DS3 System Services Consultation – Volume Capped Procurement

This questionnaire has been prepared to facilitate responses to the consultation. Respondents are not restricted to this template and can provide supplementary material if desired.

Please send responses in electronic format to DS3@eirgrid.com or DS3@soni.ltd.uk

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Note: It is the TSOs' intention to publish all responses. If your response is confidential, please indicate this by marking the following box with an "x". Please note that, in any event, all responses will be shared with the Regulatory Authorities.

Response confidential ☐

Question	*Response*
Proposed Market Ruleset	
	We wish to preface this template response by indicating that we have set out in the associated Appendix (pdf document) a Comprehensive Set of **Recommendations (inc Summary)** which follow a **Contextual piece**. These form an Integral part of Bord na Móna's Response. The pdf will be easier to read and will be more impactful than these template formatted responses. We would respectfully encourage and request the TSO's to read the pdf.
Question 1: Do you have any comments on the two options for service bundling proposed and the TSO's preferred option?	The issue, as identified within the paper, is to reach the appropriate balance between delivering the optimal level of services from new entrants from a TSO perspective, and the stifling effect on service provider investment given the longer '2 second to 20 minute reserve cover' timeframe in relation to TOR2, versus the '2 second to 5 minute cover for TOR1. The useful option not identified is the bundling of services from the 5 second to 20 minute reserve cover, ie, POR to TOR2. We believe that such projects may arise in the future and that this third option is worthy of future consideration. We also note the more fundamental (more general) query around whether tenderers should be allowed to offer differing levels of volume for each of the 4 or 5 system services. Our belief is that the decision on such a matter should be based on considerations around how to incentivise the new investor, rather than being focused on system complexity difficulties around the procurement process, which appears to present a difficulty to the TSOs. We do not understand clearly, and the paper does not explain, what difficulties arise from the individual service approach arising from real-time operation of the system.

Question 2: Do you have any view on the technical requirements proposed, including the requirement for over-frequency response?

a) We request more clarity in relation to the scalars which apply for Summary Product Delivery Characteristics set out in Table 3 of the Paper.

Table 3: Summary of Product Delivery Characteristics

Characteristic	Requirements
Dynamic response	Dynamic capability in response to a Reserve Trigger
Required minimum speed of response	150-300ms
Trajectory	0.3Hz
Required reserve trigger capability	49.8 Hz
Recharge limitations	Trickle recharge allowed post-event provided frequency has returned to within ±0.05Hz and remained there for 5 minutes

Can we take it that the relevant scalars under 'Volume Capped' Arrangements for Required minimum speed of response, Trajectory and Required reserve trigger capability are the same as those for the same services under 'Volume Uncapped' arrangements?

Related to this, what FFR Dynamic Trajectory Scalar applies either side of the 0.3Hz requirement, if there is a difference between Capped and Uncapped arrangements?

Does the delivery of 0.3Hz trajectory still result in only a 0.8 FFR Dynamic Trajectory Scalar, ie, less than unity?

Does the delivery of a response time for FFR of faster than 150ms still attract a scalar of 3?

b) We do not have an issue with the requirement for over-frequency response from applicants at this juncture. However our position is based on insufficient information on which to make an informed judgement.

We would however request that the TSO provide clarity on the requirements for over-frequency as this would have impact on sizing of projects with regard to MIC and MEC. Should a lower

	percentage of MIC be required (relative to MIC) for certain technologies, then this percentage as well as the duration for availability of same should be expanded upon. In general terms, we would observe that protection against over-frequency would be particularly required in the event of partial unavailability of the EWIC Interconnector, which appears to have been experiencing availability problems of late. Regarding the product characteristics set out in Table 3 above we gather that these will be the subject of further consultation, intended for July 2018. The term "trickle recharge" is undefined and clarity should be provided as to what is intended by a slow rate of recharge. How, during a state of recharge, will this impact on calculation of availability? Our understanding is that this could affect the MIC/MEC requirements, with associated cost implications to the Service provider. We request more clarity.
Question 3: Do you have any comments on the availability obligation proposed?	We support the general thrust behind the TSOs proposal to exclude any planned maintenance outages from any availability obligation but only to the extent that service providers would be provided with a set number of days per year where they are able to declare themselves unavailable due to maintenance. We see no reason to oppose that the specification as to what would constitute 'planned maintenance' would need to be reasonable and that a reasonable notice period would be required of the service provider with outages not exceeding a certain number of days. We do not disagree with the proposal that the service availability obligation will be 97% for all providers and will be assessed on a monthly basis, where this 97% provision excludes planned periods of maintenance outage. We request clarity on the TSO proposal for forced outages at the connection point due to reasons beyond the control of the IPP plant e.g. asset upgrades, reinforcements, etc. We would propose that such forced outages are treated similarly to capacity whereby if a unit is dispatched for non-energy reasons this will not be counted as a non-fulfilment of the availability obligation, such that they will similarly not be counted.

Question 4: Do you have any comments on pre-requisites with respect to Connection Offers?	We note, as mentioned in the paper, that the process for grid connections is jurisdictional in nature and hence different in Ireland and Northern Ireland but that there is a sufficient level of commonality on which to agree broad principles. Of the three options presented we are aligned with the TSOs proposal supporting Option 2 whereby applicants must provide a legally binding connection agreement(s)/offer(s) or be in receipt of a connection offer for the site(s) in question suitable for a contract go-live date of 31st May 2021. We understand that this approach would still provide a significant amount of certainty to the TSOs whilst increasing the number of potential applicants vs Option 1, without exposing the process to the extent of speculative bidding which might result from Option 3.
Question 5: Do you have a view on the two options provided with respect to managing network limitations?	We believe that the balance of risk should sit with the TSO. We do believe that it would be appropriate for the TSO to have some requirement as to where units should connect to with the provisos that: i) the process of selection of sites & projects would be entirely transparent and objective. In this regard we note one of the key objectives outlined in decision paper SEM 14 108[1]: 'Provide certainty to new providers of system services that the defined procurement framework delivers a mechanism against which significant investments can be financed;' ii) the connection point on the Transmission System/Distribution System for which the service providers have confirmation from the TSO/DSO that they expect this location to meet the availability requirements fully take into account **future** TS/DS developments which might render such projects useful to the system in the medium term. This consideration is mirrored in the State Aids ruling regarding the Irish Capacity Mechanism[2]. We believe that this precedent serves as an indicator of EU thinking

[1] DS3 System Services Procurement Design and Emerging Thinking Decision Paper SEM-14-108, December 2014

[2] Para 49 State aid No. SA.44464 (2017/N) – Ireland Irish Capacity Mechanism; expresses that it is not appropriate for plant which clears at auction to be displaced by additional plant which is required locally in an area in which there are currently constraints but which may be overcome in the future.

	which may equally apply to Eirgrid providing appropriate investment signals for DS3 investment. This would give some surety to the TSO and some visibility to the investor. As such we recommend Option 1, whereby Connecting providers would need to provide confirmation from the TSO/DSO that network limitations will not prohibit service availability. We qualify our support for Option 1 '**such that the TSO/DSO decision fully takes into account *future* TS/DS developments** which might render such projects useful to the system in the near term. Importantly, providers will be remunerated if unavailable due to network limitations. **However we are firmly of the view that it would be an entirely inappropriate investment signal to not guarantee that the suitability of a site would not change for the worse over the payback period of the project. Projects must be bankable and such a loose provision would not appeal to investors**.
Question 6: Do you have a view on the staged approach proposed under the volume capped arrangements?	We note the mismatch between the enduring connections policy ECP-1 of 27/3/2018 and that of DS3 with regard to scale of DS3 rollout. We understand that the principal objective of ECP-1 is to afford the opportunity of network connections for shovel ready projects and to lay the foundations for more regular batches for connection. Under ECP-1, some 400MW are reserved for DS3 projects only, from the 1,000MW min. new connection offers in the 2018 batch. In contrast, the TSO proposal is that, under a staged approach to procuring volume capped System Services some 300MW would be in place by 31st May 2021, with just 100MW being procured in the first round, with an upper limit of 30MW of DS3 contracted services per connection point. By and large we support this staged approach for the following reasons: i) it is aligned with a phased transition from existing assets to new technologies which will support system security ii) it will lead to lower cost services where technology costs are on a reducing path

	iii) it will lead to broader site selection due to improvements in the Transmission & Distribution systems over the rollout period iv) it will lead to safer procurement by TSOs under auctioning where bids may be infeasible, below cost and where projects may not be realised. We comment on this danger elsewhere, which we believe to be particularly prevalent in a 'Pay as Bid' remuneration mechanism. As expressed elsewhere, and notwithstanding the TSO's bid evaluation difficulties, we do not believe 'Pay as Bid' is appropriate; rather 'Pay as Clear'.
Question 7: Do you have a view on the proposed bid pricing requirements and the mechanism for assessing bids and determining price?	We support the TSO Proposal that prices should be submitted for each System Service within the bundle to enable the relevant scalars to be applied and to ensure that the proposed tariff limits are respected. While we note that all services within the bundle are required to the same volume and that these are required to the same high availability obligation we believe that the balance of this approach is weighted in favour of the purchaser and against the provider. While recognising the rationale for same, particularly in the early stages, we believe that it should be possible to revisit this approach and to evaluate the alternative option to assess each service volume separately in the future. Regarding price determination, for as long as this 'equal volume' approach applies it would seem reasonable that a typical year approach would be taken, that the total price per service would be summed into a total remuneration cost for the bundle and that prices per MW would be compared to determine the successful applicants. The approaches outlined towards remuneration of providers consider the certainty of remuneration to the providing units as well as to expenditure by the TSO. The options for remuneration are for remuneration to be based on either real system conditions or based on a calculated value using a typical wind year, with the overall approach then potentially involving a cap and floor.

	We support the notion of a cap and floor, and while agreeing that the typical year approach is used for assessment, we believe that early entrants[3] need to be incentivised within the tariff cap and floor mechanism. We propose that a suitable mechanism for doing this would be, in setting the cap and floor, that these should be set by the remuneration expected for a high and typical wind year respectively, rather than for a low wind year. Notwithstanding the SEMC decision to set the floor at a low wind year (24% wind capacity factor), this is a more fair approach on which to make a secure business investment which will seed the market for early entrants[5]. We support the TSO proposal that the recommended service tariffs should set the tariff caps for bids. **With regard to price determination we strongly disagree with the TSO proposal for Pay as Bid pricing, to the exclusion of Pay as Clear. The paper itself recognises that Pay as Bid is generally restricted to where there are market power issues, ie, where market liquidity is low and that Pay as Clear pricing is seen as a more 'market like' approach generally favoured by the European Framework Guidelines as the means by which to determine the price for services. If necessary there should be further consultation on options to resolve the issue arising.** We refer to scalar remuneration issues in our response to Q9. With regard to acceptance of last tenderer our proposal would be to extend the TSO proposal whereby whole bids would be accepted in price order up to and exceeding the total volume, ie removing the 'not exceeding' provision. We believe that the risk to over expenditure by the TSOs if project sizes were to be limited to only 30MW should come secondary to securing the business case of a new technology provider.

[3] This could be limited to the first 200MW in the first instance, and then be subject to review

Question 8: Do you agree with the proposed maximum volume proposed per separate grid connection?	In recognising the options presented for Max. size <10MW, 30MW and 100MW per separate grid connection we see no reason, in the context of the 100MW capped procurement, to object to the TSO proposal whereby a maximum DS3 contract volume of 30MW is proposed per separate grid connection. It is notable however that this is out of kilter with the max. limit of 50MW for Enhanced Frequency Response (EFR) in the UK, and raises the issue of whether smaller 30MW bound projects could be subject to competitive disadvantage. We propose that the UK's EFR arrangements could usefully be included in a **workshop** as one of several areas highlighted below.
Question 9: Do you have a view on the proposed application of performance, scarcity, product and locational scalars?	The SEMC decision is that services should be rewarded during periods of higher SNSP. In relation to the scarcity scalar, in alignment to our response to Q7 we believe that a suitable mechanism for doing this would be, and coincident with the cap and floor approach, that the scarcity scalar should be applied based on actual SNSP, subject to being not less than a typical wind year. We believe this is a more fair approach on which to make a secure business investment which will seed the market for early entrants[5]. Regarding the *Performance Scalar* we do not have reason to disagree or to comment further on the TSO proposal to use the Performance Scalar outlined in Table 4 of the Paper. *Product Scalar for the Faster Response of FFR*; we agree that this scalar should apply as defined and that the appropriate assessment should follow from Option 3 whereby applicants are sorted on speed of response with those faster than 200ms over those which are slower and that further Option 2 should also apply whereby the Product Scalar for faster response is applied after assessment, ie, in remuneration and not in assessing the actual remuneration cost which is characteristic of Option 1. *Product Scalar for the Enhanced Delivery of FFR, POR, SOR and TOR1* (to incentivise capability to react to a frequency trigger); we agree with the TSO proposal that the product scalar for Enhanced Delivery is not applied. *Product Scalar for the Continuous provision of Reserve from FFR to TOR 1* (to incentivise the continuous provision of FFR to TOR1); seems reasonable to limit the scalar at 1.

	Locational Scalar; the TSO proposal is for the Locational Incentive scalar not to be applied under this initial stage of volume capped procurement arrangements, but subject to future use if such locational signals are necessary. We would note that the network limitations provisions Options 1 and 2[4] that these alone will rule out areas within the grid thereby providing their own locational signal – which will be a diminishing multiplier (ie, less than 1) rather than an enlarging multiplier (greater than 1) from a locational scalar.
Question 10: Do you have a view on the market interactions outlined here and the proposed mechanism for mitigating?	We acknowledge that the relevant industry frameworks must be respected but that a need for modifications may arise as the rollout occurs. Regarding market interactions: -It is critical that the TSOs and Service providers consider and fully understand any interactions between the volume capped arrangements and the energy and capacity markets within I-SEM. We propose that there is a **workshop** on same. -I-SEM Balancing Market; It is recognised that if a unit was to be dispatched on in the balancing market, their availability for the provision of System Service for which they were contracted would reduce, and that this would be unacceptable to the TSO. However, having to 'manage our position within the balancing energy market' as expressed by the TSO could be extremely limiting to certain projects. For example any unit wanting to participate in the energy markets would likely be severely restricted in trying to do so. The TSO proposal is that dispatch for purposes other than energy provision would not count as non-fulfiment of availability for the contracted service. As such their proposal is that Service Providers should manage their own positions in the energy market to ensure they can fulfil the service and availability outlined in their contract. Our belief is that this is too restrictive and that further clarity is required, perhaps within a **workshop**. -I-SEM Interactions – recharge after activation; providers are expected to take responsibility ensuring that they recharge in a timely manner after activation. They can do this via utilisation of their trickle charge capability or, more quickly, by bidding in the balancing market. We

[4] P32 of the Consultation Paper

	support the TSO proposal that Service Providers must adjust their balancing bids to recharge after an event or may utilise their trickle recharge function (within the appropriate frequency conditions). It is not clear from the paper whether a slow trickle recharge would lead to a reduced availability performance scalar, which could incentivise the balancing bids approach. We would welcome clarity in this regard. -I-SEM Interactions – Capacity Market; the Paper sets out that there remains a question as to whether units successful under the volume capped procurement process are able to get a Reliability Option contract through the CRM and the impact on the availability obligation should a unit be called upon to provide this capacity. As we know all units above 10MW must compete for an RO. The recommendation in the paper is vague suggesting that similar to the proposal for participation in the balancing energy market, the most viable option currently is for the service provider to take responsibility for their participation in the Capacity Mechanism, in order to ensure they are able to meet their system service availability obligations. What exactly does this mean? There are competing objectives here to the extent that the paper indicates that mandatory participation in the CRM could be investigated by the RAs as an alternative mitigation mechanism. This is vague at best and needs further open discussion, perhaps within a **workshop**. That said, we recognise and welcome the position where if a unit is dispatched for non-energy reasons this will not be counted as a non-fulfilment of the availability obligation.
Question 11: Do you agree with the proposed mechanism for assessing applications?	We agree with steps 1 through to 4. As we set out in our response to Q7 we believe that there should be room for contracts to exceed the 100MW first tranche, should this be the agreed lot size, given the relatively small exposure from projects with a likely max. size of 30MW, should this be the agreed project size cap for same. 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

This leads to our Recommendations & Summary Points:

The key recommendations are to take a prudent approach by:

i) transitioning from existing to new technologies/service providers at a pace such that the existing technologies/service providers 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.

ii) Ensuring that Volume Capped procurement supports new technology in such a way as to render projects bankable.

1. Recognise the complete inadequacy of 'Pay as Bid'; the reward mechanism selected must be 'Pay as Clear'. The paper itself recognises that Pay as Bid is generally restricted to where there are market power issues, ie, where market liquidity is low and that Pay as Clear pricing is seen as a more 'market like' approach generally favoured by the European Framework Guidelines as the means by which to determine the price for services.
2. Further we are firmly of the view that it would be an entirely inappropriate investment signal to not guarantee that the suitability of a site would not change for the worse over the payback period of the project. Projects must be bankable and such a loose provision as appears to be proposed would not appeal to investors.
3. Recognising that the minded to position is to rollout 100MW for auction in the first batch, which is relatively modest vs the Enduring Connection Policy 400MW volume set aside for DS3, we believe that there is adequate room for securities to be provided to service providers in certain areas[5]:
   a) In relation the TSOs Service Bundling Proposals the option not identified is the bundling of services from the 5 second to 20 minute reserve cover, ie, POR to TOR2.

[5] Which will not over expose the TSOs on the expenditure side

	We believe that such projects may arise in the future and that this third option is worthy of future consideration. b) We support the staged approach. c) We are broadly in support of the availability obligation proposals however we request clarity on the TSO proposal for forced outages at the connection point due to reasons beyond the control of the IPP plant e.g. asset upgrades, reinforcements, etc. We would propose that such forced outages are treated similarly to capacity whereby if a unit is dispatched for non-energy reasons this will not be counted as a non-fulfilment of the availability obligation, such that they will similarly not be counted. d) With regard to managing network limitations; the connection point on the Transmission System/Distribution System for which the service providers have confirmation from the TSO/DSO that they expect this location to meet the availability requirements should fully take into account **future** TS/DS developments which might render such projects useful to the system in the medium term e) We support the notion of a cap and floor, and while agreeing that the typical year approach is used for assessment, we believe that early entrants[6] need to be incentivised within the tariff cap and floor mechanism. We therefore propose that a suitable mechanism for doing this would be, in setting the cap and floor, by the using the remuneration expected for a high and typical wind year respectively, rather than for a low wind year. Notwithstanding the SEMC decision to set the floor at a low wind year (24% wind capacity factor), this is a more fair approach on which to make a secure business investment which will seed the market for early entrants[5]. f) With regard to acceptance of last tenderer our proposal would be to extend the TSO proposal whereby whole bids would be accepted in price order up to and exceeding the total volume, ie removing the 'not exceeding' provision. We believe that the risk to over expenditure by the TSOs if project sizes were to be limited to only 30MW should come secondary to securing the business case of a new technology provider.

[6] This could be limited to the first 200MW in the first instance, and then be subject to review

	We propose that the UK's EFR arrangements could usefully be included in a **workshop** as one of several areas highlighted below. In relation to the scarcity scalar, in alignment to our response to Q7 we believe that a suitable mechanism for doing this would be, and coincident with the cap and floor approach, that the scarcity scalar should be applied based on actual SNSP, subject to being not less than a typical wind year. We believe this is a more fair approach on which to make a secure business investment which will seed the market for early entrants[5]. g) Product Scalar for the Faster Response of FFR; we agree that this scalar should apply as defined and that the appropriate assessment should follow from Option 3 whereby applicants are sorted on speed of response with those faster than 200ms over those which are slower and that, further, Option 2 should also apply whereby the Product Scalar for faster response is applied after assessment h) Regarding market interactions; having to 'manage our position within the balancing energy market' as expressed by the TSO could be extremely limiting to certain projects. For example any unit wanting to participate in the energy markets would likely be severely restricted in trying to do so. It is critical that the TSOs and Service providers consider and fully understand any interactions between the volume capped arrangements and the energy and capacity markets within I-SEM. We propose that there is a **workshop** on same. For instance it is not clear from the paper whether a slow trickle recharge would lead to a reduced availability performance scalar, which could incentivise the balancing bids approach. We would welcome clarity in this regard. Continuing on I-SEM interactions – the Capacity Market; the recommendation in the paper is vague suggesting that similar to the proposal for participation in the balancing energy market, the most viable option currently is for the service provider to take responsibility for their participation in the Capacity Mechanism, in order to ensure they are able to meet their system service availability obligations. What exactly does this mean? There are competing objectives here to the extent that the paper indicates that mandatory participation in the CRM could be investigated by the RAs as an alternative mitigation mechanism.

This is vague at best and needs further open discussion, perhaps within a **workshop**.

We recognise and welcome the position where if a unit is dispatched for non-energy reasons this will not be counted as a non-fulfilment of the availability obligation.

i) As we set out in our response to Q7 we believe that there should be room for contracts to exceed the 100MW first tranche, should this be the agreed quantity, given the relatively small exposure from projects with a likely max. size of 30MW, should this be the agreed project size cap for DS3 contract purposes.

Within our Response we have identified many areas which require clarification

We have proposed that a Workshop be held to address these

'Context' – which precedes the Recommendations & Summary Points in the pfd 'Appendix' document

- Bord na Móna is pleased to have this opportunity to contribute to the design of DS3 System Services Volume Capped rollout. As a market participant with conventional and renewable assets we are fully supportive of the DS3 System Services project in achieving an SNSP rate of 75%, ensuring that national obligations and targets are realised by 2020.
- With the transition to I-SEM and future downward pressure on energy revenues accompanied by reduced remuneration for Capacity under the CRM, Bord na Móna is acutely aware of the importance to the investor of being able to capture secure and adequate revenues from System Services to help underpin the business case for investment in both new technologies as well as for existing investments.

  A central theme of our ISEM recent DS3 and CRM responses is that we recognise how critically important it is for the RA's/TSOs to ensure, at a most fundamental level, that there is a secure level of power 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. • We emphasise that this journey will be a transition which prudence would suggest should involve a degree of caution and surety of foot – for both 'existing' as well as to 'new' technology – as well as to Service providers and the System Operators/Regulatory Authorities. If there is insufficient commercial surety to Service providers, there will be insufficient signal for investment (for new and for existing) with the associated threat to Energy security. • In this regard we would highlight the fragile backdrop to the revenue streams, ie., the market dynamic. -**Energy** revenues are expected to fall; as such they provide only a very limited energy investment signal. -**Capacity revenues** too have reduced markedly with the introduction of the CRM. -Finally **Ancillary services** revenues too are highly uncertain. Ireland is trying to achieve levels of SNSP unprecedented in anywhere in the world. Potential DS3 payments only approach the €235m 2020 expenditure glide path at consistently 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 increasingly important DS3 revenue stream. DS3 services are only rewarded at scale when SNSP levels are above 60%. Competitive bidding/Auctioning is becoming a reality, depressing Service provider revenues, 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 – most particularly in a 'pay as bid' market mechanism. In the volume uncapped stream there is likely to be tariff erosion, thereby failing to underpin the business models of 'existing' technologies.

	• We are at a critical point in this transition, 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 power supply security. Likewise the degree of revenue uncertainty places a significant risk of under investment for new technologies and services.