

EirGrid and SONI response to DS3 Protocol Workshop (24/11/2020)

22 December 2020



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Introduction

This document is in response to the industry workshop hosted by the TSOs on 24 November 2020 to discuss proposed changes to the DS3 Protocol document.

The four areas discussed at the workshop were:

- **Changes to the POR Assessment Method**
- **Ramping Margin Performance Assessment Proposal**
- **Reduction in FFR and OR Assessment Threshold**
- **Data Poor Process**

The slides from the industry workshop can be found as part of this publication on the TSOs' websites¹.

Questions and comments discussed on the day and submitted by stakeholders following the event have been summarised below along with responses from the TSOs in each of these four areas. The written responses submitted by stakeholders by email following the workshop can be found appended to this document.

Discussion topics and queries raised outside the scope of the workshop have been noted; however they have not been addressed in this TSO response.

As stated at the workshop it is our intention to conduct a 6-week consultation, beginning early March 2021 with a consultation workshop planned to be held mid-March 2021.

¹ www.eirgrid.com and www.soni.ltd.uk

1. Changes to the POR Assessment Method

Stakeholders who took part in the discussion during the workshop:

Peter Stratford - Everoze

Mark Vesey - Energia

Will Carr- ESB/EAI

Rory Griffin - Bord Gais Energy

Frank Burke - Lumcloon Energy Ltd

Jim Cooke - ESB

Paddy Finn - DRAI

Three written responses were received following the workshop with regards to the changes to the POR assessment method.

At the workshop it was suggested having two methods for the performance assessment of POR for a period of time to allow more analysis to take place.

A comment was made at the workshop that the inertia credit was a recognition of the energy required to accelerate a 'heavy' unit if the frequency was recovering quickly. They stated that this can be in the POR timeframe and should continue to be accommodated – the physics of this has not changed.

Another stakeholder commented that the inertia credit was introduced to account for the characteristics of large synchronous generators when responding to frequency trips and it was not a reward for providing inertia. If it is removed, large synchronous generators will fail a lot of events with no way of resolving this issue.

One written submission commented that they welcomed the proposal to average the response over the entire POR period as they believed this would resolve the anomaly whereby rapidly changing values are measured using 1 second sampling and should ensure that future performance assessment is a more accurate reflection of the actual performance.

One respondent disagreed with the logic provided for removal of the inertia credit and did not agree that the introduction of SIR and FFR justify the removal of inertia credit. They further stated that the inertia credit reflects the characteristics of a synchronous unit when responding to a frequency event and offsets the reduction in POR provision whilst the frequency is recovering;

All respondents noted that in the TSOs' workshop presentation the new proposed average response method was used against 5 events and resulted in a number of fails occurring when units had passed using current assessment criteria. They further commented that they believed that the sample, shown at the workshop, contained too few events to be a fair representation of a unit's performance under the proposed methodology.

All respondents welcomed the invitation from the TSOs to engage bilaterally on the impact on individual providing units.

TSOs Response:

We welcome the discussion and comments received from industry regarding the changes to the POR assessment method. Whilst we believe there is a genuine rationale for these changes we will continue to discuss the comments internally and further engagement will take place as part of the next Protocol consultation.

We welcome those stakeholders who have requested one to one meetings to avail of the analysis in the changes to the POR Assessment Method and these are being followed up on separately.

2. Ramping Margin Performance Assessment Proposal

Stakeholders who took part in the discussion during the workshop:

Stephen Brownlees - EPUK

Will Carr - ESB/EAI

Paddy Finn - DRAI

Three written responses were received following the workshop with regards to the changes to the Ramping Margin Performance Assessment Proposal.

In summary, all stakeholders who provided comment agreed that a review of the ramping assessment methodology is welcomed and required.

Two respondents commented that it is important the new tool is designed in a manner that results in a fair and balanced assessment across all technology types, such as to integrate all dispatch instructions, and that the relevant tolerances by technology type are established by working closely with industry. They further stated that they welcomed the proposals to split the Replacement Reserve assessments from those for Ramping, and further propose that there is merit in separating the assessments for each of RM1, RM3 and RM8.

Two respondents highlighted their concerns over the proposed monitoring of start-up profiles against declared TOD sets as part of this methodology. They further stated that due to the nature of CCGT units it is very difficult to accurately follow TOD start-up profiles due to the inflexible nature of the TOD parameters. CCGT loading profiles will often temporarily deviate from the TOD profiles as the machines dynamically heat soak.

One respondent suggested the using the existing FAIL SYNC assessment for unit start-ups and assess dispatch instructions when the units are in normal operation.

TSOs Response:

We welcome the comments from industry and would like to reiterate what was stated at the workshop. Development of the new tool to carry out ramping margin performance assessment is ongoing with prototype testing planned for early 2021. The actual design is yet to be fully finalized which will include the determination of tolerance levels for pass/fail criteria and the calculation method of the Performance Incident Scaling Factor (Qi).

We welcome those stakeholders who have requested one to one meetings to discuss how their units would be specifically assessed using the new tool.

3. Reduction in FFR and OR Assessment Threshold

Stakeholders who took part in the discussion during the workshop:

Frank Burke - Lumcloon Energy Ltd

Peter Stratford - Everoze

Will Carr - ESB/EAI

Hugh Mullany - Mullany Energy

Mark Coleman - SSE

Justin Maguire - Bord na Mona

Tom Birney - Statkraft

Paddy Finn - DRAI

Four written responses were received following the workshop with regards to the reduction in assessment threshold.

All queries and comments related to the reduction of 1 MW to 0.5 MW for POR, SOR and TOR1 and the reduction of 1 MW to 0.2 MW for FFR used in calculate the respective Performance Incident Scaling Factor (Qi). Further detail of what was proposed in the Protocol consultation on 8th April 2020 can be found in the DS3 Consultations and Publications section on the EirGrid and SONI websites.

TSOs Response:

It became apparent during the workshop due to the large number of queries that an error had been made in the marked up version of the Protocol document issued as part of the Protocol consultation published on 8th April 2020. It was not the intention of the TSOs to change the tolerance used in the calculation of the Performance Incident Scaling Factor (Qi) for any of the reserve products.

The tolerance that was proposed to be lowered was the threshold to proceed with performance monitoring for each reserve product. The proposals were to reduce the assessment threshold for OR services to 0.5MW and reduce the assessment threshold for FFR to 0.2MW.

In the next Protocol consultation the marked up version of the Protocol document will detail this proposed threshold change.

4. Data Poor Process

Stakeholders who took part in the discussion during the workshop:

Stephen Brownlees - EPUK

Will Carr - ESB/EAI

Paddy Finn - DRAI

Three written responses were received following the workshop with regards to the data poor process.

In summary, stakeholders commented that service providers should not become data poor due to a decreasing number of events on the system. One additionally commented that given that 'Data Poor' is evidence of the collective contribution to successfully achieving system stability and security it seems counter intuitive that providers would be worse off, having made a positive contribution.

A number of respondents commented that the 12 month pre-decay period should be extended to 24 months and with the costs of a successful test being borne by the System Operator, and that of a failed test by the service provider.

TSOs Response:

As stated at the workshop the TSOs do not propose any changes to the current Data Poor Process in the next consultation. A generating unit can apply for a Performance Test at any time to return to the Data Rich Process.

If a generating unit has gone Data Poor and performance data is available for a chargeable event then please contact performancemonitor@eirgrid.com or performancemonitoring@soni.ltd.uk.

Appendix

Date: 4th of December 2020

By email to DS3@eirgrid.com and DS3@soni.ltd.uk

RE: Industry Workshop on DS3 System Services Protocol Document 24th November 2020

To Whom it May Concern,

In addition to, our email communication of 27th November, BnM welcomes this opportunity to feedback on the workshop and on the proposals presented for discussion.

We understand that the main purpose of this exercise is to help formulate a subsequent consultation to help inform the presentation of meaningful, considered proposals which will ultimately follow through to fair solutions, where these solutions which will reflect the values across differing technologies of their contributions towards system stability and security.

On this basis, we comment on the proposals:

1. POR Inertia Credit removal, POR AVG

Conventional generation is making a valuable contribution to system security and stability and it should be remunerated fairly, in recognition of the same. We support the representation from the EAI that the proposed methodology would not be fair and robust under conditions where there was relatively high inertia on the system and the recovery of system frequency post event accrued slowly through the POR timeframe. Our immediate concern with the approach is that the estimated impact of the proposed change is made on the basis of a very small number of events - just five events. We do not consider that this is an adequate number of events on which to make a proposal which would have such negative financial impact.

In the case of EPL, the plant experienced only three of these five events, on which to assess its impact on performance rating and associated remuneration.

The purpose of our email of the 27th November was to flag, based on our own analysis, our belief that this proposed change would have a very significant negative impact on our EPL steam generation plant's commercial performance as a result of the increased scale of event fails.

From the workshop, the indication, by and large, was that there would be only little impact, and that the compensation by the POR AVG (vs the POR Achieved) would more or less compensate for the removal of the Inertia credit. However, this was not borne out across industry, for the June and July events, from the scale of negative impacts as presented.

BnM would welcome Eirgrid's own analysis of the impacts from events on EPL.

We are further concerned around the possibility of the potential removal of the alpha and beta governor droop multipliers – which would further exacerbate the negative financial impact on EPL.

BnM would welcome further engagement with the SOs on this proposal.

2. Reduction of the Threshold for Performance Assessment

We understand that there was a mistake made within the proposal, which would have exposed service providers to increased risk of fail and of partial passes, and that the proposal is being rectified so as to simply create a greater number of events.

We welcome the clarification that the proposed reduction in the Threshold for Performance Monitoring does not include a change to the calculation of performance where the assessed differential between the expected and achieved response is less than 1MW.

3. Ramping

While we welcome the general thrust of the proposal we are concerned that it has the potential to put an extra burden specifically on OCGT peaker plant. It is important that it is designed in a manner that results in a fair and balanced assessment across all technology types, such as to integrate all dispatch instructions, and that the relevant tolerances by technology type are established by working closely with industry. To this end we would welcome further engagement in advance of next year's consultation to develop and parameterise the proposal.

We welcome the proposals to split the Replacement Reserve assessments from those for Ramping, and further propose that there is merit in separating the assessments for each of RM1, RM3 and RM8.

4. Data Poor

While we welcome the initiatives to improve the Data Poor situation we feel that the proposals could have gone further, along the lines proposed by industry as well as by individual proponents.

Given that 'Data Poor' is evidence of the collective contribution to successfully achieving system stability and security it seems counter intuitive that providers would be worse off, having made a positive contribution. BnM's view is that good behaviour should be incentivised, with the 12 month pre-decay period being extended to 24 months and with the costs of a successful test being borne by the System Operator, and that of a failed test by the service provider.

BnM welcomes this opportunity to engage with the SO's and look forward to working together in assessing proposals, identifying impacts, to help reach fair and equitable solutions to evolving system needs.

For and on behalf of Bord na Móna

A handwritten signature in blue ink, reading "Justin Maguire". The signature is written in a cursive, flowing style.

Justin Maguire

Regulatory and Compliance
Bord na Móna PowerGen
Main Street
Newbridge
Co Kildare

127 Baggot Street Lwr.

Dublin, D02 F634

Date: 4th of December 2020

By email to DS3@eirgrid.com and DS3@soni.ltd.uk

RE: Industry Workshop on DS3 System Services Protocol Document 24th November 2020

Dear Christopher, Vivienne,

Following the industry workshop on the 24th November 2020 where the amendment to the DS3 Protocol Document was discussed there are a number of points that EAI members would like to emphasise in advance of the planned 2021 consultation on the Protocol Document being further developed.

POR Assessment

EAI members are concerned that the data presented by the TSOs on the cumulative impact of the proposed changes to the POR assessment methodology for recent events shows an increase in the number of units being assessed as having failed to deliver. We also believe that the sample, shown at the workshop, contains too few events to be a fair representation of the units' performance under the proposed methodology. We remain unclear as to the underlying justification for the proposed changes given the original rationale for the adoption of the inertia credit. EAI members are concerned that the proposed methodology will undermine the value of units' instant reactions to frequency events (from 0 seconds+) and would not be fair and robust under conditions where there was relatively high inertia on the system and the recovery of system frequency post event? accrued slowly through the POR timeframe.

EAI members welcome the TSOs' invitation to engage bilaterally on the impact on individual providing units and intend to do so over the coming weeks.

Reduction in the Threshold for Performance Monitoring

EAI members welcome the clarification that the proposed reduction in the Threshold(s) for Performance Monitoring does not include a change to the calculation of performance where the assessed differential between the expected and achieved response is less than 1MW.

Ramping Assessment Methodology

EAI members welcome the TSOs' proposal to move away from a performance assessment methodology based solely on Sync Instructions to one which integrates all Dispatch Instructions to give a complete assessment of a provider's ramping performance. However, this issue is one that has been raised by industry over an extended period and EAI members are keen that it now be addressed in a manner that results in a fair and balanced assessment across all technology types. To this end we would welcome further engagement in advance of next year's consultation to develop and parameterise the proposal.

We welcome the proposals to split the Replacement Reserve assessments from those for Ramping, and further propose that there is merit in separating the assessments for each of RM1, RM3 and RM8.

Data Poor Issue

EAI members remain of the view that the timeline for a provider to become data poor should be extended from 12 to 24 months and where a test was undertaken to reset a provider's data poor status, that the cost of a failed test would be for the service provider's account and the cost of a successful test outcome would be funded the System Operator.

EAI welcomes the TSOs' engagement with industry on these issues to date and would be happy to meet to discuss any of the points raised in this letter.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'William Carr', is positioned above a horizontal dashed line.

William Carr

Chair, EAI DS3 Working Group

Submission from Sean McParland, Regulation Analyst, **Energia**

Dear Sir/Madam

Thank you for your presentation on the Proposals for Future DS3 System Services Protocol Updates on the 24th November.

As suggested to participants at that presentation, we would like to avail of the opportunity to discuss the impact of the proposed changes on the Huntstown Generation plants.

In respect of the proposed amendments we would like to make some initial comments:

Changes to POR Assessment Method

- We welcome the proposal to average the response over the entire POR period. This would resolve the anomaly whereby rapidly changing values are measured using 1 second sampling. This should ensure that future performance assessment is a more accurate reflection of the actual performance.
- We disagree with the logic provided for removal of the Inertia Credit and do not agree that the introduction of SIR and FFR justify the removal of Inertia Credit;
- Inertia Credit reflects the characteristics of a synchronous unit when responding to a frequency event and offsets the reduction in POR provision whilst the frequency is recovering;
- As you are aware a technical working group was established in relation to the issue of inertial response by conventional generators and the implementation of Inertia Credit. We recommend that a similar technical working group also needs to be established to discuss the implications and impacts of potentially removing Inertia Credit rather than considering this solely within the forum of changes to the DS3 Protocol Document.
- In respect of the POR Assessment review, we note that the new proposed Average Response method was used against 5 events and resulted in a number of Fails occurring when units had Passed using current assessment criteria;
- We are keen to further understand and view the direct impacts of this proposed change on the Huntstown Generation Plants.

Ramping Margin Performance Assessment Proposal

- Energia believe that a review of the ramping assessment methodology is required;
- However we have concerns over the proposed monitoring of start-up profiles against its declared TOD set as part of this methodology; Due to the nature of CCGT units it is very difficult to accurately follow TOD start-up profiles due to the inflexible nature of the TOD parameters. CCGT loading profiles will often temporarily deviate from the TOD profiles as the machines dynamically heat soak.
- We would welcome an opportunity to discuss our concerns in relation to this and understand the impact of the proposed change in relation to the Huntstown Generation Plants.
- Our suggested approach would be to use the existing FAIL SYNC assessment for unit start-ups and assess dispatch instructions when the units are in normal operation.

Reduction in FFR and OR Assessment Threshold

- It is our understanding following the presentation that no changes to the FFR or OR threshold are now being proposed;
- We would be grateful if that understanding could be confirmed.

Data Poor Process

- It is our understanding that no change in relation to the Data Poor Process are to be proposed in the next DS3 Protocol consultation;
- However we would reiterate previous views that service providers should not become data poor due to a decreasing number of events on the system;
- Mitigating options to this issue include:
 - extending the period after a service provider is deemed to be data poor from 12 months to 24 months; and/or
 - allocating the cost of a failed test to the service provider but the cost of a successful test to the TSO.

We would welcome the opportunity to discuss the above and understand the direct impacts of proposed changes on the Huntstown Generation units at the earliest opportunity.
We look forward to hearing back from you on this matter.

Submission from Julie Bowe, Legal Counsel, **Indaver Ireland Ltd & UK**

Dear EirGrid and SONI,

Thank you for the opportunity for further comment on the DS3 Protocol proposed changes next year.

Indaver's Waste to Energy Plant in Duleek Co. Meath is currently contracted for DS3 System Services from POR through to RM8. The provision of these services are normally during constrained operation of the plant during periods of high renewable penetration on the system. Given the plant's size (17MW) it can only produce the minimum tendered quantities (1MW) of POR to TOR1 under frequency droop response.

If you are in a position to share any analysis of how Meath Waste to Energy would fare under the proposed combination of no inertial credit and new measurement rules for POR for our generator, we would appreciate it. We also welcome the clarification during the workshop that there was no intent to narrow the measurement tolerances for the provision of the operational reserves. Indaver had no objection to further tighter tolerances, subject to the ability to tender partial MW of reserve capability.

It is important for all DS3 providers to reliably deliver their declared response. Given our plant size, we are concerned about the proposed removal of the inertia credit for that reason, as we cannot adjust our tendered volumes downwards to ensure reliable delivery as measured under the new rules. Furthermore, as the generator is over 10MW in size, its response cannot be aggregated within an AGU's or DSU's overall response to resolve the issue that way. In conclusion, these changes may exclude Indaver from payment for POR, despite a Grid Code mandate to provide it.

As per our consultation response, we believe that this issue could be resolved by allowing providers tender for partial MW values. There will be increasing numbers of smaller providers of DS3 services in the future (in terms of tendered capability), e.g. windfarms, small generators and smaller storage. It is important that these providers can compete fairly with the larger DS3 providers, whether in aggregate or individually. They should not be inadvertently excluded from payment for services which they do deliver (even if not at 1MW each on an individual basis) on the basis of a rule change. In the absence of any aggregation proposals, this means either i) tendering for partial MW of reserves should be allowed, or ii) these changes should not be implemented if it makes smaller providers of DS3 system services unable to meet the minimum required threshold of reserve provision.

We thank you in advance for any data that you can share, and trust that you will consider our arguments in favour of not inadvertently excluding smaller providers of operation reserves from fair payment for delivered service.

Submission from Angela Blair, **Power NI Power Procurement Business (PPB)**

We welcome the opportunity to contact you on an individual basis to avail of your analysis on units in the area of the POR suggested changes. We are particularly interested in this analysis. Can you forward the analysis for our units. We also suggest that more events are analysed as using the 2020 data set is a bit too narrow.

In addition, we welcome the change in the assessment of ramping however we have some considerable concern on the running up of a unit being included in this. There are a few areas we wish to highlight in this regard:

1. The TOD submission has to be submitted DA and the unit characteristics may have changed between the TOD submission and the live operation – this needs to be taken into consideration.
2. There is one set of TOD for each heat state and the number of hours into the heat state can vary the rate of the run-up considerably, so while a mid-position TOD set is best for a unit in the market settlement a worst case TOD set is better under this ramping assessment. This will be difficult for providers.
3. CCGT's may have different combinations of their units at start-up e.g. GT coming on first followed by an ST, this could create errors in cycle choice by a performance system and needs to be considered.