

# TSO PR5 Local/Dublin Security of Supply

## PR5 Balanced Scorecard and Incentive Multi-Year Plan 2023-2027

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Final Post Consultation



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# 1 Introduction and Context

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The Local Security of Supply (LSoS) multi-year plan 2023-2027 identifies the infrastructure delivery actions and activities that EirGrid will undertake during the period to contribute to the resolution of security of supply issues in the greater Dublin region. The development of the plan has taken place within the context of policy decisions and processes as outlined in the following sections.

The LSoS multi-year plan 2023-2027 contains infrastructure related milestones in the following metric areas<sup>1</sup>:

1. T-3/T-4 TSO Non-Contestable Project Delivery
2. Major Project Delivery including the Dublin Programme
3. Planning and Environment
4. Stakeholder and Public Engagement

In Section 7.11 of CRU/20/154, the CRU highlighted the importance of resolving local security of supply issues within its PR5 Strategic Objectives. CRU/20/154 states that given the significant forecasted growth in demand in the greater Dublin region, constraints in the Dublin Region represent a security of supply risk. The aim of the Local/Dublin Security of Supply Incentive is for the TSO to demonstrate progress in addressing and managing key transmission network security of supply / constraint areas during PR5.

The LSoS Plan for 2021, as submitted to the CRU in early 2021, included strategic, demand, generation, infrastructure and operational aspects. Since the publication of [CRU/20/154](#), the security of supply challenge has evolved materially. The CRU set out its high level mitigation plan in [CRU/21/115](#), the CRU's Security of Electricity Supply - Programme of Actions Information Paper, published in September 2021. EirGrid is committed to delivering the actions as set out in [CRU/21/115](#) and mitigating Ireland's security of supply issues continues to be EirGrid's top priority. An Electricity Security of Supply Programme of Work Update was published by CRU in June 2022 in [CRU202264](#).

EirGrid has developed the Local / Dublin Security of Supply MYP for 2023-2027, that focuses on the infrastructure delivery aspects of the broader topic of security of supply in the greater Dublin region. Delivery of the annual actions in this MYP will be a major step forward in achieving the overall security of supply objective in the region.

This incentive plan is aligned with CRU's strategic aim to remove the Dublin constraints and to ensure that the electricity supply to Dublin would not be materially impacted by the loss of generation in the Dublin area. The MYP defines the transmission infrastructure delivery metrics against which the TSO's performance will be measured.

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<sup>1</sup> The delivery of temporary non-contested emergency generation (TEG) projects is not included in this LSoS incentive multi-year plan and is reported by CRU in the Electricity Security of Supply Programme of Work Updates on its website.

## 2 Local / Dublin Security of Supply

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This incentive plan outlines how the investment planning, development and delivery of specific security of supply infrastructure related programmes, actions and projects is progressing and what their contribution is to the resolution of security of the supply challenge in the greater Dublin region.

Security of supply is the ability of the transmission network to reliably transport electrical energy from the generators where it is generated to the demand centres where it is consumed. Security of supply is also concerned with the reliability of the transmission network and EirGrid plans for the timely development of the transmission network to maintain an acceptable level of performance and reliability, thereby ensuring that transmission network performance is not a barrier to economic development.

The following sections outline the LSoS infrastructure delivery actions that EirGrid is undertaking during the period of this multi-year plan.

### 2.1 T-3 /T-4 Non-Contestable Project Delivery

The T-4 and T-3 Capacity Auctions conducted by SEMO (Single Electricity Market Operator) in respect of Capacity Years T-4 23/24, T-4 24/25, T-3 24/25 and T-4 25/26 contracted a total of circa 2 GWs for delivery, of which c. 50 MWs is already delivered. A number of connection offers have been accepted for the construction of new Generation units. At the time of writing, for those projects with connection agreements executed, the completion of the non-contestable works will facilitate the connection of up to 1,500 MW of Generation (Gas ca. 1100 MW, BESS ca. 200 MW, Biomass ca. 200 MW) by the end of 2024.

There are third-party project delivery risks heavily influenced by the customers, such as the ability to achieve planning consents for the generation facility and grid infrastructure and procurement of the generation materials within a constrained market. The other project risks include the ability to provide available outages and timely delivery of materials for the connections.

### 2.2 Major Project Delivery including the Dublin Programme

The Irish government is taking major steps towards making Ireland carbon neutral by 2050. Part of these steps is the commitment to increase the proportion of electricity generated from renewable energy sources from 30% to up to 80% by 2030. In November 2021, EirGrid published “Shaping Our Energy Future” which outlined the roadmap to meeting the Government Climate targets. The next Shaping Our Energy Future update is expected to be published in 2023.

A key enabler is the security of supply and the renewable energy capacity in the Dublin area and specifically an integrated programme of works to transform the Dublin Area transmission network. This group of projects is called the Dublin Programme or “Powering Up Dublin” and will install up to 50km of cables across the city, through six cable and six station projects. Most of the cables operated by EirGrid are underground and additional connections will be required to be made near to either upgraded substations or new stations to support the capacity needed. The number of projects within the programme may increase and change as it matures during PR5 and PR6.

EirGrid has included 13 transmission infrastructure projects in this Local/Dublin Security of Supply multi-year plan, 11 projects<sup>2</sup> from the Dublin Programme and two additional major projects in the greater Dublin

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<sup>2</sup> Two projects will be merged into one capital project (CP1226 & CP1218).

region. The relevant milestones for this LSoS incentive plan of Capital Approval, Project Agreement and /or Energisation are the major project milestones which are contained in the TSO's Q4-22 Network Delivery Portfolio (NDP). The NDP is published on the TSO's website<sup>3</sup> and is required as per Section 3.2 Capex Monitoring of [CRU/20/154](#). See also Appendix II of this document for further relevant milestones and activities which are applicable for 2023.

The Security of Supply needs are best described in the context of these LSoS MYP projects and the benefits these projects bring, and also considering the projects' drivers and needs.

EirGrid launched its "Powering Up Dublin" programme in May 2022<sup>4</sup>. The Dublin programme will:

- replace and upgrade older infrastructure that is reaching the end of its life.
- help ensure the security of supply in the Dublin region.
- meet the growing demand for electricity from growing social and economic activity.
- facilitate renewable electricity, specifically offshore capability (being 'offshore ready'); and improve the overall resilience of the power system.

#### **Powering Up Dublin Programme (11 Projects):**

- Five projects (CP1100 Finglas - North Wall 220 kV Cable Replacement, CP1146 Carrickmines - Poolbeg 220 kV Cable New Replacement, CP1150 Inchicore - Poolbeg No. 2 220 kV Cable Replacement, CP1157 Inchicore - Poolbeg No.1 220 kV Cable Replacement and CP1216 Poolbeg - North Wall 220 kV Cable Replacement) involve replacing existing 220 kV underground cables (UGCs). The existing fluid filled cables will be replaced with higher capacity and up to date underground cable technology. The drivers of these projects are security of supply and RES integration and Asset Management. The need for investment relates to the age and condition of the existing fluid filled UGCs - it is also a requirement of EirGrid's Cable Maintenance Policy to replace all fluid filled cables on the system. In addition, the need relates to a lack of capacity and the higher rated UGCs will facilitate the connection of, and supply to, forecast increased demand in Dublin and the integration of offshore wind generation off the east coast.
- One project (CP1190 Poolbeg 220 kV Station) involves replacing the existing Poolbeg 220 kV station. The driver of this project is security of supply related to the age and condition of the existing station. It is important to note that the replacement station will also facilitate the connection of offshore wind generation off the east coast.
- One project (CP1213 Belcamp 220 kV Busbar Extension) involves extending the existing Belcamp 220 kV Bulk Supply Point station. The driver of this project is security of supply. It will facilitate the connection of, and supply to, forecast increased demand in North County Dublin. The extension will also facilitate the connection of offshore wind generation off the east coast.
- Three proposed developments (CP1214 North County Dublin Bulk Supply Point, CP1218 West County Dublin Bulk Supply Point<sup>5</sup> and CP1273 Dublin Central Bulk Supply Point) involve building three new Bulk Supply Points (BSPs) in North, West and Dublin Central and associated connecting circuits. BSPs are interface points between the Transmission System and Distribution System. The driver of these projects is security of supply. The need for investment relates to a lack of capacity at existing BSPs and transmission circuits to supply the increased demand that DSO has forecast. These proposed developments are at an early stage of the grid development process and moved into Step 3 in early 2023 and in Step 3 the project scopes will be further developed.

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<sup>3</sup> <https://www.eirgridgroup.com/customer-and-industry/general-customer-information/network-delivery-portfolio/index.xml>

<sup>4</sup> <https://www.eirgridgroup.com/uuid/9fe9d891-469f-493b-8e60-eab2089c6f80/EirGrid-Powering-Up-Dublin-Web-Final.pdf>

<sup>5</sup> It is planned that CP1218 West County Dublin New BSP will be combined with CP1226 South Dublin Reinforcement, see CP1226 description for further details.

- One proposed development (CP1226 South Dublin Reinforcement<sup>6</sup>) involves a holistic solution to address two interacting needs. The first need for investment relates to a lack of capacity in the South Dublin East Kildare part of the transmission network while the second need case relates to a lack of capacity at existing BSPs and transmission circuits to supply the increased demand that DSO has forecast. The drivers of this project are security of supply and RES integration. The proposed development will facilitate the connection of, and supply to, forecast increased demand. It will also facilitate the integration of offshore wind generation off the east coast. This proposed development is at an early stage of the grid development process. The project moved into Step 3 in early 2023 and in Step 3 the project scope will be further developed.
- CP1214 North County Dublin Bulk Supply Point, CP1218 West County Dublin Bulk Supply Point<sup>5</sup>, CP1226 South Dublin Reinforcement <sup>6</sup> and CP1273 Dublin Central Bulk Supply Point are in the very early stages of the project development process, detailed scopes are still to be developed. Feasibility studies will be completed in Step 3, throughout 2023, which will further define the project scopes and enable EirGrid to develop detailed project programmes and forecast delivery dates.
- One proposed development (CP1251 North Wall Station Refurbishment) involves extending the life of the existing North Wall 220 kV station. The driver of this project is security of supply related to the age and condition of the existing station. This proposed development is at a very early stage of the grid development process. At the time of writing it is in Step 1, and planning to move into Step 3 at the end of 2023. The scope of this proposed development will be further developed in Step 2.

#### **Greater Dublin Region Major Projects (Two Projects):**

- One project (CP0966 Kildare-Meath Grid Upgrade) involves building a new 400 kV UGC between Dunstown and Woodland 400 kV stations in Kildare and Meath, respectively. The drivers of this project are security of supply and RES integration. The project will help meet the growing demand for electricity in the east. In addition, a significant number of Ireland's electricity generators are located in the south and south-west. This is where many wind farms and some modern, conventional generators are located. This power needs to be transported to where it is needed in the east. To solve this emerging issue, we need to strengthen the electricity network between Dunstown and Woodland.
- One project (CP1021 North Dublin-East Meath Grid Upgrade) involves building a new 400 kV UGC between Belcamp and Woodland 400 kV stations in Dublin and Meath, respectively. The drivers of this project are security of supply and RES integration. The project will help meet the growing demand for electricity in east Meath and north Dublin. This project is also driven in part by the need to reduce reliance on fossil fuelled generation in Dublin as this will be displaced by renewable or more efficient fossil fuelled generation elsewhere in the country. To solve this emerging issue, we need to strengthen the electricity network between Belcamp and Woodland.

EirGrid as TSO has proposed significant reinforcement projects during PR5 period to address security of supply in the Dublin area. These system reinforcement projects are at different stages of development however the solution which is being proposed is a full offline build, to minimize power outages and any disruption to the power flows in the Dublin region.

The multi-year plan refers to the major NDP project delivery milestones for each of the projects as they are known. The stakeholder engagement, planning and environment targets are also included in the plan. These milestones will continue to be developed as the programme and the individual projects progress and will be reported on in the TSO's quarterly NDP publications.

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<sup>6</sup> CP1226 South Dublin Reinforcement will be combined with CP1218 West County Dublin New BSP project, see CP1218 description for further details.

## 2.3 Planning and Environment

Infrastructure Delivery occurs within a strategic and statutory planning and environmental context, where the focus is on matters of proper planning and sustainable development. As such, timely achievement of planning and environmental milestones forms a vital part of ensuring the progression of these projects.

For this metric, the TSO will assess its timely achievement of the following key planning and environment processes as they relate to relevant LSoS projects listed in the Q4 NDP. This will include a combination of the activities such as;

- Pre-application consultations,
- Declarations of exempted development and/or,
- Planning applications.

## 2.4 Stakeholder and Public Engagement

The TSO has a commitment to meaningful stakeholder and public engagement, which is embedded across the company and forms part of the TSO's core strategy. This applies to all of its grid infrastructure development, both urban and rural, including the Dublin Programme and major projects in the Greater Dublin region.

The Powering Up Dublin Community and Business Forum brings together people and organisations from across the project area so that stakeholder, community views and local businesses can be discussed, understood and properly considered throughout the lifecycle of the project. The TSO will also report on its Dublin Energy Citizen Roadshows as they progress.

For this metric, the TSO will assess annually the Stakeholder and Public Engagement activities undertaken against those which were planned. These activities will consist of regular forum meetings with a range of stakeholders, project specific consultations and regular documented updates on the progress of the Dublin Programme and projects in the Greater Dublin Region.

# 3 LSoS Balanced Scorecard 2023-2027

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The Local / Dublin Security of Supply (LSoS) Balanced Scorecard 2023-2027 contains four complementary infrastructure metrics to assess the TSO's performance in addressing and managing the transmission network security of supply challenges. The metrics contained in section 3.2 below have been developed to enable the TSO to demonstrate how it has progressed towards delivering these infrastructure projects in a timely manner.

## 3.1 LSoS Plan 2023-2027 Objectives

The incentive plan for the period 2023-2027 includes the following objectives to deliver upon the strategic aims of the plan:

1. Delivery of 1500 MW of T-3/T-4 projects (300MW in 2023, 275MW in 2024, 600 MW in 2025 and 325 MW in 2026)
2. A focus on confirming investment decisions for the Dublin programme
3. Engaging with communities and stakeholders
4. Bringing the Powering Up Dublin Programme and the two Greater Dublin Region major projects through the required consenting processes
5. Advancing the cable and major projects to Project Agreement with ESB Networks. It is at this point that a project moves into the detailed design and construction stages
6. Energisation of LSoS Dublin Station Projects.

## 3.2 LSoS Plan 2023-2027 Metrics

The Local / Dublin Security of Supply incentive plan metrics focus on the following areas:

1. Delivery of 1500 MW of T-3/T-4 projects (300MW in 2023, 275MW in 2024, 600 MW in 2025 and 325 MW in 2026)
2. Major Project Delivery including the Dublin Programme
3. Planning and Environment
4. Stakeholder and Public Engagement

For each of the metrics, the TSO has defined specific milestones to quantify progression of the programme across the 5 year period of the multi-year plan. Additional milestones will be added as project the project lifecycle matures.



# 4 Performance Assessment and Incentive Award Scales

## 4.1 Outturn Reporting

EirGrid will provide an annual Local/Dublin security of supply incentive outturn report to CRU containing its outturn performance. The report will detail the activities which have taken place during the calendar year including the implementation of the incentive plan, the quality of the plan and the benefits and impacts derived from the achievement of specific milestones and activities towards the strategic aims of this incentive.

## 4.2 Performance Assessment

The potential upside/incentive award in each calendar year is €1.5 million, whilst the potential downside/incentive penalty is €1 million per annum. Per CRU/20/154<sup>7</sup>, 75% of the annual reward/penalty will be applied annually while the remaining 25% of each years' reward/penalty will be deferred to the end of the Price Review Period (to be assessed after the PR6 Final Determination has been published).

Incentive Award	Upside (Infrastructure)	Downside (Infrastructure)
PR5 Allowance	+ €1.5 million	- €1 million
Annual Allowance (75%)	+ €1.125 million	- €0.75 million
End PR5 Allocation (25%)	+ €0.375 million	- €0.250 million

LSoS MYP 2023-2027 Incentive Award

The TSO proposes that the allowed upside be calculated on a linear basis with the quantum of deliverables achieved/milestones reached per calendar year directly related in percentage terms to the allowed upside. The TSO also proposes that the incentive should be weighted as defined in the table below, however it is acknowledged that the applicable weighting will ultimately be a decision for the CRU based on its performance against this incentive plan.

Metric No.	Area	Weighting
1	T-3/T-4 Non Contestable Project Delivery	40%
2	Major Project Delivery including Dublin Programme	40%
3	Planning & Environment	10%
4	Stakeholder & Public Engagement	10%

LSoS MYP 2023-2027 Metric Weightings

<sup>7</sup> CRU/20/154, section 7.11, page 66.

## 4.3 Ex Post Adjustment Process

As part of the annual review of the outturn performance for this incentive the TSO will evaluate how third-party actions, or events outside of its control, may have resulted in, or created, a measurable and justifiable deviation from planned or forecast performance. Where third party actions have facilitated accelerated delivery, this too will be noted in the outturn reporting. This *ex-post* adjustment process may lead to the exclusion of specific targets, the inclusion of similar substituted milestones or form the basis of performance adjustments arising from such actions or events.

This process will be documented and form part of the annual outturn reporting process. The achievement of the strategic aims of this incentive plan is the ultimate goal therefore additional milestones may be included where these advance the achievement of the overall objectives of the plan.

## 5 Conclusion

The PR5 Local / Dublin Security of Supply MYP is a detailed plan against which the TSO's performance will be measured on an annual basis. The strategic aim of this incentive is to work towards removing the Dublin/greater Dublin region constraints in the short and medium term and to ensure that the electricity supply to Dublin would not be materially impacted by the loss of generation in the area. This incentive is aligned with the TSO's ambitious "Powering Up Dublin" programme, and the objectives contained within the TDP 2021-2030, to develop the transmission network so that it will continue to operate reliably in the future and ensure that the city and greater Dublin region is ready to facilitate renewable energy.

# Appendix I - LSoS Multi-year Plan Targets

LSoS Multi-Year Plan - 2023-2027 - Targets					
Metric Area	2023	2024	2025	2026	2027
T-3/T-4 Project Delivery	ca. 300 MW	ca. 275 MW	ca. 600 MW	ca. 325 MW	TBC
Major Project Delivery including the Dublin Programme	As per the TSO's Q4-22 Network Delivery Portfolio (NDP) published on EirGrid's website. See also Appendix II.	As per Q4-22 NDP as published on EirGrid's website	As per Q4-22 NDP as published on EirGrid's website	As per Q4-22 NDP as published on EirGrid's website	As per Q4-22 NDP as published on EirGrid's website
Planning and Environment	Commence pre-application consultation for all Cables Projects <b>AND/OR</b> undertake process for Declaration of Exempted Development Applications will be submitted in 2023 and the expectation is that local authority consent will be issued in 2023 (Poolbeg & Belcamp)	Complete submission of application(s) for all cable projects	Progress remaining project consenting requirements (if applicable).	Progress remaining project consenting requirements (if applicable).	Progress remaining project consenting requirements (if applicable).
Stakeholder and Public Engagement	Dublin Programme Infrastructure Forum quarterly meetings Community Forums set up and meeting quarterly Business Forums set up and meeting quarterly Project specific consultations in line with individual project timelines Quarterly website/FAQ updates	All Forums operating consistently.  Engagement to evolve in response to need and progress. Milestones to be developed annually.	All Forums operating consistently.  Engagement to evolve in response to need and progress. Milestones to be developed annually.	All Forums operating consistently.  Engagement to evolve in response to need and progress. Milestones to be developed annually.	All Forums operating consistently.  Engagement to evolve in response to need and progress. Milestones to be developed annually.

Table 1: LSoS Metrics & Targets 2023-2027

## Appendix II - 2023 Project Milestones & Activities

LSoS Incentive Plan 2023 - Dublin Programme and Greater Dublin Region Milestones		
CP No.	Project Name	2023
CP0966	Kildare Meath Upgrade	GW5 - Lodge Planning Application
CP1021	East Meath North Dublin	GW4 – Complete Step 4
CP1100	Finglas – North Wall 220kV Cable Replacement	Cable Routing Activities & Engagement Ongoing
CP1146	Carrickmines - Poolbeg 220kV Cable New Replacement	Cable Routing Activities & Engagement Ongoing
CP1150	Inchicore – Poolbeg #2 220kV Cable Replacement	Cable Routing Activities & Engagement Ongoing
CP1157	Inchicore – Poolbeg #1 220kV Cable Replacement	Cable Routing Activities & Engagement Ongoing
CP1190	Poolbeg 220kV Station	GW5 - Lodge Planning Application
CP1213	Belcamp 220kV Busbar Extension	GW6 - Approval to Enter Project Agreement
CP1216	Poolbeg – North Wall 220kV Cable Replacement	Cable Routing Activities & Engagement Ongoing

# Appendix III - Notes on Security of Supply Programmes

Security of Supply for the electricity Transmission Network and ensuring security of supply for electricity customers is a broad area for which several programmes of work are currently under way by the TSO.

1. CRU published CRU21115 an Information Paper on Security of Electricity Supply - Programme of Actions in September 2021<sup>8</sup>
2. The Government of Ireland published the National Energy Security Framework in April 2022<sup>9</sup>
3. EirGrid launched its “Powering Up Dublin” project in May 2022<sup>10</sup>.
4. CRU published CRU202264 Electricity Security of Supply Programme of Work Update in June 2022<sup>11</sup>

The design of the Local / Dublin Security of Supply incentive MYP 2023-2027 is specifically focused on the delivery of an infrastructure programme to achieve this aim and does not include operational, market or emergency measures or initiatives set out elsewhere by the TSO.

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<sup>8</sup><https://www.cru.ie/wp-content/uploads/2021/09/CRU21115-Security-of-Electricity-Supply-%E2%80%93-Programme-of-Actions.pdf>

<sup>9</sup> <https://www.gov.ie/en/publication/ea9e4-national-energy-security-framework/>

<sup>10</sup> [https://www.eirgridgroup.com/\\_uuid/9fe9d891-469f-493b-8e60-eab2089c6f80/EirGrid-Powering-Up-Dublin-Web-Final.pdf](https://www.eirgridgroup.com/_uuid/9fe9d891-469f-493b-8e60-eab2089c6f80/EirGrid-Powering-Up-Dublin-Web-Final.pdf)

<sup>11</sup><https://www.cru.ie/wp-content/uploads/2022/06/CRU202264-Electricity-Security-of-Supply-Programme-of-Work-Update.pdf>

# Appendix IV - Acronyms

CPP - Committed Project Parameter Document

CRU - Commission for Regulation of Utilities

IPD - Investment Planning and Delivery

GW - Gateway

MYP - Multi-year plan

NDP - Network Delivery Portfolio

PR4/PR5/PR6 - Price Review 4/5/6

TAO - Transmission Asset Owner

TOP - Transmission Outage Programme

TSO - Transmission System Operator