity is restricted to 1-year contracts, existing capacity will only receive the new entrant price for 1 year at best. In any event, this is a theoretical scenario because, in reality; new capacity is highly unlikely to set the clearing price (even for one year) given that requirements for new entry are typically signalled within locationally constrained areas only (which transverse the entire market) and paid-as-bid. There is therefore little or no prospect of existing capacity receiving more than ECPC or USPC (if applicable), both of which are further discussed below.

Energia has consistently held the view, as reflected in responses to SEM-16-073, SEM-18-028 and SEM-20-006 that the ECPC multiplier is set too low. Any rational investor must adopt a prudent view of future costs, revenues and risks, especially when looking 4 years' ahead. Ultimately the shareholders will be making the decision whether to keep the plants open and invest in their continued operations and this will be determined by their view alone of net going forward costs taking all associated risks and uncertainties into account. There is ample evidence, given past and recent events, that unforeseen economic shocks can and do happen, with severe negative consequences for generators. Adverse changes to market arrangements after auctions have taken place can also have a material negative impact on existing capacity restricted to ECPC. Changes to scarcity pricing or RO penalties discussed earlier fall into this category, as do significant reductions in DS3 tariffs being proposed elsewhere[11]. It is therefore vital that a conservative view of NGFC is appropriately reflected in the ECPC. The current multiple of 0.5 times Net CONE clearly does not achieve this. It should also be recognised that the current netting of DS3 revenues from the BNE calculation process removes the incentive to invest capital in the provision of system services necessary to decarbonise the power system.

Accordingly. there is a strong, logical and justifiable case for the ECPC to be adjusted upwards for all future auctions. Given the expected capacity shortfalls over the coming years, there is not only need for investment in new capacity but also a continued need for considerable existing generation to support the low carbon transition.

Unit Specific Price Cap (USPC)

In relation to setting the Unit Specific Price Cap (USPC), we wish to draw to the attention of the SEM Committee fundamental problems that are not flagged in the EY Review, but which we have raised with the SEM Committee at various times. In summary, the USPC process does not adequately allow for the risks, limitations and challenges of projecting future costs, revenues and level of generation over fours' years ahead; its treatment of unavoidable future investments is flawed (for reasons

[11] The TSOs have proposed significant reductions in DS3 tariffs given the current budget cap of €235m. If these proposed DS3 reductions are implemented there is no opportunity to revise CRM bids to replace the 'missing money' and, going forward, restrictive bid limits may prevent such cost recovery which creates an inefficient exit signals for existing capacity

explained below); and it adopts an overly narrow definition of net going forward costs. It is therefore not a valid substitute for setting the ECPC too low.

Plant Refurbishment

As we have repeatedly argued in previous submissions to the SEM Committee, the auction rules will continue to discourage refurbishment and plant upgrades unless they allow all significant future investments to benefit from a long-term contract. NERA made this argument clearly in a Memorandum which accompanied our response to SEM-18-009:

> *"Most generators applying for a USPC will only be able to bid in a proportion of between ten and twenty per cent of their UFI costs in any given year.*
>
> *These rules present a problem for generators facing UFI costs: being able to include costs within capacity market bids offers no guarantee of recovery of those costs. Generators undertaking UFI but with costs below the New Capacity Investment Rate Threshold (NCIRT) will continue to be eligible for capacity contracts only of a single-year's duration. As a result, a generator may win a contract in the first capacity auction whilst including up to 20 per cent of its UFI costs in its bid; the same generator may fail to win a contract in any subsequent auction at prices that would recover the remaining 80 per cent of its UFI costs."*

This risk of failing to recover UFI costs is present even for efficient investments that are in end-users' collective interest. It is also commensurately greater for generators constrained on by the system operator in the capacity market. These generators take risk not only over their relative position in the market-wide merit order but also over whether constraints will endure for the full period necessary to recover their UFI costs. Preventing generators facing UFI costs from recovering them in a single year and excluding them from signing multi-year agreements distorts investment towards new plant able to sign multi-year agreements which are potentially more costly for consumers."[12]

Failure to recognise this problem is a glaring omission in the EY Report and is particularly pertinent in the context of acute security of supply concerns and difficulties experienced in delivering new capacity. The current review provides an opportunity to remedy this deficiency in regulatory process (recognising that the I-SEM regime does not have a refurbishment category for meeting the NCIRT threshold) and to address the concerns raised above about the risks to recovery of UFI. To resolve the I-SEM's anomalous treatment of refurbishment, therefore, the SEM Committee should:

- Introduce an additional (lower) threshold for refurbishments and plant upgrades
- Once this threshold is met, bid limits should then be determined by APC automatically, in line with the British rules for plant refurbishment[13]

[12] NERA (2018), Competition and Cost Recovery under the 2019/20 T-1 Capacity Auction Parameters, page 6.
[13] The British rules allow generators to offer their units as both (a) refurbished at a given price and quantity or (b) unrefurbished at a different price and quantity. Only the refurbished CMU is a price maker automatically. In other words a generator cannot offer to refurbish in order to achieve price maker status and then bid freely without refurbishing. It can, however, keep its options open and submit a separate price for the existing and unrefurbished

Locational Signals

In its State aid decision for the I-SEM CRM, the EC noted the importance of locational signals for incentivising generation and transmission capacity in areas of constraints, but yet we see no recognition of this or suggested market reforms to address these concerns in the EY Review. There is a need to address this because the status quo has the effect of paying new entrants in constrained areas a high price for the next 10 years, whilst sending existing capacity in the same areas a signal to exit by imposing upon them much lower and overly restrictive bid limits as discussed above.

EY Case Study on Termination of Awarded New Capacity

EY's Case Study refers to the concept of "Winners Curse", which they define as a scenario where winning projects are those that are most unrealistically optimistic about their ability to deliver on time. It also describes the outcome whereby ESB chose to terminate their 10-year capacity contracts awarded in the T-4 auction for CY22/23 and rebid projects on those sites into the T-3 auction for CY24/25 receiving much higher priced 10-year contracts (over €100,000/MW greater per year). Despite these observations, EY's analysis does not contemplate the broader implications of awarded capacity being able to terminate and more profitably participate in a future auction and whether this should be permitted given its potential implications for security of supply and competition. This is an important issue that warrants further consideration.

APPENDIX 1 – Summary Tables of EY proposals, SEMC position, Energia's comments and Fundamental Omissions

1. Was sufficient Capacity procured in the capacity auctions?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
1.1 Move to a tighter reliability standard in line with other European markets	Yes	Yes	ALREADY PROGRESSING - studies to recalculate VoLL and CONE have commenced	SUPPORT PROPOSAL - we have called for 3 hour LOLE security standard in line with GB & France
1.2 Greater transparency of target setting through panel of technical experts assessment of EirGrid recommendations and explanation of process by which GCS forecasts are translated to target volumes to procure	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL - we have called for transparency in relation to capacity volumes including level of reserves and volumes withheld for demand uncertainty. - we will comment further in our response to SEM-22-075.
1.3 More explicit accounting of non-delivery in target setting: (i) Introduce process to monitor progress reports for early indication of non-delivery; OR (ii) Apply standardised adjustment to capacity requirement to account for likelihood of non-delivery	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL - we have called for risk of non-delivery of new capacity to be included in methodology for capacity requirement - The capacity requirement should allow for termination without putting at risk overall capacity requirement (as currently the case)

2. Did capacity auctions attract sufficient participation?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
2.1 Greater investment in infrastructure to enable more competitive all-island market and reducing pressure for new build in particular locations	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL - Support investment in grid infrastructure to help address locational constraints. There is also a need for a rolling pathway / future outlook for grid connection. Investors need at least 24 month visibility before qualification for an auction in terms of what system can support. However until resolved locational transmission constraints must be included in auctions.
2.2 N/A – No proposals to amend bidding restrictions	No	N/A	NO PLANS TO PROGRESS	DISAGREE WITH PROPOSAL - Bidding restrictions considered only in context of leading to early plant closure. - Does not consider the requirement for out of market contracts (LRSA and emergency generation) is evidence of bidding restrictions having negative outcomes - Does not consider need for review and improvements of ECPC, USPC or Plant Refurbishment ***See more detailed commissions in Fundamental Omissions table***
2.3 Requirement of new build to have all necessary consents to pre-qualify for auction	Yes	YES	INTEND TO PROGRESS	SUPPORT PROPOSAL - Support necessary consents and appropriate vetting being undertaken at qualification stage

3. Did new capacity procured get built?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
3.1 Increase lead time to at least 4 years from results to start of capacity delivery year	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL - Support auctions taking place 4 years before delivery as per design
3.2 Increase Performance securities following auction or to be lodged prior to auction	Yes	Yes	ALREADY PROGRESSING Increased performance security / termination charges introduced	SUPPORT PROPOSAL
3.3 Increased monitoring (taskforce involving RAs, TSO, Gov Dept.) to flag issues and address barriers	Yes	Yes	ALREADY PROGRESSING Enhanced monitoring process to enable early indication of non-delivery implemented	SUPPORT PROPOSAL
3.4 More permissive approach to requests for extensions from new build projects	No	No	INTEND TO PROGRESS	SUPPORT PROPOSAL - however, this is caveated on the need for transparency, being clearly set out in CMC and applying on a forward looking basis to protect integrity of competitive auction process. More detail is required in separate consultation.

4.1 Was the capacity procured of sufficient value – are there adequate incentives for generation to be reliable?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
4.1 (a) Recalibrate ASP function so BM pricing better reflects market scarcity and causes higher frequency of periods with prices above RO strike price	No	No	INTEND TO PROGRESS	DISAGREE WITH PROPOSAL - Recalibrating ASP to artificially cause higher prices above RO strike price will not improve capacity reliability as intended - analysis shows that projected availability for generators in general is not a key contributory factor to capacity deficits. - it will increase the risk of penalties to generators when they are already facing a significantly greater risk due to the capacity deficit that has emerged from other failings of the CRM.
4.1 (b) Refine principle of flagging I/C actions from BM prices to drive prices that are more likely to exceed RO strike price	No	No	INTEND TO PROGRESS	DISAGREE WITH PROPOSAL – Reversing a previous RA approved decision to include I/C trades in BM pricing and thus create higher BM prices will not improve capacity reliability as intended.
4.1 (c) Greater monitoring of technology performance in stress events to inform future DRF	No	No	INTEND TO PROGRESS	DISAGREE WITH PROPOSAL - Whilst we note the rationale of monitoring to inform future DRF the implication that DRFs should be set based on availability during stress events is flawed, as there is a correlation between low availability and stress events - hence availability will be lower than average during stress events.
4.1 (d) Apply administrative penalties for non-delivery to plants in specific locations where an amber alert has been raised and plant unavailable	No	No	INTEND TO PROGRESS	DISAGREE WITH PROPOSAL - A proposal that penalises generation in certain locations cannot proceed unless the additional value of the capacity is recognised on the revenue side as well. This is not possible (a) for contracts already set and (b) going forward, with the current bid restrictions on existing plant

4.1 (e) Implement additional physical checks on existing capacity providers in periods with no stress events	No	No	NOT COMMENTED ON	SUPPORT PROPOSAL – Energia are happy to facilitate any additional checks / testing that the TSO may deem necessary so long as the associated cost is met by the TSO and no financial impact on unit.

4.2 Was the capacity procured of sufficient value – are there adequate incentives for DSU's to be reliable?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
4.2 (a) Implement baseline methodology for assessing contribution of DSU in reducing energy demand	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL
4.2 (b) Pay DSUs for negative generation up to RO strike price	N/A	N/A	ALREADY PROGRESSING	NO COMMENT - This issue was considered in a sperate consultation
4.2 (c) Determine energy only stack within BM and compensate energy providers (including DSU) if instructed not to run for system reasons	Yes	Yes	INTEND TO PROGRESS	SUPPORT PROPOSAL - We support principal of an unconstrained energy stack within the BM and providers getting compensated if not run for any reason thereafter. - Clarity required around this including what will be flagged as a system action and ensuring units compensated if not ran for any reason.
4.2 (d) Single DRF for DSU regardless of size	N/A	N/A	NOT COMMENTED ON	NO COMMENT - we will consider this in our response to SEM-22-075.

4.2 (e) Implement provision for secondary trading for capacity providers			NOT COMMENTED ON	SUPPORT PROPOSAL - Energia have repeatedly called for implementation of secondary trading as originally intended.

4.3 Was the capacity procured of sufficient value – does CRM adequately value efficient generation technologies?				
EY Proposal	**Root Cause Identified?**	**Will Remedy Address Problem?**	**SEMC Position**	**Energia Comment**
4.3 (a) Allow 15 year contracts for most capital intensive new-build (CCGT, long duration storage)	No	No	NOT COMMENTED ON	SUPPORT PROPOSAL (amended) - Support longer term contracts in general but should be technology neutral. This will help with investment cases in general for delivery of new capacity.
4.3 (b) Make ancillary service contracts more accessible to new build by creating ancillary service contracts with longer lead time and duration in line with CRM and procure products in single integrated auction process	N/A	N/A	INTEND TO PROGRESS	WITHHOLD COMMENT - DS3 market is going through major changes (amending tariffs, developing future arrangements). It is therefore unclear how this could be implemented in a clear and transparent manner. As such this requires separate and detailed consultation to understand proposal.

Fundamental omissions in EY Review	
Key Issue not addressed	**Energia Comment**
Existing Capacity price Cap	Given expected capacity shortfalls over coming years, there is a need for considerable existing generation to support the low carbon transition. ECPC should be increased to ensure that it appropriately reflects concerns over recovering net going forward costs, which the current multiple of 0.5 does not achieve.

Unit Specific Price Cap	The USPC process is not a valid substitute for setting the ECPC too low. Apart from its other flaws, this is because the USPC process does not adequately allow for the risks, limitations and challenges of projecting future costs, revenues and level of generation over fours' years ahead.
Plant Refurbishment	The auction rules will continue to discourage refurbishment and plant upgrades unless they allow all significant future investment to benefit from a long-term contract. This is a glaring omission in the EY Report and is particularly pertinent in the context of acute security of supply concerns and difficulties experienced in delivering new capacity.
Locational Signals	The State aid decision for the CRM notes the importance of locational signals for incentivising generation and transmission capacity in areas of constraints, but we see no recognition of this or suggested market reforms to address these concerns in the EY Review.
EY Case Study on Termination of Awarded New Capacity	EY's analysis does not contemplate the broader implications of awarded capacity being able to terminate and more profitably participate in a future auction and whether this should be permitted given its potential implications for security of supply and competition. This is an important issue that warrants further consideration.