



NETWORKS



CALL FOR INPUT ON DSO PR5 INCENTIVES MULTI- YEAR PLANS 2025 - 2029

ESB Networks Consultation

Feedback to: consultations@esbnetworks.ie

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1 Introduction

Background

The Commission for Regulation of Utilities (CRU) “PR5 Regulatory Framework, Incentives and Reporting” decision paper [CRU20/154](#), outlines the set of arrangements that apply to how the network companies will be incentivised throughout the PR5 period (2021-2025), with a key focus on:

- delivering better outcomes for customers
- using innovation to deliver services more efficiently, and
- meeting key national strategic objectives

The CRU’s strategic objectives for the DSO, as set out above, are being delivered in part through new PR5 incentives concerning flexibility, visibility, enhancing the independent role of the DSO, and improving estimated restoration time accuracy for customers. For each of these a Multi-Year Plan (MYP) is submitted to CRU in September of each year to cover the next three calendar years in detail and years four and five thereafter at a high level. Based on these submissions, the CRU makes decisions by year-end on the milestones, deliverable targets and weightings for the following year.

Previous Submissions and Balanced Scorecard Information Papers

In 2021, DSO made submissions to the CRU with respect to the plans for these incentives for 2021. This was the first year of Price Review 5. The CRU’s decision on the 2021 Balanced Scorecards was published in March 2022 via the CRU’s PR5 2021 Balanced Scorecards Information Paper, [CRU202226](#). In December 2022, the CRU published the “PR5 2022 Balanced Scorecards Information Paper 2022”, [CRU2022989](#). This document set out the CRU’s Balanced Scorecards for 2022, following on from related DSO submissions and consultations. In June 2023, the CRU published the “PR5 2023 Balanced Scorecards Information Paper 2023”, [CRU202354](#), which set out the CRU’s Balanced Scorecards for 2023, following on from related DSO submissions and consultations. In March 2024, the CRU published the “PR5 2024 Balanced Scorecards Information Paper 2024”, [CRU202405](#), which set out the CRU’s Balanced Scorecards for 2024, again following on from related DSO submissions and consultations.

Purpose of this Call for Inputs Paper

This Call for Input Consultation Paper relates to the DSO's preparation of 2025-2029 Multi-Year Plans for the following four PR5 incentives: Flexibility, Visibility, Independent Role of the DSO, and Estimate Restoration Time Accuracy.

ESB Networks, in consideration of inputs from stakeholders, will develop the planned activities as appropriate for these incentives in detail for 2025, 2026 and 2027 and the planned activities at a high level for 2028 and 2029. Similar to the approach taken last year, to develop the Multi-Year Plans 2025-2029 we are publishing this Call for Input Consultation Paper during the development of the plans, rather than a consultation on finalised Multi-Year Plans.

Further information on each of the four incentives is outlined in Section 2 of this paper. This Call for Input will allow us to include feedback from stakeholders in advance of the finalisation of the proposed plans and submission of same to the CRU by September 2024.

Have Your Say

ESB Networks have commenced the process of developing the PR5 Joint Incentive Multi-Year Plans for 2025-2029 as required per CRU20/154 in relation to the four DSO balanced scorecard incentives. These plans will set out our proposed approach for the next five years. The DSO previously published the incentive Multi-Year Plans for the period 2024-2028. We now propose to use the final four years (2025 – 2028) of those plans as a starting point for the 2025 – 2029 plans. Via this Call for Input Consultation, we are inviting stakeholder inputs into the development of those 2024-2028 plans, in advance of the submission of same to the CRU. For the avoidance of doubt, please note that the DSO will not be consulting again in relation to the PR5 Multi-Year Plans 2025-2029.

Responses are invited until 5pm on Monday 26th August, and can be submitted to consultations@esbnetworks.ie. For clarity and to assist in the preparation of the plans for the individual incentives, we request that respondents structure their feedback comments under the following subheadings (as appropriate) in their submissions:

- Flexibility
- Visibility
- Independent Role of the DSO
- Estimated Restoration Time Accuracy

2 PR5 DSO Balanced Scorecard Incentives

Stakeholders are invited to express their views on and input into the following four DSO balanced scorecard incentives. These plans will set out ESB Networks’ approach for the next five years. The DSO previously published the incentive multi-year plans for the period 2024-2028, which can be found at the links below. Stakeholders may find it helpful to refer to this documentation when considering their responses to this Call for Inputs.

PR5 Incentive	ESB Networks Multi-year Plan 2024-2028	Supporting CRU Documentation
Flexibility	Link to Flexibility Multi-year plan 2024-2028	Section 8.9 of CRU20/154 Section 4 of CRU202226 Section 4 of CRU2022989 Section 4 of CRU202354 Section 6 of CRU202405
Visibility	Link to Visibility Multi-year plan 2024-2028	Section 8.10 of CRU20/154 Section 6 of CRU202226 Section 6 of CRU2022989 Section 6 of CRU202354 Section 8 of CRU202405
Independent Role of the DSO	Link to Independent Role of the DSO Multi-year plan 2024-2028	Section 8.11 of CRU20/154 Section 5 of CRU202226 Section 5 of CRU2022989 Section 5 of CRU202354 Section 7 of CRU202405
Estimated Restoration Time Accuracy	Link to Estimate Restoration Time Accuracy Multi-year plan 2024-2028	Section 8.4 of CRU20/154 Section 3 of CRU202226



Section 3 of [CRU2022989](#)
Section 3 of [CRU202354](#)
Section 5 of [CRU202405](#)

2.1 Flexibility

Introduction and Context

The National Network, Local Connections (NNLC) Programme was established within ESB Networks to deliver the transformative change required on the distribution system to meet ESB Networks' PR5 targets and Climate Action Plan targets, in particular as regards flexible demand and the integration of renewables. Through this programme, ESB Networks has worked with, and for, customers to enable fundamental changes to how and when renewable energy is used or stored, as required to decarbonise our society.

Over the course of 2023, the NNLC Programme was combined with other business areas as part of the Distribution Market System Operator (DMSO). The DMSO is a new organisational structure in ESB Networks that brings together the teams from the National Networks, Local Connections Programme, Smart Metering, Network Operations and Retail Market Services.

In June 2023, the CRU launched the development of Ireland's national Energy Demand Strategy (EDS), identifying that the NNLC Programme will play a central role to enable and incentivise much of the demand flexibility and response required to meet our national targets. As part of the EDS, ESB Networks is responsible for working towards the Climate Action Plan 2023 target of 15-20% flexible demand by 2025, building on the existing target of 20-30% by 2030. In Q4 2022 the CRU issued ESB Networks a Direction to accelerate and expand the scope of a number of initiatives under the NNLC programme to facilitate bringing greater demand flexibility to the system sooner. The initial focus of this acceleration was to reduce the 2022/23 winter peak consumption by at least 5% in line with EU targets set in the EU emergency regulation on high prices¹.

Through its agile approach, the NNLC Programme has made significant progress in delivering new, and improving existing, capabilities. The first three local flexibility markets went live in 2022, in Carlow, Dublin Central and Dublin North, and over the winter 2022/23 peak period thousands of domestic and commercial customers adopted flexible demand products for the first time, to help them reduce peak demand through the Beat the Peak pilots.

Through these initiatives we have seen customers' response to flexibility events consistently growing, and we are developing valuable insights about what customers find most useful and are most responsive to, which are being applied in each successive scheme or rollout. These

¹ [Council Regulation \(EU\) 2022/1854](#)

developments have been supported by flexibility and market improvements, distribution analysis, enhanced customer engagement, and technological and operational enhancement.

To accelerate the introduction of system flexibility at scale, the Department of the Environment, Climate and Communications (DECC) introduced – as part of Climate Action Plan 2023 – a new demand side flexibility target of 15-20% by 2025, significantly accelerating the planned trajectory to meeting the existing target of 20-30% by 2030. Recognising its role, ESB Networks has reaffirmed – in its Networks for Net Zero Strategy, and in response to the CRU Direction – its commitment to delivering on CAP targets for demand side flexibility.

As such, throughout 2023, the NNLC Programme has worked on accelerated rollout plans designed to drive these national targets. We are accelerating the rollout of flexible demand propositions, targeting flexibility which may be accessible at scale in a 2-3 year timeframe, while continuing to deliver an agile, discovery-led approach, with flexibility introduced through collaborative rollouts of new products and services, that are adapted and scaled (based on learnings). This will be delivered in partnership with stakeholders and organisations, with extensive customer research, education and recruitment initiatives to build customer participation and awareness.

The core inputs which we are currently using to develop our updated Flexibility Multi-year Plan 2025 – 2029 are published alongside this paper.

In this call for input, we are asking respondents to:

- Comment on the inputs we are currently developing, in particular the following strategies for introducing flexibility, addressing different market and consumer perspectives, accessible [here](#):
 - Flexibility Market Design strategy
 - Customer (Domestic) strategy
 - Customer (Commercial) strategy
 - Power System Requirements strategy
 - Behind-the-Meter Infrastructure strategy
- Provide us with further inputs into the update of our flexibility multi-year plan. This could include:
 - Your perspectives on activities we need to introduce or accelerate
 - Reports, policies or research you believe should inform our plans

Alongside this call for input, we have published the [overview](#) of each of the market, customer, power system and behind the meter infrastructure strategies which are shaping our multi-year plan at present. In these overviews, we outline the arenas (where we plan to be active), vehicles (how we plan to introduce or rollout new services), differentiators (key elements of how we deliver), staging (what will we deliver and when) and economic logic underpinning the activities which we plan to include in our multi-year plans.

Strategic Proposals

The inputs and strategies identified above include a number of strategic proposals, which we expect will feature in our multi-year plans, including:

- **Flexibility Market Design**
 - Identify the parameters (frequency and duration of response) needed for flexibility products
 - Grow local flexibility markets through a series of national and local auctions that address flexibility requirements
 - Review procurement process and identify pathways to running auctions closer to real time (day ahead and intraday)
 - Systemise market interaction through the deployment of a Flexibility Auction Platform
 - Design and introduce different models of market participation, including direct bidding and through aggregators
 - Implement future DSO-TSO operating model to enable distribution-connected resources' stacking of services

- **Power System Requirements**
 - Forecast localised distributed generation, low-carbon technologies and demand to support system operation and planning
 - Analyse the needs/impacts of generation and demand, assessing thermal, voltage, system strength, harmonics and other parameters
 - Identify and publish (on a 2-yearly basis) the requirements – and the potential – for flexible services in the short, medium, and long term
 - Introduce – and embed – flexible connections, to accelerate electrification and the connection of renewable generation

- Introduce flexible connections at demand level to facilitate early access to demand customers to the distribution system
 - Develop an enhanced investment planning methodology to identify optimum solutions to identified network constraints, taking account of different attributes of various solutions and where and when flexible services are available
 - Enable the DSO's optimisation of demand and supply, at a local level, by undertaking near real-time and real-time operational planning
 - Work to improve distribution customers access to EirGrid markets for services
 - Enable TSO/DSO coordination to facilitate the optimal integration of Distribution Energy Resources (DER) and maintain the balance between supply and demand
- **Customer (Commercial)**
 - Harness data to characterise, cluster and profile different kinds of commercial energy demand, developing clear insights into the commercial demands with potential for demand flexibility
 - Leverage data science techniques to build a library of meaningful insights into specific demand behaviours and consumption patterns
 - Define the range of opportunities available to different kinds of commercial electricity customers as we work to Climate Action targets
 - Describe the characteristics of businesses participating in flexible demand products in future, underpinned by personas representing different business types and levels of maturity, to help map their flexible demand journey
 - Compile and disseminate research on flexible demand products for commercial customers in international markets to support supplier / aggregator product development
 - Define the incentives and product packaging needed from the DSO and/or market participants to stimulate commercial customer participation in flexibility
 - Pilot flexible connections², enabling customers' – including, but not limited to, industrial, e-heat and transport – accelerated/enhanced access to the distribution system (phase one to focus on timed connections)
 - Per flexibility market design staging, develop and launch new flexibility products that provide a route to market for additional commercial sub-sectors³

² Please note that the flexible demand product for electric heat – proposed in the 2023 *Call for Input* – is now incorporated within flexible connections.

³ Please note that the flexible demand product for agriculture – proposed in the 2023 *Call for Input* – is now incorporated within the broader development and launch of a range of new flexibility products.

- Procure a medium-term demand flexibility product⁴ in locations where there is a defined system need, as part of an overall programme to meet capacity requirements
 - Offer products to Extra Large Energy Users, incentivising their embedding of flexibility in consumption patterns (in line with the intent set out in the CRU's National Energy Demand Strategy)
 - Enhance and revise open competitions for *Beat the Peak* Business (both daily and active system events)
- **Customer (Domestic)**
 - Describe the future customer, underpinned by personas that map out customers' energy usage journey; this will inform a national outreach programme which will support customers in understanding and participating in demand side flexibility
 - Work with suppliers to deliver future solutions that raise customers' awareness of flexibility; develop a plan to migrate initiatives to suppliers*
 - Identify the behaviours and product definitions that will appeal to customers, disseminate this with suppliers and energy companies, and apply in product designs*
 - In collaboration with energy suppliers, introduce pathways and incentives that will reshape consumer behaviour in the consumption, generation and storage of electricity*
 - Propose a joint vision with suppliers and emerging energy companies for how/who will deliver products, services and propositions to the 'customer of the future', e.g. suppliers, aggregators or energy innovators*
 - * *subject to DSO-Supplier and DSO-energy company partnership transition model being established*
- **Behind-the-Meter Infrastructure**
 - Inverter-interfaced PV and batteries, enabling quick and efficient PV uptake, and domestic customers' participation in flexibility products using their micro- and mini-generation
 - Smart EV charging, enabling domestic and commercial customers participate flexibility products and services, and avail of flexible connections

⁴ Please note that the medium-duration storage proposition – proposed in the 2023 *Call for Input* – is now incorporated within the medium-term demand flexibility product.



- Smart domestic energy management, facilitating customers' ability to directly contract with suppliers and aggregators to participate in new flexible demand products and services
- Design of the operational technology dispatch architecture integration with an Advanced Distribution Management System
- Technical specifications, communications protocols and standards needed to deliver flexibility-ready EV chargers and charge points
- Ensure that proposed Behind-the-Meter architectures are designed to facilitate broad participation in flexibility offerings.

Have your say

Please bring your perspective: if your interest is in flexibility market design, can you see a pathway to an open and liquid market that complements the wholesale, retail and ancillary services markets? If decisions regarding behind-the-meter technology are important to your business model, are you clear on the timelines and channels influencing the standards to be agreed and introduced? If you want to deep dive into the role of the supplier, will the approach proposed support a transition from DSO-led to supplier-led flexible demand?

2.2 Visibility

Introduction and Context

The Operational Visibility and Mapping workstream within the DMSO will, in the coming years, deliver increased levels of network mapping and increased levels of network monitoring. Accurate network mapping will include accurate referencing of customers to substations and circuits, and the topology and electrical parameters of the LV circuits themselves. The existing maps are not always complete and there are gaps in the network which leave some customers disconnected from the LV schematic model.

ESB Networks is also targeting the installation of Circa. 5,000 monitors in MV/LV substations by the end of PR5, increasing visibility and enabling near real-time monitoring of the network. These monitoring devices will be installed during the remainder of the PR5 period and will comprise both ground-mounted and pole-mounted devices. Once installed that will allow ESB Networks to measure certain electrical parameters including both voltage and current in the MV/LV substation.

Intent

The DMSO's intent with respect to network mapping and LV monitoring will be realised through the following approach:

- **Piloting and Field Trials:** Programme-specific field trials will be carried out to further test various mapping techniques being developed. Field validation of the outputted network model in selected locations will be carried out by field resources to ensure the efficiency and effectiveness of the mapping solutions; this will be conducted on a continuous basis until the end of the PR5.
- **Delivery Readiness – Development of Procedures/Training:** Specific procedures and training for the installation of LV monitoring devices will be finalised imminently as the rollout commences. These procedures will address on-site safety risk assessment, monitor installation using live working procedures, on-site testing, and maintenance of device. Under LV mapping, the LV Network Discovery (LVND), procedure and training documents will be continue to be briefed out as part of training and readiness activities .
- **MV phase collection:** An important part of delivering the objectives of ESB Networks' wider activities to drive and enable flexible demand in Ireland is the augmentation of

existing Operational Technology (OT) capabilities. This includes enabling advanced functionalities (such as power flow and state estimation) to support our ability to forecast demand and optimise management of the network. A potential for a more automated process of identifying the phasing on MV lines has been explored, and ESB Networks is looking for innovative automated solutions to pilot in the upcoming months. The long-term plan is to deliver this functionality with an integrated OT solution, however we have commenced enabling this functionality on the existing OT platforms to:

- support the programme specific pilots and
- facilitate delivery of the CAP 2023 objectives and learn the extent to which our existing network model was capable of supporting advanced capabilities.
- A pilot to identify the best method to capture the correct phase group in overhead single-phase spurs was completed for the Mullingar area in Q4 2023 and has informed the approach for the national rollout. MV sensor enhancements will be required to allow the enduring OT system/solution and associated functionality to deliver better quality power flow and state estimation results. At present the existing MV telemetry has been sufficient for existing operational requirements, however additional enhancements in MV telemetry will be required to fully utilise state estimation techniques
- **Industry Partnerships and Collaboration:** To further explore new techniques and solutions for mapping the LV network, ESB Networks are also progressing collaboration with various third-party vendors to pilot and overlay an automated and enhanced mapping solutions using AI and data analytics techniques.

Strategic Proposals

To action the intent set out above, the DMSO has identified the following strategic proposals:

- **LV Network Mapping (50% by the end of PR5):** ESB Networks is developing accurate maps/models of the low voltage system using and correcting existing Geographic Information System (GIS) data, Advanced Metering Infrastructure (AMI) data, data analytics and targeted patrolling. The mapping solutions that have been developed – and will continue to be enhanced throughout 2024-2025 – include:
 - GIS geospatial validation

- Targeted LV Patrols
- LV Network Discovery
- Artificial intelligence (AI) mapping
- Electric Power Research Institute (EPRI) tool

Details in relation to each of the above mapping options can be found in the [Visibility multi-year plan](#), published in Q4 2023.

- **LV Monitoring (Circa 5000 installations by the end of PR5):** For ESB Networks to have an active, real-time view of the LV network, the installation of LV monitors on both ground-mounted and pole-mounted MV/LV substations is required (and this will take place across the remainder of PR5). These devices will measure electrical parameters (voltage and current) of the sub-station and perform calculations on these measurements (active and reactive power, power flow direction, voltage total harmonic distortion). The data will be fed back to the cloud platform through ESB Networks' IT systems via 4G connection initially, and then through the private long-term evolution (LTE) network once it becomes available.

2.3 Independent Role of the DSO

The purpose of the independent role of the DSO incentive is to encourage and reward the DSO for a timely and robust transformation of the DSO's role and improvements in the independence of the DSO. There are a number of areas considered under this incentive. These are:

- i. Transparency in the finance arrangements of ESB Networks; visibility and transparency of the DSO's debt allocation;
- ii. Governance and independence, including ESB Networks Board and Executive Director independence and enhancement of the compliance officer role and the existing ring-fencing arrangements;
- iii. Neutral market facilitator; and
- iv. Innovation independence and third-party collaboration;

The last area, *Innovation independence and third-party collaboration* (item iv above) is referenced in this document but is not the subject of this consultation. Innovation is covered in separate annual consultation documents issued by ESB Networks as part of the existing Innovation consulting process, as agreed with CRU. These annual innovation consultations issue each February. For more information on Innovation within ESB Networks, including our most recent consultation, please follow the link [here](#).

2.3.1 Transparency in financial arrangements

ESB Networks and ESB considers that raising debt at an ESB Group level remains the most efficient way to fund and is common practice amongst many utility companies in the UK.

Notwithstanding that, ESB Networks and ESB committed in the proposal to provide more transparency on the allocation of debt in a way that will meet CRU's objectives as set out in the PR5 determination document. Notional debt allocation will consist of: (i) embedded debt as at 1 January 2021 to be agreed with CRU; and (ii) new debt to fund net cashflow requirements, including refinancing of embedded debt, arising throughout PR5 and beyond. Implementation of the proposed arrangements will highlight a requirement for a transparent notional liquidity facility which effectively mirrors what ESB Networks would be required to do as a stand-alone entity, when it may be necessary to have standby facilities and fund ongoing

cash requirements of the business in advance of a new long-term funding being raised. ESB Networks has identified 6 milestones to achieve this objective:

1. Agreement on notional embedded debt assigned to ESB Networks as at 1 January 2021.
2. Agreement on the on-lending framework for New Debt than would apply from 1 January 2021.
3. Agreed terms of Working Capital / Liquidity Facility
4. Amendment of existing agreements to reflect revised arrangements
5. All changes required to systems and internal documentation in place
6. Revised format of regulatory accounts and any other ancillary reporting if required.

ESB Networks believes that the achievement of these six milestones will provide further transparency to debt raised on behalf of ESB Networks. ESB Networks remains satisfied it delivered on the milestones set out for completion in 2021 (1 & 2 above) and provided significant and detailed analysis with regard to how the proposed notional debt and associated on lending framework would operate through PR5. It is noted that ESB Networks requires signoff from CRU to progress with the remaining milestones and engagement with the CRU on the submissions provided to date remains ongoing. The finalisation of these milestones will be best achieved through focussed and sustained collaboration between ESB Networks and CRU to ensure successful delivery of this element of the Incentive.

2.3.2 Governance & Independence, including enhancement of the compliance officer role and existing ring-fencing arrangements

To provide enhanced assurance and transparency in relation to the independence of the ESB Networks business, in the interests of facilitating regulatory oversight and increasing market confidence, ESB Networks has identified 4 milestones that we believe, if achieved, will deliver on all of CRU's objectives. These 4 milestones are as follows:

1. **ESB Networks DAC Board membership:** ESB Networks proposed, sought, and received the approval of the Minister (with the concurrence of the Minister for Public Expenditure and Reform) to make changes to the board membership that has resulted in the majority of ESB Networks DAC Board membership consisting of independent non-executive directors. The ESB Networks DAC Board is now comprised of 2 executive directors, and 3 independent non-executive directors.

2. **Legal undertakings from ESB:** ESB Networks proposed, sought, and received from the ESB Board a legally binding undertaking in relation to the exercise of its supervisory rights as a parent company
3. **Role of ESB Networks Managing Director** ESB Networks proposed to document clearly the role of the Managing Director at ESB Group level demonstrating appropriate independence. This was undertaken, published and is available on our [website](#).
4. **Enhancement of the Compliance Officer role and the existing ring-fencing arrangements:** ESB Networks proposed to ensure a full-time resource is available to enhance existing licence compliance and assurance arrangements. In Q1 2023, a Regulatory Compliance Manager was appointed who is in place to assist the Compliance Officer.

There are 2 pillars of the Enhancement of the Compliance Officer role milestone that are due to be delivered in 2024 and 2025, as detailed in our April outturn report submission. These are to:

- Develop revised briefing/training packs for ESB Networks staff, ESB staff who interact with ESB Networks and contractors and commence new training cycle.
- Document and implement a revised licence condition sign-off process that incorporates evidence-based sign-offs.

Significant work has already been carried out by ESB Networks on each of these key milestones and these are currently with CRU for assessment.

2.3.3 Neutral Market Facilitator

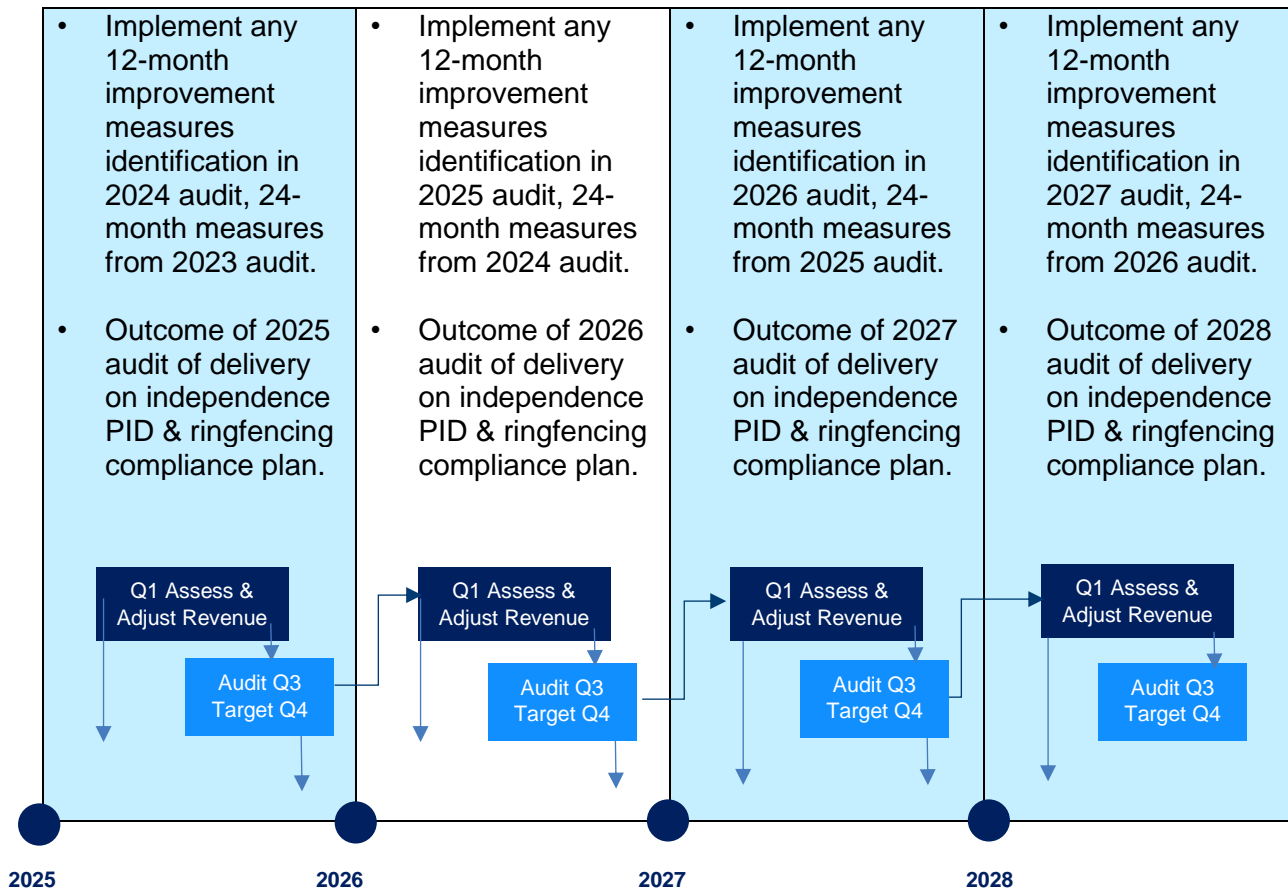
Neutral Market Facilitation (NMF) is the foundation for fair and competitive energy markets. Ultimately, the long-term objective of NMF is to provide equal opportunities for all participants by ensuring transparency, enabling increased accountability, and preventing market & price manipulation. Through NMF, ESB Networks seek to improve quality of service, encourage investment, and protect customer interests, while maintaining network efficiency.

To understand the current milestones related to NMF, please refer to our current multi-year plan for this incentive. In line with the PR5 audit conducted in H2'2022, which assessed ESB Networks approach to NMF, several recommendations were made. These recommendations primarily focus on enhancing the following areas;

- Independence project governance
- Independent procurement
- Procurement
- Vendor management
- Skills & capability development
- Ongoing ownership and maintenance
- System landscape
- Ways of working

ESB Networks recognise the progress that has been made to date in implementing the recommended actions advised by the independence auditors and acknowledge areas of improvement.

Looking ahead, ESB Networks are committed to building upon the achievements of the current plan. The below graphic outlines ESB Networks forthcoming planned activities in our previous Multi-Year Plan that was submitted to the CRU in September 2023.



2.4 Estimated Restoration Time Accuracy

The complex network we maintain includes distribution stations, overhead lines, poles and underground cables. In every power system, faults are an unavoidable issue that needs to be managed. Faults can occur in the power system for multiple reasons. They can be due to the weather, mechanical failure of a component of the system or accidents such as vehicles colliding with poles or by animals interfering with wires and supporting structures. Power may also be cut off for safety reasons if someone has come into contact with a live conductor. Faults can also be as a result of criminal activity i.e. copper theft.

Whenever faults occur, our aim is to restore power safely as quickly as possible. A key part of this is providing customers with an accurate Estimated Restoration Time (ERT) in the event of an outage. The ERT is our estimated time for the restoration of your power. ESB Networks is looking to improve the accuracy of our ERT process for fault outages. To further encourage this, an incentive mechanism regarding improving the accuracy of ERTs was introduced by the CRU for PR5.

In recognition of the importance of customers planning around the outage information provided to them, this incentive focuses on the accuracy of the information provided as opposed to the speed of power restoration. The measures that are outlined by CRU to be reported on are:

- The time between the commencement of the power disruption and the time that the first restoration time estimate was made publicly available.
- Restoration of power within 15 minutes of the initial estimated restoration time.
- Restoration of power within 1 hour of the initial estimated restoration time.
- Restoration of power outside 1 hour of the initial estimated restoration time.

Estimated Response Time (ERT) Process

A balanced scorecard for this incentive was provided in [CRU20/154](#). This sets out the measures for establishing reporting and measurement processes required for the provision of the specific estimated outage restoration times. Early milestones of the balanced scorecard focused on process and data assurance, while the milestones in the final years of PR5 focuses on targets and the performance against targets. The initial multi-year plan for the incentive covering the years 2022-2025 was submitted to the CRU in 2021. An updated [multi-year plan](#)

covering the period from 2023-2027 was submitted in December 2022 and the [most recent multiyear plan](#) covering the period 2024-2028, was submitted to CRU in September 2023.

The purpose of the ERT is to provide the customer with an accurate estimate as to when their power will be restored. The following sets out the current process regarding ERTs:

- Estimated Restore Times (ERTs) for fault outages are created automatically in the ESB Networks Outage Management System (“the System”).
- The ESB Networks Outage Management system makes a prediction as to where in the network the fault occurred, and it also predicts what type of fault it might be. This is based on the outage reports that are entered into the System. These reports come from customers who report a loss of supply as well as directly from signals on automated devices on the electricity network.
- The initial ERT is then automatically calculated by the System based on pre-set configuration settings for the predicted device type involved in the fault, as well as whether it is suspected to be in an urban or rural location.
- When ERTs are calculated by the System, it rounds the ERT up to the next 15-minute period.
- While some faults can be fully or partially fixed remotely through remote network switching, most faults need to be dispatched to a crew to attend the fault.
- The crew attends the fault to assess the damage. At this point they usually obtain a better understanding of what type of fault it is and where it is located. For complex faults this involves an intricate process of fault hunting and network switching to locate the fault.
- The crew updates ESB Networks Central Dispatch as to when the fault is likely to be restored based on the latest damage assessment. This new time is entered into the System, creating a new updated ERT.
- The latest ERTs are displayed online through the [powercheck.ie](#) website and are also available through contacting the ESB Networks call centre.

Improving the Accuracy of ERTs

As detailed in the ERT Incentive, ESB Networks is seeking to improve the accuracy of initial ERT for Fault Outages and Storm Outages. The first two years of the incentive has been spent collating and analysing historic fault outage data and using the insights gained through this analysis to predict future ERTs. Using this information, we have established baselines of the current restoration times for fault outages, grouped across a number of fault characteristics and we are using this historic data to adjust the configuration in the System to improve the accuracy of our ERTs. In 2022, an ERT pilot was run where the initial ERT time associated with selected device types in seven areas were changed based on our analysis. The initial findings of the pilot have shown a positive improvement in the initial ERT accuracy. In 2023, the outage data for 2023 was analysed using the monitoring and recording process developed in 2021. Using historical outage data, the new ERT values were determined for the selected Device Types and the ERT Pilot was rolled out to additional areas. Having concluded a detailed analysis of the 2023 outage datasets it was determined the ERT Pilot delivered the ERT accuracy targets as set out in the 2023 Balance Scorecard for both Non-Storm Days and Storm Days. These targets were not only achieved but exceeded in both cases.

From a data assurance perspective, a detailed analysis of the 2023 outage data was completed, and a review of randomly selected outages events was carried out confirming that all selected outage events were correctly recorded and reported.

A review of the new Storm Process was concluded, and all outstanding items that needs to be completed were identified in advance of rolling the new process out to the business.

In addition to this, customised software that was developed by ESB Networks in 2021 for the ERT Incentive was updated and modified to include planned outages. This enabled the reporting of planned outages in 2023 as requested by the CRU.

In 2024, the focus will be on delivering against the ERT accuracy targets that have been agreed with the CRU.

3 Next Steps

ESB Networks have commenced the process of developing the PR5 Joint Incentive Multi-Year Plans for 2025-2029 as required per CRU20/154 in relation to the four DSO balanced scorecard incentives. These plans will set out our proposed approach for the next five years and will be submitted to CRU at the end of September for their consideration and approval.

Via this Call for Input Consultation, we are inviting stakeholder inputs into the development of those 2025-2029 plans, in advance of the submission of same to the CRU.

For clarity and to assist in the preparation of the plans for the individual incentives, we request that respondents structure their feedback comments under the following subheadings (as appropriate) in their submissions:

- Flexibility
- Visibility
- Independent Role of the DSO
- Estimate Restoration Time Accuracy

We welcome interested stakeholders' views until 5 pm on Monday 26th August. Responses can be submitted to consultations@esbnetworks.ie.