

DS3 System Services Consultation – Enduring Scalar Design

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

Respondent Name	<i>Brian Mongan</i>
Contact telephone number	<i>028 9335 6238</i>
Respondent Company	<i>AES UK & Ireland</i>

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

☐

The closing date for responses is Monday, 21 August 2017.

Question	Response
Proposed Scalars for Regulated Arrangements	
<p><u>Question 1:</u> Do you agree with our proposal to include in the performance assessment methodology to determine the value of the Performance Scalar an additional measure to incentivise a unit to supply to the TSOs an accurate forecast of its availability to provide Reserve and Ramping Margin Services? If not, please specify why or identify what element of the proposal you believe requires amendment?</p>	<p>A1 The provision of a forecast is likely to be beneficial to the TSO in the scheduling of generation and the provision of high SNSP. The Availability of generation capability has been a component of daily interaction with the TSOs for many years for Conventional Generation. AES would welcome the introduction of accurate forecasting of Reserve and Ramping for all generation.</p> <p>Due to the lack of communication systems to handle this forecast data, it is understandable that this Scalar may not be introduced for May 2018. However there needs to be a clear indication, in the Decision Paper to this consultation, as to when it shall be introduced. This is so that all participants can identify their financial investment requirements and prepare internal systems to handle such a requirement.</p> <p>AES currently has a generation portfolio made up of conventional generation. The application of this proposed scalar should be clarified if it shall be applied to generators whose output is not limited to variable energy supply. The Reserve and Ramping available in the near future shall be a result of the despatch issued by the TSO and so any forecast shall only identify any unusual issue that a conventional generator would have, rather than its ability to provide its normal Reserve and Ramping values.</p>
<p><u>Question 2:</u> Do you agree with our proposal to implement a Product Scalar for the Faster Response of FFR? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p>	<p>A2 AES welcomes the updated proposal and acknowledges the need to value faster response and its benefit to the stability of the System. We accept the scalars identified in figure 4 of the consultation paper provide further reward of fast system support. It is unclear as to the value of the scalar that would be applicable to a specific generator. There should be further clarification surrounding the methodology of deriving the scalar “from the unit’s contracted capability to provide the FFR Service at a specified time”. We would suggest that a specific rate of change of frequency and frequency trigger value be set in this methodology.</p>

<p><u>Question 3:</u> Do you agree with our proposal to implement a Product Scalar for the Enhanced Delivery of FFR, POR, SOR and TOR1? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p>	<p>Whilst it is indicated that the figure will be agreed during the procurement process, it does not give the participants enough information to arrive at firm financial investment decisions.</p> <p>We suggest that the scalar should be set at the fastest recorded response of the generator unit, either during testing or actual system response, and proposed by the Generator.</p> <p>It is unclear the methodology proposed for any 'performance scalar' associated with this provision. Will there be a separate performance scalar or a contribution to an existing performance scalar?</p> <p>It has been noticed in previous system transients that the speed of change of Frequency can impact on the response time of a generator. This would be more evident if a generator was specifically requested to hold a frequency deadband, wherein it would delay its response until the deadband had been exceeded. This could slow an actual response, and inadvertently attract a performance scalar.</p> <p>Research has shown that initial response is achievable at sub 0.15s. In order to provide incentive for further development of technologies for provision of this very fast response, which can contribute to reduced RoCoF, the service payment should not be capped at a response of 0.15s and a slope should continue essentially to zero seconds, meeting the y-axis at a scalar factor that is equivalent to the provision of SIR of which (at this response time) the output would be indistinguishable from. This would reduce the need for separate further investment in additional technology to provide system inertia at periods of high SNSP levels.</p> <p>A3 This appears to be a scalar that reduces the reward to generators that respond to frequency movement in calculated steps and/or with a deadband.</p> <p>It is welcomed that the operational frequency trigger set point shall not impact payment, which shall be based on the frequency trigger which the generator is capable and willing to provide.</p> <p>Since these values are agreed between the TSO and Generator, and are handled through management of change processes, it may not be suitable for frequency trigger values to be adjusted within 60 seconds of TSO instructions. It is difficult to envisage</p>
--	---

[illegible]

<p><u>Question 6:</u> Do you agree with our proposal to implement a Product Scalar for SSRP with Watt-less VArS? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p> <p><u>Question 7:</u> Do you agree with our proposal to implement a Temporal Scarcity Scalar for DRR and FPFAPR? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p> <p><u>Question 8:</u> Do you agree with our proposal to implement a Temporal Scarcity Scalar for FFR? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p>	<p>A6 AES believe this to be similar to the scalar for an AVR, whereas it is of benefit to the system especially during system disturbances. This has an additional benefit if the generator isn't required to provide energy (MW). However this scalar should only be applicable to those generators that can provide energy with VArS and zero energy with VArS. This should not be for devices such as static compensators. It is unclear if Synchronous compensator generators are included in this scalar given that they have a negative MW component.</p> <p>A7 It is noted that this scalar is only applicable during times of very high SNSP. It is understood that the requirement of these products are best seen during system disturbances at high SNSP times.</p> <p>A8 AES do agree that FFR benefits the system and should be rewarded for that. We do however believe that this benefit is witnessed at all levels of SNSP. Generators are being tested for RoCoF compliance and not for any specific SNSP. Fast changes in frequency benefit from fast response of generators and that benefit is obtained over a full range of SNSP, and especially during high SNSP. We suggest that FFR obtains a scalar of at least 1 when SNSP is below 60%, so as to reflect the benefit of this to the system – in a similar way to POR/SOR/TOR1 etc.</p> <p>There is a significant difference between reaching 60% and 70% SNSP and an additional step at 65% would be appropriate given that it is proposed to increase the</p>
--	--

<p><u>Question 9:</u> Do you agree with our proposal to implement a Temporal Scarcity Scalar for 11 Existing System Services? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p> <p><u>Question 10:</u> Do you agree with our proposal to implement a Locational Scarcity Scalar for All System Services? If not, please specify why or identify what element of the scalar design you believe requires amendment?</p>	<p>SNSP limit in increments of 5%. With a step at 65% any delay in reaching 70% SNSP would have less of an effect on the certainty revenues received by investors.</p> <p>A9 AES believes that this scalar targets those generators that are ‘synchronised’ to the System and providing the services. This does not cover those generators that have invested, but don’t get despatched due to Market/Commercial conditions.</p> <p>There is a significant difference between reaching 60% and 70% SNSP and an additional step at 65% would be appropriate given that it is proposed to increase the SNSP limit in increments of 5%. With a step at 65% any delay in reaching 70% SNSP would have less of an effect on the certainty revenues received by investors.</p> <p>A10 This scalar is not to be applied in the foreseeable future and its description is somewhat vague. The term “at the behest of the TSOs” does not include the expected level of decision transparency.</p> <p>There is also no methodology surrounding the calculation of the actual scalar value which may be greater than 1.</p> <p>We understand that there may be a requirement to procure services in certain localities although there are other mechanisms for this. If those other arrangements fail then this scalar may be required.</p> <p>Should an additional new or an existing provider be further incentivised due to the locational scalar being adjusted, and this were to cause the annual cap to be exceeded a conditional review should not be triggered. Investor uncertainty would be created as this would in effect be redistributing revenue from previously contracted providers, potentially creating stranded assets.</p>
Scalars not Proposed for Implementation	

<p><u>Question 11</u>: Do you agree with our proposal NOT to implement a Product Scalar for Enhanced Delivery of DRR with more reactive current? If not, can you provide rationale to support your views?</p>	<p>A11 AES agrees with the proposal not to implement this scalar, due to the complexities of implementation.</p>
<p><u>Question 12</u>: Do you agree with our proposal NOT to implement a Product Scalar for Enhanced Delivery of SSRP with a PSS? If not, can you provide rationale to support your views?</p>	<p>A12 AES agrees with the proposal not to implement this scalar and that any associated issue should be dealt with through performance monitoring.</p>
<p><u>Question 13</u>: Do you agree with our proposal NOT to implement a Product Scalar for SIR with Reserve? If not, can you provide rationale to support your views?</p>	<p>A13 AES agrees with the proposal not to implement this scalar. There is already an incentive to reduce MinGen, via the SIR and SSRP calculation. This MinGen usually comes with reserve capability.</p>
<p><u>Question 14</u>: Do you agree with our proposal NOT to implement a Product Scalar for Faster Response</p>	<p>A14 AES agrees with the proposal not to implement this scalar as it does not appear to be required at this time.</p>

<p>of FPFAPR? If not, can you provide rationale to support your views?</p>	
<p><u>Question 15</u>: Do you agree with our proposal NOT to implement a specific Temporal Scarcity Scalar for Reserve Products? If not, can you provide rationale to support your views?</p>	<p>A15 AES agrees with the proposal not to implement this scalar, due to the complexities of implementation.</p>
<p><u>Question 16</u>: Do you agree with our proposal NOT to implement a specific Temporal Scarcity Scalar for SIR? If not, can you provide rationale to support your views?</p>	<p>A16 AES agrees with the proposal not to implement this scalar, due to the lack of additional flexibility</p>
<p><u>Question 17</u>: Do you agree with our proposal NOT to implement a specific Volume Scalar for Regulated Arrangements? If not, can you provide rationale to support your views?</p>	<p>A17 AES agrees with the proposal not to implement this scalar. The amount of volume offered to the TSOs during procurement processes should allow the TSOs to control the expenditure, without adjusting the tariffs or other scalars. This allows the generators to identify returns on investment.</p>

Frequency Response Curves	
<p><u>Question 18</u>: Do you agree with our proposal to implement Frequency Response Curves to define the provision of the FFR Service? If not, please specify why or identify what element of the curve design you believe requires amendment?</p>	<p>A18 The ability to define curves that reflect the response of a generator in a manner consistent to every system transient is difficult. Each unit shall respond differently as the frequency rate of change impacts the droop calculation, and the speed of recovery of the frequency also has a similar impact to the calculation. This has been witnessed with conventional generation, which is capable of FFR provision.</p> <p>Given that there is likely to be time delays in physical response, for both conventional and new technologies, the curves in figures 18 and 19 should be based on 'design' parameters.</p> <p>There is a comment in the consultation paper that at times of 'over frequency', the curve design is identical except mirrored. There should be no reference to 'over frequency' curves as there is no DS3 product for this.</p> <p>AES welcomes the approach that the TSOs shall carry out detailed evaluations of control parameters, although this should be done in conjunction with service providers.</p>