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Eirgrid  
By email

Our Ref: EN01-005578

7 August 2017

Dear Sir,

### **Re: Consultation Response - DS3 System Services Enduring Scalar Design**

RES is the UK & Ireland's largest independent renewable energy developer with interests in energy storage, onshore wind, wave and tidal, offshore wind, solar and demand-side response. RES is at the forefront of innovation and design around the world, and now employs over 1000 people and has developed/built over 10,000MW of wind energy assets.

Since developing our first onshore wind farm in Ireland in the early 1990s, RES has subsequently developed and/or constructed 22 wind farms across the island totalling 318MW. RES currently operates over 118MW of wind capacity and has secured planning permission for a further 59MW under/awaiting construction, and has 81MW in the planning system.

RES is one of the world's leading independent energy storage developers, with a global energy storage portfolio totalling more than 240 MW (275 MWh), providing multiple grid services. RES was identified by Navigant Research as one of the leading utility-scale energy storage integrators.

Based in Larne, County Antrim, RES' Ireland team comprises 20 staff covering environmental, planning, engineering, technical, legal, commercial, project management, construction, operations and administration disciplines.

RES is a member of the Irish Wind Energy Association (IWEA).

This consultation response is not confidential.

### **Commentary on the Consultation Paper not Covered by Consultation Questions**

The TSOs propose that a Protocol Document will provide the contractual definition of the Performance Scalar and underlying performance assessment methodologies *to "allow for the ongoing development of these methodologies as required and as dependent TSO systems allow"*. The scope for such significant amendments would be a significant risk for any investor in a new facility to provide DS3 System Services. The contractual framework must place some limitations on the trigger criteria, the extent and the frequency that such amendments could occur. Otherwise investment in new facilities will be discouraged and competition will be damaged to the detriment of consumers.

## Responses to the Consultation questions.

### Proposed Scalars for Regulated Arrangements

*Question 1: 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?*

Yes.

*Question 2: 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?*

RES agrees with the proposed scalar as defined by figure 4. RES also agrees that performance monitoring should be used to adjust the performance scalar in the event that performance differs from the contracted response time. However this adjustment should include the possibility of an upward adjustment in case of improved performance in addition to a downward adjustment in case of failing to meet the contracted timeframe. The intervals at which performance shall be assessed (and subsequently re-assessed if contracted timeframes were not met) must be defined in a manner which does not place undue burden on the TSOs but incentivises best performance by the provider.

*Question 3: 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?*

Yes.

*Question 4: Do you agree with our proposal to implement a Product Scalar for the Continuous Provision of Reserve from FFR to TOR1? If not, please specify why or identify what element of the scalar design you believe requires amendment?*

Yes.

*Question 5: Do you agree with our proposal to implement a Product Scalar for Enhanced Delivery of SSRP with an AVR? If not, please specify why or identify what element of the scalar design you believe requires amendment?*

Yes subject to these additional points:

- RES supports the views of 2016 consultation respondents who “requested clarity that the definition of an AVR encompasses voltage controllers for non-synchronous generators that meet specified performance criteria.”

- RES also supports the views of 2016 consultation respondents who *“requested clarity that embedded generators will be permitted to operate under voltage control, unless the DSOs can provide rationale why this is not suitable.”* Such service providers should be able to access SSRP service payments and the associated AVR scalar.

***Question 6:** 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?*

No. RES agrees with the concept of a product scalar for SSRP with Watt-less VARs. However the proposed scalar magnitude of 2 may be insufficient to meet the energy costs of a provider of this service. Consider a provider who can provide Watt-less VARs with an efficiency of 98% (notional example). In this case the SSRP tariff including Watt-less VAR product scalar (total 0.44 Euro/MVAr/h) must cover the average purchase price of electricity for the 2% losses and there is a break-even electricity price of 22 Euro/MWh above which it is not economic to provide this service. Therefore if a provider believes there is a significant risk that the purchase cost of this electricity might exceed his break-even price (for a significant proportion of the trading periods nominated by the TSO over the course of the contract period) he will not offer this service to the TSOs.

Either the SSRP tariff rate or the Watt-less VARs product scalar magnitude should be linked to the cost of electricity MWh in the relevant trading period.

***Question 7:** 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?*

Yes subject to the following points:

- Since the TSOs only value provision of these services when SNSP  $\geq 70\%$  there should be no detriment to TSOs and providers if performance monitoring indicates a failure to provide these services when SNSP  $< 70\%$
- Since the TSOs only value provision of these services when SNSP  $\geq 70\%$  there should be no detriment to TSOs and providers if providers declare these services unavailable when SNSP  $< 70\%$
- The magnitude of this scarcity scalar has been reduced by 15% as described in the enduring tariff consultation *“to account for the uncertainty of the impact of market dispatch and physical dispatch intricacies”*. After the scalars have been implemented for a period, this impact will no longer be uncertain and either the scalar should be adjusted upwards accordingly or I-SEM rules should be introduced to prevent gaming if this has exacerbated this impact.

***Question 8:** 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?*

Yes subject to the following points:

- Since the TSOs only value provision of FFR when SNSP  $\geq 60\%$  there should be no detriment to TSOs and providers if performance monitoring indicates a failure to provide FFR when SNSP  $< 60\%$
- Since the TSOs only value provision of FFR when SNSP  $\geq 60\%$  there should be no detriment to TSOs and providers if providers declare FFR unavailable when SNSP  $< 60\%$

- The magnitude of this scarcity scalar has been reduced by 15% as described in the enduring tariff consultation *“to account for the uncertainty of the impact of market dispatch and physical dispatch intricacies”*. After the scalars have been implemented for a period, this impact will no longer be uncertain and either the scalar should be adjusted upwards accordingly or I-SEM rules should be introduced to prevent gaming if this has exacerbated this impact.

Question 9: 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?

Yes subject to the following points:

- The magnitude of this scarcity scalar has been reduced by 15% as described in the enduring tariff consultation *“to account for the uncertainty of the impact of market dispatch and physical dispatch intricacies”*. After the scalars have been implemented for a period, this impact will no longer be uncertain and either the scalar should be adjusted upwards accordingly or I-SEM rules should be introduced to prevent gaming if this has exacerbated this impact.

Question 10: 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?

Yes subject to the following points

- Proposals to introduce scalar values > 1 at particular locations would be market sensitive information for which procedures for safeguarding and fair dissemination must be developed by the TSOs and approved by the RAs
- Any proposals to introduce scalar values > 1 at particular locations should be approved by the RAs

## **Scalars not Proposed for Implementation**

Question 11: 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?

No comment.

Question 12: 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?

No comment.

Question 13: 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?

No comment.

Question 14: Do you agree with our proposal NOT to implement a Product Scalar for Faster Response of FPFAPR? If not, can you provide rationale to support your views?

Yes.

Question 15: 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?

Yes.

Question 16: 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?

Yes.

Question 17: 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?

Yes.

## **Frequency Response Curves**

Question 18: 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?

Yes subject to the following points:

- Providers using batteries will design the size of their batteries based on degradation calculations which include many assumptions including the sensitivity of FFR to frequency (lower frequency droop).
- If the TSOs value installations with higher sensitivity then there should be a scalar to incentivise providers to offer this so that providers can design their installations accordingly
- Contracts based on particular agreed design FFR sensitivity should not be subject to price reduction if TSOs subsequently instruct lower sensitivity. The service provider will have already sunk his

capital cost into his battery. Any risk of such price reduction would be an unacceptable investment risk

We hope the comments contained in our response will help the success of the DS3 project. Please do not hesitate to contact me if you have any questions about this response.

Yours sincerely,

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