



An Coimisiún
um Rialáil Fóntas
**Commission for
Regulation of Utilities**

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Commission for Regulation of Utilities

Dublin Security of Supply: Locational Scarcity Scalars for System Services

Decision Paper

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CRU Mission Statement

The CRU's mission is to protect the public interest in Water, Energy and Energy Safety.

The CRU is guided by four strategic priorities that sit alongside the core activities we undertake to deliver on the public interest. These are:

- Deliver sustainable low-carbon solutions with well-regulated markets and networks;
- Ensure compliance and accountability through best regulatory practice;
- Develop effective communications to support customers and the regulatory process; and
- Foster and maintain a high-performance culture and organisation to achieve our vision.

Executive Summary

In 2017 and 2018, the CRU highlighted the Dublin security of supply issue with the publication of two Information Papers, the *Regulatory Approach to Maintaining Local Security of Supply in Electricity* (CRU/17/346) and *Dublin Security of Supply: Measures to mitigate the risk of disorderly exit* (CRU/18/228). These Information Papers set out the CRU's approach to taking actions to address local security of supply issues and the suite of mitigant measures which the CRU decided to progress in response to maintaining local security of supply in the Greater Dublin Region. One of these mitigant measures was Locational Scalars for System Services in the Dublin Region.

On 4 February 2019, the CRU published a consultation paper 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 this 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. As set out in EirGrid's Generation Capacity Statement 2018-2027¹, the electricity demand in Ireland could grow by up to 58% in the next 10 years. A key driver for electricity demand in Ireland for the next number of years is the connection of new large energy users, such as data centres. A significant proportion of these new large energy connections will materialise in the Dublin region. The CRU considers that locational scalars will facilitate these connections by increasing system support in the region and therefore providing EirGrid with greater flexibility in scheduling outages to carry out the works required for the connections.

Security of supply has been recognised within the CRUs Strategic Plan 2019-2021² and has also been included as a core strategic objective as part of the CRU's Price Review 5 ("PR5") project. As part of the PR5 project, the CRU has highlighted the importance of resolving Local Security of Supply in the Dublin region during the period (2021-2025). Locational Scarcity Scalars do not remove the need to reinforce the network in the Dublin Region. As stated above, this is one of a range of measures the CRU is progressing to protect local security of supply, as set out in the CRU paper '*Dublin Security of Supply: Measures to mitigate the risk of disorderly exit*' (CRU/18/228). The other mitigant measures include:

1. Local Reserve Serve Agreements (LRSAs);
2. Additional Service Provision in the Dublin Region;
3. Financial Reporting to mitigate future disorderly exit;
4. TSO Operation measures to maintain system security;
5. Facilitating generators connecting in the Dublin Region;

¹ http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_2018.pdf

² https://www.cru.ie/document_group/strategic-plan-2019-2021/

6. Accelerated transmission reinforcement of the Dublin Region; and
7. Flexible Demand Contracts in the Dublin Region.

The consultation window closed on 19 March 2019. The CRU received ten responses to its consultation and the parties that submitted non-confidential responses are listed in section 1.7. The CRU also held bi-lateral meetings with stakeholders, where requested.

This paper summarises the responses received to the CRU's consultation, sets out the CRU's response in turn and the CRU's decision in relation to the consultation proposals.

Summary of the CRU's Decision

The CRU decision can be summarised as follows:

- The Locational Scarcity Scalars will be adjusted above one for all service providers in the Dublin Region for the services TOR2, RRS, RRD, RM1, RM3 and SSRP.
- €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 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; and
- 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 will develop scalar values for the Locational Scarcity Scalars in line with the decision as set out in this paper. EirGrid will then consult on the proposed scalar values and the final scalar values will be submitted to the CRU for approval.

Public/ Customer Impact Statement

The Dublin Region has experienced demand growth in the last number of years and this growth is expected to increase significantly over the next number of years, particularly with the anticipated connection of large energy users such as data centres, as noted in EirGrid's All-Island Generation Capacity Statement 2018-2027³. Coupled with this, the Dublin Region has been identified as a Locational Capacity Constraint Area.

Providers of System Services are paid based on an individual tariff rate for each service. The Locational Scarcity Scalars work as a multiplier by increasing the level of payment for the provision of services in locations where they are more valuable. Increasing the level of payment for System Services providers in the Dublin Region is an additional measure that reduces the risk of generator exit and increases the likelihood of generator entry which is important for system support and should improve the longer-term security of supply in the region. This is particularly relevant in the context of significant forecast demand growth and the relatively higher costs of generation in the Dublin Region. Locational Scarcity Scalars will not remove the need to reinforce the network in the Dublin Region. Rather, Locational Scarcity Scalars aim 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 CRU has decided that an annual allowance of €12.5m will be allocated to cover the costs of increasing the Locational Scarcity Scalars in the Dublin Region. This paper sets out the CRU's decision to direct EirGrid to adjust the System Services Locational Scarcity Scalar above one for a subset of System Services for providers in the Dublin Region.

³ EirGrid's All-Island Generation Capacity Statement 2018-2027: http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_2018.pdf

Table of Contents

Table of Contents	4
1 Introduction	6
1.1 Commission for Regulation of Utilities	6
1.2 Background.....	6
1.3 System Services.....	7
1.4 System Services Locational Scarcity Scalars	7
1.5 Purpose of this Paper	8
1.6 Legal Background	8
1.7 Consultation Responses Received	8
1.8 Structure of this Paper.....	9
2 Summary of Consultation Proposals	10
3 Summary of Consultation Responses	11
3.1 Objectives and Principles.....	11
3.2 Amount Allocated to Cover the Costs of Adjusting the System Services Locational Scarcity Scalars	16
3.3 Relevant Services	18
3.4 Long-term Signals.....	21
3.5 Payment Basis.....	24
3.6 Interactions with the Capacity Remuneration Mechanism	26
3.7 TSO Direction	27
3.8 Additional Comments.....	27
4 Summary of Decision	29
4.1 Objectives and Principles.....	29
4.2 Amount Allocated to Cover Costs of Adjustment.....	29
4.3 Relevant Services and Scalar Rates	30
4.4 Long-term Signals.....	30
4.5 Payment Basis.....	30
4.6 TSO Direction	31
5 Next Steps	32

Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or Meaning
CRU	Commission for Regulation of Utilities
TSO	Transmission System Operator – EirGrid
DS3	Delivering a Secure, Sustainable Electricity System
CRM	Capacity Remuneration Mechanism
Dublin Region	The electrical area in and around Dublin that includes areas that may not be geographically located in Dublin but are considered electrically inside Dublin
RO	Reliability Option
LRSA	Local Reserve Services Agreement

1 Introduction

1.1 Commission for Regulation of Utilities

The Commission for Regulation of Utilities (CRU) is Ireland's independent energy and water regulator. Our remit is to regulate water, energy and energy safety in the public interest.

Further information on the CRU's role and relevant legislation can be found on the CRU's website at www.cru.ie.

1.2 Background

On 18 December 2017, the CRU published an information paper titled '*Regulatory Approach to Maintaining Local Security of Supply in Electricity*' (CRU/17/346)⁴. This paper set out the CRU's objectives, principles and intended approach to maintaining local security of supply in response to significant demand growth or a generator exiting the market. Specifically, CRU/17/346 outlined how the CRU may intervene in order to maintain security of supply where it considers that there is a risk to security of supply, on all or part of the system, due to generator exit or anticipated demand growth.

Local security of supply issues can arise not only due to increases in demand in an area but also due to reductions in generation capacity in a particular area. The Dublin Region has experienced demand growth in the last number of years and this growth is expected to increase at unprecedented levels over the next number of years, particularly with the anticipated connection of large data centres. Data centres tend to have large demand loads and relatively short construction lead times that can create challenges for network planning and can lead to potential issues such as network constraints and delays to demand connections etc. For instance, according to EirGrid's All-Island Generation Capacity Statement 2018-2027, there is currently around 400 MVA of demand capacity contracted to data centres, with the potential for an additional 1400 MVA of demand to connect by 2023/24. This potential additional demand forecast may not materialise as expected. This is demonstrated in EirGrid's scenario analysis set out within its Generation Capacity Statement 2018-2027⁵. However, a significant proportion of the potential additional demand will likely materialise in the Dublin Region.

On 5 October 2018, the CRU published an information paper titled '*Dublin Security of Supply: Measures to mitigate the risk of disorderly exit*' (CRU/18/228). This paper outlined a range of measures that the CRU has decided to progress to address the Huntstown DMILC risk and to ensure that the long-term security of supply of the Dublin Region will be protected. One such measure is the use of locational signals via the System Services

⁴ Regulatory Approach to Maintaining Local Security of Supply in Electricity (CRU/17/346) <https://www.cru.ie/wp-content/uploads/2017/12/CRU17346-Information-Paper-Regulatory-Approach-to-Maintaining-Local-Security-of-Supply.pdf>

⁵ All-Island Capacity Statement 2018-2027 http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_2018.pdf

Locational Scarcity Scalars to reduce the risk of generator exit and increase the likelihood of entry in the Dublin Region.

As outlined in the CRU information paper *'Electricity Transmission Network Allowed Revenues 2019 & Demand Transmission Use of System (D-TUoS) Tariffs 2018/2019'* (CRU/18/195)⁶, the CRU has included an amount of revenue in D-TUoS to cover the costs of a number of these measures to improve the immediate and longer-term security of supply of the Dublin Region. This includes provision for the introduction of locational signals via the System Services Locational Scarcity Scalars.

On 4 February 2019, the CRU published a consultation paper on its proposals to adjust the System Services Locational Scarcity Scalar above one, for a number of System Services, for providers in the Dublin Region. The consultation window closed on 19 March 2019.

1.3 System Services

DS3 stands for Delivering a Secure, Sustainable Electricity System. The aim of the DS3 programme is to meet the challenges of operating the electricity system in a secure manner while achieving the 2020 renewable electricity targets.

System Services is a key work stream within the DS3 Programme, these are services that are paid to providers that supply valuable services to the system to help maintain the stability and security of the power system. The System Services work stream will improve the technical capability of the generation fleet and the system more generally by incentivising generation valuable to the system and by interacting with the energy trading and capacity markets in order to deliver value to consumers and a secure, sustainable power system.

1.4 System Services Locational Scarcity Scalars

In December 2014, the SEM Committee published a decision paper on the high-level design for the procurement of DS3 System Services (SEM-14-108)⁷. Since the high-level design was published, the Transmission System Operators (TSOs) and the Regulatory Authorities have worked to implement many aspects of this design, including the successful development and implementation of the System Services Regulated Arrangements (SEM-17-080)⁸ which went live in May 2018.

The high-level design paper directed that locational scarcity scalars should be applied to incentivise the provision of services on a locational basis where needed. These scalars work by multiplying payments of the tariff rates for the relevant services. The System Services contracts

⁶ Electricity Transmission Network Allowed Revenues 2019 & Demand Transmission Use of System (D-TUoS) Tariffs 2018/2019 (CRU/18/195) <https://www.cru.ie/wp-content/uploads/2018/08/CRU18195-Electricity-Transmission-Network-Allowed-Revenues-2019.pdf>

⁷ DS3 System Services High Level Design Decision Paper (SEM-14-108) <https://www.semcommittee.com/publication/sem-14-108-ds3-system-services-decision-paper>

⁸ DS3 System Services Tariffs and Scalars Decision Paper (SEM-17-080) <https://www.semcommittee.com/news-centre/ds3-system-services-tariffs-and-scalars-sem-committee-decision>

under the Regulated Arrangements contain a Locational Scarcity Scalar whose value is currently set at one. Where a need has been identified in a given location(s), the Regulatory Authorities may direct the relevant TSO to adjust the scalar value above one for the appropriate System Services for all providers in that location(s). The purpose of adjusting the Locational Scarcity Scalar above one is to incentivise the provision of System Services by increasing the level of payment to those service providers in locations where a need has been identified.

1.5 Purpose of this Paper

The purpose of this paper is to set out the CRU's decision in relation to System Services Locational Scarcity Scalars for providers in the Dublin Region following public consultation which closed on 19 March 2019.

1.6 Legal Background

Section 9 of the Electricity Regulation Act, 1999, as amended requires the CRU to have regard to ensuring security of supply. In addition, Regulation 28 of SI 60 of 2005 puts additional security of supply obligations on the CRU and the TSO, including the requirement that "*The Commission shall take such measures as it considers necessary to protect security of supply*".

1.7 Consultation Responses Received

In total, ten responses were received to the CRU's consultation, eight of these were marked non-confidential and have been published alongside this decision paper. The parties that submitted non-confidential responses were as follows:

- Bord na Mona
- Bord Gais Energy
- ESB GT
- EirGrid
- Energia
- Innogy
- SSE
- Tynagh.

The CRU also held bi-lateral meetings with a number of stakeholders, where requested, to discuss the consultation proposals.

1.8 Structure of this Paper

This Decision paper is structured also follows:

Section 1: Provides an overview of the background and relevant legislation;

Section 2: Provides a summary of the consultation proposals;

Section 3: Provides a summary of the consultation responses, CRU response and decision in relation to the consultation proposals;

Section 4: Provides a summary of the CRU's Decisions; and

Section 5: Sets out the next steps.

2 Summary of Consultation Proposals

The CRU's proposals in the Consultation Paper are summarised as follows:

- The Locational Scarcity Scalars will be adjusted above one for all services providers in the Dublin Region for the services TOR2, RRS, RRD, RM1, RM3 and SSRP. This will only apply to the DS3 System Services Regulated Arrangements.
- €12.5m will be allocated on an annual basis to cover the costs of adjusting the DS3 System Services Locational Scarcity Scalars in the Dublin Region. This amount will be reviewed annually.
- In the first year, the Locational Scarcity Scalars will be set for five years from their initial adjustment, e.g. the period 2019 - 2024. In subsequent years, the Scalar values will be set five years in advance on an annual basis. For instance, in 2020 the scalar values will be set for the year 2025 and so on, one year at a time.
- 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.
- Consideration should be given as to how revenues gained by a service provider from the Locational Scarcity Scalars should be considered in terms of capacity payments in the CRM and interactions with the calculation of the Unit Specific Price Cap (USPC).

Comments and feedback were welcomed from respondents regarding these proposals.

3 Summary of Consultation Responses

3.1 Objectives and Principles

Consultation Proposal

In the consultation paper, the CRU set out its proposed objectives and principles in relation to the approach to adjusting the Locational Scalars in the Dublin Region.

The objective of adjusting the System Services Locational Scarcity Scalars is to incentivise generation that provides system support in the Dublin Region, 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.

In seeking to meet this objective, the CRU set out the following principles:

1. To increase the remuneration for services that most contribute to increasing local security of supply;
2. To send appropriate long-term market signals to market participants to promote efficient locational decisions for new and existing generation which can provide system support; and
3. To adopt an approach that can be implemented quickly, that is pragmatic and fit for purpose and in a manner that delivers reasonable certainty for market participants.

Stakeholders were asked the following question.

Question 1: Do you have any views on the CRU's objectives and principles in relation to introducing locational signals to Dublin via the DS3 System Services Locational Scarcity Scalars?

Consultation Responses

Seven of the ten respondents were broadly in favour of the CRU's objectives and principles in relation to introducing locational signals to Dublin via the System Services Locational Scalars. Specifically, five respondents noted that the proposals would help provide an effective signal to encourage new generation to provide system support in the region and prevent the exit of existing generation. Two of these respondents also noted that the System Services Locational Scalars are the only means of recognising the locational value of generation in constrained areas, something which is not explicitly recognised in the energy or capacity markets.

However, two respondents were of the view that System Services are not in themselves a basis for investment and their purpose should not be as a long-term market signal. One respondent commented that an obvious technical need for these services has not been provided and that the intention of the Locational Scarcity Scalar is to incentivise short term behaviour rather than long-term investment. These respondents were also of the view that the CRU's proposals are not in line with the goals of DS3 and are not an efficient use of electricity consumers' money as any

additional value received from the adjustment of the Locational Scalars will go to existing plant, which have not indicated their intention to close in the short to medium term.

A number of additional comments were received from respondents requesting clarifications or amendments regarding some of the CRU's proposals. Some general comments received will be addressed in this section while those specifically relating to the CRU's proposals will be addressed in sections 2.3 to 2.8.

Three respondents requested further clarity on the definition of the "Dublin Region" in relation to the geographic area to which the proposed Locational Scalars will apply. Two respondents queried whether this would equate to the locational capacity constraint area for Dublin that has been defined for the purposes of the Capacity Remuneration Mechanism (CRM).

Three respondents requested more detail on EirGrid's planned transmission network reinforcements for the Dublin Region. These respondents commented that there is insufficient clarity on the level of reinforcements planned, including timelines for when these will be in place, and how they will impact the Dublin constraints. Two respondents commented that this detail is important for long-term investment planning as it would provide signals to the market as to when and where generation capacity may be needed and whether generation outside Dublin can contribute to the region. Two of these respondents also noted that the introduction of Locational Scalars in the Dublin Region should not take away from the need for transmission developments which are a necessary long-term solution for the region.

One respondent noted the CRU's direction to ESB and EirGrid of the 17 October 2018 to issue a connection offer to any generation located within the Dublin region Level 2 Locational Capacity Constraint area that is successful in the T-4 capacity auction for 2022/23⁹. This respondent suggested running a connection offer round under ECP exclusively for Dublin to offset the risk of speculative bidders entering the CRM to secure a connection offer and then failing to deliver.

Two respondents requested confirmation if revenues from the Locational Scalars will be netted off the LRSA payments for both Huntstown Units. One of these respondents commented that revenues from the Locational Scalars should not be paid to units with an LRSA as to do so would dilute the overall value to other providers in the Dublin Region and would reduce the effectiveness of the intended locational signal.

Two respondents requested further information on the LRSA with an undisclosed party referred to in CRU/18/228 and noted the CRU's stated intention to publish further information on this.

One respondent proposed the addition of another objective regarding the introduction of mechanisms that should provide the correct signals for the retention of existing capacity where that represents the most economic means to securing supply to the Dublin area.

Two respondents requested clarity on the DS3 System Services framework post 2023 noting that the current framework for regulated tariff arrangements is due to expire in April 2023 (although there is provision to extend by up to 36 months subject to SEMC approval). These respondents

⁹ CRU/18/229 https://www.cru.ie/document_group/dublin-region-level-2-locational-capacity-constraints-for-the-upcoming-t-4-capacity-auction/

noted that the proposed five-year timeframe for the introduction of the locational signal would exceed this 2023 framework.

One respondent commented on the need for Locational Scalars to be considered within the design of the capacity market as well as this would better address long-term capacity adequacy in locations of need.

CRU Response

The CRU notes that the majority of respondents were broadly in favour of the proposed principles and objectives, notwithstanding the fact that a number of clarifications and specific amendments were requested. Specific comments in relation to the range of services chosen will be addressed in section 2.4 while those related to the term of the proposed locational signal will be addressed in section 2.5.

The CRU also notes the comments from a number of respondents that the Locational Scalars would provide an effective signal to encourage new generation to provide system support in the region and prevent the exit of existing generation while being a means of recognising the locational value of generation in constrained areas. As noted in the consultation, the CRU considers that there is a need for locational signals for 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. By adjusting the Locational Scalars for the proposed services, the CRU's intention is to introduce such a locational signal for the Dublin Region. The CRU notes that the scalar will not by itself make an investment case for a generator and is not designed to do this. However, the Locational Scarcity Scalar will incentivise providers to make available the services that support system security in the Dublin Region. Accordingly, the CRU considers that the use of the Locational Scarcity as set out in this paper will provide an appropriate locational signal.

In the SEM design, System Services provide locational signals that can be sent that recognise the locational value of providers that contribute to security of supply. This approach to System Services is consistent with the European Commission's State Aid decision¹⁰ on the CRM.

In relation to the comments from respondents that the Locational Scalars are intended to incentivise short term behaviour and should not be seen as a long-term investment signal, the CRU notes that the intention of its proposals is to incentivise provision of those services which most contribute to increasing security of supply, this may be both from existing and new service providers. The CRU considers that a five-year signal is an effective means of providing certainty and incentivising the provision of services most valuable to security of supply in Dublin.

In relation to the respondent's comments regarding the lack of any obvious technical need for increasing payments for the proposed services and that the additional value received from the adjustment of the scalars will only go to existing plant, the CRU has engaged with EirGrid in identifying those services which are of most value to the Dublin Region and will contribute to maintaining security of supply in the context of significant forecasted demand growth. The CRU's proposals are intended to incentivise the provision, both from existing and new providers, of

¹⁰ https://ec.europa.eu/competition/state_aid/cases/267880/267880_1948214_166_2.pdf

those services identified as most suitable for alleviating potential issues in the Dublin Region. In the consultation paper, the CRU put forward a number of considerations which it has taken into account in determining the appropriate amount to allocate towards adjusting the Locational Scalars. These considerations recognise the value that a secure Dublin power system delivers and the costs of alternative options, such as transmission reinforcements. The CRU considers that introducing a locational signal to the Dublin region that incentivises the provision of services valuable to system security will help protect local security of supply and will deliver value to consumers, in light of the considerations as outlined. As stated previously, Locational Scarcity Scalars do not remove the need to reinforce the network in the Dublin Region. Rather, Locational Scarcity Scalars aim to send a positive signal to market participants and promote efficient locational decisions for new and existing generation which can provide system support. Security of supply has been recognised as a core strategic objective as part of the CRU's PR5 project. Specifically, the CRU has highlighted the importance of resolving Local Security of Supply in the Dublin region during the period (2021-2025) through removal of the existing network constraints.

With reference to other general comments received in relation to this question, the CRU's responses are as follows:

As to the definition of the Dublin Region, the CRU noted in the consultation paper that the Dublin Region refers to the electrical area in and around Dublin and therefore includes areas that may not be geographically located in Dublin but are considered electrically inside Dublin. The CRU also noted that area will be defined by EirGrid. In response to comments raised during the consultation, the CRU understands that the Dublin Region, in the context of this decision, is likely to be geographically similar to the level 2 locational capacity constraint area defined for the purposes of the CRM T-4 auction. Nevertheless, the exact area will be determined by EirGrid. As the CRM and System Services market serve different purposes it may be the case that the network constraints in the Dublin Region may give rise to different definitions of the relevant constraint areas. As the TSO, EirGrid is best placed to define the appropriate area.

In response to those stakeholders requesting more detail on EirGrid's planned transmission network reinforcements for the Dublin Region, the CRU wishes to clarify 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. As set out in CRU/17/346 and CRU/18/228, the CRU has approved the recovery of efficiently incurred costs by the transmission companies associated with the accelerated development of planned transmission reinforcement works in the Dublin Region. The CRU notes the concerns raised by respondents regarding the lack of clarity in relation to these planned works, and their impact on the Dublin constraints. The CRU will be engaging with EirGrid in this regard during the PR5 project with a view to providing more information to stakeholders.

Regarding the comment in relation to running a separate connection offer round under ECP exclusively for Dublin, the CRU notes that connection policy is a separate process to this decision but will take this suggestion into consideration in the development of subsequent connection policy proposals.

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. As noted in section 1.2, an overall amount has been allocated in

relation to Dublin security of supply measures in D-TUoS for 2018/19, this is inclusive of LRSA payments and Locational Scalar payments. Therefore, the Huntstown units will not see additional payments due to the introduction of locational scalars. As for the other proposed LRSA referred to in CRU/18/228, this issue is outside the scope of this paper and further information on this LRSA will be published in the near future.

With reference to one respondent's suggested addition of another objective regarding the introduction of mechanisms to provide the correct signals for the retention of existing capacity where that represents the most economic means of securing supply to the Dublin area, the CRU notes that broader objectives in relation to maintaining local security of supply have already been set out in CRU/17/346. The objectives and principles in the CRU's consultation paper are specific to the Locational Scalars, therefore, the CRU does not consider that there is a need for an additional objective in relation to these proposals.

Concerning those responses requesting clarity on the System Services framework post 2023, the CRU notes that this is a SEM Committee decision but that developments in this area are ongoing and that the proposed enduring framework will be subject to public consultation.

CRU Decision

The majority of respondents supported the CRU's proposals. Having considered the responses, the CRU has decided to adopt the objectives and principles as proposed in the consultation paper.

The objective of adjusting the System Services Locational Scarcity Scalars is to incentivise generation which provides system support in the Dublin Region, 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.

In seeking to meet this objective, the CRU will have regard to the following principles:

1. To increase the remuneration for services that most contribute to increasing local security of supply;
2. To send appropriate long-term market signals to market participants to promote efficient locational decisions for new and existing generation which can provide system support; and
3. To adopt an approach that can be implemented quickly, that is pragmatic and fit for purpose and in a manner that delivers reasonable certainty for market participants.

3.2 Amount Allocated to Cover the Costs of Adjusting the System Services Locational Scarcity Scalars

Consultation Proposal

As noted in the consultation paper, the CRU has included an amount of revenue in D-TUoS for 2018/2019 to cover the costs of a number of measures to improve the immediate and longer-term security of supply of the Dublin Region. Of this amount, the CRU has allocated €12.5m to cover the costs of adjusting the System Services Locational Scarcity Scalars in the Dublin Region.

The CRU engaged with EirGrid in determining the appropriate amount for the Locational Scalars and put forward a range of considerations which were taken into account in this determination such as the cost of alternative transmission reinforcement options, the equivalent Value of Lost Load (VOLL) and the additional costs of generation in Dublin.

The CRU also noted that the initial 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, hence ensuring only efficient expenditure is eventually allowed and recovered.

The question posed to stakeholders was as follows.

Question 2: Do you have any comments on the CRU's determination of the amount to allocate to cover the costs of adjusting the System Services Locational Scarcity Scalars in the Dublin Region?

Consultation Responses

Two respondents requested clarity on how the annual revenue of €12.5m was arrived at and commented that no significant detail on the development of this figure was provided.

One respondent requested clarity on the proposed annual k-factoring of revenues and the impact of potential over/under spend on the scalar values for the subsequent period.

Two respondents commented that the annual €12.5m figure appears to undervalue the benefit to the Dublin region in terms of the considerations provided regarding VOLL and the equivalent cost of large-scale transmission reinforcements needed to support the Dublin Region. One respondent commented that this initial amount should be adjusted upwards in subsequent years to reflect increasing demand in Dublin and the increased value of service provision each year in line with this growth in demand.

One respondent questioned the accuracy behind the consideration of the cost of generation in Dublin noting that it is more expensive to invest but cheaper to operate on a short run marginal cost basis and to sell electricity into the market due to TLAFs. This respondent noted that the CRM already provides sufficient entry signals in the Dublin Region.

CRU Response

Two respondents requested clarity on how the annual revenue figure of €12.5m was arrived at and commented that no significant detail on the development of this figure was provided. As stated within the consultation paper¹¹, the CRU engaged with EirGrid to determine the appropriate amount to allocate towards the adjustment of the Locational Scalars. In doing so EirGrid took a number of considerations into account, annual revenues of €12.5m would support transmission investment in the order to €150m, which is expected to be considerably less than the cost of developing large-scale cross-country electricity infrastructure to support the Dublin region.

Locational Scarcity Scalars do not remove the need to reinforce the network in the Dublin Region. Instead they aim to send appropriate long-term market signals to market participants to promote efficient locational decisions for new and existing generation which can provide system support. Secondly, consideration was given to the value that a secure Dublin power system delivers and thirdly the cost of new generation development within urban areas was also taken into account when determining the appropriate amount to allocate towards the adjustment of the Locational Scalars. Within this context the CRU considers that €12.5m is an appropriate annual revenue allocation. In line with the principle set out above, these arrangements should be fit-for-purpose and quickly implementable. Therefore, the CRU does not consider it appropriate to develop a detailed methodology at this point.

Regarding respondents' queries as to the impact of potential over/under spend on the scalar values for the subsequent period, the CRU's response in relation to these concerns will be detailed in section 3.4.

With reference to one respondent's suggestion that the annual €12.5m figure should be increased in subsequent years in line with demand growth and the increased value of service provision, the CRU will set scalars ex-ante and cost recovery will be dealt with through the CRU's established tariff review process. One respondent questioned the accuracy behind the consideration of the cost of generation in Dublin noting that it is more expensive to invest but cheaper to operate on a short run marginal cost basis and to sell electricity in to the market due to TLAFs. This respondent noted that the CRM already provides entry signals in the Dublin Region. The CRU notes that, notwithstanding more favourable TLAFs in the Dublin Region, there is a potential security of supply issue in the Dublin Region in the context of unprecedented levels of forecast demand growth in the greater Dublin region.

CRU Decision

The CRU has decided that an annual allowance of €12.5m will be allocated to cover the costs of adjusting the System Services Locational Scarcity Scalars in the Dublin Region. Scalars will be set ex-ante and cost recovery will be dealt with through the CRU's established tariff review process.

¹¹ See Section 3.3.2 of the CRU's Consultation Paper: *"Dublin Security of Supply: Locational Scarcity Scalars for System Services in the Dublin Region"*

3.3 Relevant Services

Consultation Proposal

The CRU proposed that the Locational Scarcity Scalars will be adjusted above one for all services providers in the Dublin Region for the services identified in the table below:

Table 1 System Services available and selected for Locational Scarcity Scalars

System Services		
Acronym	Name	Applicable
SIR	Synchronous Inertial Response	X
POR	Primary Operating Reserve	X
SOR	Secondary Operating Reserve	X
TOR1	Tertiary Operating Reserve	X
TOR2	Tertiary Operating Reserve	✓
RRS	Replacement Reserve – Synchronised	✓
RRD	Replacement Reserve – Desynchronised	✓
RM1	Ramping Margin 1	✓
RM3	Ramping Margin 3	✓
RM8	Ramping Margin 8	X
SSRP	Steady State Reactive Power	✓
FFR	Fast Frequency Response	X
FPFAPR	Fast Post Fault Active Power Recovery	X
DRR	Dynamic Reactive	X

The CRU engaged with EirGrid on the appropriate services that would most contribute to increasing security of supply in the Dublin Region. Five of the services, TOR2 to RM3 combined incentivise the capability to deliver energy from 5 minutes to 3 hours. The other service, SSRP, requires the provision of steady-state reactive power which can be used to alleviate congestion issues and minimise the likelihood of a potential voltage collapse. The CRU considers that locational scalars will facilitate connections within the Dublin area by increasing system support in the region and therefore providing EirGrid with greater flexibility in scheduling outages to carry out the works required for the connections.

The CRU noted the value of these services in terms of providing the necessary supports which are appropriate in the context of the Dublin network and most contribute to security of supply.

The question posed to stakeholders was as follows.

Question 3: Do you have any comments on the CRU's proposals to adjust the Locational Scarcity Scalars for the above services? Are there other considerations the CRU should take into account in determining the appropriate services?

Consultation Responses

Six respondents either supported the CRU's proposal or had no issue with the range of services proposed. Two of these respondents suggested that the Locational Scalars also be adjusted for additional services. For instance, one respondent proposed that SIR also be included as it is a valuable service for system stability while another proposed that the faster reserve services FFR to TOR1 should also be included as these could help provide a quick frequency response to help reduce the risk of blackouts in the region.

Three respondents requested additional information and analysis on how these specific services were chosen. Two respondents commented that no technical argument for these services was provided or specific need identified in the consultation paper. Another respondent requested clarity on how the proposed services will interact with the current operational constraints in the Dublin Region, for example, how this may relax the current voltage constraints.

Three respondents requested clarity on how the Locational Scalars would be weighted among the proposed services i.e. whether an equal weighting would apply to each of the relevant services.

CRU Response

The CRU notes that the majority of respondents either supported the CRU's proposal or had no comment on this matter. As noted, the CRU has engaged with EirGrid on the appropriate services that are of most value to the Dublin Region in terms of security of supply. The services proposed are those that incentivise the capability for energy provision for longer durations and that provide voltage support for the region, and are best able to assist with managing congestion issues. The Dublin Region is particularly susceptible to this due to the high concentration of demand in the area, and the reliance on key generation and service providers to support the network. This reliance is reflected in the TSO's Operational Constraints¹², which lists specific requirements relating to the operation of generation in the Dublin Region.

Specifically, the following requirements exist:

- There must be at least two large generators on-load at all times in the Dublin area, to provide voltage control. This assumes EWIC is operational – if this is not the case, there must be at least three large generators on-load at all times in the Dublin area. These

¹² See for example http://www.eirgridgroup.com/site-files/library/EirGrid/OperationalConstraintsUpdateVersion1_86_September_2019.pdf

must be selected from the DB1, HNC, HN2, PBA and PBB generating units, and at least one of DB1, HNC, HN2 must be on at all times.

- When Ireland System Demand is greater than 4000 MW, two large generators on-load are required, and 3 when load is above 4700 MW. This assumes EWIC is operational as before, however this time HN2 may not be one of the selected units. This operational constraint is required for load flow control in the Dublin area.

These constraints demonstrate the reliance on existing generating units in Dublin to provide both voltage support and load flow control. Unavailability of any units from this small pool creates difficulties for the TSO and generally leads to additional costs on the consumer as additional measures are taken to ensure a safe and secure supply. The services to which the locational scalar is proposed to apply are well placed to assist in managing these issues.

The CRU is not proposing at this time to adjust the Locational Scalars for other services such as SIR or FFR out to TOR1. However, the CRU notes that EirGrid may review this position in subsequent years during its annual review of the scalar values and may propose changes to which services are adjusted by the locational scalar. This will be subject to CRU approval.

In relation to the comments made by three respondents requesting additional information and analysis on how these specific services were chosen, the CRU has noted that the services proposed are those that are considered most valuable for providing system support in Dublin in the context of significant demand growth. These services combined incentivise the capability for energy provision for longer durations and help provide voltage support and are best placed to manage congestion issues in the Dublin Region. With regards to the comment concerning interactions with operational constraints, the CRU agrees that this is an important consideration. There are a number of operational constraints currently in place in the Dublin Region, one of which relates to voltage. The CRU considers that increasing the provision of those services that most contribute to security of supply in the region should help alleviate some of these constraints, particularly where system capabilities can be increased in new and enhanced service provision. The CRU will continue to engage with EirGrid in relation to reducing these constraints.

Regarding those respondents requesting clarity on the weighting for the Locational Scalar values, the CRU considers that, at least initially, an equal weighting across the relevant services would likely be most appropriate and implementable approach. However, the CRU will engage with EirGrid on the appropriate weighting.

CRU Decision

The Locational Scarcity Scalars will be adjusted above one for all services providers in the Dublin Region for the services TOR2, RRS, RRD, RM1, RM3 and SSRP. This will only apply to the System Services Standard Contracts. The CRU will direct EirGrid to consult on its proposed scalar values.

3.4 Long-term Signals

Consultation Proposal

In the consultation paper, the CRU proposed that the Locational Scarcity Scalar values should 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, for instance, in 2020 the scalar values will be set for the year 2025 and in 2021 the scalar values will be set for the year 2026, one year at a time.

The CRU noted that it considered it appropriate to introduce a longer-term locational signal in order to provide reasonable investment certainty for market participants and to incentivise generation which can provide system support in the region.

The CRU also noted that any over or under-expenditure incurred in one year may be accounted for in the scalar values for the subsequent year, however, the intention is to provide certainty and an effective signal, so it is envisaged that the scalars will be adjusted as little as possible. The CRU will take the importance of the overall stability of the mechanism into account when adjusting the scalar values.

Nevertheless, the CRU proposed that EirGrid would have the right, subject to CRU approval, to adjust the Locational Scarcity Scalar values if there is significant over-expenditure in a particular tariff year. The CRU may also direct EirGrid to adjust the Locational Scarcity Scalar value back to one where it considers that the appropriate security of supply measures have been implemented and there is no longer a need for a locational signal.

The question posed to stakeholders was as follows.

Question 4: Do you have any views on the CRU's proposal to set the Locational Scarcity Scalar values for a five-year period on an initial basis and then five years in advance on an annual basis in subsequent years?

Consultation Responses

Eight respondents noted the benefit of a five-year signal in terms of providing a degree of investment certainty. However, a number of respondents requested clarification as to the potential adjustment of the scalar on an annual basis and raised concerns that this could lead to uncertainty in the scalar values year on year which would dull the intended long-term investment signal. Two respondents requested that any changes to the scalar values should occur at least five years in advance in order to provide market participants with sufficient foresight of their revenues.

One respondent suggested that the locational signal, via the Locational Scalars, should be introduced in 2022 for an initial five-year period, rather than in 2019 as proposed. The respondent commented that the current proposals would unnecessarily favour existing generation in the region, generation that has not indicated an intention to close, and is not a sufficient signal for new investment. Two respondents commented that setting the Locational Scalars for an initial five-year period beginning in 2019 would not be an effective signal for new investment as new projects take time to develop and would not have sufficient certainty of

potential locational revenues in their design phase. Thus, they would not be able to fully avail of this initial fixed five-year signal. One of these respondents proposed that the Locational Scalars should be adjusted for an initial five-year term beginning in 2022, otherwise another option would be an eight-year signal from 2019 onwards. This would be beneficial to new projects as it would provide adequate foresight of their revenues during the design and development stages.

Another respondent commented that the five-year term should be introduced at the date of commissioning rather than on a fixed term for all providers in order to provide a sufficient signal to incentivise new investment.

One respondent noted that the Dublin constraints issue is a network problem primarily and should not be resolved through System Services as this is not the intention of the DS3 programme. This respondent noted the need to look at incentivising the location of data centres away from Dublin to alleviate demand concerns.

One respondent disagreed with the proposal to apply the Locational Scalars for the relevant services to all providers in the Dublin Region as this would entail additional payments to plants that are not in danger of exiting and would distort the market. The respondent suggested that the scalars should only be applied where there is a specific need, such as for a generator that is at risk of exit. The respondent suggested that a USPC type process should be applied at an individual plant level to determine those units to which the scalars should apply.

CRU Response

The CRU notes the concerns raised by a number of respondents regarding the potential adjustments of the Locational Scalars in case of over/under expenditure. The CRU wishes to reiterate that the intention of its proposals is to provide a degree of certainty and an effective locational signal for market participants. The intention is to provide a five-year signal, thus it is intended that the Locational Scalar values should be fixed for the initial five-year period. The CRU considers that EirGrid should have the right, subject to CRU approval, to adjust the scalar values in a given year in the face of significant over or under expenditure. The CRU considers that this is a necessary measure to protect the electricity consumer..

As noted in the consultation paper, cost recovery for the TSO will be carried out through the established annual mechanism. Actual costs associated with locational scalars will be recovered in Ireland only and not Northern Ireland.

With respect to comments on the proposed five-year term beginning in 2022, the CRU notes respondents' concerns. However, the CRU considers that there is an immediate need to ensure that the correct signals are introduced for the retention of existing capacity in the Dublin area to maximise the availability of the necessary system services. As well as this, appropriate long-term markets signals are needed to promote efficient locational decisions for new generation which can provide system support.

As set out in EirGrid's Generation Capacity Statement 2018-2027¹³, the electricity demand in Ireland could grow by up to 58% in the next 10 years. A key driver for electricity demand in

¹³ http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_2018.pdf

Ireland for the next number of years is the connection of new large energy users, such as data centres. A significant proportion of these new large energy connections will materialise in the Dublin region. Security of supply has been recognised as a core strategic objective as part of the CRU's PR5 project. Specifically, the CRU has highlighted the importance of resolving Local Security of Supply in the Dublin region during the period (2021-2025). As such, Locational Scarcity Scalars will not remove the need to reinforce the network in the Dublin Region. Rather, Locational Scarcity Scalars aim to send a positive signal to market participants and promote efficient locational decisions for new and existing generation which can provide system support.

Concerning the comment raised by one respondent on the Dublin constraints issue and data centre positioning, the CRU notes that the Locational Scalars are one of a range of measures being progressed to protect local security of supply, as noted in CRU/18/228. Other measures currently being progressed relate specifically to transmission reinforcements and flexible demand connections for data centres to alleviate the strain on the Dublin network. The CRU considers that this range of measures combined is necessary to ensure security of supply in the region.

In relation to the comment that the Locational Scalars would entail additional payments to plants that are not in danger of exiting and that a USPC type process should be used to determine applicability, the CRU again notes that the intention of these proposals is to incentivise the provision of services that provide system support, both in terms of generator exit and entry, and not remove the need to reinforce the network in the Dublin Region. The Locational Scalars should be adjusted for the relevant services on a non-discriminatory basis i.e. all those service providers qualified to provide these services will receive payments for the level of service provision.

CRU Decision

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. The application of locational scarcity scalars in the Dublin Region will end in 2027, when the necessary reinforcements will have been delivered.

3.5 Payment Basis

Consultation Proposal

The CRU proposed that the Locational Scarcity Scalars should 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 Ruleset¹⁴. For clarity, the CRU noted that for those relevant units and services that are remunerated based on their market position, the Locational Scarcity Scalar will only apply to the market position of these providers. For all other relevant technologies and System Services, the Locational Scarcity Scalars will only apply to payments associated with the physical dispatch position of providers. This means that only units that have committed to making the relevant 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.

The question posed to stakeholders was as follows.

Question 5: Do you agree with the CRU's proposals in relation to the payment basis for the System Services Locational Scarcity Scalars?

Consultation Responses

Five respondents disagreed with the CRU's proposal in relation to the payment basis for the Locational Scalars. Three respondents noted that providers are often constrained on in Dublin to provide the necessary system services and that payment based on market position only would not provide any signal for investment and would dull the intended locational signal. Two respondents noted that payment based on market position only does not recognise the locational value of generation, whether mid-merit or offline service provision, that is often constrained on to provide services in Dublin. One respondent commented on the difference between the payment basis for the Temporal Scarcity Scalars where units that are constrained on may be for reasons unrelated to the incentive for providing the service i.e. SNSP, whereas units that are constrained on in Dublin are specifically required to provide the locational system services which the Locational Scalars are designed to incentivise and reward.

Another respondent also commented on the need for allowances for non-energy providers of system services as not all providers will participate in the energy market and therefore, will not have a market position.

One respondent commented that thermal plants are often constrained on in Dublin and suggested that they should not be allowed make windfall profits from these services, especially if being constrained on means the plant cannot provide one set of services but can provide

¹⁴ SEMC Decision on the DS3 System Services Market Ruleset
<https://www.semcommittee.com/sites/semc/files/media-files/SEM-18-032%20SEMC%20Decision%20Paper%20on%20DS3%20System%20Services%20Market%20Ruleset.pdf>

another. Two respondents either had no issue or did not comment on this proposal. One respondent agreed with the proposal, no supporting information was provided.

CRU Response

The CRU notes the feedback from a number of respondents who did not agree with the CRU's proposal in relation to the payment basis for the Locational Scalars. However, the CRU's proposals are intended to incentivise the provision of services valuable for system support and reward units based on decisions they have made as opposed to TSO decisions. In this regard the CRU notes one respondent's comment that thermal plants which are often constrained on should not be allowed make windfall profits from these services.

In light of the principles outlined in this decision to increase the remuneration for services that most contribute to security of supply and to send appropriate signals to new and existing generation that can provide system support, the CRU considers that there is merit in adopting an approach that recognises units that have committed to make services available in the ex-ante markets. Therefore, the CRU has decided that the payment basis for the Locational Scarcity Scalars will be applied in line with the payment rules for the Temporal Scarcity Scalar, as set out in the DS3 System Services Market Ruleset¹⁵.

CRU Decision

The payment basis for the Locational Scarcity Scalars will be applied in line with the payment rules for the Temporal Scarcity Scalar, as set out in the DS3 System Services Market Ruleset.

The CRU may review this approach in subsequent years.

¹⁵ SEMC Decision on the DS3 System Services Market Ruleset
<https://www.semcommittee.com/sites/semc/files/media-files/SEM-18-032%20SEMC%20Decision%20Paper%20on%20DS3%20System%20Services%20Market%20Ruleset.pdf>

3.6 Interactions with the Capacity Remuneration Mechanism

Consultation Proposal

In the consultation paper, the CRU noted that consideration should be given as to how revenues gained by a service provider from the Locational Scarcity Scalars should be considered in terms of capacity payments in the CRM and interactions with the calculation of the Unit Specific Price Cap (USPC).

The CRU noted that USPC calculations are a SEM Committee matter and therefore outside the scope of this paper, nevertheless, views were welcomed from respondents as to how additional revenues from Locational Scarcity Scalars should be considered in relation to CRM payments, and the calculation of a unit's Unit Specific Price Cap (USPC), in order to assist the SEM Committee in its considerations.

The question posed was as follows.

Question 6: Do you have any views on how additional revenues received by providers from the application of the Locational Scarcity Scalars should be considered in relation to the CRM and the calculations of a unit's Unit Specific Price Cap (USPC)?

Consultation Responses

The CRU thanks respondents for their views in relation to the Locational Scalars and USPC determinations. The comments received will assist the SEM Committee in its considerations. The treatment of Locational Scarcity Scalars in USPC calculations will be considered separately to this decision paper.

3.7 TSO Direction

Following this Decision Paper, EirGrid is directed to develop scalar values for the Locational Scarcity Scalars in line with the decisions set out in this paper. EirGrid will also consult on its proposed scalar values and the final scalar values will be submitted to the CRU for approval.

3.8 Additional Comments

Consultation Proposal

In the consultation paper the CRU asked respondents if they had any further comments or if there were any other considerations that the CRU should take into account in its proposals.

Consultation Responses

One respondent reiterated their concern that no immediate technical need has been demonstrated for these Locational Scalars, their implementation would be costly and unnecessary and will distort the energy market. A preferable option would be for the TSO to prioritise network investment and encourage the growth of data centres away from Dublin.

This respondent also stated that if there is a need for ancillary services to support those units who have not received a Reliability Option, then this should be via an LRSA which limits the provider to the balancing market only.

Three respondents requested further clarity on the timelines for implementation of the Locational Scalars.

CRU Response

Regarding one respondent's concern with the lack of any demonstrated technical need for these Locational Scalars and their preferred option of prioritising network investment and data centre positioning, the CRU considers that it has provided sufficient responses to these comments in previous sections.

With reference to the comment regarding the putting in place of LRSAs, where necessary, with units that have not received an RO, the CRU notes that the framework for the Targeted Contracting Mechanism (TCM) has been set out in CRU/17/346. CRU/17/346 sets out the processes under which this mechanism will apply that may lead to mitigant measures, potentially including a contract with a generating unit, such as an LRSA. The intention of the CRU's proposals in relation to the Locational Scalars is to send an appropriate market signal to promote locational decisions for service providers that can contribute to system support in Dublin. Reducing the risk of generator exit and increasing the likelihood of generator entry that can contribute to system support should mitigate the risk to security of supply of a potential disorderly exit in the Dublin region, thus, reducing the need for additional LRSAs to be put in place.

In relation to the comments requesting clarity on the timelines for implementation of these proposals, the CRU has provided additional detail in section 5 of this paper.

4 Summary of Decision

As summary of the CRU's Decision on each proposal is set out below.

4.1 Objectives and Principles

The CRU has decided to adopt the objectives and principles as proposed in the consultation paper.

The objective of adjusting the System Services Locational Scarcity Scalars is to incentivise generation which provides system support in the Dublin Region, 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.

In seeking to meet this objective, the CRU will have regard to the following principles:

1. To increase the remuneration for services that most contribute to increasing local security of supply;
2. To send appropriate long-term market signals to market participants to promote efficient locational decisions for new and existing generation which can provide system support; and
3. To adopt an approach that can be implemented quickly, that is pragmatic and fit for purpose and in a manner that delivers reasonable certainty for market participants.

4.2 Amount Allocated to Cover Costs of Adjustment

The CRU has decided that €12.5m will be allocated on an initial basis to cover the costs of adjusting the System Services Locational Scarcity Scalars in the Dublin Region.

The CRU engaged with EirGrid to determine the appropriate amount to allocate towards the adjustment of the Locational Scalars. In doing so EirGrid took a number of considerations into account, annual tariffs of €12.5m would support transmission investment in the order to €150m, which is expected to be considerably less than the cost of developing large-scale cross-country electricity infrastructure to support the Dublin region.

Consideration was also given to the value that a secure Dublin power system delivers and thirdly the cost of new generation development within urban areas was also taken into account when determining the appropriate amount to allocate towards the adjustment of the Locational Scalars. Within this context the CRU considers that €12.5m is an appropriate revenue allocation. Scalars will be set ex-ante against this annual allowance and cost recovery will be dealt with through the CRU's established tariff review process.

4.3 Relevant Services and Scalar Rates

The CRU has decided that the Locational Scarcity Scalars will be adjusted above one for all services providers in the Dublin Region for the services TOR2, RRS, RRD, RM1, RM3 and SSRP. This will only apply to the System Services Standard Contracts. The CRU will request that EirGrid consult on its proposed scalar values.

The services proposed are those that incentivise the capability for energy provision for longer durations and that provide voltage support for the region, and are best able to assist with managing congestion issues which are present in the Dublin Region. The CRU is not proposing at this time to adjust the Locational Scalars for other services such as SIR or FFR out to TOR1, since these tend to impact security of supply on a system wide basis. However, the CRU notes that EirGrid may review this position in subsequent years during its annual review of the scalar values to be applied to system services. This will be subject to CRU approval.

4.4 Long-term Signals

The CRU has decided that in the first year, the Locational Scarcity Scalars will be set for five years from their initial adjustment. The CRU may adjust the value of the scalars within the five-year period where there is a risk of excessive costs for the consumer. However, the CRU will have regard to the overall stability of the mechanism and certainty for providers.

The intention of the Decision is to provide a degree of certainty and an effective locational signal for market participants. Any subsequent changes to the scalar values should be set five years in advance in order to provide market participants with adequate foresight of their potential locational revenues going forward.

The application of locational scarcity scalars in the Dublin Region will end in 2027, when the necessary network reinforcements will have been delivered.

4.5 Payment Basis

The CRU has decided that the payment basis for the Locational Scarcity Scalars will be applied in line with the payment rules for the Temporal Scarcity Scalar, as set out in the DS3 System Services Market Ruleset.

In light of the principles outlined in this decision to increase the remuneration for services that most contribute to security of supply and to send appropriate signals to new and existing generation that can provide system support, the CRU considers that there is merit in adopting an approach that also recognises the locational value of units that can be constrained on or activated for service provision in constrained areas. Therefore, the CRU has decided that the payment basis for the Locational Scarcity Scalars will be applied in line with the payment rules for the Temporal Scarcity Scalar, as set out in the DS3 System Services Market Ruleset.

4.6 TSO Direction

Following this Decision Paper, EirGrid is directed to develop scalar values for the Locational Scarcity Scalars in line with the decisions set out in this paper. EirGrid will also consult on its proposed scalar values and the final scalar values will be submitted to the CRU for approval.

During EirGrid's annual review, the TSO may also consider it necessary to propose changes to the scalar values and other applicable issues. The CRU will engage with EirGrid on any and all proposals made by the TSO during this annual review.

5 Next Steps

As noted in the consultation paper, the CRU will seek to adopt an approach for the Locational Scalars that can be implemented quickly, is pragmatic and is fit for purpose.

EirGrid will develop scalar values for the Locational Scarcity Scalars in line with the decision as set out in this paper. The CRU directs that EirGrid consult on the proposed scalar values and that the final scalar values will be submitted to the CRU for approval.

The CRU will engage with EirGrid on any and all proposals made by the TSO during its annual review. The TSO may consider it necessary to propose changes to the scalar values and other applicable issues.

The CRU will also engage with EirGrid on the development of potential methods for dealing with network congestion issues as they arise