
Response to SEMC's Consultation Paper

on

CRM T-1 Capacity Auction 2019/20 Consultation
(incl. Appendix A responses¹)

from

BORD^{NA}MÓNA

19th April 2018

¹ Appendix A responses also provided in a separate document

Context

- Bord na Móna is pleased to have this opportunity to contribute to the design of the CRM for the 2019/20 Capacity Auction

A central theme of our ISEM related responses is that we recognise how critically important it is for the RA's to ensure, at a most fundamental level, that there is a secure level of supply, and to ensure this supply, there needs to be a sufficient level of revenue certainty to financially support the supply² base business model – be it for existing or new supply. In this context we would note the dynamic nature of increasing demand going forward driven by datacentres, electric vehicles, the electrification of heat, etc.

- We also recognise that there is a system need for an increasingly efficient economic delivery to maximise social welfare but we realise that that this needs to be achieved by following a path, ie., on an incremental basis so as to ensure security of supply as priority on this transitional journey.

There are clearly just three main revenue streams available to suppliers¹, Energy, Capacity and Ancillary services. These are generated using 'existing' technologies and services as well as 'new' technologies and services. We fully understand and embrace that that new technologies, of which BnM will be a supplier, will firstly accompany, and ultimately replace, existing technologies and services, and our responses are framed within this context.

- The key point we wish to emphasise is that this journey will be a transition which prudence would suggest should involve a degree of caution and surety of foot – where this point applies equally to existing as well as to new technology – as well as to Suppliers¹ and the System Operators/Regulatory Authorities.

If there is insufficient commercial surety to Suppliers¹, there will be insufficient signal for investment (continued existing or new) with the associated threat to Energy security.

- In this regard we would highlight the fragile backdrop to the revenue streams, ie., the market dynamic as we see it. We believe that investors will have a similar perspective:
 - Energy** revenues could easily fall; many commentators believe that renewables will bring down the Energy price. Energy revenues provide only a very limited energy investment signal.
 - Ancillary services** revenues too are highly uncertain. Ireland is trying to achieve levels of SNSP³ unprecedented in anywhere in the world. DS3 payments only approach the €235m glide path during incidences of very high levels of SNSP and, although built on admirable ambition, there is a well-flagged possibility that the TSOs may have to reduce the SNSP thresholds thereby threatening the DS3 revenue stream. DS3 services are only rewarded at scale when SNSP levels are above 60%. Competitive auctioning of ancillary services is likely to depress service provider revenues, thereby compounding this lack of upside in DS3 revenues. Competitive bidding/Auctioning is becoming a reality and it is possible that, as is common with many markets, that the initial 'winners' may bid too keenly and not be able to deliver, again undermining market stability.
 - Capacity revenues** too have reduced markedly with the introduction of the CRM.

² 'supply' and 'suppliers' in this context is intended to mean generators, service providers, etc.

³ SNSP 'system non-synchronous penetration'

Not a very attractive vista for the investor.

- On the back of the context as set out above we offer a fundamental recommendation which extends beyond the scope of just this response. Our recommendation is to advocate a no regrets approach which would be consistent with many climate and energy related targets – ie, one which allows a sustainable supply delivery model for both the System Operator and the Supplier/service Provider.

However, we are at a critical point in this transition, the ‘journey’ as we have termed it, in that the current context is that there is a clear threat to existing assets which may financially expose them ahead of the availability of new technologies and services, which could threaten grid supply security. Likewise the degree of revenue uncertainty places a significant risk of under investment for new technologies and services.

The key recommendation is to take a prudent approach by transitioning from existing to new technologies/suppliers at a pace such the existing technologies/suppliers will underpin this transition by adding much needed security of supply – rather than going for the perfect solution day 1, risking outages and non-optimal solutions.

This rationale underpins our responses and recommendations with regard to choice of Auction format, the retention of parameters from the 2018/19 T-1 Capacity auction and particularly our responses relating to Interconnector capacity and storage de-rating.

Overview & Recommendations

With regard to the questions posed within this consultation we make the following main recommendations highlighted below. We note from the context, as set out above, that the underpinning recommendation is one which recommends prudence such that both existing and new investors are each afforded the appropriate chance to contribute to the successful transition to the new order by supporting secure supply.

Recommendations:

1. Based on rationale below and in the State Aids Documentation (SADs) we firmly recommend to not to move away from Auction format B (for which there is additional capacity for locational purposes) until beyond the transitional phase (ie for all T-1 auctions). Further, we believe there is clear rationale to retain Auction format B for the first T-4 auction. SADs is so openly in support of the rationale underpinning Auction format B that one would question whether there is a need to formally go to Europe for such approval. Our secondary and related recommendation would be to gain soundings from the EU as to whether there is a need to open formal discussion on State Aids in this regard, or can a less formal approach be made.
2. Not to have a T-2 auction in December 2019; hold it off for a T-1 auction some months later.
3. Recognise the risk/reward balance in apportioning capacity volume balance between T-1 and T-4 periods for delivery in the same capacity year and be mindful of the scope for far from optimal solutions afforded by over dependence on extended timelines (such as T-4) – most particularly for existing capacity. More economically efficient solutions will be found for existing capacity with T-1 auctions in preference to T-4 auctions.
4. We support by and large the proposals put in relation to the treatment of storage with regard to de-rating. In particular we support the voluntary application of DECTOL for Storage. We remain undecided however whether we consider it reasonable to apply system-wide outage statistics to new technologies such as batteries on the basis of insufficient information presented within the paper. This is an important decision with implications for security of supply which requires further consideration.

5. We call for a cautious approach in calculating Interconnector de-ratings and applying over estimates. We express our concerns around the danger of system tightness in SEM which would likely come about if the Interconnector de-rated capacity was too high and if non-winning plant at auction had left the market. This could lead to an under-procurement of capacity at auction which in the long run could have negative impacts on overall social welfare by threatening supply.
6. Our response highlights an important additional factor which would support that a more cautious approach is required.
The calculations effectively assume 100% coupling; the fact that coupling will not be in place over all timeframes, ie, being restricted by one of the Intraday auctions as well as the Intraday continuous trading, will have a reducing impact on effective interconnector capacity. We do not believe that this is factored into any Interconnector de-ratings.
7. We recommend that the proposed intention to end the exemption from payback obligations for difference payments for DSUs as of the delivery period starting in October 2020 be revisited and dropped. We cite that the issue is one of facilitating rather than impeding one of the leading technologies which will contribute to the successful delivery of the DS3 programme and believe that by removing this provision a significant extra administrative, financial and legal onus would be put on the supplier of this key technology – thereby increasing unduly challenging their business model.

We note the merits of the proposals for de-rating DSUs with limited Maximum Down Time.
8. Regarding the New Capacity Investment Rate Threshold we note that this is currently set at 40% of the gross BNE investment cost, which equates to c€300/kW invested. We believe this rate to be too high a barrier to entry to firms wishing to conduct substantial refurbishments for regulatory compliance (e.g. with the IED) and propose that it would be more appropriate at a reduced level of c.€100/kW invested. This would likely provide a greater social welfare benefit from plant at this reduced investment level, due to their passing a lower incremental cost on to the consumer.

SUMMARY OF CONSULTATION QUESTIONS

3. Auction Timings

3.2.1 Do you have any comments on the indicative auction timetable set out in this section?

The indicative timetable of auctions will inevitably struggle to find the correct balance between T-1 and T-4 auction volumes. While we recognise that the purpose of T-4 auctions (vis a vis nearer term T-1 auctions) is fundamentally to encourage new investment we caution against providing for excessive volumes in those T-4 auctions, which inherently carry more risk given the multitude of moving parts between revenues from energy, ancillary services and capacity, out over such an extended period. These risks equally apply to the SEMC as they do to the Capacity providers.

We recognise the scope for far from optimal solutions afforded by over dependence on extended timelines (such as T-4) – most particularly for existing capacity.

More economically efficient solutions will be found for existing capacity with T-1 auctions in preference to T-4 auctions.

With regard to Table 1 of SEM 18 009 we note that the proposal with regard to auction timings is effectively for both a T-1 and a T-2 auction both in December 2019. We believe that two T-1 auctions would reach an improved social welfare solution and see no rationale for a T-2 auction which unnecessarily introduces an increased level of uncertainty for all participants.

We comment further in 4.7.1 on the Auction format issue and the contradiction with the legitimate expectation of industry at the time of SEM 17 0224 in respect of moving away from Auction format B – for which there is additional locational capacity, switching to other formats for which there is displacement of units clearing at Auction. This seems most inequitable and carries an inherent increased risk of a further mis-balanced outcome, most particularly if the larger displacing unit has bid inflexibly.

On a matter for clarification we do not understand the SADs statement that there will be four T-4 auctions before 2022 (para 42).

4. Capacity Year 2019/20 T-1 Parameters

4.7.1 Do you agree with the SEM Committee's minded to position to keep the parameters (excluding capacity requirement and de-rating factors) for the CY2019/20 capacity auction consistent with the CY2018/19 parameters?

1) We focus our response primarily on Auction format and Locational Capacity Constraints

We firmly would agree with a position to retain Auction Format B for at least the Transitional period, ie., for the first four T-1 auctions.

We further believe that it should hold for the first T-4 auction.

We note the State Aids Documentation sets a tone which appears to acknowledge that moving away from Option B, for which there is additional capacity for locational purposes, is a poor and inferior decision relative to Auction formats C and D – the so called 'heuristic' and 'fully combinatorial' formats for which there is no additional capacity for locational purposes.

We believe that the assumption that it is better to displace a unit which clears at auction by one which does not, flies against the laws of legitimate expectation – and we note that the State Aids Documents (SADs) has much to say in this regard.

While the SAD provides for moving towards a displacement format after this next T-1 auction, ie., for the remaining two T-1 auctions during the transitional phase, it appears to do so very reluctantly. We note the balanced paragraphs (49) and (152) in the SAD which highlight real concerns which support the retention of Auction format B.

- a) Para 49 expresses concerns that by not displacing the marginal capacity provider but being contracted on top of it better reflects the long term needs of the system as it awards a contract to the marginal capacity which is competitive and will be needed once the transmission constraints are removed.
- b) Para 152 recognises the threat to system security, expressing that it must be recognised that without the additional capacity the reliability standard might not be met on a regional level. It continues that, because of the existing capacity constraints in the transmission network, the normally procured capacity might not be able to prevent loss of loads events.

In this regard we would note the dynamic nature of increasing demand going forward driven by datacentres, electric vehicles, the electrification of heat, etc.

It is really only paragraph (156) which talks about reducing the total amount of capacity to offset the additional capacity required to meet locational constraints. It actually concedes the limited inefficiency of Option B by indicating that the authorities underline that the expected over procurement is limited to 4% to 5% of the total capacity requirement.

One would have to sensibly conclude and hope that there may be room for manoeuvre within the scope of the SAD, and that there may be a legitimate case for open discussion to address and to

⁴ CRM Parameters Decision Paper

correct this such that Option B can be retained for all transitional auction as well as for the first T-4 auction.

Inherent within the response above is our support for the Locational Capacity Constraints methodology in parallel with Auction Format B.

2) Payback obligation for DSUs

We note however the intention to end the exemption from payback obligations for difference payments for DSUs as of the delivery period starting in October 2020.

Under CRM1 DSUs have not been required to make RO difference payments when their customers' reduced load leads to a shortfall⁵. We believe that very little will have happened by 2020 to warrant the change of this provision. The issue is one of facilitating rather than impeding one of the leading technologies which will contribute to the successful delivery of the DS3 programme. We believe that by removing this provision a significant extra administrative, financial and legal onus would be put on the supplier of this key technology – thereby unduly challenging their business model.

3) New Capacity Investment Rate Threshold

We note that this is currently set at 40% of the gross BNE investment cost, which equates to c€300/kW invested. We believe this rate to be too high a barrier to entry to firms wishing to conduct substantial refurbishments for regulatory compliance (e.g. with the IED) and propose that it would be more appropriate at a reduced level of c.€100/kW invested. This would likely provide a greater social welfare benefit from plant at this reduced investment level, due to their passing a lower incremental cost on to the consumer.

6. De-rating Factors

6.3 Storage De-Rating (perhaps in separate appendix)

A. Do participants have any comments on the methodology for calculating DRFs for storage units as described in this paper?

While we recognise the need to modify upwards the initial marginal DRFs for storage we do recognise that the draft methodology is underpinned by assumptions used and required in the absence of historical outage data. We believe that the appropriateness of the methodology presented largely hinges around the answer to question B – whether participants consider it reasonable to apply system-wide outage statistics to new technologies such as batteries. We believe that if it is chosen as the favoured methodology that it is kept under constant review and further developed as improved outage data becomes available.

B. In the absence of significant historical data, do participants consider it reasonable to apply system-wide outage statistics to new technologies (such as batteries)? If not, please provide alternative with justification.

Batteries are an increasingly well known, increasingly deployed and developing technology. We do not understand why there is not consideration to applying actual outage statistics where they are known through international application. One might add that, with improving technology, that this retrospective approach will under estimate de-rating factors, which will be to the beneficial advantage of system security and err on the side of prudence.

However if an individual technology/project provider can present and justify a higher rating then they should be allowed to make that representation and be assessed accordingly.

⁵ We acknowledge that at that time it was stated that this provision would be kept under review

C. Regarding Storage Units with Storage Volume sizes that are not a multiple of 30 minutes: Do participants have any comments on the TSO's preferred methodology for calculating DRFs for such storage units, i.e. interpolating between storage sizes? What other options do they believe may be more appropriate?

We believe that linear interpolation between storage sizes is entirely appropriate and is the best of the options presented.

D. Should storage units be allowed to apply a DECTOL to their De-rated Capacity? Please provide arguments to support your response.

We believe that storage units should be allowed to apply a DECTOL to their de-rated capacity largely for the reason outlined in the consultation paper. We support the argument that commitments to deliver system services could lead to storage units and other energy limited units, including some DSUs, expending all of their energy in a short time-frame, leaving them exposed during other trading periods. We support the notion that it would be undesirable to have a unit potentially exposed to capacity market penalties for meeting their obligations in the provision of system services.

E. Should specific DRF values be published for units with energy storage volumes of 6.5 hours or greater? Are participants aware of potential projects that might make such a change appropriate?

We believe that this will become appropriate with the deployment of new and larger projects regardless of the reduced marginal increase in de-rating at higher energy storage volume hours.

F. Do participants consider that a unit's run-hour limitations (due to emission restrictions or otherwise) should be reflected in the Capacity Market Auction? If so, what mechanisms should be applied. If not, please provide rationale.

This is not straightforward as the Reliability Option rests with the unit and not the fuel type. It may be possible that a unit with emission restrictions with a particular fuel type may be able to modify their fuel input to obviate emission restrictions. We agree with the approach that there should be consideration of application of a DECTOL or some other form of downward adjustment – but strictly only on a Voluntary basis.

Very similar market forces which have encouraged wind to participate to only a very limited extent in the T-1 CY2018/19 auction will apply to emission restricted plant. There has been no need for mandatory adjustment. Voluntary adjustment would be appropriate by the owner who will generally be in a better position to estimate expected run hours in an emissions restricted scenario than the TSOs.

G. Do participants have any comments on the proposed approach for de-rating DSUs with limited Maximum Down Time?

We note the merits of DSUs with a Maximum Down Time of less than 6 hours potentially taking their DRFs from the Other Storage De-rating curve.

The secondary, and currently less pressing question is to what degree the Other Storage De-rating curve is legitimately differentiated from those for Pumped hydro storage units. This might require further thought and development.

6.4.1

1) Do you agree with the proposed modification to the treatment of outages for small and embedded capacity in GB in the interconnector de-rating methodology?

The appropriate answer to this largely depends on whether a forced outage rate of 7% is appropriate. While the consultation paper expresses that this is likely to be a conservative assumption it is not backed up by any objective information on which to base an informed judgment. In short, there is insufficient information presented or easily accessible on which to form a sound decision. The precautionary assumption here would be to assume a higher forced outage rate.

More general comment on treatment of Interconnectors – not consulted on but worth raising

In our responses to Consultation Paper SEM-16-051 Capacity Requirement we raised a number of points which are perhaps more pertinent now than they were then, given the imminence of ISEM. These are:

- Our concerns around the danger of system tightness in SEM which would likely come about if the Interconnector de-rated capacity was too high and if non-winning plant at auction had left the market. This could lead to an under-procurement of capacity at auction which in the long run could have negative impacts on overall social welfare.
- We previously expressed our concerns about Interconnector de-ratings being too high. While we note and welcome that the de-rating factors are reduced vs the CY 2018/19 auction we would treat with caution the approach to use 10 years of historic data for the Interconnector technology class, in the context of the extended EWIC forced outage of late 2016, early 2017, whereby the 10 year average effectively reduced the recency impact, thereby resulting in a higher de-rating factor that may be justifiable.⁶
- At the time we highlighted that the level of Interconnector forced outages expressed within the methodology were patently under-represented, referring in the main to the Moyle interconnector. It appeared at the time that the historical extended Moyle forced outages were taken out of the de-rating calculation, thereby boosting the final calculated availability. It is unclear whether this has been addressed in the current Moyle de-rating factor.

We highlight again a number of additional factors which would suggest that a more cautious approach is required:

- The calculations effectively assume 100% coupling; the fact that coupling will not be in place over all timeframes, ie, being restricted by one of the Intraday auctions as well as the Intraday continuous trading, will have a reducing impact on effective interconnector capacity. We do not believe that this is factored into any Interconnector de-ratings.
- Somewhat related, it is unclear from the consultation if due consideration has been taken into account of the limitation on physical deliveries across the interconnector.

Perhaps the largest assumption within the Interconnector de-rating methodology is that available capacity will be set by flows largely from GB to SEM. There is evidence to suggest that this will not be the case:

- Forecasts suggest that GB is facing scarcity over the coming years which will result in higher local prices which could encourage flows from SEM to GB, reducing the effective capacity potential from GB to SEM
- In determining economic Energy flows across the Interconnector the impact of the Carbon price floor in the UK will be another driver tending to push up prices in the UK potentially encouraging flows from SEM to GB, thereby absorbing effective interconnector capacity

Finally we believe that there has been insufficient scenario analysis of the impact of coincident scarcity in ISEM and GB.

2) Do you agree with the use of a least-worst regrets approach to the choice of GB generation scenario used to set EMDF?

While the least-worst regrets approach is appropriate for selecting the capacity requirement and de-rating factors to be used for qualification it has an inherent flaw in being used to choose the GB generation scenario used to set the EMDF. This is because this approach will tend to over-estimate the level of capacity being provided by GB. This is because inherent within this approach the cost of over-procuring capacity is less than the cost of under-procuring. This is because under-capacity is effectively priced at VOLL, whereas over-capacity is priced at CONE at worst, being a considerably

⁶ Accepting that the indicative interconnector de-rating factors for T-1, CY2019/20 Estimate with no reserve include a forced outage rate of 10.9% which provides a safer and lower de-rating than that for the T-1, CY2018/19 Initial Auction Information Pack value of just 6.9%

lower figure. In the case of estimating import capacity this will automatically lead to an over-estimate of capacity.

Our recommendation in this regard is to be more conscious of the negative social welfare implications of potential scarcity events arising from over-capacity estimate of interconnectors which will translate into higher estimates of de-rated interconnector capacity and ultimately over purchase at auction. This echoes our concerns, expressed above around the danger of system tightness in SEM which would likely come about if the Interconnector de-rated capacity was too high and if non-winning plant at auction had left the market. This could lead to an under-procurement of capacity at auction which in the long run could have negative impacts on overall social welfare.

The broader question is around the appropriate value for EMDF which results from this approach. We note that the analysis yields values of EMDF between 53% to 93% and that the indicative EMDF value proposed is 60% and that this will be subject to review. Given the importance of the Interconnector de-ratings it will be very important to follow up on this. In response to the next question we recommend to extend and test the methodology to fully take into account the compounding relationship between EMDF with and without the influence of other interconnectors with GB and the EU.

3) Do you agree with the approach that the EMDF need only be determined for the GB market for CY2019/20 in the absence of interconnection with other markets?

The GB market is multi interconnected with Europe. It is not unreasonable to assume that a scarcity event in GB could coincide with interconnected countries, most particularly in an unstable political situation where GB and the EU relies on Russian energy imports with whom where there appear to be increasing political tensions. Energy flows, unlike some ancillary services are not location specific, providing rationale that interconnection with other markets should be factored into the EMDF calculation.

4) Do you have any response to the storage related questions raised by the TSOs in their paper, which are listed in paragraph 6.3.3 above.

Yes, as detailed.

5) Do you have any response to the other energy and run-hour limited generation related questions raised by the TSOs in their paper which are listed in paragraph 6.3.5 above.

As detailed above in relation to responses 6.3 F. & G.

7. Long-Stop Date and Termination of New Capacity

7.5

7.5.1 The SEM Committee welcomes views on the following consultation question:

1) Do you agree with our revised proposals for Long Stop Dates and Substantial Financial Completion dates as set out in the section, and summarised in Table 4.

We do not wish to comment on this at this time.

To conclude, we thank you for the opportunity to respond to this consultation.

We would welcome discussing any aspect of our response and remain at your disposal.

A handwritten signature in blue ink that reads "Justin McGuire". The signature is written in a cursive style with a large initial 'J'.

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