Implementation Proposal:

Locational Scarcity Scalars

for System Services

8 September 2020

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2 Introduction

Building on the principles set out in Information Paper CRU/18/228, the Commission for Regulation of Utilities (CRU) published Consultation Paper CRU/19/011[1] on its proposals to adjust the System Services Locational Scarcity Scalar above one, for a limited number of system services, for providers in the Dublin Region. In the paper, the CRU noted the need for locational signals in the Dublin Region to incentivise generation that provides system support, both in terms of entry and exit, which is important for the long-term security of supply in the region, in the context of unprecedented levels of forecast demand growth. The output of CRU's consultation was a direction for EirGrid to develop scalar values for the Locational Scarcity Scalars, based on the decisions outlined in the decision paper Dublin Security of Supply: Locational Scarcity Scalars for System Services (CRU/19/128)[2], published on 19 December 2019.

The key decisions outlined in this can be summarised as follows:

- The Locational Scarcity Scalars will be adjusted above one for all eligible service providers in the Dublin Region for the following services:
    - Replacement Reserve – Desynchronised (RRD)
    - Replacement Reserve – Synchronised (RRS)
    - Ramping Margin 1 (RM1)
    - Ramping Margin 3 (RM3)
    - Steady State Reactive Power (SSRP)
    - Tertiary Operating Reserve (TOR2)

- €12.5m will be allocated annually, to cover the costs of adjusting the System Services Locational Scarcity Scalars in the Dublin Region. Scalars will be set ex-ante against this

[1] https://www.cru.ie/wp-content/uploads/2019/02/CRU19011-Consultation-Paper-on-Locational-Scalars-in-the-Dublin-Region-updated.pdf

[2] https://www.cru.ie/wp-content/uploads/2019/12/CRU19128-Dublin-Security-of-Supply-Locational-Scarcity-Scalars-for-System-Services.pdf

allocation and cost recovery will be dealt with through the established CRU tariff review process;

- The Locational Scarcity Scalars will be set for five years from their initial adjustment. In subsequent years, the Scalar values will be set five years in advance on an annual basis (i.e. the 2026 scalar will be set in 2021). The application of locational scarcity scalars in the Dublin Region will end in 2027, when the necessary reinforcements will have been delivered;

- The Locational Scarcity Scalars will be applied to payments for the relevant technologies and System Services in line with the payment rules for the Temporal Scarcity Scalar as set out in the DS3 System Services Market Ruleset. Therefore, only units who have committed to make the services available in the ex-ante markets will receive the scalar payments. Units constrained on by the TSO will not. This approach rewards units based on decisions they have made as opposed to TSO decisions.

EirGrid subsequently published a consultation paper on 4 August 2020 in which a definition for a Dublin region was proposed as well as a methodology for calculating the Locational Scarcity Scalars and proposed scalar values.

In this document, we summarise the responses received to the consultation, provide clarifications where necessary, and put forward our recommended scalar values to the CRU for approval ahead of implementation.

3 Responses

The consultation closed on 4 August 2020. In total, thirteen responses were received from the following parties:

Bord Gais

Bord Na Mona

DRAI

Dublin Waste to Energy

Energia

EP Kilroot Power Ltd and EP Ballylumford Ltd

ESB Generation and Trading (ESB GT)

Everoze

IESA

Lumcloon

RWE

Scottish Power

Tynagh

In keeping with standard practise, all non-confidential responses have been published alongside this proposals paper.

4 Questions from the Consultation Paper

In the next section, the responses to each of the four questions are summarised. In light of the volume of comments received, each question will be dealt with specifically in this document and we will address the key themes that were raised under each question.

EirGrid received comments which do not relate directly to the questions posed. These have been included at the end of this section.

4.1 Defining a Dublin Region

Question 1: Do you agree that the Dublin region applicable to Locational Scalars should be as per the level 2 locational capacity constraint area defined for the purposes of the CRM T-4 auction for the Capacity Market? If not please specify other approach for defining the Dublin region.

EirGrid proposed in the consultation paper that the Dublin region, to which the locational scalars will apply, should be implemented as per the level 2 locational capacity constraint area defined for the purposes of the CRM T-4 auction for the Capacity Market. EirGrid outlined that such an approach would avoid any segregation between capacity and energy markets, could be implemented quickly and would be both pragmatic and fit for purpose.

4.1.1 Industry Responses

The majority of respondents agreed with this proposal with one respondent stating that flexibility for future network changes should be facilitated. Four respondents did not answer this question while one respondent suggested that the region could be changed to include plant an additional generator that is in their portfolio.

4.1.2 TSO Proposal

The TSO proposes that the Dublin region be defined as per the level 2 locational capacity constraint area defined for the purposes of the CRM T-4 auction for the Capacity Market. While it is acknowledged that one respondent requested a unit outside the proposed Dublin region be included, the TSO considers that this would drive the need for expansion of the proposed

Dublin region as a whole and also require inclusion of other units in the proposed Dublin region. The TSO considers that this would reduce financial benefits to those already in the proposed region and undermine the effectiveness of Locational Scalars.

4.2 Technologies for which Locational Scalars apply

Question 2: Do you agree with the proposal that Locational Scalars should apply to all technologies that provide any of the required system services? If you believe they should only apply to a subset please specify the relevant technologies and basis for same.

It was proposed in the consultation paper that locational scalars shall apply to units of all technologies located within the proposed Dublin region. In regard to DSUs, it was proposed that, in a manner similar to the capacity mechanism, for DSUs all Individual Demand Sites (IDS) would have be located within the defined Dublin region. It was also proposed that DSUs that are located in the defined Dublin region but that do not hold a capacity contract would be eligible for locational scalars provided that they have a systems services contract for any of the products specified by the RAs. For such units, validation of the location will be carried out in a similar manner to that of the capacity mechanism.

4.2.1 Industry Responses

Eleven of the thirteen respondents agreed with the proposal that all technologies should be eligible for Locational Scalars while two respondents did not directly answer the question. One respondent stated that for DSUs within the Dublin but with IDSs outside of the Dublin region, that these units should also be eligible for Locational Scalars. One respondent suggested that fossil fuel technologies perhaps receive lower Locational Scalars than other technologies while another considered batteries could be treated unfairly given their inability to provide SSRP as effectively as other technologies.

4.2.2 TSO Proposal

The TSO proposes that Locational Scalars should apply to all technologies as per the proposals outlined in the consultation paper. For DSUs with IDSs outside of the Dublin region, the TSO considers that maintaining alignment with Capacity Mechanism rules is the most

appropriate approach at this time. In relation to comments surrounding fossil fuel technologies and batteries, it is the TSO's position that system service products are, in so far as possible, technology neutral and are designed to address the needs of the power system to meet all appropriate policy objectives in an efficient manner.

4.3 Methodology for Implementation of Locational Scalars

Question 3: Do you agree with the proposed methodology for implementation of Locational Scalars? If not please provide an alternate methodology and basis for same.

In the consultation paper, the TSOs set out a methodology for implementation of Locational Scalars. This involved dividing the €12.5m allocation equally amongst products eligible for Locational Scalars per initial recommendations set out in CRU19/18 in which it was stated that "*at least initially, an equal weighting across the relevant services would likely be most appropriate and implementable approach*"

The proposed methodology saw most recently available unconstrained market model (along with contracted volumes for system services and current tariff rates and Temporal Scarcity Scalar values) used to provide a forecast of system services revenue for the relevant products based on the proposed Dublin region. Using this expenditure forecast, Locational Scalars were calculated, based on the total revenues for each product for units located in the Dublin region using the formula below:

$$Locational\ Scalar\ per\ Product\ = \frac{(Total\ Revenue\ for\ Product + Locational\ Scalar\ Allocation)}{Total\ Revenue\ for\ Product}$$

4.3.1 Industry Responses

Four of the respondents supported the proposed methodology, while four respondents did not respond specifically to this question. Of the respondents who disagreed with the approach, one indicated a preference for more detailed Plexos studies to determine more appropriate weightings while a number of participants considered that an equal weighting does not reflect an accurate means for remuneration of services.

4.3.2 TSO Proposal

Having considered the feedback from interested stakeholders, EirGrid are keen to ensure that, insofar as is possible, the remuneration for the services is linked to the value of each services. EirGrid therefore understands the risks of having unsuitably high scalars for certain products which have lower product volumes and not necessarily higher value. Furthermore, very high scalar volumes for some products could also result in significant increase in expenditure.

The TSO considers that a pro rata approach, whereby all products receive the same Locational Scalar, would be more suitable. The Locational Scalar for this methodology is based on splitting the €12.5m allocation for each product based on the portion of individual product revenues relative to total revenue across all products eligible for Locational Scalars.

4.4 Locational Scalar Values

Question 4: Do you agree that the proposed values of the Locational Scalars reflect the value of these services to the SEM? If not please outline the values you believe are appropriate and basis for same.

Based on the methodology detailed in the consultation paper, the following Locational Scalars were proposed:

RRD	RRS	RM1	RM3	SSRP	TOR 2
4.35	2.35	2.97	2.49	1.39	1.62

Table 1: Proposed Locational Scalar Values for each product

4.4.1 Industry Responses

Only four respondents agreed with the scalars published in the consultation document and also shown above in table 1. Six respondents disagreed with the proposed scalar values or expressed concern regarding the values with one stating that a scalar value of 4.35 for RRD seemed too high, another proposing basing values on tariff rates while a number simply stated that an even allocation seemed incorrect.

4.4.2 TSO Proposal

The TSO recommends that a pro rata approach is adopted in determining Locational Scarcity Values as outlined in section 4.3.2 of this document. Using this approach all products receive a Locational Scarcity Scalar of 1.94 for the 2020/21 tariff year.

5 Additional Comments from Industry

5.1.1 Implementation of Market Physical Rule Set

Six of the respondents expressed concern regarding implementation of Locational Scalars in line with the Market Physical ruleset with a number of these respondents stating that locational scalars should be applied for units that are constrained on.

As per the CRU's decision paper CRU/19/128, Locational Scarcity Scalars are to be implemented in line with the Market Physical Ruleset, in order *"to send a positive locational signal to market participants and promote efficient locational decisions for new and existing generation which can provide system support*". The TSO therefore considers that comments in relation to the Market Physical ruleset are outside the scope of this consultation process.

5.1.2 Clarification on LRSA Agreements

There was a request for clarification on the interaction between LRSA payments and the Locational Scarcity Scalars.

In CRU/19/128 it was stated that:

"In relation to LRSA payments for the Huntstown Units, the CRU refers respondents to CRU/18/228 which noted that the total revenue received under the LRSA equals the strike price minus any revenues from a Reliability Option and less any revenues from locational payments should they be introduced."

The TSO therefore included all units regardless of whether or not they are in receipt of LRSA payments in the calculations for Locational Scalars.

5.1.3 Future Arrangements

A number of respondents also requested clarification on what will happen after the current arrangements end in April 2023. The TSO notes that developments in this area are ongoing

and that the proposed enduring framework will be subject to public consultation and, ultimately, approval by the SEM Committee.

5.1.4 Transmission Network Reinforcements

In response to those stakeholders requesting more detail on EirGrid's planned transmission network reinforcements for the Dublin Region, the TSO refers to CRU/19/128 in which CRU clarified that its proposal for adjusting the Locational Scalars in the Dublin Region is one of a range of measures that are being progressed to protect local security of supply.

5.1.5 Availability Quarterly Reports

One respondent requested a quarterly report showing monies paid on Locational Scalars. The TSO will endeavour to produce a report but the details of this are not finalised at present.

6 Additional Clarifications

6.1.1 Implementation of K Factors

Per CRU 19/128 it is stated that provision of €12.5m would be reviewed on an annual basis and that any difference between the €12.5m ex-ante allowable revenue and the actual costs expended will be trued up under the established k-factor mechanism.

It is therefore the TSO's understanding that adjustments could be required to Locational Scarcity Scalars prior to each tariff year.

7 Next Steps

CRU will now consider the recommendations set out in this paper. The implementation of the approved Locational Scarcity Scalars will take place in line with the direction of the CRU; it is anticipated that this direction will be provided in sufficient time to enable the TSO to apply the scalars from 1 October 2020.