An Coimisiún um Rialáil Fóntas
Commission for Regulation of Utilities

Electricity Networks Incentives and Reporting Information Paper (2023)

Information Paper

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The Exchange, Belgard Square North, Tallaght, Dublin 24, Ireland
T +353 1 4000 800 | F +353 1 4000 850 | www.cru.ie

CRU Strategic Plan 2022-2024

Our Mission

- Protecting the public interest in water, energy and energy safety.

Our Vision

- Safe, secure and sustainable supplies of energy and water, for the benefit of customers now and in the future.

Our Strategic Priorities

- Ensure Security of Supply
- Drive a Low Carbon Future
- Empower and Protect Customers
- Enable our People and Organisational Capacity.

Executive Summary

The CRU's Regulatory Framework, Incentives and Reporting Decision Paper (CRU/20/154) sets out the suite of incentives and reporting requirements to apply to EirGrid (TSO) and ESB Networks (DSO/TAO) (collectively the 'network companies') over the Price Review Five ('PR5') period (2021 to 2025). The incentive mechanisms approved as part of PR5 attach financial rewards or penalties to specific measures of performance. Eleven of the twenty-seven incentives set out in CRU/20/154 are Balanced Scorecard Incentives, which means the specific requirements for each incentive is set annually by the CRU. The CRU's Information Paper (CRU/20/2354) set out the 2023 Balanced Scorecards for Transmission and Distribution.

The PR5 incentive framework acknowledges that the network companies have a crucial role to play in meeting Ireland's 2030 targets. Greater flexibility on the network will be needed to securely accommodate more renewable generation, new technologies and new demands on the system while maintaining secure supplies and a high level of reliability. This will require transformational change, embedding innovation, agility and developing new ways of working and delivering network services.

This Information Paper sets out the CRU's assessment of the network companies' performance against this framework in 2023, and final decision on financial rewards and penalties for each incentive. As this is the third year of assessments under the PR5 incentive framework it is possible to identify trends in performance under the framework. This is the first year the CRU is publishing a standalone Information Paper on the network companies' performance. The CRU will continue to promote and enhance transparency in network companies' performance throughout the remainder of PR5 and as we develop PR6.

ESB Networks – Distribution System Operator (DSO)

The CRU has allowed an overall incentive reward of €5.22m (2019 prices) for the DSO. This is approximately 10% of the total incentive reward package available to the DSO on an annual basis, indicating that there is still significant room for improvement to achieve a higher reward. The DSO has shown continued strong performance in some areas. Several Balanced Scorecard Incentives, such as Flexibility and Estimated Restoration Time scored very highly, reflecting the progress achieved by the DSO under those incentive area. There was also a welcome improvement in the results for the Visibility incentive.

However, the DSO's performance in a number of core performance areas continue to be below the required levels. Notably, the CRU has significant concerns about ESBN's performance in relation to unplanned outages and customer interruptions. Performance has been below target levels for the last three years and the CRU has penalised ESBN €37m to date in PR5 (2021-2023) for failing to meet these targets. The CRU is aware of remedial actions being taken by the DSO to address unplanned interruptions; however, it is imperative that such actions are accelerated. Quality and consistency of supply is a core function of any DSO and must be addressed as a priority.

EirGrid – Transmission System Operator (TSO)

The CRU has allowed an overall incentive reward of €1.16m (2019 prices) for the TSO. This is 15% of the total incentive reward package available to the TSO on an annual basis, indicating that there is still significant room for improvement in order to achieve a higher reward. While there has been progress in relation to the integration of renewables, the TSO has missed a number of PR5 targets for incentives that support the integration of renewable energy on the electricity network: RES-E, Renewables Dispatch Down, and System Non-Synchronous Penetration (SNSP). The CRU has penalised EirGrid a total of €1.43m to date in PR5 (2021-2023) for failing to meet these targets. The CRU is concerned at the TSO's progress against these targets over the past three years, and the resulting impact that this will have on Ireland's ability to meet its overarching target of 80% renewable electricity by 2030. While RES-E rates increased to 42% in 2023 (up from 35% in 2021), it is still below target, and the level of network constraints and renewable dispatch down rates remain challenging and concerning.

The TSO has continued to show strong performance in relation to System Frequency, however, for the first year in PR5 the TSO has received a penalty for System Minutes Lost.

There was incremental improvement in the score for the Local Security of Supply incentive, however the CRU remains concerned that the level of constraints in the Dublin area will not be sufficiently resolved by the end of the PR5 period. The CRU's approach to this and constraints more generally will be reviewed in the development of the PR6 regulatory framework.

ESB Networks – Transmission Asset Owner (TAO)

The CRU has allowed an overall incentive reward of €6m (2019 prices) for ESB Networks in its role as Transmission Asset Owner (TAO). This is out of a total possible upside €6m and a total possible downside of €6m. The TAO has performed consistently well against the incentive framework since the beginning of PR5, which is welcome. The CRU is however cognisant that there are issues with the overall delivery of the transmission infrastructure programme. These issues will be considered in the design of the PR6 regulatory framework for both TSO and TAO.

Reporting and PR5 Infrastructure Delivery

The network companies have a wide range of reporting obligations under the PR5 Regulatory Framework, varying from topics such as stakeholder engagement, innovation and infrastructure reporting. This paper provides a summary of these submissions.

The paper focuses in particular on TSO and TAO reporting on PR5 transmission infrastructure delivery. The CRU is concerned at delays in the delivery of the capital programme, particularly at the final stages of development. While there has been an increase in the volume of projects moving through the earlier stages of delivery, this increase in pace is not consistent across all delivery stages. The CRU is concerned that overall, the pace of delivery in PR5 to date is not sufficient to address security of supply and decarbonisation challenges and targets.

Due to ongoing concerns in this area, the CRU commissioned a report on transmission infrastructure delivery. This report and a summary of the CRU's actions to date and next steps will be published shortly.

Price Review 6 (PR6) Regulatory Framework

The CRU has commenced work on next price control, PR6, which will run from 2026-2030. In developing the regulatory framework for PR6, the CRU will reflect on lessons learned from PR5. This will include consideration of performance to date against PR5 incentive framework, which will help to inform where changes are needed in the framework to support better outcomes for consumers.

Additionally, as previously outlined in the PR6 Strategy Paper, the CRU will increase the availability of clear and accessible information on network companies' performance and delivery in PR6.

Public Impact Statement

Every five years the CRU publishes a Price Review that determines the amount of revenue that EirGrid and ESB Networks (the network companies) can collect from customers over a five-year period.

In addition to the allowed revenues, each Price Review outlines the set of arrangements that will apply to the network companies during that period, including how they will be incentivised to deliver outcomes for consumers, and the reporting requirements that they should comply with.

The CRU assesses the performance of the network companies annually against these incentives. This information paper includes details on the 2023 incentive assessment, performance over the last three years and an update on reporting requirements for 2023. The approved incentives form part of the annual approved revenues for ESB Networks and EirGrid.

- **€5.2m** award for ESB Networks as Distribution System Operator.

High level Summary - 2023 Decision			
Available Incentive		**CRU Decision**	
Downside	-49.94	**Penalty**	-17.20
Upside	53.10	**Reward**	22.42
		Total	5.22

- **€1.16m** award for EirGrid as Transmission System Operator.

High level Summary - 2023 Decision			
Available Incentive		**CRU Decision**	
Downside	-4	**Penalty**	-1.08
Upside	8	**Reward**	2.236
		Total	1.16

- **€6m** award for ESB Networks as Transmission Asset Owner.

High level Summary - 2023 Decision			
Available Incentive		**CRU Decision**	
Downside	-6	**Penalty**	0
Upside	6	**Reward**	6
		Total	6

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Glossary of Abbreviations and Terms

Abbreviation or Term	Definition or Meaning
AIF	Agile Investment Framework
CAP	Climate Action Plan
CEP	Clean Energy Package
DAO	Distribution Asset Owner
DSO	Distribution System Operator
DUoS	Distribution Use of System
ESBN	ESB Networks
GWh	Gigawatt hours
NDP	Network Delivery Portfolio
NNLC	National Network Local Connections
PR4	Price Review 4
PR5	Price Review 5
PR6	Price Review 6
RES-E	Renewable Energy Source - Electricity
TAO	Transmission Asset Owner
TSO	Transmission System Operator

1. Introduction

This paper has six sections, and each section is described below:

- **Section 1:** describes the context and outlines the purpose of this information note.
- **Section 2:** outlines the DSO's performance against incentives and reporting requirements.
- **Section 3:** outlines the TAOs performance against incentives and reporting requirements.
- **Section 4:** outlines the TSO's performance against incentives and reporting requirements.
- **Section 5:** outlines the network companies' performance against the joint incentives.
- **Section 6:** conclusion.

1.1 Background and purpose of this information paper

The CRU is responsible for the economic regulation of the system operators and asset owners for electricity transmission and distribution. Price controls, which limit the revenues that the relevant licensees can recover from electricity consumers, are set every five years. In addition to the allowed revenues, each Price Review outlines the set of arrangements that apply to how the network companies will be incentivised and the reporting arrangements that will apply. In December 2020, the CRU published its Decision Paper on PR5 Regulatory Framework, Incentives and Reporting (CRU/20/154) setting out new incentive arrangements and reporting obligations for the system operators for 2021-2025. This was supplemented by the CRU's Information Paper published in June 2023 setting out the 2023 Balanced Scorecards for Transmission and Distribution (CRU/20/2354).

This paper details the CRU's decision on the DSO's, TAO's and TSO's performance against the suite of incentives in place for 2023 based on the PR5 Regulatory Framework and 2023 Balanced Scorecards. This paper also details the non-financial reporting requirements for the DSO, TAO and TSO as set out in CRU/20/154.

In addition, the following letters are published alongside this paper:

- a letter from the CRU to the DSO and TAO setting out feedback in relation to its 2023 performance against incentives
- a letter from the CRU to the TSO setting out feedback in relation to its 2023 performance against incentives

1.2 Other Related Documents

CRU/20/154	PR5 Regulatory Framework – Incentives and Reporting
CRU2023103c	DSO and TAO 2022 Incentive Outturn Performance 2022 Letter
CRU2023104d	TSO Incentive Outturn Performance 2022 Letter
CRU202354	PR5: 2023 Balanced Scorecards
CRU2022989	PR5: 2022 Balanced Scorecards
CRU202226	PR5: 2021 Balanced Scorecards
CRU202482	Transmission Allowed Revenues 2025
CRU202486	Distribution Allowed Revenues 2025
CRU2023103	Distribution Allowed Revenues 2024
CRU2023104	Transmission Allowed Revenues 2024
CRU2022089	Distribution Allowed Revenues 2023
CRU2022090	Transmission Allowed Revenues 2023
CRU/21/080	Distribution Allowed Revenues 2022
CRU/21/078	Transmission Allowed Revenues 2022
CRU/20/084	Distribution Allowed Revenues 2021
CRU/20/095	Transmission Allowed Revenues 2021

2. DSO 2023 Incentive Performance

This section provides a summary of the DSO's incentive performance in 2023. Performance results for 2021 and 2022 are also included for comparison purposes.

An overview of the incentives available to the DSO is set out in the table below along with the key aims of each incentive as envisaged in the PR5 Regulatory Framework, Incentives and Reporting Decision Paper (CRU/20/154).

Incentive	Description
Mechanistic	
Unplanned Outage Duration	This incentive for unplanned outage duration aims to give the DSO an appropriate financial stake in maintaining high standards of supply reliability. It is measured by Customer Minutes Lost.
Unplanned Outage Frequency	This incentive for unplanned outage frequency aims to give the DSO an appropriate financial stake in maintaining high standards of supply reliability. It is measured by Customer Interruptions.
Customer Service (National Customer Contact Centre)	The customer service incentive aims to give the DSO an appropriate financial stake in maintaining high standards of service. This incentive is measured by a number of metrics relating to the National Customer Contract Centre - ESATRAT.
Customer Service (overall satisfaction survey)	The customer service incentive aims to give the DSO an appropriate financial stake in maintaining high standards of service. This incentive is measured by a customer service survey.
Stakeholder Engagement	The incentive mechanism is to maintain the benefits of effective stakeholder engagement.
Connections (ECP2)	The aim of this incentive is for timely processing of connections applications because new connections are critical to well-functioning, competitive wholesale markets and to the objective of decarbonising the energy sector.
Smart Metering	The purpose for the smart metering incentive is to give the DSO an appropriate financial stake in delivering its part of the National Smart Metering Programme (NSMP).
Worst Served Customer	The purpose of the worst-served customer[1] (WSC) incentive is to improve outcomes for those households and business who would otherwise have a sustained and materially lower standard of supply reliability.
Balanced Scorecard	
Estimated Restoration Time	The aim of this incentive is to provide customers and network users with accurate and reliable outage information, including the estimated time for restoration of outages.
Flexibility	This incentive aims to: • Give the DSO an appropriate financial stake in delivering flexible non-wire alternative solutions to the network's needs. • Deliver efficient outcomes for customers and market participants by using flexible solutions.

[1] Typically, these customers are supplied on rural single-phase overhead networks and experience more than or equal to 5 interruptions in the previous 12-month period and more than or equal to 15 interruptions in the previous 3 years

	• Comply with Article 32 of the Electricity Market Directive 20192 (Incentives for the use of flexibility in distribution networks).
Visibility	This incentive aims to give the DSO an appropriate financial stake: • In increasing the visibility of its network. • To actively manage its network to accommodate a greater number of LCTs and avoid expensive Capex reinforcements. • To improve the efficiency of its decision making in operating and investing in the network.
Independent Role of the DSO	To encourage and reward the DSO for a timely and robust transformation of the DSO's role including: • Independence and transparency of the DSO finance arrangements. • Independence in Governance. • Independence in its role as a neutral market facilitator. • Independence in innovation. • Enhancement of the compliance officer role and the existing ring-fencing.
TSO/DSO Joint Incentive	The joint incentives between the TSO/DSO incentivises the promotion of efficiencies through enhanced collaboration.

2.1 DSO 2023 Incentive Outturn

Based on the DSO's performance in 2023, the CRU has allowed an overall incentive reward of **€5.22m** (2019 prices). This will feed into the DSO's 2025 revenues.

The incentives were assessed by reference to the PR5 Framework set out under CRU/20/154, and the 2023 Balanced Scorecard requirements set out in CRU202354[3]. Table 1 (see below) details the overall score achieved by ESBN.

Incentive	Upside (€m)	Downside (€m)	CRU Decision
Unplanned Outage Duration	10.00	-10.00	-10.00
Unplanned Outage Frequency	10.00	-10.00	-5.79
Care Centre Satisfaction (ESATRAT)	2.50	-7.50	1.41
Customer Satisfaction	2.70	-2.70	-1.41
Stakeholder Engagement	1.00	-	0.57
Connections (ECP2)	3.00	-2.00	1.03
Smart Metering	1.20	-4.00	0.80
Worst Served Customer	6.7	-6.7	6.7
Estimated Restoration Time	1.00	-1.00	0.91
Flexibility	3.00	-1.00	3.00
Visibility	3.00	-1.00	2.53
Independent role of the DSO	6.00	-3.04	3.12
DSO/TSO coordination	3.00	-1.00	2.35
Total (2019 monies)	53.10	-49.94	**+5.22**
Total (2023 monies)	61.54	-57.88	**+6.05**

Table 1 DSO 2023 Incentive Performance

[2] Electricity Market Directive (EU) 2019/944

[3] Price Review Five: 2023 Balanced Scorecards Distribution and Transmission (CRU202354)

Further detail regarding the DSO's performance in respect of these incentives is set out in the following:

2.1.1 Unplanned Outage Duration

There are two incentives in PR5 aimed at reducing the number of unplanned outages on the distribution network. The first relates to the duration of unplanned outages on the network. It is measured using a metric called Customer Minutes Lost ('CML'). The DSO missed its 2023 performance target on the unplanned Customer Minutes Lost ('CML') incentive. It achieved a CML of 105.59 against a target of 80.8. The DSO has missed all CML targets to date in PR5. In 2021 the DSO received a penalty of €5.5m. In 2022 it incurred a penalty of €10m. As a result of its performance in 2023, the DSO is subject to the full downside penalty of €10.0m. The DSO has been penalised a total of €25.5m to date for the duration of PR5 for failing to meet targets for customer minutes lost.

2.1.2 Unplanned Outage Frequency

The second incentive in PR5 aimed at reducing the number of unplanned outages on the distribution network relates to the frequency of unplanned outages. It is measured using a metric called Customer Interruptions ('CI'). The DSO missed its 2023 performance target on the unplanned Customer Interruptions ('CI') incentive. It achieved a CI of 126.38 against a target of 114.8, which is a marginal improvement from last year when the DSO achieved a CI of 127.12 against a target of 116.90, however it was still below target levels. As with the CML metric, the DSO has missed all CI targets for PR5 to date. In 2021 a penalty of €0.7m was applied and in 2022 a penalty of €5.11m was applied. As a result of its performance in 2023, the DSO is subject to a penalty of €5.79m. The DSO has been penalised a total of €11.6m to date in PR5 for failing to meet targets for customer interruptions.

2.1.2.1 CML and CI Performance

Figure 1 below illustrates the DSO's performance in relation to unplanned customer outages during PR5 to date. In 2023, the CRU highlighted strong concerns for overall declining CML and CI performance via a published letter (CRU2023103c[4]) and requested the submission of an unplanned outage management report. This report was received in January 2024, with an updated report provided on 30 April 2024. The DSO's report highlighted six core challenges including (1) timber, foliage, and vegetation, (2) condition-based maintenance and asset replacement, (3) weather, (4) wildlife/livestock, (5) automation and (6) design standards and protocols.

[4] CRU202310c –Letter from CRU, Re: DSO and TAO Outturn Performance 2022 to Donal Crean

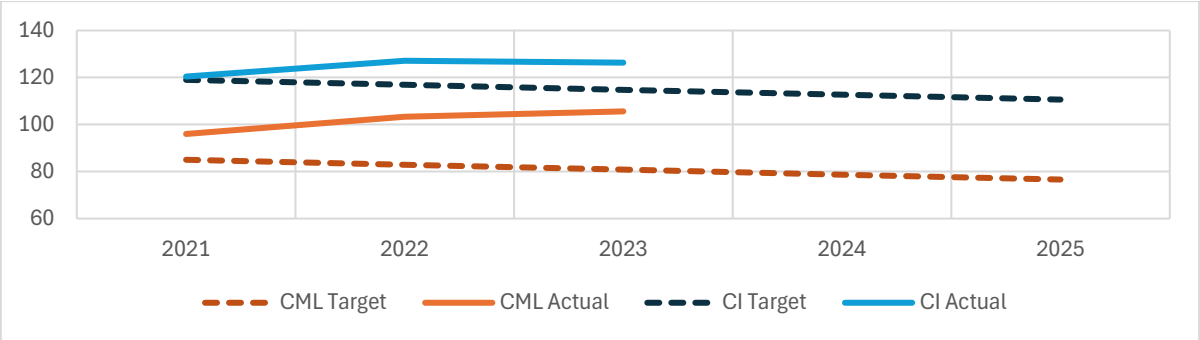


Figure 1 CML and CI Actual Performance vs PR5 Target

While the DSO has referenced initiatives being undertaken to address this issue, including the Optimised National Continuity Plan, detail regarding expected impact of solutions once implemented was lacking.

Ensuring reliability of supply is a core function of a DSO. When this service is not provided at the level it should be it has a significant impact on customers. Business customers in particular can be financially impacted by interruptions to supply. The continued poor performance levels are not acceptable. The CRU has now penalised the DSO a total of €37.1m over three years for poor performance in this area. Given the fundamental importance of these metrics, the CRU will consider other options to address this issue in PR6. In the interim, the CRU will require quarterly updates from the DSO on results and impacts of remedial actions for the remainder of PR5.

2.1.3 Care Centre Satisfaction (ESATRAT)

There are two incentives in PR5 aimed at ensuring the DSO provides appropriate customer service levels to the public. The first incentive assesses customer satisfaction with the DSO's National Customer Contact Centre ('NCCC').

The DSO's customer service and satisfaction ratings are measured using a range of five KPI's relating to the performance of the NCCC. This is measured using an ESATRAT score. The NCCC (ESATRAT) PR5 target is 90%. In 2023, ESBN measured score was 91.7%, achieving the target score. This led to a reward of €1.41m. In 2021 and 2022, ESBN missed the target for this incentive and incurred penalties for this. The CRU welcomes the improvement in score for 2023.

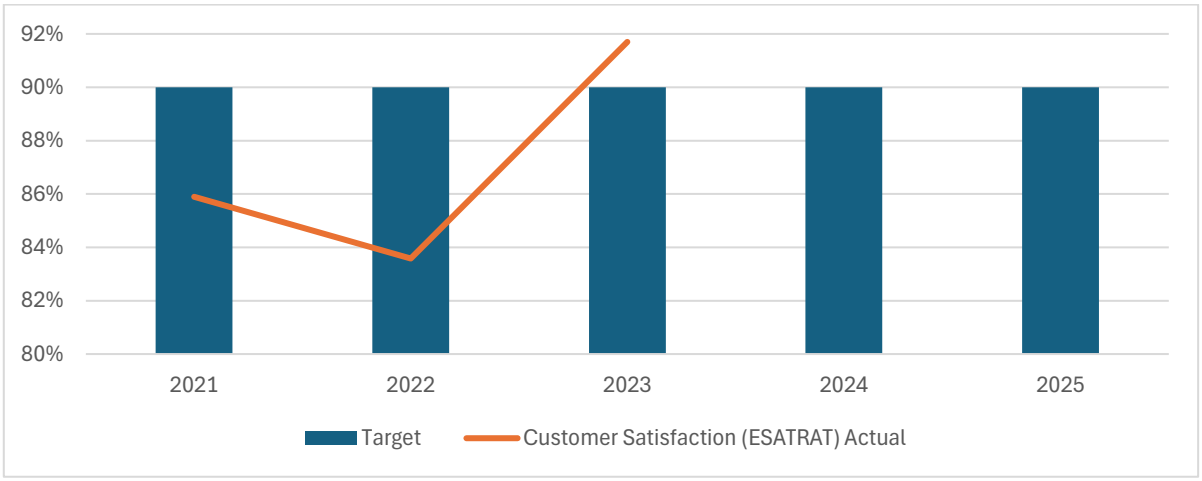


Figure 2 Customer Satisfaction (ESATRAT) Actual vs Target

2.1.4 Customer Satisfaction

The second incentive aimed at customer service levels, is measured using a CSAT score. The Behaviour & Attitudes" (B&A) Market Research Company CSAT figure for 2023 for the DSO was 80.09%. This compared with a target of 82% and results in a penalty of -€1.41m.

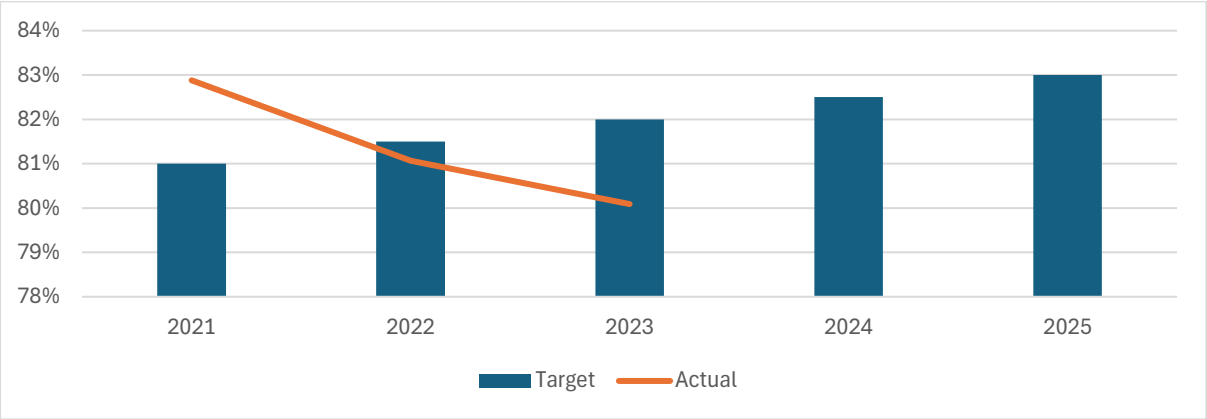


Figure 3 Customer Satisfaction Survey

This is the second year of PR5 that ESBN has missed the target score, a penalty was also applied for 2022 performance. ESBN has informed the CRU that it is implementing a Customer Improvement Plan to address the drop in performance.

2.1.5 Stakeholder Engagement

The DSO was assessed by a CRU-appointed panel, the National Stakeholder Engagement Evaluation Panel, on its stakeholder engagement performance in 2023. ESBN published its Stakeholder Engagement Report[5] for public consultation earlier this year. The report describes ESBN's engagement with stakeholders for 2023. The aim of the report is to provide a self-assessment on how the DSO has delivered against the planned engagement strategy[6] and activities for 2023.

A decision was reached by the panel to give the DSO a score of 7.60. This results in an incentive reward of €0.57m.

Feedback from the National Stakeholder Engagement Evaluation Panel will be provided in a separate report which will be published later this year.

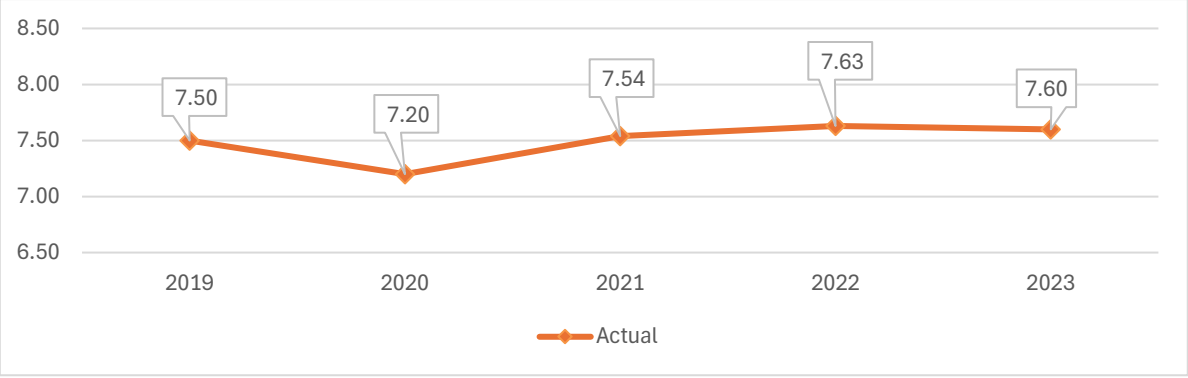


Figure 4 National Stakeholder Engagement Evaluation Panel Score

[5] Stakeholder Engagement Report 2023 | ESBN
[6] Stakeholder Engagement Strategy & Plan 2023 | ESBN

2.1.6 Connections (ECP2)

The 2023 ECP-2 incentive relates to processing all connection applications under the ECP2.3 batch. In total there were 70 applications processed. The incentive is assessed based on measuring each 10% of the total batch achieved, before each milestone, rounded down to the nearest 10%. The DSO has been awarded a total amount of €1.03m.

It was noted within the DSO's submission that certain aspects outside its control had an impact on the timelines for issuing ECP2.3 connection offers. These issues included:

- Some of the detailed studies for ECP2.2 connections have not been finalised.
- Interlinkages between some of the ECP2.3 connection offers and one of the new renewable hub locations.

2021	2022	2023
76/86 connections processed by target date	62/85 processed by target date	40/70 processed by target date
+€2.13m	**+€1.6m**	**+€1.03m**

2.1.7 Smart Metering

The Smart Metering incentive for PR5 is comprised of three parts. The DSO's performance against each of the three components in 2023 is set out below.

Aspect	Total Upside	Total Downside	Decision
Smart Meter Deployment	€0.24m	-€2.00m	€0.24m
Smart Meter Functionality	€0.60m	-€0.80m	€0.20m
Customer Satisfaction	€0.36m	-€1.20m	€0.36m
	€1.20m	-€4.00m	**€0.80m**

For 2023, the target for smart meter deployment was a range of 450-500k by Q4 2023. The DSO achieved a total of 464,954 smart meter installations. The total award of €0.80m reflects good performance for 2023, with a full award given for deployment and customer satisfaction and a partial award given for functionality. Partial award was given to the DSO for smart metering functionality, as there were delays on the design of the enduring Microgen solution. It was however acknowledged that the delay was outside of the DSO's control and as such a partial award was given.

As shown in Figure 5 below, the DSO has consistently performed well against the PR5 targets for the installation of smart meters.

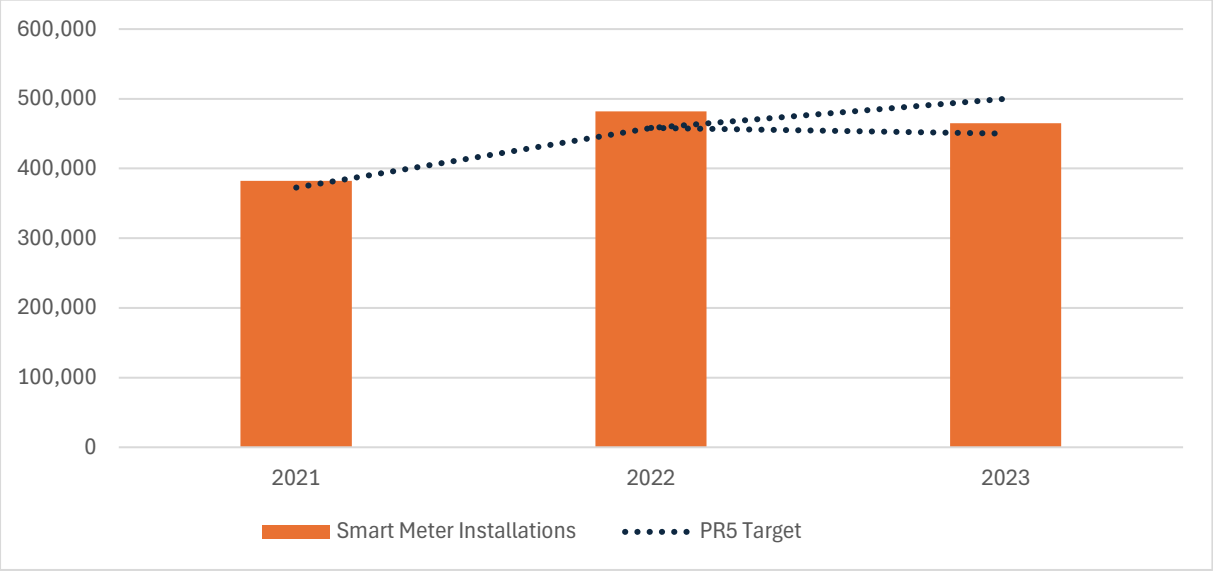


Figure 5 Smart Meter Deployment

2.1.8 Worst Served Customer

The Worst Served Customer incentive is assessed by reference to improvements of 20% in reliability of supply to 6,000 Worst Served Customers (WSC) on the distribution system. WSC are typically supplied on rural single-phase overhead networks and have experienced five or more interruptions in a 12-month period, or 15 or more interruptions in a 3-year period. The DSO is eligible for an incentive payment when a minimum of 5,400 WSC have reliability improved by over 20%. The maximum incentive payment is available if 9,000 WSC customers' reliability is achieved.

Due to 2021 and 2022 work completed, 13,569 customers met the incentive success criteria in 2023 for worst served customers with improved reliability. As the DSO has surpassed the incentive success criteria by at least 5,400 customers, an incentive of €6.7m will be paid to the DSO. The DSO will not be entitled to claim any additional reward for this incentive for the remainder of PR5.

The CRU welcomes the improvement in the quality of supply for this cohort of customers, who would typically have had materially lower standards of supply to the average customer. However, there remains a wider issue with the general performance levels for customer minutes lost and customer interruptions.

2.2 DSO Balanced Scorecard 2023 Incentives

This section details the DSO's performance against the balanced scorecard incentives. The requirements for the Balanced Scorecard incentives are updated annually. The details and requirements for the 2023 Balanced Scorecard Incentives can be found in CRU202354[7].

In assessing the outcome of performance of ESBN on each of the balanced scorecards, the CRU considers the following criteria:

- 20% quality of the plan and defined actions;
- 40% quality of implementation of the plan; and
- 40% effectiveness of the plan and demonstrable impacts.

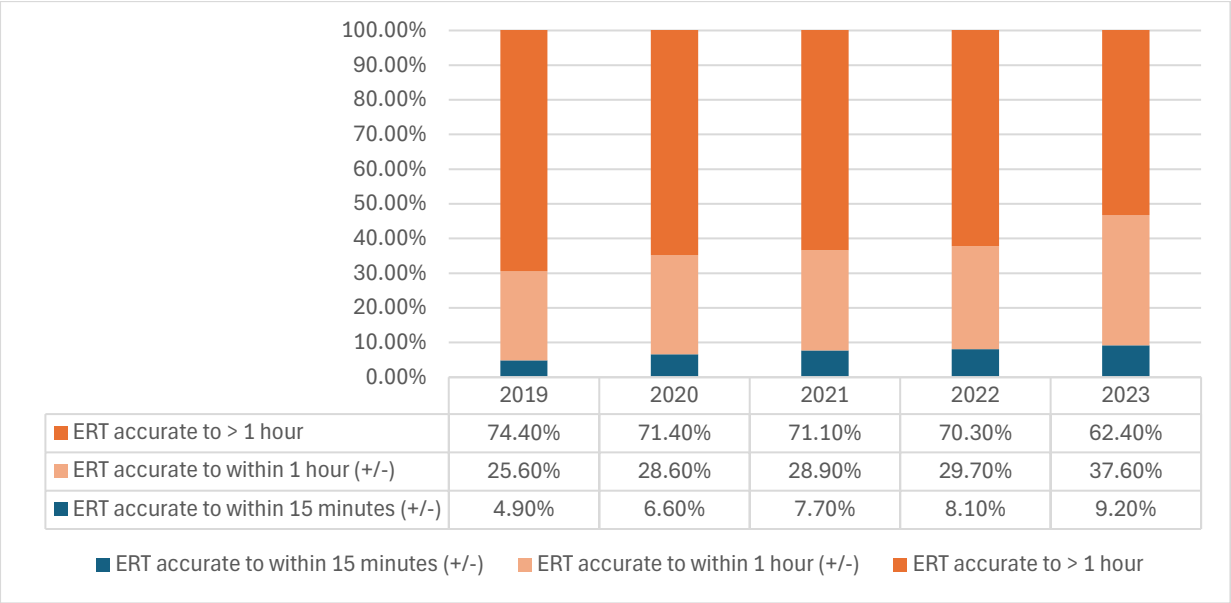
2.2.1 Estimated Restoration Time

This incentive aims to improve outage information to provide customers and network users with accurate and reliable outage information, including time for restoration of outages. This incentive was assessed against three areas.

Aspect	Total Upside	Total Downside	Decision
Delivery against preliminary target	€0.4m	-€0.4m	€0.32m
Refinement of data and continual improvement	€0.4m	-€0.4m	€0.40m
Establishment of year 4 target	€0.2m	-€0.2m	€0.195m
	€1.0m	-€1.0m	**€0.915m**

The DSO performed well against the three required workstreams for this incentive for 2023 and has been awarded €0.91m out of a total of €1.00m. The DSO has delivered against the 2023 target for non-storm ERT accuracy within 1 hour, achieving 37.6%. The target for 2023 required 35.2% of customers to be restored within 1 hour of initial ERT (see Figure 6 Estimated Restoration Times on Non-Storm Daysbelow). The full allowance of €0.4m was not awarded for the achievement of the preliminary target however as the CRU had identified a number of issues with the multi-year plan, including, around the target-setting methodology and plans for improving year-on-year performance.

[7] Price Review Five 2023 | Balanced Scorecards Information Paper (CRU202354)



	2019	2020	2021	2022	2023
ERT accurate to > 1 hour	74.40%	71.40%	71.10%	70.30%	62.40%
ERT accurate to within 1 hour (+/-)	25.60%	28.60%	28.90%	29.70%	37.60%
ERT accurate to within 15 minutes (+/-)	4.90%	6.60%	7.70%	8.10%	9.20%

Figure 6 Estimated Restoration Times on Non-Storm Days

Overall, ESBN performed well against this incentive for 2023. The DSO has scored well against this incentive for the last three years.

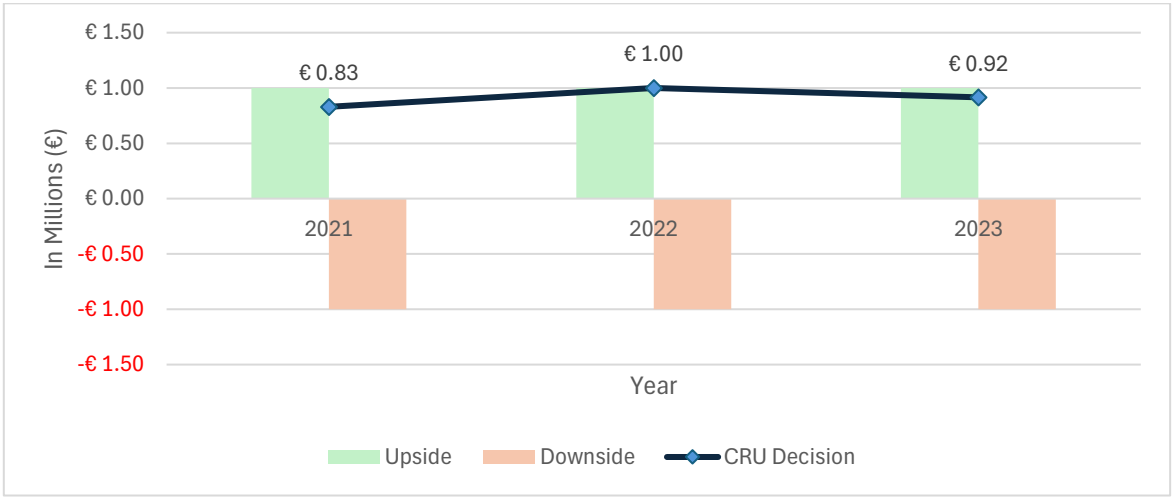


Figure 7 DSO ERT Monetary Reward Performance (2021 – 2023)

2.2.2 Flexibility

The aim of the incentive is to give the DSO an appropriate financial stake in delivering flexible non-wire alternative solutions to manage the network's needs. It helps to drive the quicker and effective delivery of efficient outcomes for customers and market participants by using flexible solutions rather than, or as a complement to, capex solutions.

The DSO was assessed against three overarching categories for this incentive, the detailed requirements for each category are set out in the 2023 Balanced Scorecard Information Paper.

Aspect	Total Upside	Total Downside	Decision
Flexible non-wire tenders	€1.0m	-€0.33m	€1.0m
Standard products and services	€1.0m	-€0.34m	€1.0m
Reporting and transparency arrangements	€1.0m	-€0.33m	€1.0m
	€3.0m	-€1.0m	**€3.0m**

The work done against the flexibility incentive in 2023 by the DSO was of a high quality, and both the submitted plan and the outturn incentive report were well structured, detailed, and comprehensive throughout.

In relation to the first category, the submission presented a robust summary of the bench-testing, defined technical architecture of smart inverters, laboratory pilot testing and demonstrates proof of concept for the smart technologies. The DSO also included actionable lessons learned and challenges encountered throughout these processes to inform future implementation. The DSO reported some delays on the Mullingar Local Flexibility Market Go-Live, however, sufficient evidence was provided to show it was beyond its control.

With regards to the second category, the DSO's submission provided all the requisite evidence of implementation, as well as the effectiveness and impact of the implemented actions. There was a delay in one area, First Calls for Competition for 15-20% Flexibility Services go-live, having assessed the submission the CRU was satisfied that this delay was outside of the DSO's control.

For the final category, the DSO provided evidence of robust stakeholder engagement and extensive publication of related materials to ensure transparency, such as the Distribution Market System Operator (DMSO) Community Toolkit MVP dashboard and publication of the National Networks Local Connections (NNLC) Advisory Council meetings and programme documentation.

The DSO was awarded the full amount of €3m for 2023 performance. The DSO has consistently scored well in this incentive since the beginning of PR5.

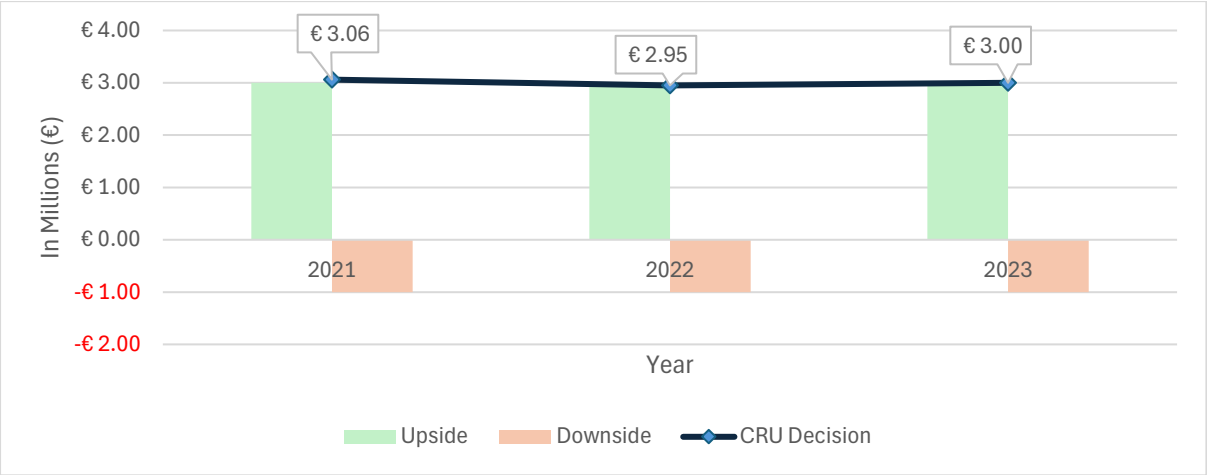


Figure 8 DSO Flexibility Monetary Reward Performance (2021 – 2023)

2.2.3 Visibility

The objective of putting in place an incentive mechanism for Visibility is to give the DSO an appropriate financial stake in increasing the visibility of its network. It reflects the need for better information on, and visibility of, the Low Voltage (LV) distribution network. The DSO was incentivised against four workstreams in 2023.

Aspect	Total Upside	Total Downside	Decision
LV Network Visibility Target of 25%	€1.6m	-€0.533m	€1.6m
LV monitoring	€0.90m	-€0.30m	€0.43m
Use of data analytics	€0.30m	-€0.10m	€0.30m
Sourcing and re-sourcing	€0.20m	-€0.067m	€0.20m
	€3.0m	-€1.0m	**€2.53m**

The DSO performed well across a number of the areas of this incentive such as visibility platforms, dashboards, and the use of data analytics. The DSO had a target of 25% visibility of the LV network in 2023 and achieved an outturn of 25.4%. This is a welcome result, and a noted improvement on 2022 performance, where the DSO reported an output of 8.8% visibility. Data analytics application was applied to several work programmes including the development of LV Mapping progress, LV Network Discovery, and Medium Voltage (MV) Phase collection programme dashboards, the advancement of the Meter MPRN[8] analysis scripts and FME[9] data analysis.

However, the DSO has not installed the LV monitoring devices at the expected rate. The DSO had a target of installation of 3,554 monitoring devices by the end of 2023. However, due to procurement issues, no installations were made. The CRU notes that the DSO will have to

[8] MPRN – Meter Point Reference Number is a unique digit number used to identify an address. It is used by all suppliers to check the incoming supply details for individual premises.
[9] FME - Feature Manipulation Engine is a geospatial extract, transformation and load software platform.

make significant progress to ensure the target of 10,660 monitoring devices is met by the end of 2025.

Overall, the DSO was awarded €2.53m out of a possible €3m. This is a significant improvement from 2022.

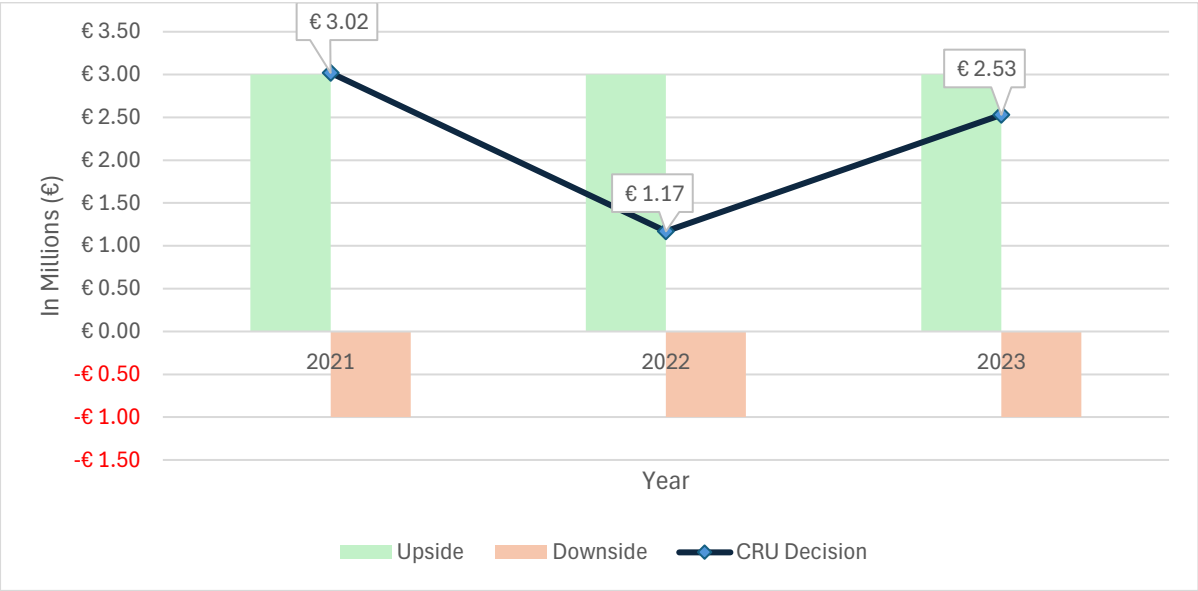


Figure 9 DSO Visibility Monetary Reward Performance (2021 – 2023)

2.2.4 Independent role of the DSO

The aim of this incentive is to encourage and reward the DSO for a timely and robust transformation of the DSO's role and display improvements in the independence of the DSO. The DSO was assessed against three workstreams in 2023, overall, the DSO was awarded €3.12m.

Aspect	Total Upside	Total Downside	Decision
Financial Transparency[10]	N/A	N/A	N/A
Governance and Independence	€5.0m	-€2.54m	€2.24m
Neutral Market Facilitation	€0.6m	-€0.3m	€0.60m
Innovation independence	€0.4m	-€0.2m	€0.28m
	€6m	-€3.04m	**€3.12m**

One area (financial transparency) was deferred due to ongoing engagement between the CRU and the DSO. It is expected that performance in this area will be assessed in the final years of PR5.

[10] Reallocated to 2024 as per CRU decision CRU202405. For 2024, the total upside would have been €6.6m and the total downside would be -€2.250m. The full PR5 allocation is an upside €10m, downside of €5m.
[11] This element of the incentive has not been assessed to date under PR5.

The DSO was given the full incentive award for the Neutral Market Facilitation aspect of the incentive (reward of €0.6m). The DSO demonstrated that it meets the required criteria in demonstrating required levels of independence in its role in the National Networks Local Connections project, including carrying out of audit against the Independence Project Initiation Document, and implementing recommendations from previous years audits.

A partial award was given for Innovation Independence (reward of €0.28m). The submission showed strong compliance with the required deliverables. Key impacts were highlighted extensively in some areas, for example the project prioritisations and dissemination of learning, but more detail could be provided for innovation strategy and governance, and in particular around the role of the Innovation Steering Group.

In relation to Independence and Governance a partial award was given following assessment (reward of €2.24m, out of a possible €4.55m). This area included four milestones[11], which were (#1) DAC Board Membership, (#2) Legal undertakings from ESB, (#3) ESB Networks Managing Director and (#4) Enhancement of Compliance Officer role.

The DSO reported on the implementation of a number of actions that it had committed to implementing for example, holding a ESB Networks DAC board meetings with a majority of independent non-executive board members, publishing the ESB Group's Executive Committee Terms of Reference[12] which outlines ringfencing measures in relation to the role of the Managing Director, ESB Networks, securing ESB Board approval for a range of legal undertakings (between ESB Parent & ESB Networks DAC) to protect the independence of ESB Networks role as DSO, and appointing a full-time Regulatory Compliance Manager to focus on strengthening regulatory compliance in ESB Networks. However, the CRU did not consider that the DSO clearly demonstrated the quality of its plan, and the impact and effectiveness of its actions in enhancing independence within the DSO. A significant financial incentive was put in place to support the transformation of the role of the DSO, and while good progress was made in this area, the CRU did not consider that the actions warranted a higher award.

4.1.1. TSO/DSO Joint Incentive

This incentive will be discussed in section 5.1.

[12] ESB Executive Committee Terms of Reference

2.3 DSO Incentives Outturn Summary

With respect to its performance in 2023, the DSO has continued to show strong performance in several areas. Several Balanced Scorecard Incentives, such as Flexibility and Estimated Restoration Time scored highly, reflecting the consistent strong progress.

However, there are still certain areas of performance which continue to be an area of concern for the CRU. In particular, the continued poor performance trend for unplanned outages which have overall shown a decline in performance since 2021. Satisfaction levels with the DSO's National Customer Contact Centre have improved, which is welcomed, however general customer satisfaction was measured through the ESATRAT survey, was below the target level.

2.4 DSO Reporting

The CRU's Decision Paper (CRU/20/154) sets out the PR5 Regulatory Framework on Incentives and Reporting and includes a suite of reports which the DSO is required to prepare and submit to the CRU on an annual basis. The objective of these enhanced reporting requirements is to enable a transition to a more outcomes focused approach for the PR5 periods, and to increase transparency.

The CRU requires the DSO to submit the following reports to the CRU, as part of the PR5 reporting framework:

- Stakeholder Engagement Strategy;
- Innovation Report;
- Regulatory Reporting Pack; and
- Annual Performance Report (APR)[13].

An overview of the reports submitted and an assessment of these is set out below.

2.4.1 Stakeholder Engagement Strategy

The CRU requires the DSO to publish a Stakeholder Engagement Report in Q1 each year detailing how it has delivered against its engagement strategy and plans for the previous year. ESB Networks published its Stakeholder Engagement Report 2023[14] in Q1 2024.

In addition, there is an incentive associated with Stakeholder Engagement. Further detail has been captured in the incentive section and will be contained in the Network Stakeholder Engagement Evaluation Panel Close Out Report which will be published later this year.

[13] The CRU requires this report to be prepared, consulted upon and submitted during Q3 and Q4 of each year. Therefore, it is not covered as part of this report.
[14] ESBN Stakeholder Engagement Report 2023. Available here.

2.4.2 Innovation Report

The CRU requires the DSO to submit an Innovation Report to track the use by the DSO of innovation projects to help support and accelerate progress against the strategic objectives.

The report is required to cover the following:

- projects being initiated;
- projects that are in progress, and;
- projects that have been completed.

Furthermore, the report must include relevant, proportionate evidence on the scope, cost, rationale for and impacts of each project with either activity or impacts during the reporting year.

A business case for additional funding could also be included setting out the rationale for why the project is innovative, the nature of the potential benefits and a description of how the project will be managed, reported and evaluated. The report should further demonstrate outcomes and learnings.

The 2023 Innovation Report[15] was submitted to the CRU following a public consultation. The report contains information in relation to ESB Network's Innovation during 2023, future innovation projects, innovation strategy and governance. In addition, the report details the project management process detailing the methodology of how projects are selected, prioritised, delivered and transitioned to the Business As Usual (BAU).

The report provided a good level of information on all projects and clearly indicates the scope, rationale, and status of each. The report has included costs for the majority of projects, where exact costs are still unknown and the DSO has provided estimations, which is welcomed. The report also contained a good level of information on stakeholder engagement, dissemination of learnings, and integration of learnings into BAU.

2.3.3. Annual Performance Report (APR) and associated documentation

The CRU requires the DSO to consult on and publish an APR each year. The report is intended to provide customers, industry participants and other interested parties with a clear, accessible, comprehensive, quantified but non-technical report on performance over the past year.

The 2022 report[16] was consulted on in 2023 and submitted to the CRU. Following CRU review and approval, it was published on the CRU's website, alongside a feedback letter in March 2024[17]. It is expected that the feedback issued in March 2024 will be taken into account in the 2023 APR. The timeline for the submission of the 2023 APR is 1 October 2024.

[15] Innovation to Deliver the Electricity Network for a Clean Electric Future 2023 | ESBN
[16] Distribution Annual Performance Report 2022 | ESBN
[17] Letter from CRU to DSO | Re: 2022 Electricity Distribution Annual Performance Report (19 March 2024)

2.3.4. Benchmarking Report

The CRU requires the DSO to submit a Benchmarking Report as part of the regulatory reporting pack which identifies the best international practice and compares its performance against this, using comparators and supporting information. Comparisons should be made with OECD countries and particular importance should be paid to where the DSO is not meeting its PR5 performance targets and to innovation and renewable integration.

The CRU received the first Benchmarking Report for PR5, covering the year 2021 on 7 November 2023. The CRU did not receive this report in the required timeframe. While the report included useful information, it did not identify international best practices and learnings for the DSO. Future reports would also benefit from more streamlining and additional commentary and insight from the data compared.

ESBN has informed the CRU that it aims to submit a combined 2022 and 2023 bench marking report in late 2024.

2.3.5. Regulatory Deliverables – Workplan and EU Network Codes

The Regulatory Reporting Pack requires the DSO to submit two reports under this heading:

- Performance against its workplan; and
- Implementation of EU Network Codes.

2.3.5.1. Workplan

The CRU requires the DSO to submit a report setting out its workplan and performance against it. The DSO submitted its workplan report setting out its deliverables along with a target date. For some work items, the report also included information on the status of these deliverables.

2.3.5.2. EU Network Code

The CRU required the DSO to provide a summary of progress against implementation of the EU Network Codes. The European Network Code Implementation Plan (ENCIP) was formally closed as of 2022, however work on various aspects of some Codes is ongoing. The DSO submitted a detailed report regarding ongoing network code activities. The report summarised high-level activity including Eurelectric, European Stakeholder Committee and the Solar Power Europe Summit.

2.3.6. Audit Report on Quality of Data Provided to the CRU

The CRU requires that an audit report be submitted each year confirming the quality and accuracy of the data provided to the CRU as well as the quality of regulatory submissions provided to the CRU. The documents are reviewed against four criteria: clear, complete, candid and constructive as set out in CRU/20/154.

The DSO's progress in implementing recommendations is an ongoing process. For 2023, fewer typographical errors occurred indicating a general improvement compared to 2022. There were a number of instances where acronyms were not fully expanded but this has improved from the previous year. While there was no evidence that a standard layout has

been adopted, in general documents have improved their inclusion of table of contents and glossary of terms when compared to the 2022 audit.

The auditor graded the overall DSO submission quality as “Good”, based on 15 sample documents which were assessed out of a total of 61 submissions. In 2022, the assessment resulted in a “Good” grading, based on the 16 sample documents from a total of 75 submissions. The following auditor recommendations remain unchanged from 2022:

- To ensure that all internal and external documents are referenced using a consistent format and to include as minimum the full document title, author/source and date of publication.
- To implement a standard layout for key document including a table of contents, glossary of terms and placeholders for the document date and version number, and sensitivity as standard to minimise the risk that this information is inadvertently omitted.
- To use standard spelling and grammar checking tools to pick up minor errors. This should include a visual check for cross-referencing errors, formatting issues and document layout quality.
- To ensure any watermarks or text indicating on a document is still in draft form are removed prior to submission.
- To request guidance on scoring approach to address the unreasonably high bar of perfection as the standard required to achieve an Excellent rating.

2.3.7. Reporting Conclusion

Overall, the CRU is satisfied with the reports submitted by the DSO. The majority of submissions are of good quality, for example the Annual Performance Report. However, there is room for improvement, including the Benchmarking Report. Overall, the CRU acknowledges and welcomes that the DSO has displayed improvement in reporting in terms of improved quality and submitting the reports in a timely manner.

3. TAO 2023 Incentives Performance

This section provides a summary of the TAO incentive performance 2023 against incentives defined in the PR5 Regulatory Framework, Incentives and Reporting Decision Paper (CRU/20/154). Performance results for 2021 and 2022 are also included for comparison purposes.

An overview of the incentives available to the TAO are set out in the table below along with the key aims of each incentive as envisaged in the PR5 Regulatory Framework.

Incentive	Description
TAO Project Delivery	The incentive mechanism for TAO project delivery gives the TAO a proportionate financial stake in the efficient and timely implementation of the TSO's investment plans.
TAO Outage Management	The incentive mechanism for the management of outages by the TAO is to give the TAO a proportionate financial stake to minimise the total net costs associated with the agreed outage plan, having regard to its own costs and costs imposed by outages on the TSO and market participants.
TAO/TSO Joint Incentive	The joint incentives between the TAO/TSO incentivises the promotion of efficiencies through enhanced collaboration.

3.1. TAO 2023 Incentive Outturn

Based on the TAO's performance in 2023, the CRU has allowed the full overall incentive amount of **€6m** (2019 prices) to feed into the TAO's 2025 revenues. The incentives and the TAO's outturn are summarised below.

Incentive	Upside (€m)	Downside (€m)	CRU Decision
Project Delivery	3.5	-3.5	3.5
Outage Management	1.0	-1.0	1.0
TSO/TAO Joint Incentive	1.5	-1.5	1.5
Total (2019 monies)	6.0	-6.0	**+6.0**
Total (2023 monies)	6.95	-6.95	**+6.95**

Table 2 TAO 2023 Incentives Outturn

Further detail regarding the TAO's performance under each of these incentives is set out below.

3.1.1. TAO Project Delivery

This incentive is assessed against four categories that are set out in CRU/20/154. Each category is largely quantitative. The TAO is also required to submit an independent audit report verifying the outturn performance. The TAO was awarded the full upside of €3.5m under this incentive as it demonstrated strong performance under each of the four categories that compose this incentive.

1. **Issuance of Project Implementation Plans (PIPs):** the TAO had a target of 45 PIPs to be issued in 2023, and 45 PIPs were issued, as a result full award was given for this category.

2. **Customer Project Energisation**: the TAO had planned for the energisation of 26 projects in 2023. However, this was adjusted to 16 due to third-party delays outside of TAO/TSO control. The TAO listed the reason for each ex-post adjustment to the CRU, with the majority being due to customer delays. The ex-post adjustments were reviewed by the independent auditor also. As a result, despite the high level of ex-post adjustments the full award was given for this category.

3. **Transmission Capex Spend**: the TAO had a total transmission capex investment programme for the year 2023 of €267,105,126. The TAO reported a spend of €272,210,737 against this programme, an achievement of 102%. As a result, the full award was given for this category.

4. **Project Delivery Process Improvement**: This category of the incentive is qualitative and requires an independent audit report to carry out an assessment of the TAO's performance. Two process improvements were implemented by the TAO in 2023 and submitted for assessment by the auditors: Project Management Initiatives and Commercial and Contractor Management. The auditor reported that the TAO had strong performance in each one.

The TAO has consistently scored well in this incentive during PR5, which is positive. It is however noted that overall, the transmission programme is not progressing at the required rate. The CRU will consider the design of all incentives aimed at improving delivery of infrastructure in PR6.

An overview of the TAO performance for the quantitative elements of this incentive in the first three years of the PR5 is showed in the charts below.

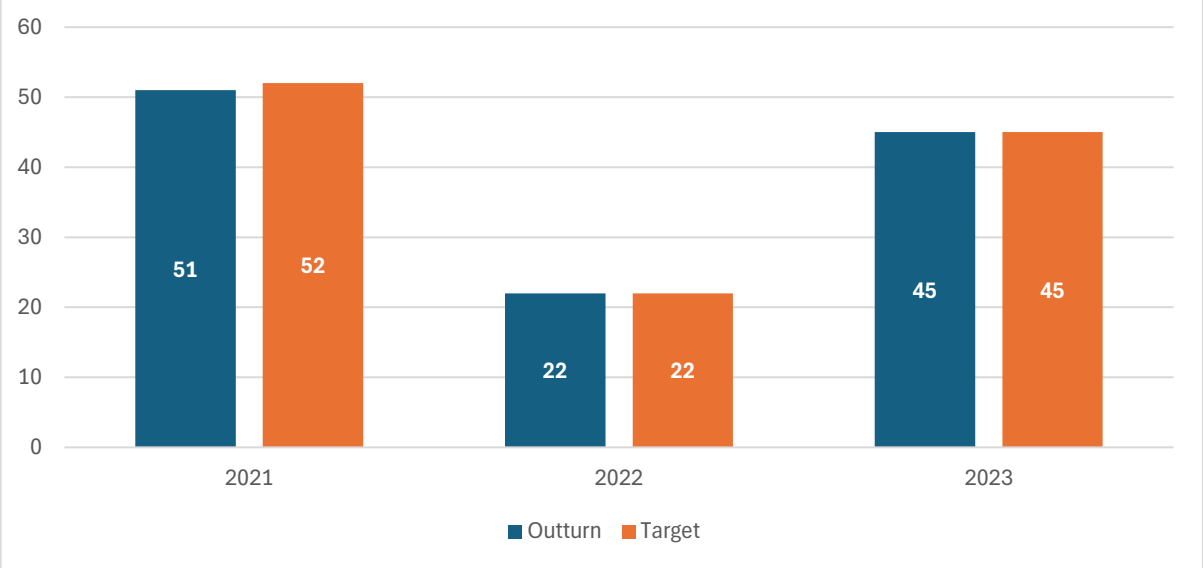


Figure 10 Issuance of Projects Implementation Plans PR5 Performance (Years 2021-2023)

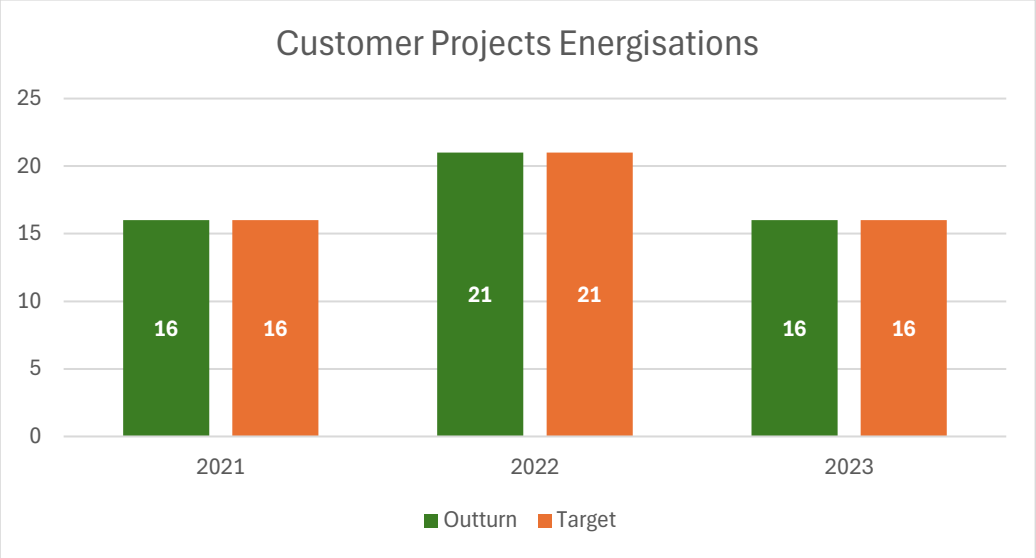


Figure 11 TAO Customer Projects Energisations PR5 Performance (Years 2021-2023)

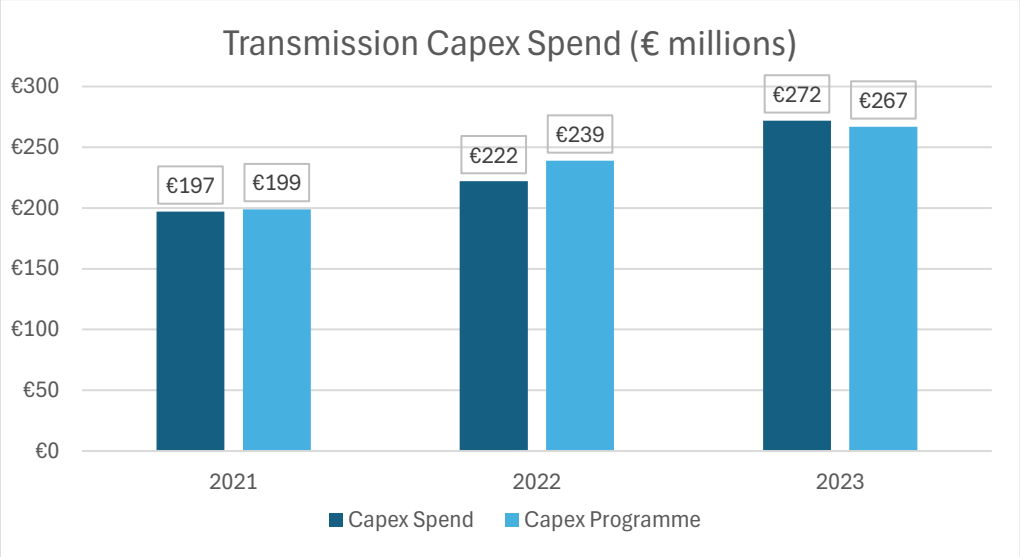


Figure 12 TAO Transmission Capex Spend (€ m) PR5 Performance (Years 2021-2023)

3.1.2. TAO Outage Management

This incentive represents a proportionate financial stake to minimise the total net costs associated with the agreed outage plan, having regard to TAO own costs and costs imposed by outages on the TSO and market participants. The incentive is determined on a quantitative basis. A reward is paid if the actual number of outage days are less than or equal to the baseline, a partial incentive is paid if the actual number of outage days are between the baseline and 5% over, a full penalty is applied if the actual outages days is more than 5% over the baseline. The full reward of €1m was applied as the TAO demonstrated that it had performed below the baseline with regard to the number of outage days. The TAO reported an outturn performance of 10,061 outage days against 10,496 planned outage days.

As the CRU develops the framework for PR6, it will review how outages are incentivised to ensure the regulatory framework fully supports the changes required by the TSO and TAO to increase outage opportunities and maximise delivery within outage windows.

The TAO has performed consistently well in this incentive in PR5, as it can be seen in the chart below.

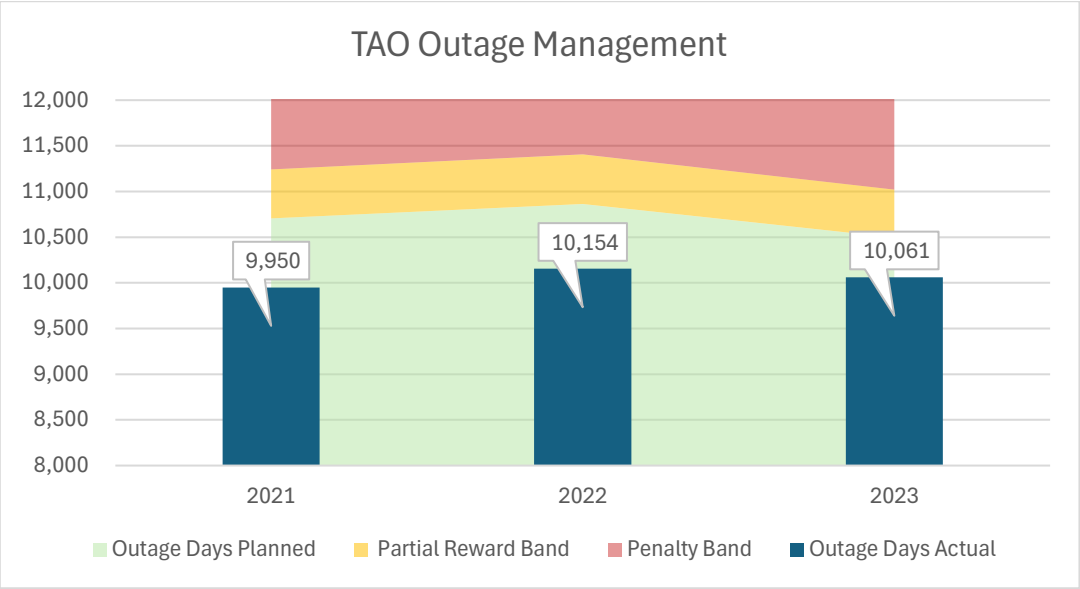


Figure 13 TAO Outage Management PR5 Performance (Years 2021-2023)

3.1.3. TAO/TSO Joint Incentive

This incentive is discussed in section 5.2.

3.2. TAO Incentives Outturn Summary

Overall, the CRU notes the strong performance of the TAO under these incentives for 2023. The TAO's strong performance has been consistent since the beginning of the PR5 period. However, the CRU will review these incentives while developing PR6 to ensure that the TAO remains appropriately challenged and delivers in the interests of the consumer.

4. TSO 2023 Incentive Performance

This section provides a summary of the TSO incentives performance 2023 against six mechanistic incentives and seven balanced scorecard incentives. Performance for 2021 and 2022 is also included for comparison purposes.

An overview of the incentives available to the TSO is set out in the table below along with the key aims of each incentive as envisaged in the PR5 Regulatory Framework, Incentives and Reporting Decision Paper (CRU/20/154).

Incentive	Description
Mechanistic	
SNSP (%)	The System Non-Synchronous Penetration (SNSP) incentive will reward the TSO for the actions it has taken to introduce new tools and processes to allow for annual increases in the SNSP.
Renewable Dispatch Down (%)	The Renewable Dispatch Down incentive incentivises the TSO to reduce/minimise renewable dispatch down levels over the PR5 period.
System Minutes Lost	The System Minutes Lost (SML) incentive gives the TSO an appropriate financial stake in maintaining appropriately high standards of system performance.
System Frequency	The system frequency incentive seeks to provide the TSO with an appropriate financial stake in maintaining appropriately high standards of system frequency performance.
Connections (ECP-2)	The connections incentive incentivises the timely processing of connection applications under the CRU's Enduring Connection Policy.
Stakeholder Engagement (NSEE)	The stakeholder engagement incentive mechanism continues to incentivise the benefits of effective stakeholder engagement.
Balanced Scorecard	
RES-E (%)	The RES-E incentive seeks to reward the SO for the actions that it has taken to achieve the annual RES-E targets.
Investment Planning and Delivery	The investment planning and delivery incentive seeks to incentivise improved transparency over the efficiency with which these key processes are undertaken.
Strategic Objective	The strategic incentive creates a mechanism to allow the TSO to retain a share of the value to the market (and, by extension customers) if the TSO outperforms what might reasonably be expected in specified, strategically important areas.
Local Security of Supply	Security of Supply incentive incentivises the TSO to demonstrate progress in addressing and managing key transmission network security of supply / constraint areas during the PR5 period.
Imperfections & Constraints	The Imperfections incentive incentivises the TSO actions to mitigate and reduce imperfection costs which will ultimately be passed onto electricity customers.
TSO/TAO Joint Incentive	The joint incentives between the TSO/TAO and TSO/DSO incentivises the promotion of efficiencies through enhanced collaboration.
TSO/DSO Joint Incentive	

As can be seen in the following table, €8m was available to the TSO as incentive for the year 2023, with a possible downside of €4m. Based on the TSO's performance in 2023, the CRU has allowed an overall incentive amount of **€1.16m** (2019 prices) to feed into the TSO's 2025 revenues.

The incentives metrics and the CRU's decision on the incentive earned are summarised below. All figures are in 2019 prices if not stated otherwise.

Incentive	Upside (€m)	Downside (€m)	CRU Decision
RES-E (%)	0.4	0.0	0.0
SNSP (%)	0.6	-0.3	-0.30
Renewable Dispatch Down (%)	0.6	-0.3	-0.28
System Minutes Lost	0.3	-0.5	-0.50
System Frequency	0.3	-0.5	0.10
Connections (ECP-2)	0.5	-0.2	0.03
Stakeholder Engagement (NSEE)	0.5	0.0	0.19
Investment Planning and Delivery	0.9	-0.5	0.72
TSO/TAO Joint Incentive	0.2	-0.1	0.20
TSO/DSO Joint Incentive	0.2	-0.1	0.15
Strategic Objective	0.5	0.0	0.345
Local Security of Supply	1.5	-1.0	0.396
Imperfections and Constraints	1.5	-0.5	0.105
Total (2019 monies)	8.0	-4.0	**+1.16**
Total (2023 monies)	9.27	-4.63	**+1.34**

Table 3 TSO Incentive Performance 2023

4.2. TSO 2023 Incentives Outturn

Further detail regarding the TSO's performance in respect of these incentives is set out below:

4.2.1. SNSP

System Non-Synchronous Penetration (SNSP) is an important enabler for increasing the integration of renewable electricity sources. A SNSP target of 80% was set for the TSO in 2023. The TSO reported a SNSP of 75% in 2023, therefore a penalty of €0.3m was applied in line with the methodology set out in CRU/20/154. In its outturn report the TSO notes that the 75% SNSP trial started in 2021 and became operational policy in March 2022. The report also contains considerations around the inefficiency of SNSP increments of less than 5%, considering the significant effort and trial duration required for each increase. The TSO also noted that its efforts were targeted at other operational constraint reductions in 2023 such as the RoCoF trial and MUON trial.

The TSO has missed this incentive target since the beginning of the PR5 period and has been penalized a total of €0.9m to date. The CRU is concerned that the TSO is not on track to meet the target of 85% SNSP by 2025. CRU's target of 85% SNSP by 2025 is consistent with the Climate Action Plan, which has included a KPI of 85% SNSP by 2025 also. The Operational

Policy Roadmap published by the TSO indicates that 85% SNSP will not be achieved until 2026[18].

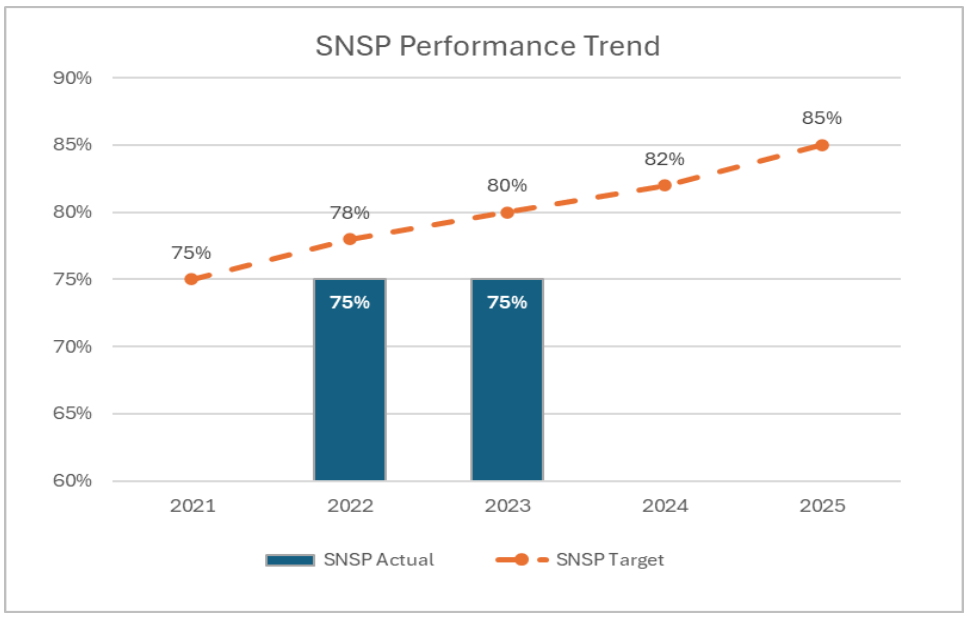


Figure 14 SNSP Outturn Performance vs PR5 Target

4.2.2. Renewable Dispatch Down

The CRU set an upside target of 5% and a downside target of 7% for the Renewable (RE) Dispatch Down incentive. The TSO is eligible for a reward if the level of dispatch down is 5% or less. Conversely the TSO is eligible for a penalty if the level of dispatch down is 7% or higher. The TSO has reported that during 2023, 8.9% of renewables were dispatched down. As such, the TSO has exceeded the downside target and a penalty of €0.28m was applied in line with the methodology set out in CRU/20/154.

The level of renewable electricity being dispatched down has increased each year of PR5 and has exceeded the threshold to trigger a penalty (7%). Since the beginning of PR5, the TSO has been subjected to a total of €0.532m penalty for repeatedly exceeding the threshold. This result is concerning as higher levels of renewable energy being constrained off the power system leads to increased costs for consumers associated with constraining on more expensive generation. It also has an impact on Ireland's ability to meet its renewable electricity targets, and a clear negative impact on carbon targets.

The TSO noted in its submission that the increase in levels of dispatch down occurred during a period of increased renewables connecting to the system. The level of renewables connecting will continue to increase over the coming years. Therefore, it is critical that the TSO continues at pace to update operational policies and to accelerate the delivery of required infrastructure to ensure renewables can be accommodated into the system.

[18] Operational Policy Roadmap 2023 to 2030 | EirGrid

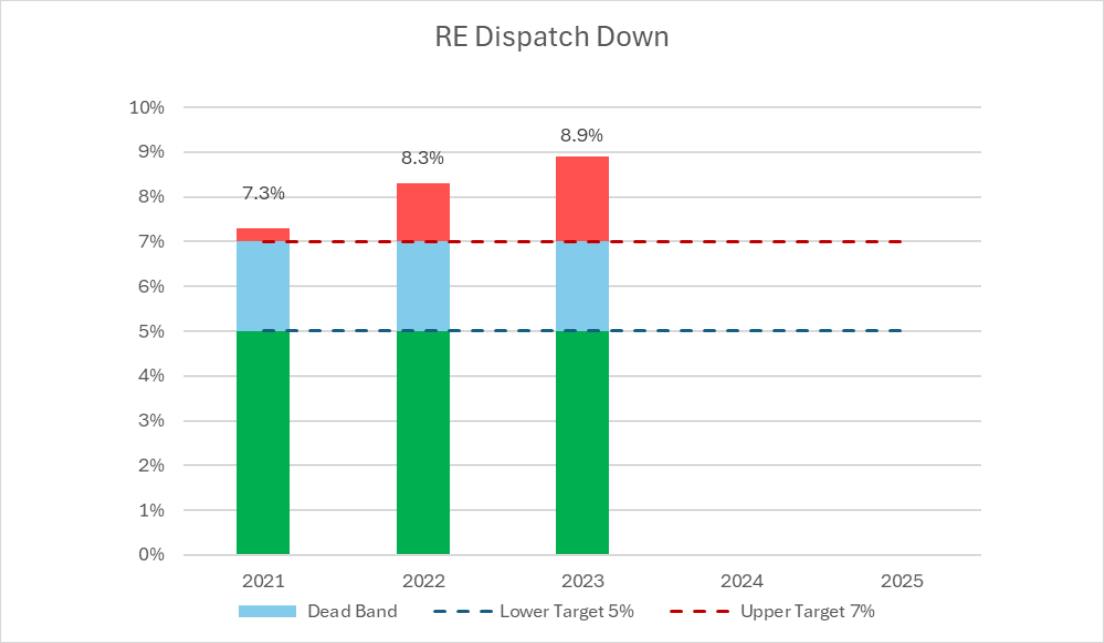


Figure 15 RE Dispatch Down Outturn Performance vs PR5 Target

4.2.3. System Minutes Lost

The CRU set out a target for System Minutes Lost (SML) with a dead band of 0.75-2.5. The TSO reported a SML of 4.461 in 2023. As this falls above the upper bound, a penalty of €0.5m was applied in respect of this incentive in 2023. Of the 4.461 SMLs reported, 4.39565 were attributed to a single fault. This is the first year in PR5 where the TSO's performance fell below target levels. The CRU will engage further with the TSO to understand the reasons for the single fault which drove the majority of the SMLs for 2023.

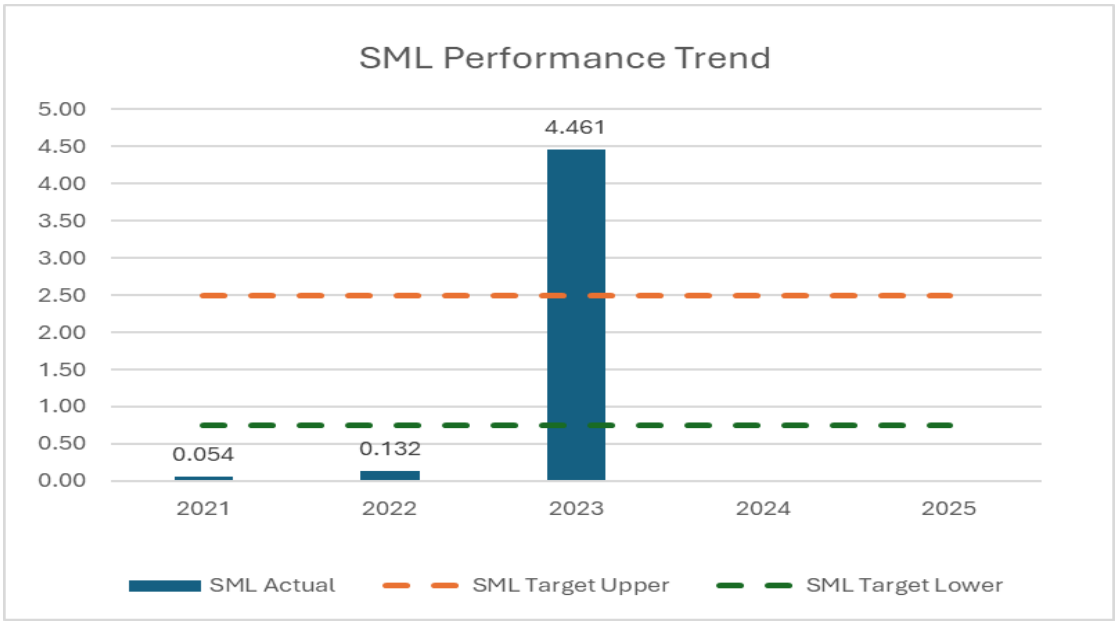


Figure 16 SML Outturn Performance vs PR5 Target

4.2.4. System Frequency

The CRU set a System Frequency target of 98%. EirGrid reported a result of 98.71% for 2023. Therefore, a reward payment of €0.1m has been applied. The TSO performance in 2022 and 2021 also resulted in an incentive payment. System frequency is a key metric to measure reliability and quality of supply on the transmission system, as such, the CRU welcomes continued strong performance under this metric.

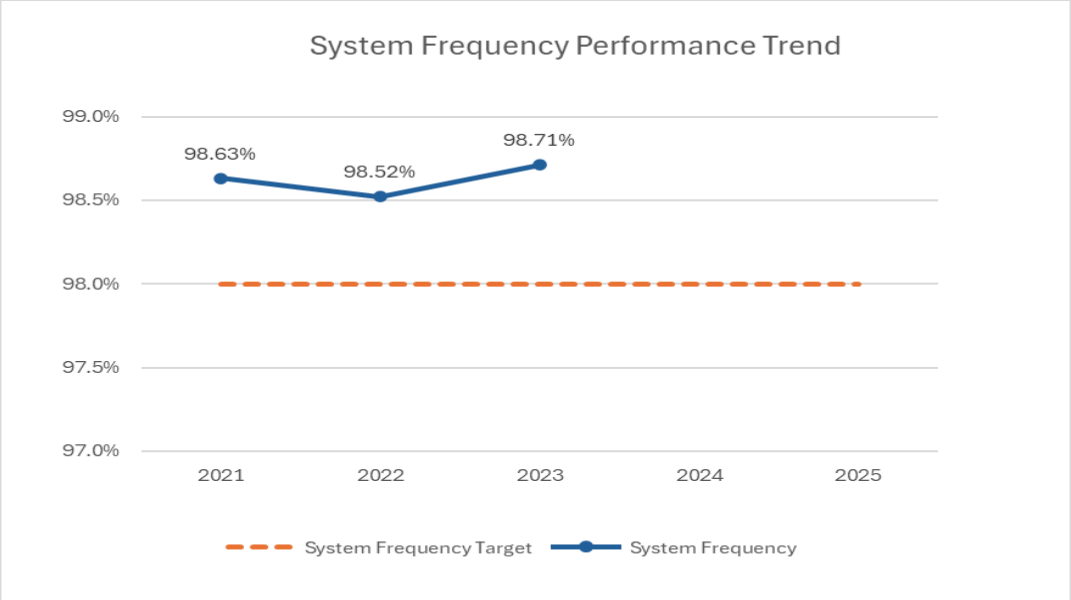


Figure 17 System Frequency Outturn Performance vs PR5 Target

4.2.5. Connections (ECP-2)

The CRU set a scale of rewards and penalties for timely issuing of connection offers. Assessment of 2022 performance was deferred to this year as a number of ECP 2.2 offers were delayed. Similarly, a number of ECP2.3 offers were delayed, so assessment of 2023 performance will take place next year.

The 2022 Connection Incentive Outturn Report was submitted to CRU in September 2023 and showed that 26 transmission connection offers were issued under ECP 2.2. throughout 2022/23. Notably:

- 31% were offered before 30 days before the deadline, leading to a €0.15m reward.
- 4% were offered 15 days before the deadline, leading to no reward or penalty.
- 4% were offered 60 days after the deadline, leading to no reward or penalty.
- 61% were offered after the final milestone, leading to a €0.12m penalty.

Overall, this leads to a net reward of €0.03m out of a possible €0.5m for ECP 2.2. The TSO reported a variety of reasons for delays in issuing of connection offers. These reasons included complex offers, increased customer engagement prior to issuing offers and overlap with ECP2.1 offers. While such issues can occur, it is important that the TSO continues to streamline processes to mitigate impact on the issuance of connection offers in a timely manner.

The following table presents an overview of the TSO performance on this incentive since the beginning of PR5.

2021	2022	2023
24/26 applications by target day	9/26 applications by target day	N/A
+€0.430m	**+€0.03m**	**N/A**

4.2.6. Stakeholder Engagement

A Network Stakeholder Engagement Evaluation Panel has been established by the CRU to evaluate the system operator's performance with regard to stakeholder engagement. The final overall score, agreed by the Panel, is calculated by weighting the scores given in each of three categories – quality of the plan, implementation of the plan, effectiveness of the plan, and adding them together to get a score between 0 and 10. The TSO must achieve at least a final score of 5.0 in order to receive any incentive payment.

Following this process's conclusion, the panel agreed a final score of 6.66 for the TSO. When the relevant formula is applied, this results in a reward of €0.19m out of a possible €0.5m. Further information in respect of this process will be set out in the Network Stakeholder Engagement Evaluation Panel Close-out Report which will be published later this year.

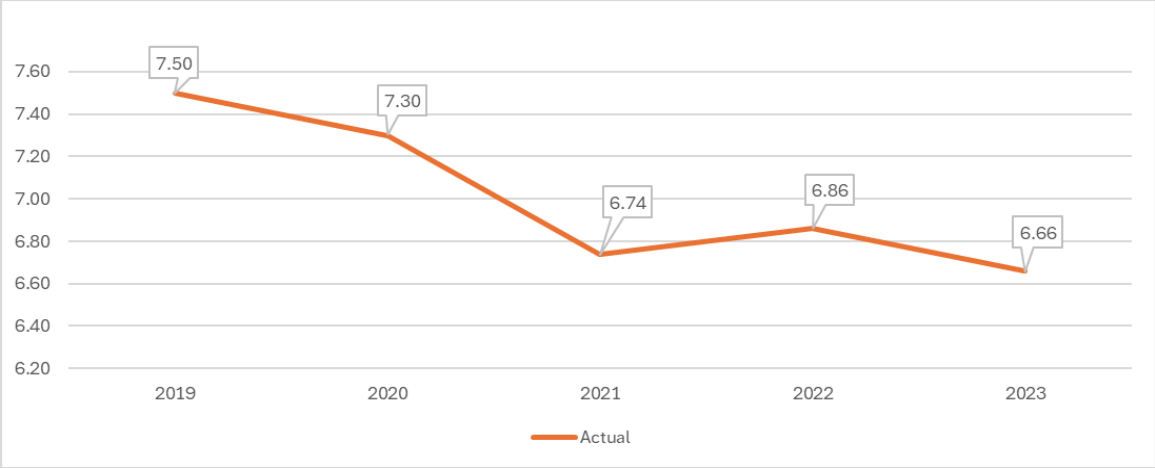


Figure 18 National Stakeholder Engagement Evaluation Panel Historical Score

4.3. TSO Balanced Scorecard 2023 Incentives

This section details the TSO's performance against the balanced scorecard incentives. The requirements for the Balanced Scorecard incentives are updated annually. The details and requirements for the 2023 Balanced Scorecard Incentives can be found in CRU202354[19].

4.3.1. RES-E

A RES-E target of 49% was set for the TSO in 2023 and the maximum reward available to the TSO was €0.4m. As the TSO reported a result of 42%, and did not meet the target, no reward could be applied in respect of this incentive. There is no penalty applied for failing in

[19] Price Review Five 2023 | Balanced Scorecards Information Paper (CRU202354)

reaching the target. The TSO has missed this incentive target since the beginning of the PR5 period.

The CRU welcomes the increase in RES-E integration rates; however, we remain concerned at the rate of increase. To meet Ireland's Climate Action Plan target of 80% renewable electricity by 2030, it is important that significant progress is made each year. The PR5 targets are challenging but have been set in line with the Climate Action Plan targets. While the level of renewable electricity added to the system each year is not fully within the control of the TSO, the TSO has a crucial role to play in this area. The CRU has previously expressed concern regarding the quality of the multi-year plans developed by the TSO in relation to this incentive.

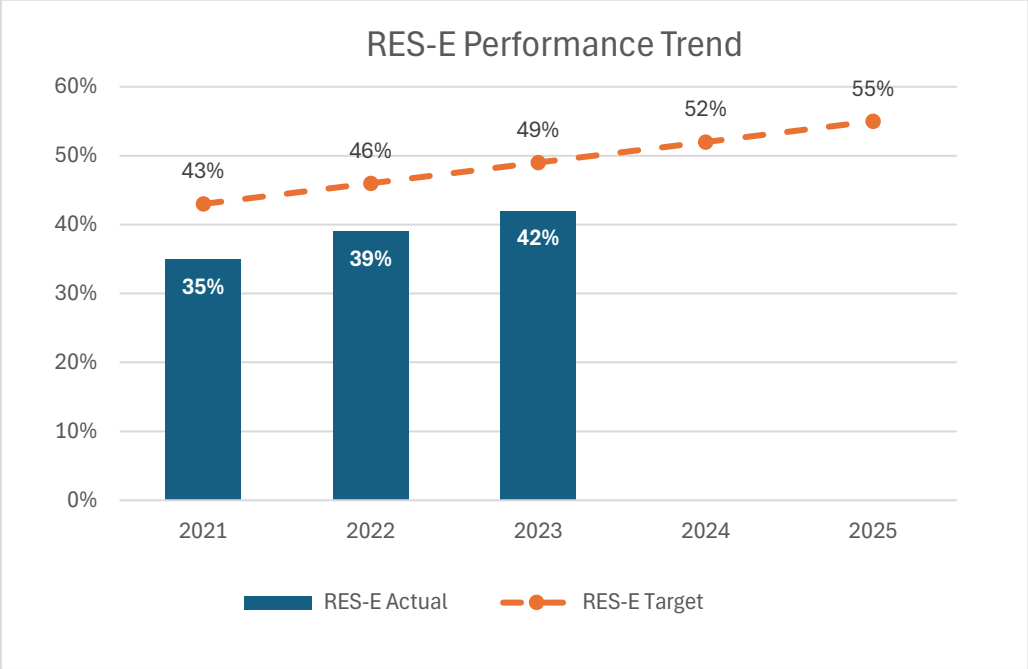


Figure 19 RES-E Outturn Performance vs PR5 Target

4.3.2. Investment Planning and Delivery

This incentive was evaluated across six metrics. One of these metrics was assessed on a quantitative basis, while the other metrics were assessed qualitatively and required an independent audit to be completed. All six metrics have been assessed in line with the CRU's 2023 Balanced Scorecard Information Paper. The CRU decided that a total reward of €0.72m out of €0.9m should be applied with respect to this incentive, as the TSO performed either 'strongly' or 'acceptably' across the assessment criteria, which was in line with the independent audit report submitted as part of this incentive. This is an increase in the incentive awarded for 2022 which was €0.62m. The improvement in performance is mainly based on the increased volume of Capital Approvals and Project Agreements delivered, which the CRU welcomes. However concerns persist over the number of Energisations, which remain below target. The CRU will continue to engage further with the TSO and TAO in relation to this.

Area	Metric	% Allocation	Auditor's Score	Reward/Penalty (€m)
Investment Planning	1	10%	Strong	0.09
	2	10%	Strong	0.09
	3	20%	Strong	0.18
Delivery	4	20%	Strong	0.18
	5	20%	Strong	0.18
Timeliness	6	20%	Acceptable	0.00
Total				**0.72**

Table 4 Summary of Investment Planning and Delivery

Follows further detail on the incentive's components.

1. **Investment planning:** 40% (€0.36m) was available to EirGrid under the first category. This was spread over three metrics aligning with the first 3 steps of EirGrid's process. Metrics 1 and 2 were each worth 10% and Metric 3 was worth 20%. All 3 metrics are qualitative. The audit report submitted recommended a score of strong for these metrics, with full assurance shown in respect of governance processes for Gateway 1-3. The submission also included evidence that non-wire solutions were considered for investment decisions in 2023.

2. **Delivery**: 40% (€0.36m) was available to EirGrid under the second category. This was spread over two metrics aligning with the next 3 steps of EirGrid's process, with 4-5 being considered together (metric 4) and 6 considered separately (metric 5).
   i) Metric 4 was qualitative and worth 20%. Under this metric, EirGrid's audit report stated that they had performed "strong" upon review of the adherence to EirGrid's Governance processes for a sample of Gateway 4-5 approvals in 2023.
   ii) Metric 5 is quantitative and is based on outturn performance against the planned Transmission Outage Programme. Relative to the 791 outage weeks TOP23 baseline, a total of 550 (69.5%) weeks were completed. This increases to 83.5% following the inclusion of additional projects delivered during the TOP23 outage season and third-party ex-post adjustments. The number of ex-post adjustments is relatively high at 10.8%, but the adjustments were verified by an independent auditor. The CRU also notes that the unadjusted performance for 2023 is an improvement on the unadjusted performance for 2022. As the adjusted performance is greater than 75%, this is deemed 'strong' performance.

3. **Timeliness**: 20% (€0.18m) was available to EirGrid under Metric 6 which is assessed on a qualitative and quantitative basis. The TSO reported that 74% of the capex programme was in line/ahead of plan in 2023. CRU calculations indicate the figure is 63%[20]. Both 63% and 74% fall within the 'acceptable' performance category.
   The TSO also provided a separate submission to the CRU on timeliness of delivery. The CRU did not award a reward or penalty for this element of the incentive, which

[20] EirGrid calculated the performance across each of the milestones (capital approvals, project agreements and energisations) individually before taking the average of the three figures which produces a score of 74%. The CRU considers that a more appropriate methodology to measure timeliness performance should first sum all the outturn performance across the three categories and then used it to produce a total score, which results in 63%.

reflects improvements in the level of information provided to the CRU, but also concerns regarding the timeliness of delivery infrastructure.

The following chart shows the CRU decision with regard to this incentive for the first three years of the PR5 period. The TSO's scores have improved in this incentive. Moving into PR6, the CRU will reconsider the design of the incentives aimed at infrastructure delivery and outages across both TSO and TAO.

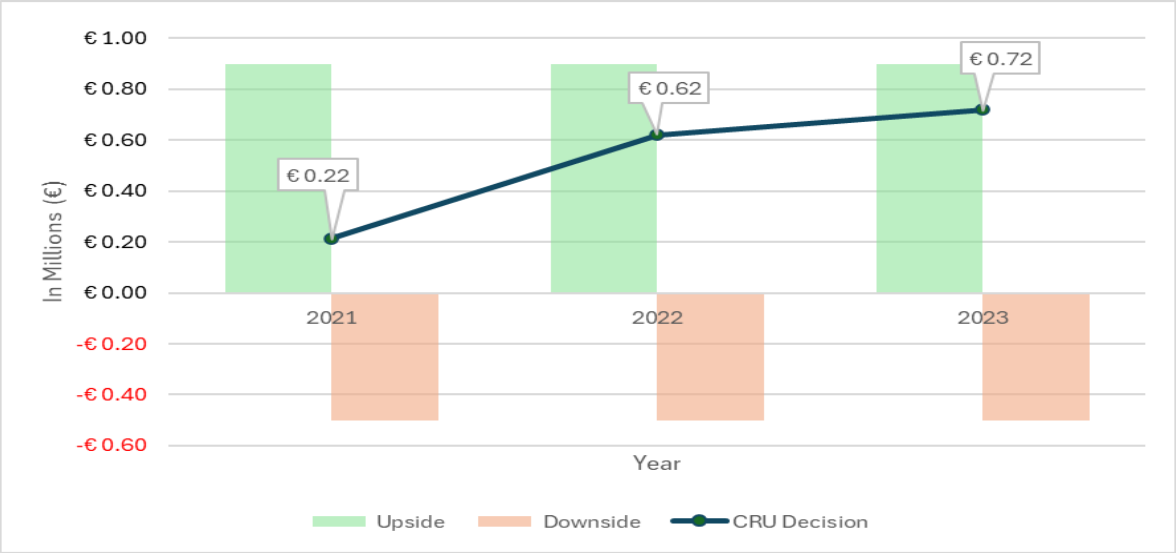


Figure 20 TSO Investment Planning and Delivery Incentive Outturn 2021-2023

4.3.3. Strategic Objective

A reward of €0.34m out of possible total upside of €0.5m was awarded to the TSO under this incentive. No downside is assigned with this incentive. There were three PR5 objectives under this incentive. The TSO mapped these strategic incentives into three Strategic Initiatives. A total of thirteen delivery milestones were outlined as part of the TSO's multiyear plan, each felling under one of the three Strategic Initiatives and contributed to at least one of the CRU's PR5 strategic objectives. Performance of these milestones was assessed in line with the CRU's 2023 Balanced Scorecard Decision Paper. The performance was assessed based on three criteria: quality of the plan, implementation of the plan and effectiveness and impact of the plan. Broadly, the plan was considered containing sufficient detail, however only partial award was applied in relation to implementation and effectiveness due to a lack of detail and evidence to demonstrate the effectiveness and impacts in some of the submissions. This award is in line with the TSO outturn performance in 2022.

The following chart shows the CRU decision with regard to this incentive for the first three years of the PR5 period.

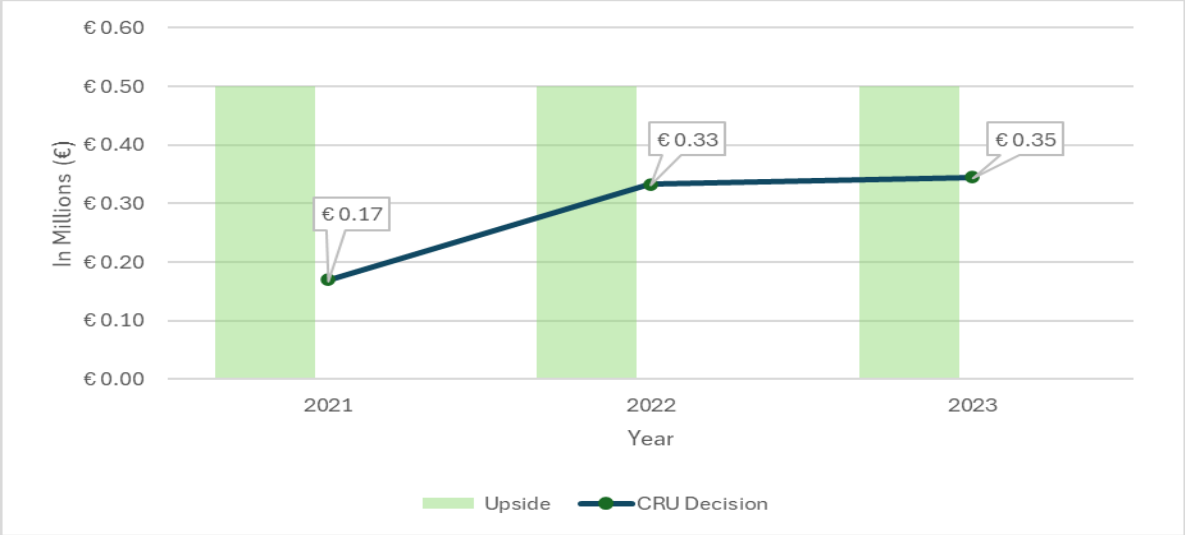


Figure 21 TSO Strategic Objective Incentive Outturn 2021-2023

4.3.4. Local Security of Supply

A reward of €0.396m out of possible €1.125m upside was awarded applied in respect of this incentive. This incentive was assessed under four headings, each of which was assessed based on three criteria: quality of the multi-year plan, implementation of the plan and effectiveness of the plan. The assessment was in line with the CRU's 2023 Balanced Scorecard Decision Paper.

The 2023 Balanced Scorecard contained four key aspects the TSO had to deliver on.

Aspect	Total Upside	Total Downside	Decision
Infrastructure solutions	€0.56m	-€0.38m	€0.184m
Quantification	€0.17m	-€0.11m	-€0.0925m
Demand	€0.17m	-€0.11m	€0.170m
T-3/T-4 Non-contestable project delivery	€0.23m	-€0.15m	€0.135m
	€1.125m	-€0.750m	**€0.396m**

1. **<u>Infrastructure Solutions</u>:** €0.184m was awarded for this element of the incentive. The TSO's outturn report provided evidence of progress in 2023 against project delivery milestones for large infrastructure projects in the Dublin area including the Powering Up Dublin programme. While progress was demonstrated on the actual progression of most project milestones, the TSO was marked down on the elements of the quality of this plan, as the multi-year plan originally submitted to the CRU lacked sufficient information, and effectiveness of the plan. Limited information was provided to show the effectiveness of actions on addressing security of supply concerns in the Dublin area.

2. **Quantification:** the assessment of this category resulted in a penalty of €0.09m. This component requires the TSO to develop a methodology for quantifying the local security of supply issues and the quantitative impact of each action proposed and implemented. The methodology was not provided in the multi-year plan originally submitted to the CRU and, with the regard to the outturn submission, only high-level information was provided on the TSO approach to defining a quantification methodology. As no clear methodology has been included, it is unclear how to measure the effectiveness of the proposed actions. The CRU assigned a partial penalty to this category of the incentive.

3. **Demand:** €0.17m was awarded for this element of the incentive. Under this component the TSO is required to quantify the level of flexibility available following engagement with data centres and outline progress on other services which can be provided by data centres to address local security of supply issues in Dublin. Sufficient level of detail and evidence have been provided on Mandatory Demand Curtailment, Voluntary Demand Reduction and Flexible Demand Arrangements. As required, stakeholder engagement on these actions were undertaken and flexibility was tested and quantified under simulated conditions. As a result, the TSO was awarded the full possible upside for this category.

4. **T-3/T-4 Non-Contestable Project Delivery:** €0.135m was awarded for this element of the incentive. For this aspect, the TSO was required to provide evidence of delivery of 300MW of the total 1,500MW by the end of 2023. The TSO provided sufficient information demonstrating that 320MW, out of a required 300MW, had been delivered by the end of 2023. However, a partial penalty was assigned against the effectiveness of the plan as sufficient explanation was not provided regarding the impacts on security of supply and the impacts were not quantified. This resulted in a partial award with regard to this component.

Overall, this year performance on the Local Security of Supply incentive represents an improvement compared with the 2022 outturn performance, where an incentive of €0.21m was applied. While it is positive to see progress being made on a variety of solutions, the CRU remains concerned that constraints around the Dublin area will not have been resolved by the end of the PR5 period. The CRU's ability to assess the quality of the plans in this area, and the impact of the plans, is impeded by the lack of meaningful engagement by the TSO to address the requirement to quantify the issue. The CRU has also previously noted concerns regarding the Local Security of Supply multiyear plan, highlight that the plan did not provide the CRU with assurance that its plans to address Dublin Local Security of Supply are sufficient to resolve Dublin constraints in a timely manner.

The following chart shows the CRU decision with regard to this incentive for the first three years of the PR5 period. While there has been some improvement in scores, which reflect some progress made in relation to identifying infrastructure solutions, demand and generation solutions, the CRU remains concerned at the rate of resolution of this issue. The CRU is also cognisant of the wider short circuit issue which has emerged during the PR5 period, which is exacerbating capacity issues in Dublin. As per CRU/20/154, the TSO will be applied 75% of the reward/penalty annually while the remaining 25% of each years reward/penalty will be at stake at the end of period (to be assessed after the PR6 Final Determination has been

published). The reward/penalty applied at the end of the period will be subject to the TSO resolving Dublin Security of Supply issue.

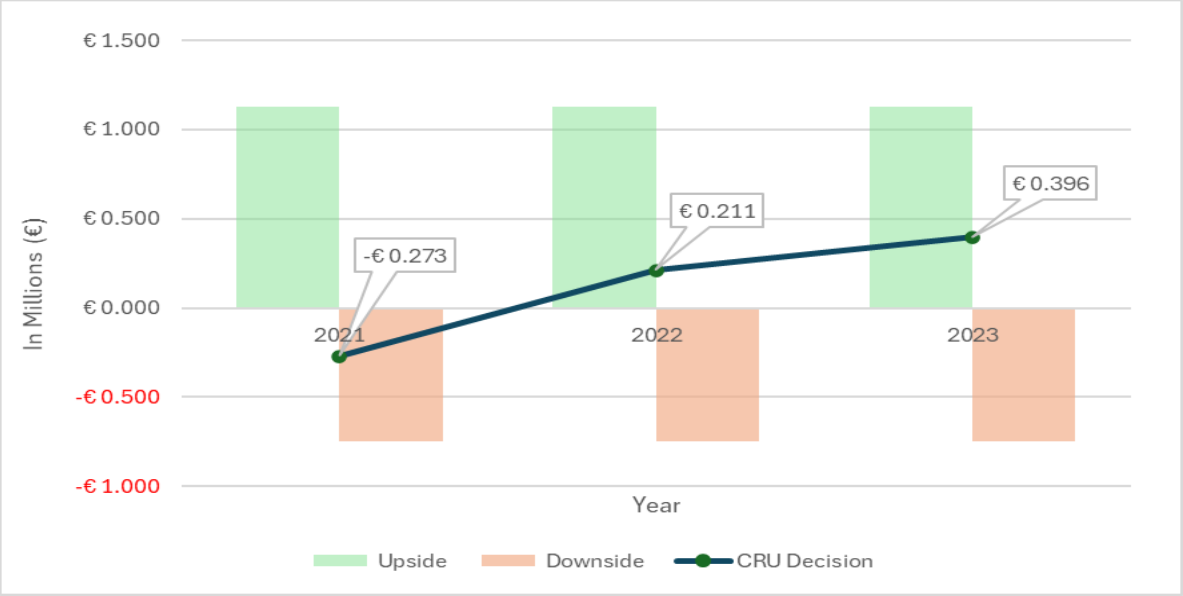


Figure 22 TSO Local Security of Supply Incentive Outturn 2021-2023

4.3.5. Imperfections & Constraints

A reward of €0.105m out of possible €1.5m upside was applied in respect of the imperfections and constraints incentive. This incentive was assessed in line with the CRU's 2023 Balanced Scorecard Decision Paper and was composed of five headings, each assessed according to three criteria: quality of plan, implementation of plan, effectiveness and impacts of the plan.

Aspect	Total Upside	Total Downside	Decision
Reserve Policy Review and Changes	0.30	-0.10	-0.10
Transmission constraint group review and roadmap	0.45	-0.15	0.00
Minimum Conventional Units Online	0.30	-0.15	0.255
Imperfections Reporting	0.25	-0.05	0.00
Updated constraints reporting	0.20	-0.05	-0.05
	1.5	-0.5	**0.105**

1. **Reserve Policy Review and Changes:** a full penalty was applied in respect of this element of the incentive. The TSO's submission noted the development of a Consolidated Reserve Policy. This, however, did not directly result in any substantive changes to the reserve policy or constraint reductions. The other deliverables mapped to this component in the 2023 Balanced Scorecard were not delivered, including a report on the System Services Product review, development of the System Service Forecast Methodology and an outline of the future application of the methodology.

2. **Transmission Constraint Group (TCG) Review and Roadmap**: €0 was awarded with regard of this element of the incentive. Under this workstream, the following deliverables were required to be completed by the end of 2023:

   i) Report on the review of thermal-based TCGs that are constraining the power system and outline planned TSO measure to alleviate;

   ii) Report on the review of voltage-based TCGs that are constraining the power system and outline planned TSO measure to alleviate;

   iii) Further development of quantitative methodology for estimating imperfection cost forecasts and subsequent cost reductions to be used in future multi-year plan submissions.

The TSO reported that a partial review was carried out, which focused on South load-based TCGs and a high-level review of longstanding TCGs. This resulted in a reduction in marks against the implementation and effectiveness of the plan criteria. Limited development was made to the methodology, which again resulted in a reduction in marks during the CRU's assessment.

3. **Minimum Conventional Units Online:** an award of €0.255m was awarded with regard of this component of the incentive. Good progress was made on this element, as the TSO reported that the operational trial to reduce the minimum number of conventional units online was conducted in 2023 and concluded in spring 2024. The full award against this component was not given as the multi-year plan submission overlapped with the Strategic Objectives incentive.

4. **Imperfections Reporting**: a partial penalty of €0 was awarded in respect of this element of the incentive. The TSO was required to deliver the followings against this component in 2023:

   i) Report on imperfection cost reductions for each measure undertaken by TSO in the year;

   ii) Submit mid-year report to the CRU to provide an analysis of Imperfections spend for the first five months of the tariff year;

   iii) Publish four Quarterly Imperfections Cost Reports with clear evidence of imperfection reduction actions, progress on annual plan and future improvements.

   The mid-year report was submitted, however, a delay in submission materially impacted Regulatory Authorities' ability to analyse the models.

   Modest Imperfections Costs savings were reported for 2023, and the outturn report highlighted the submission of the mid-year report on imperfection spend. However, the review of the multi-year plan found that there was no inclusion of actions related to the reporting of imperfections through the quarterly reports, nor any detail on how the costs of imperfections had been estimated.

It was also noted in the Regulatory Authorities review that the report focused primarily on outlining the components of the costs, as opposed to actions taken to reduce constraint costs and resulting impacts on the Imperfections Charge. A partial penalty was given against these criteria.

5. Updated constraints reporting: a full penalty of €0.05m was awarded in respect of this element of the incentive. The rationale for this decision is based upon an assessment of EirGrid's reporting on all active and removed system constraints and volume of system services dispatched by the TSO through non-energy actions, with a comparative report against 2022 performance. Ultimately, the report was similar in quality to that provided last year and included limited information. Feedback given in review of the 2022 outturn submission on level of detail was not considered.

The following chart shows the CRU decision with regard to this incentive for the first three years of the PR5 period. Performance has been lower than expected. The CRU has also highlighted concerns regarding the quality of the multi-year plans which have been developed under this incentive. The CRU has previously noted that the multi-year plans lacked information on the expected impact of planned actions on imperfection and constraint costs, which is important given the growing cost to consumers in this area.

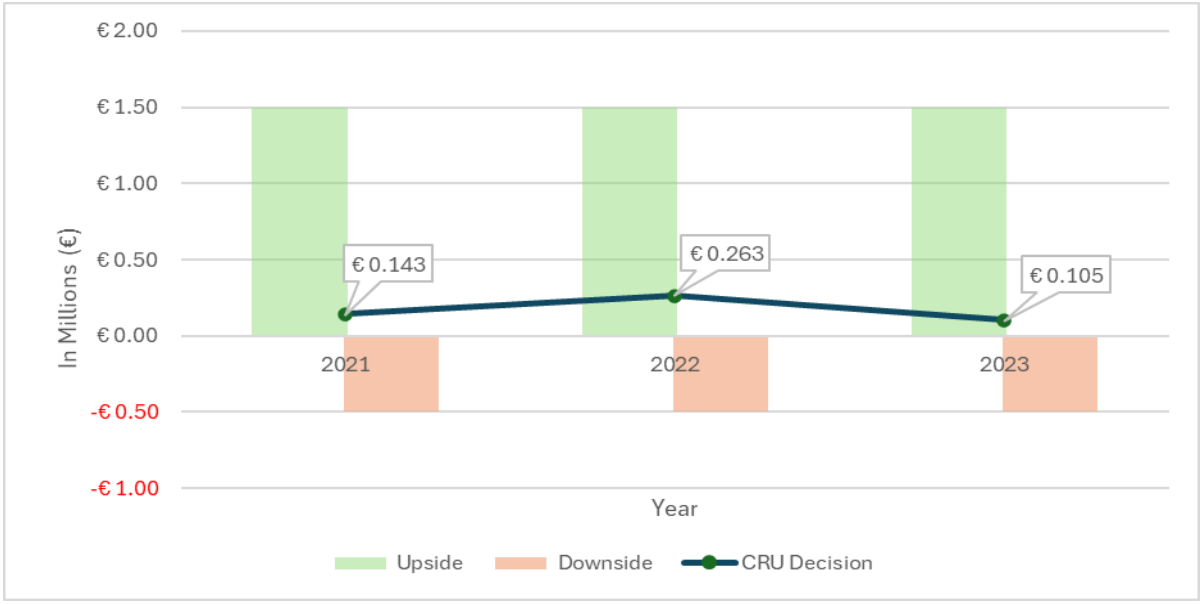


Figure 23 TSO Imperfections and Constraints Incentive Outturn 2021-2023

4.3.6. TSO/TAO Joint Incentive

This incentive will be discussed in section 5.2.

4.3.7. TSO/DSO Joint Incentive

This incentive will be discussed in section 5.1.

4.4. TSO Incentives Outturn Summary

With regard to the quantitative incentives, concerns persist for RES-E, SNSP and Renewable Dispatch Down, for which the TSO has consistently missed its targets. Given the importance of these incentives to achieving Ireland's renewable targets, further progress is required by the TSO.

The TSO has maintained a good performance on system frequency and the SML target has been missed only due to a single incident in 2023.

With regard to balanced scorecards incentives, the TSO demonstrated mixed performance. While some incentives such as Strategic Objective scored relatively high, the performance in relation to Imperfections and Constraints and Local Security of Supply incentives is low and will need to improve to be considered satisfactory at the end of PR5.

4.5. TSO 2023 Reporting

The CRU's Decision Paper (CRU/20/154) sets out the PR5 Regulatory Framework and includes a suite of reports which the TSO and TAO are required to prepare and submit to the CRU on an annual basis. The objective of these enhanced reporting requirements is to enable a transition to a more outcomes focused approach for the PR5 period and future revenue control periods and to increase transparency.

This section sets out the TSO's performance against these enhanced reporting requirements for 2023.

4.5.1. Reporting Requirements

The CRU requires the TSO to submit the following reports to the CRU:

- Stakeholder Engagement Strategy;
- Cybersecurity Report;
- Innovation Report;
- Detailed Capex Report – TSO and TAO;
- Regulatory Reporting Pack; and
- Annual Performance Report (APR) and Investment Planning and Delivery (IPD).

An overview of the reports submitted and an assessment of these is set out below.

4.5.2. Stakeholder Engagement Strategy

The CRU requires the TSO's to publish a Stakeholder Engagement Plan each year. The TSO's Stakeholder Engagement plan 2023 was published[21] following a public consultation, which was open on EirGrid Consultation Portal from the 15 March 2024 until the 17 April 2024. As there is also an incentive associated with Stakeholder Engagement, further detail has been captured in the incentive section of this paper and will be contained in the Network Stakeholder Engagement Evaluation Panel Close Out Report which will be published later this year.

4.5.3. Cybersecurity Report

The CRU requires that a report be submitted annually by the TSO setting out its progress to enhance cybersecurity. The report should include:

- an independently assessed score which comprises National Institute of Standards and Technology (NIST) and International Organisation for Standardisation (ISO27001) best practices;
- the assessment shall cover system resilience and system restoration, in addition to prevention measures,
- the report shall be concise, contain no sensitive information and contain limited, if any, technical information.

The CRU received the TSO's Cybersecurity Report along with an independent report for 2023.

4.5.4. TSO Innovation Report

The CRU requires that the TSO submit an annual Innovation Report to track the use by the TSO of innovation projects to help support and accelerate progress against the strategic objectives. The report should cover:

- projects being initiated;
- projects that are in progress; and
- projects that have been completed.

The report shall also include relevant, proportionate evidence on the scope, cost, rationale for and impacts of each project with either activity or impacts during the reporting year.

Additional funding can be requested by the TSO via the Innovation and R&D Mechanism, which is part of the Agile Investment Framework (AIF). It can provide revenues needed for innovation projects that cannot be funded through the ex-ante allowances or other mechanisms in the AIF. As part of the annual innovation report, a business case for additional funding can be included under this mechanism.

In 2023, the TSO requested an additional allowance to fund the Control Centre Tools Phase 2, to enhance the Voltage Trajectory Tool, this was approved by the CRU. In 2024, a request

[21] EirGrid Stakeholder Engagement Report 2023. Available here.

was made for additional funding for the Operational Tools and Capability Enhancement (OTCE), and this was also approved by the CRU.

The Innovation Report 2023 was submitted to the CRU on the 29 March 2024 after a period of public consultation that lasted from the 7 February to the 6 March 2024. The report examines a total of 22 projects organized in 9 strategic programmes that encompasses topics such as Artificial Intelligence, offshore wind, path to 100% System Non-Synchronous Penetration (SNSP), sustainability, and network flexibility.

EirGrid provided information regarding scope, rationale, impacts and future potential for each project, as per CRU/20/154 requirements. However, the report did not include information on costs, and a clear methodology and timeline for the incorporation of successful projects into Business as Usual is also missing. These are reporting requirements under CRU/20/154 and the CRU expects that this information will be included in the next Innovation Report. Furthermore, the report would benefit from including additional information on the dissemination of outcomes and learnings from innovation projects for the wider industry, as the information provided on this aspect was found to be lacking. This is also a reporting requirement under CRU/20/154.

4.5.5. Capex Reporting (TSO and TAO)

4.5.5.1. Capex Highlights

The CRU requires the TSO and the TAO to publish and submit a number of reports relating to its transmission capital programme.

The Investment Planning and Delivery Report (IPD) is a public summary report on all aspects of transmission investment planning and delivery, from the initial identification of needs based on planning studies through to the delivery and energisation of individual projects. The 2022 Investment Planning and Delivery Report was published by the TSO and TAO in 2023[22]. The CRU issued a letter in relation to the 2022 IPD on the 12 March 2024, the feedback provided by the CRU in this letter should be taken into account in the 2023 IPD[23]. The 2023 IPD is due to be submitted to the CRU in Q4 2024.

EirGrid is also required to publish quarterly reports setting out its progress on transmission projects. These updates commenced in October 2022, through a quarterly publication called the Network Delivery Portfolio Update (NPD). The NDP provides a quarterly status update on 3 key milestones, EirGrid Capital Approval, Project Agreement with ESB and Energisation. All NDPs published to date can be accessed on EirGrid's website.[24] The target milestones shown in the NDP are based on an unconstrained scenario.

The TSO and TAO are required to submit an annual transmission capex report each year setting out a snapshot of the capex programme detailing the progression of all projects, specifically those which have changed or been deferred.

[22] Transmission Investment Planning and Delivery Report 2022
[23] CRU Letter | TSO & TAO APR 2022 and IPD 2022 | CRU202419b
[24] Network Delivery Portfolio | EirGrid

The TSO and TAO submitted a joint Detailed Capex Report for 2023 at the end of April 2024. The report notes that of the €210m network capex allowance for 2023, €203m was spent, with an underspend of approximately 3%. All the values are considered in 2019 monies. The increase in regulatory spend reported in 2023 is welcomed following underspends in 2022 (37% underspend) and 2021 (46% underspend). The reasons for the underspend are set out as complexity of scope, consenting and legal delays, difficulty in granting outages and procurement delays.

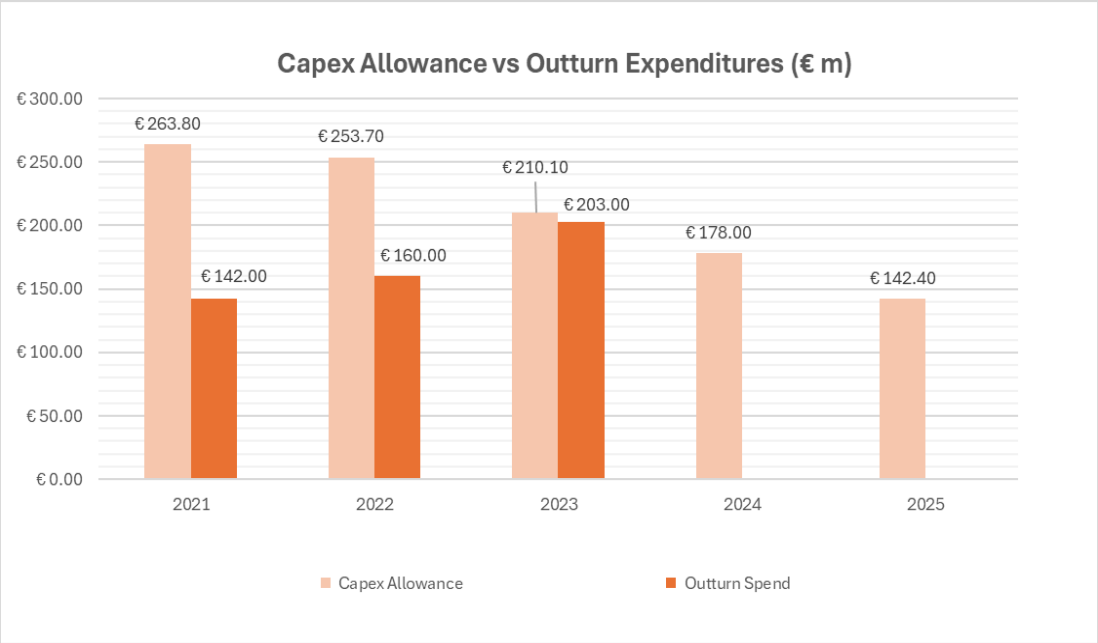


Figure 24 Transmission Capex Allowance vs Outturn Expenditures in 2019 monies.

While capital spend is a useful KPI to monitor the delivery of the capital programme, the progression of key project milestones is also important. In 2023 a significant number of Capital Approvals were achieved (50), which is in line with the TSO target (49). However, delays persist at the subsequent stages of development. There were 38 Project Agreements against a TSO target of 51. The delays are most prominent at the Energisation step, with 25 energisations achieved against a TSO target of 47. Outturn performance for 2021 and 2022 highlights a similar trend. The following figures present an overview of performance per milestone against targets for the first three years of the PR5 period[25].

[25] Target data from the TSO IPD incentive, target data not available for 2021.

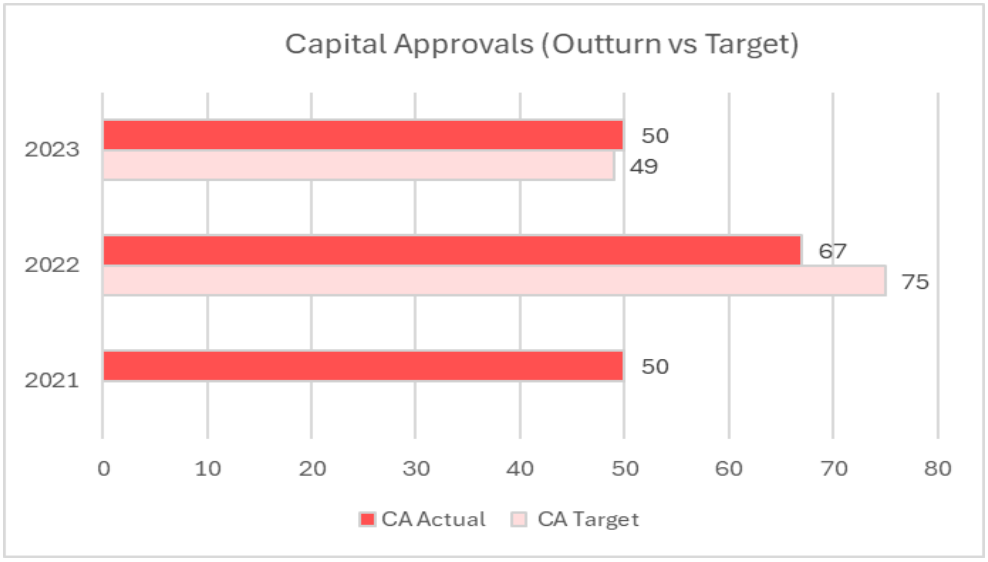


Figure 25 Capital Approvals Outturn vs Target

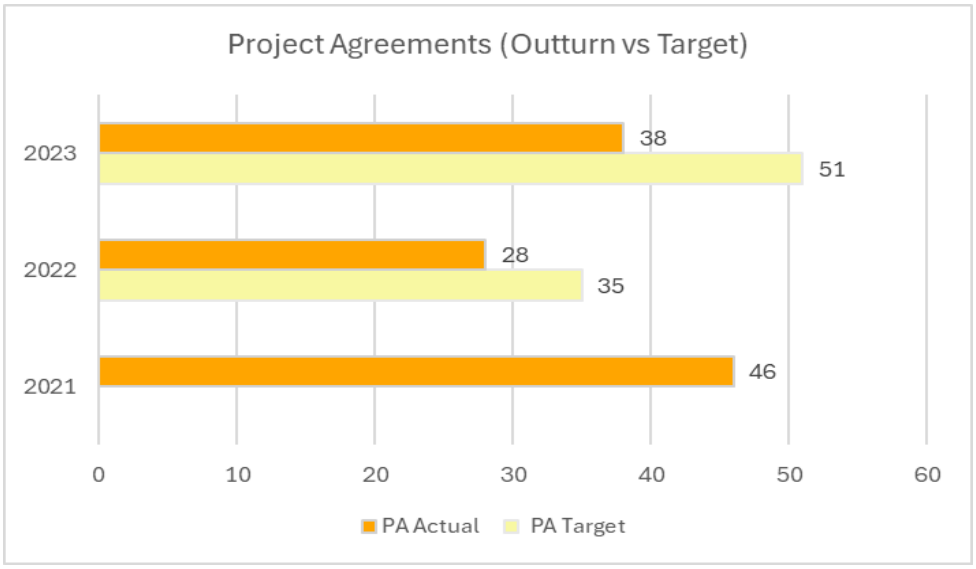


Figure 26 Project Agreements Outturn vs Target

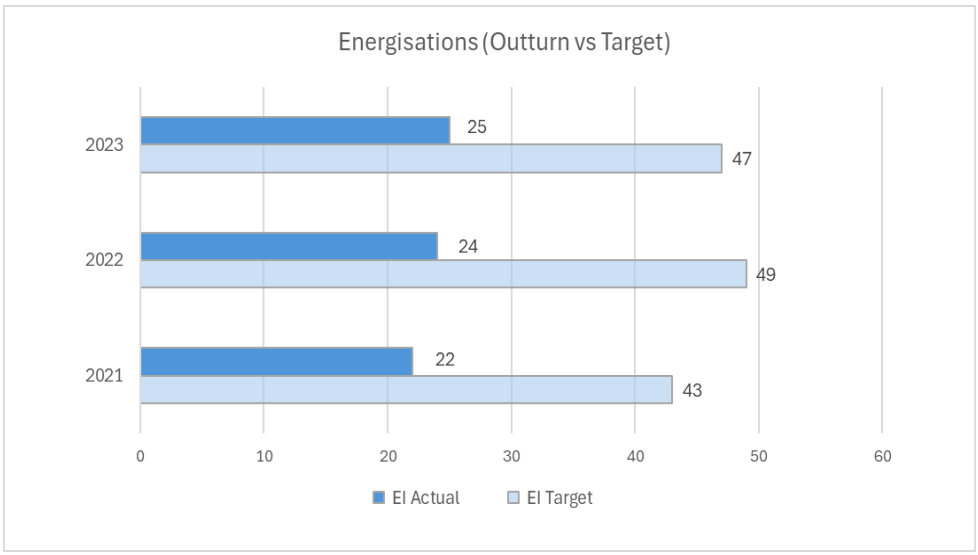


Figure 27 Energisations Outturn vs Target

The Capex report 2023 sets out forecasts for milestone delivery for the remaining years of the PR5 period. However, these are based on unconstrained data from the quarterly NDP publications, and highly subject to changes. The CRU therefore is concerned that the forecasted data does not provide an accurate overview of what it is likely to be achieved in 2025 (96 energisations forecast for 2025). The CRU is also concerned at the forecast for energisations in 2024 (22), which is lower than the 2023 actual outturn (25).

Milestone	Outturn as reported in annual Capex Reports 2021-2023			Forecast (as per unconstrained NDP Q4-23)	
	2021	2022	2023	2024	2025
CA	50	67	50	58	3
PA	46	27	38	87	57
EI	22	24	25	22	96

4.5.5.2. CRU Analysis on Transmission Capex Data

The charts below provide more information on the type of energisations which have been delivered in PR5 to date. The majority of energisations were at 110kV level and were generation connections.

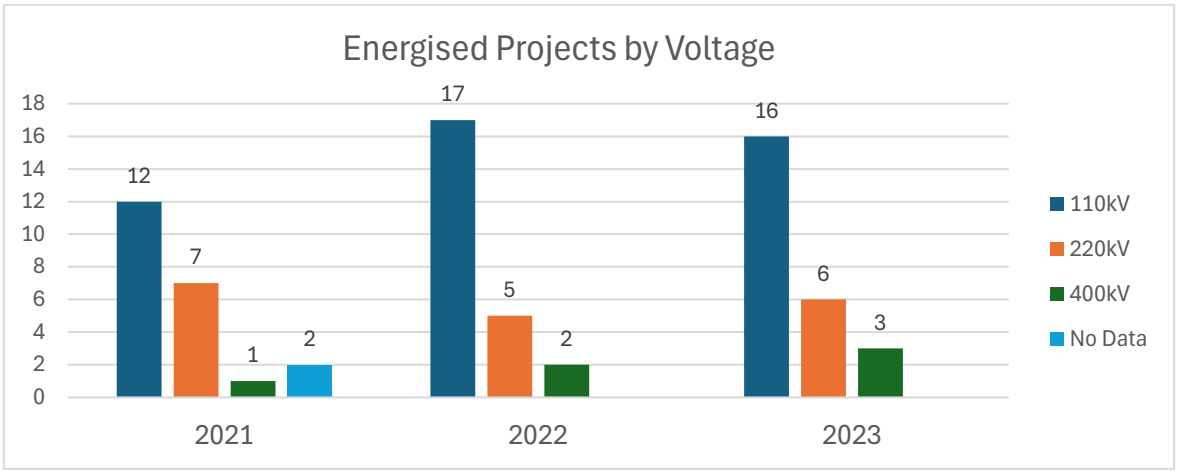


Figure 28 Projects Energised by Voltage years 2021-2023

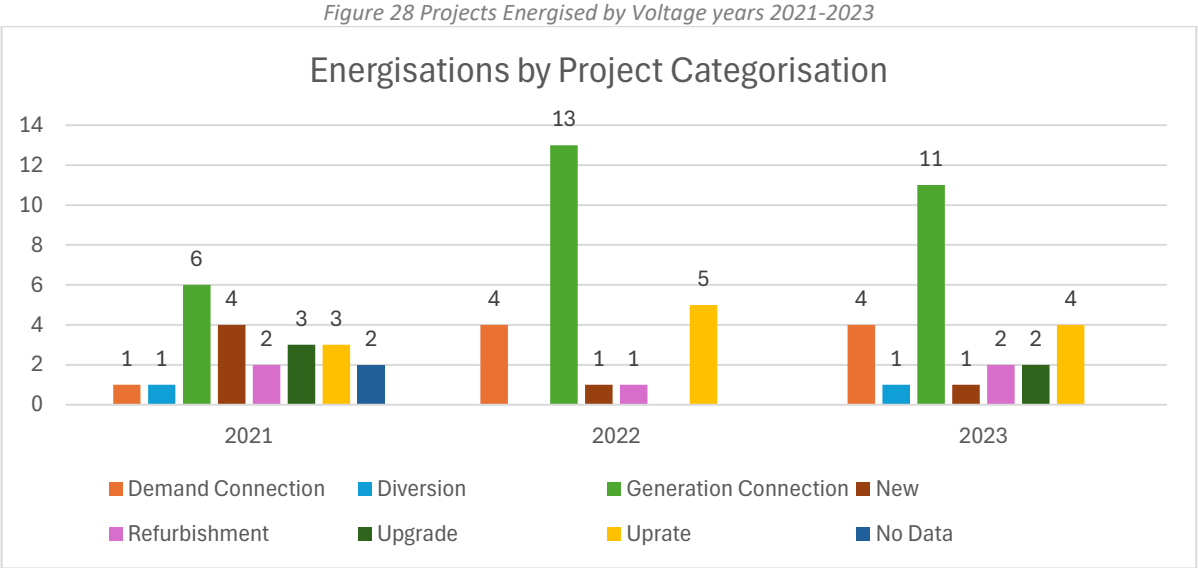


Figure 29 Projects Energised by Project Categorisation years 2021-2023

The total number of projects in the transmission capex portfolio at 31/12/2023 was reported as 322 in the 2023 Capex Report. Of these projects, 87 (27%) had delayed energisation dates since the previous year's capex report. In 2022 the portfolio included 272 projects, with 65 changes (24%) in energisation dates from the previous year. In 2021, for 52 out of 216 projects (24%) in the portfolio the energisation dates were subjected to variations since the previous year. In each year of PR5, a significant proportion of projects in the portfolio reported a delay in energisation date, and this has increased incrementally in 2023.

Further analysis was carried out by the CRU this year based on data updated to the Q2 2024 NDP publication and comprising projects of the original PR5 submission and all the following NDP updates. This analysis aims at tracking delay status and progress of individual projects comparing the latest dates for achieved and forecasted milestones with the original milestone dates.[26] A RAG status that classifies the extent of the delay is applied to milestone dates: "Green" when the milestone is either on track or with a delay of less than 3 months; "Amber" when the milestone has been delayed more than 3 months but less than 12; "Red" when the milestone has been delayed more than 12 months. When data is not available the blue status "No Date" is applied. The following chart presents an overview of the status of delay of all projects currently present in the portfolio as at Q2 2024.

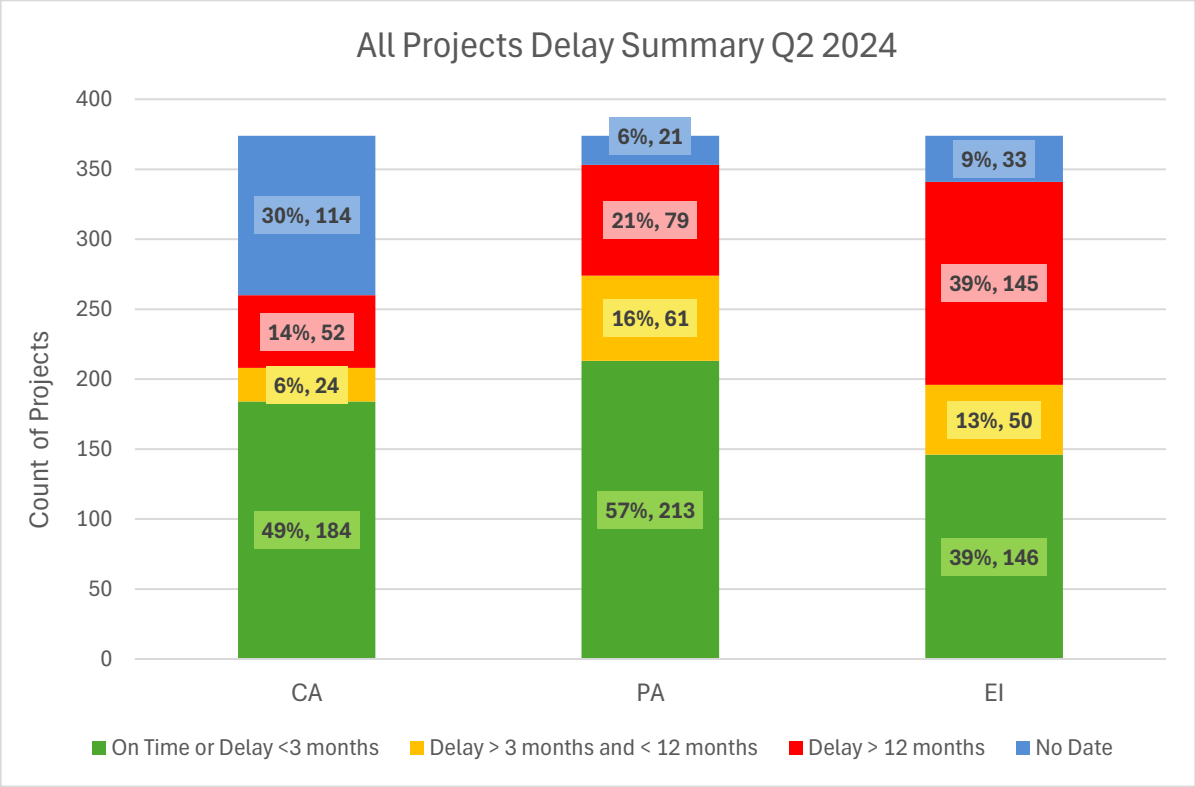


Figure 30 Portfolio Projects Delay Summary as at Q2 2024

The chart highlights that energisation is the milestone with the highest proportion of projects with a red RAG status (39%).

[26] Original milestone dates can come from original PR5 submissions to the CRU or following NDP updates.

In terms of reasons for delays in energisation dates, the consolidated cause of delays for 2022 and 2023, as reported on in the annual transmission capex report, is set out below:

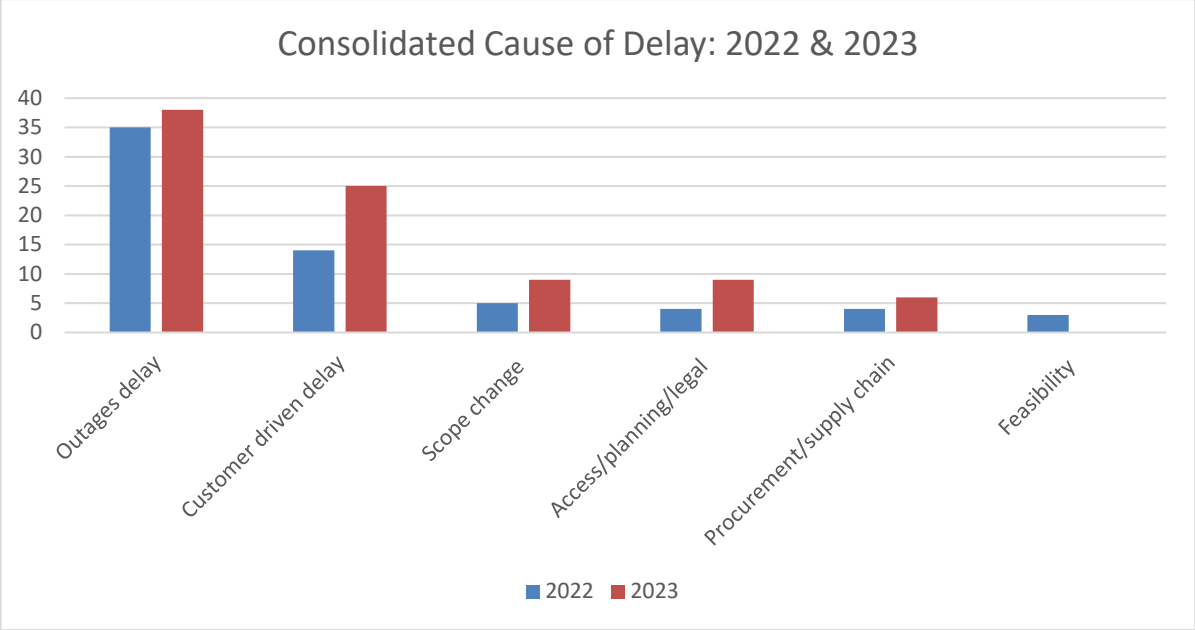


Figure 31 Identified Causes of Delay years 2022 and 2023

Outages is the most frequently reported reason for a change in energisation date as reported by TSO and TAO to the CRU. The CRU welcomes the development of a collaborative programme between the TAO and TSO, the Joint Outage Transformation Programme, focused on increasing outage availability, maximise utilisation and effectiveness of outages. There is an expectation that this programme will expedite the delivery of energisations and the completion of projects in the years to come. The CRU is providing additional support for this programme through the Joint TSO/TAO incentive and will monitor its development and outputs closely.

There is a notable increase in the reported number of delays associated with customer issues from 2022 to 2023. The CRU encourages the TSO/TAO to engage closely with connecting customers to mitigate potential risks on the customer side.

4.5.5.3. Infrastructure Delivery Review

There have been ongoing concerns regarding delays in the delivery of transmission infrastructure. In the last two price controls, PR4 and PR3, there were underspends in network capital allowances which were largely due to the slower than expected delivery of capital programmes rather than efficiencies. As this issue appears to be persisting in PR5 the CRU has commissioned a report to better understand the cause of delays in delivery and to enhance CRU's monitoring and reporting on infrastructure delivery. The CRU has been engaging actively with the TSO and TAO in relation to this over the past year to identify barriers and to address delivery risk and will continue to do so., particularly in relation to transmission outage windows. The report will be published shortly alongside a summary of CRU's actions to date and next steps in this area.

4.5.6. Regulatory Reporting Pack

The CRU requires a number of reports to be submitted as part of the Regulatory Reporting Pack. These include:

i. The detail supporting the APR and associated documentation

The CRU requires the TSO to publish an APR each year. As part of the Regulatory Reporting Pack the underlying data on the TSO's performance is submitted to allow an evaluation of the TSO's performance against the suite of incentives in place under the PR5 framework. The report is intended to provide customers, industry participants and other interested parties with a clear, accessible, comprehensive, quantified but non-technical report on performance over the past year. The timeline for submission of the 2023 APR is 1 October 2024.

The CRU approved the 2022 Transmission Annual Performance Report in March 2024.[27] The CRU's feedback on this report was provided also published in March 2024.[28]

ii. Benchmarking Report

The CRU requires EirGrid to submit a report as part of the regulatory reporting pack which identifies best international practice and compares their performance against this, using comparators and supporting information. Comparisons should be made with OECD countries and particular importance should be paid to where the TSO is not meeting its PR5 performance targets and to innovation and renewable integration. Also, a range of international experiences should be considered without focusing only on the most familiar markets. The TSO's benchmarking report evaluates the performance of the TSO across three key activity areas, System Reliability and Resilience, Energy System Transition, Network Development, and compares with selected TSOs in OECD countries and jurisdictions with similar characteristics.

This year the report included a parameter for the delivery of transmission infrastructures, incorporating the CRU's feedback given in 2022. The CRU welcomes this addition. A summary of the 2023 Benchmarking Report will be included in the 2023 Annual Transmission Performance Report which is published for consultation in Q4 2024.

iii. Regulatory Deliverables – Workplan and EU Network Codes

The Regulatory Reporting Pack requires the TSO to submit two reports under this heading:

- Performance against its workplan; and
- Implementation on EU Network Codes

[27] Annual Electricity Transmission Performance Report | 2022 | APR | EirGrid
[28] Letter | CRU to TSO & TAO | Transmission APR 2022 and IPD | 2022 | CRU202419b

Workplan

The TSO submitted its 2023 workplan setting out an overview of EirGrid's regulatory deliverables under its TSO licence along with the target completion dates for same. The report also included information on the status of these deliverables.

EU Network Codes

The CRU require the TSO to provide a summary of progress against implementation of the EU Network Codes. The TSO submitted a report in respect of this setting out the status of each code.

iv. Audit Report on Quality of Data Provided to the CRU

The CRU requires that an audit report be submitted each year confirming the quality and accuracy of the data provided to the CRU as well as the quality of regulatory submissions provided to the CRU.

The TSO submitted a report from an independent auditor setting out a score of "Adequate". The score of adequate was based on the auditor's review of 20 documents submitted to the CRU in 2023. The documents are reviewed against four criteria, as set out in CRU/20/154 – Clear, Complete, Candid and Constructive

To obtain a higher score the auditor made the following recommendations:

- Consider any document from the perspective of the target audience or reader. To aid this, documents should be self-contained, with all relevant information included in the body of the document.
- To ensure that all relevant readers gain the best understanding of the article, it's important to maintain clarity in its structure. This includes providing and/or referencing adequate background knowledge about the concepts and ensuring a clear introduction that articulates the article's purpose. A conclusion statement is recommended where appropriate.
- Link and explain the mentioned articles and/or references with more information. For example, any references from relevant documentation should be included within the response or using linked footnotes.
- Documents should undergo review before submission to address typos, grammatical errors, and ensure clarity and consistency.

The assessment in 2022 resulted also in a score of "Adequate", so the score did not change in the 2023 assessment. In addition, the external auditor stated that the 2022 recommendations have been incorporated into the document submissions for 2023, generating an improvement in the formal quality of the submissions to the CRU. Only one recommendation from 2022 needs to be applied consistently to all documentation, mainly around the referencing within documents. The CRU relies on the network companies providing high quality information which can be relied upon for decision making and welcomes the improvements identified by the auditor.

4.5.7. TSO Reporting Conclusion

The TSO has met the reporting requirements for 2023, and in some areas, it is evident that CRU feedback has been taken on board. However, some criticism persists in the respect of the reporting requirements, for example the Innovation Report.

The CRU also has concerns regarding the impact of the unconstrained data in the NDP on subsequent information which is reported to the CRU.

The CRU expects that reporting standards continually improve, and that the feedback provided this year is incorporated into the 2024 reports, including the feedback provided in March 2024 in relation to the 2022 IPD and APR. The TSO should demonstrate clear improvements in their performance in the context of the outcomes and strategic objectives of the PR5 Framework.

5. Joint Incentives Performance 2023

This section details the performance of the network companies in the two joint incentives in 2023. Performance for 2021 and 2022 is also included for comparison purposes.

An overview of the incentives available to the network companies is set out in the table below along with the key aims of each incentive as envisaged in the PR5 Regulatory Framework, Incentives and Reporting Decision Paper (CRU/20/154).

Incentive	Description
DSO/TSO Joint Incentive	Encourage and reward the DSO/TSO coordination and collaboration so that the SOs can help each other in achieving their targets or delivering their plans.
TSO/TAO Joint Incentive	Provides a positive signal to both licensees to strive to improve collaboration and innovation in delivery of transmission network improvements.

5.1. DSO/TSO Joint Incentive

The DSO-TSO joint submission contained a proficient level of detail on progress made in 2023 towards facilitating innovative technology and system services. The DSO-TSO joint submission highlights how the system operators have acted in 2023 regarding the long-term security of the power system, with the name of this section of the incentive updated from "Addressing Security of Supply" to distinguish it from the CRU's Security of Supply Electricity Programme.

This incentive was assessed against four workstreams and required the submission of a report from an external auditor. All four categories were assessed in line with the CRU's 2023 Balanced Scorecard Decision Paper and a narrative on their outturn performance is described below.

1. **Whole of system approach:** The DSO and TSO provided a detailed joint report relating to the whole of system approach element of the joint incentive, however not all the actions within the DSO-TSO 2023-2027 multi-year plan had been actioned according to the initial timeline. The score was reduced accordingly by the CRU to account for this.
2. **Facilitating new technology and system services:** The joint submission contained a good level of detail on progress made in 2023 towards facilitating new technology and system services, including detail on progress on a number of trials and pilots. Notably Pilot 2 went live on schedule in 2023 and unlocked 680MWh of system services.

   One pilot was behind the timeline set out in the multi-year plan; therefore, the score was reduced accordingly by the CRU.
3. **Reducing dispatch down of renewables:** The joint submission contained a good level of detail on progress made in 2023. The DSO and TSO developed a joint report in 2023 on the required short-term capabilities for Distributed Energy Resources (DER) visibility, forecasting and modelling, and a roadmap for the development of future required capabilities. The high-level design and plan agreed for next steps on reactive power co-

ordination was not completed according to schedule, with the development of the reactive power high level design delayed to early 2024. The score was reduced to reflect this.

4. **Secure Future Power System:** The joint submission outlined areas of progress including updating the protection settings of large users and collaborating with the Northern Ireland system operators on a draft DER technical assessment. The technical assessment was completed later than anticipated. The score was reduced to reflect this.

The CRU decided that overall, a reward payment both to the TSO and the DSO should be applied in respect of this incentive. The TSO was awarded €0.151m out of a possible €0.2m. This reflects a slight increase compared to the 2022 outturn award (€0.135m). The DSO performance resulted in a reward payment of €2.35m out of a possible €3.0m reward.

Aspect	Upside (€m)		Downside (€m)		CRU Decision (€m)	
	TSO	DSO	TSO	DSO	TSO	DSO
Whole of system approach	0.05	0.75	-0.025	-0.25	0.041	0.63
Facilitating new technology and system services	0.05	0.75	-0.025	-0.25	0.046	0.69
Reducing dispatch down of renewables	0.05	0.75	-0.025	-0.25	0.031	0.50
Secure future power system	0.05	0.75	-0.025	-0.25	0.034	0.53
	0.20	**3.0**	**-0.10**	**-1.0**	**0.151**	**2.35**

The following charts show this incentive performance trend for the first three years of the PR5 respectively for the TSO and the DSO.

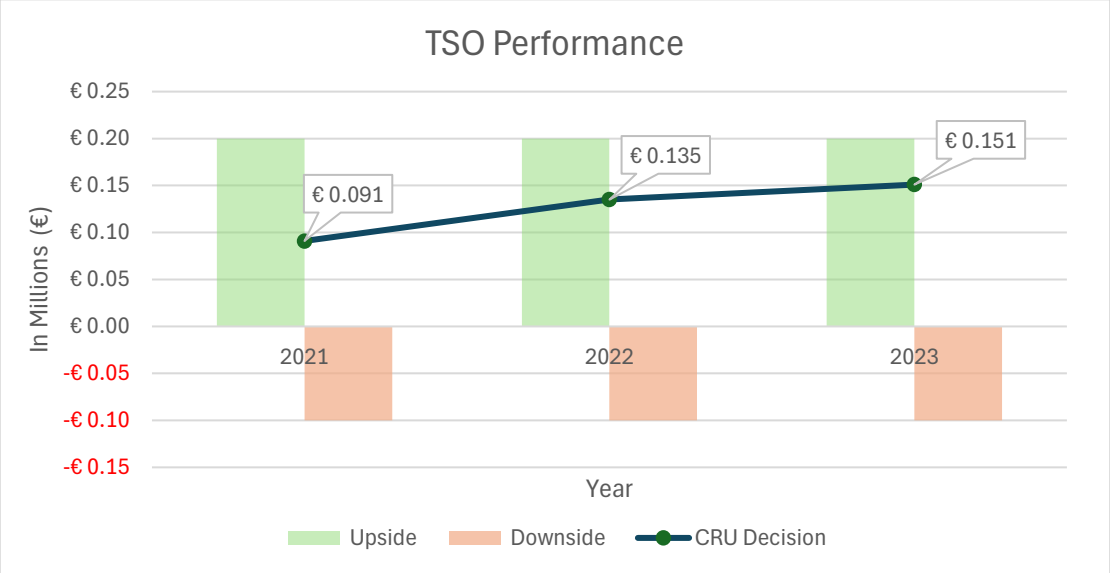


Figure 32 TSO/ DSO Joint Incentive, TSO Performance 2021-2023

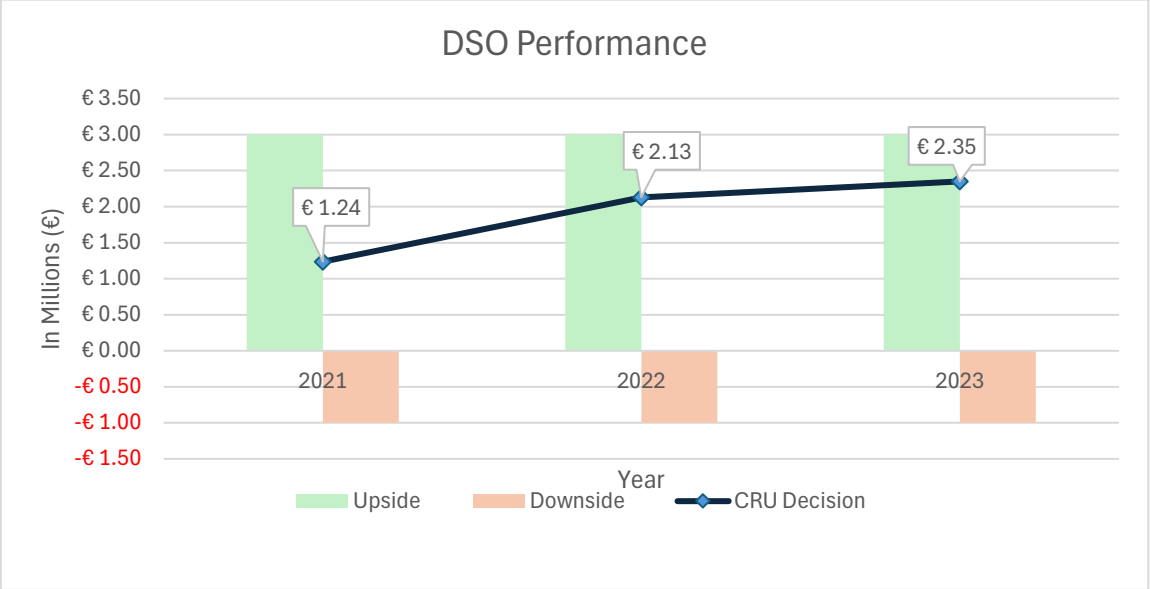


Figure 33 TSO/DSO Joint Incentive, DSO Performance (2021-2023)

5.2. TSO/TAO Joint Incentive

The joint incentives between the TSO/TAO incentivises the promotion of efficiencies through enhanced collaboration. This incentive was evaluated under four categories, one of which was assessed quantitatively, and the remainder were assessed qualitatively and require an audit to be completed. All four categories have been assessed in line with the CRU's 2023 Balanced Scorecard Decision Paper.

The TAO has an upside and corresponding downside of €1.5m available under this incentive, while the TSO has an upside reward of €0.2m available and a corresponding downside of €0.1m. The following are details regarding the network companies' performance for the four categories.

1. **Deployment of New Technology:** The focus under this component were on reviewing new technologies for use in the Technology Toolbox, with a programme of work established for each asset category (overhead lines, underground cables, and HV stations) to facilitate the actual deployment of new technologies. This component is assessed qualitatively. Sufficient evidence was provided to demonstrate the completion of most actions per asset category. In the few areas where these actions were not achieved, evidence was provided that this was outside of the control of the network companies.
2. **Project Initiation to CPP Agreed Phase:** This, the only quantitatively assessed component and incentivises a set number of projects to progress from Indicative Programme (IP) issue to Committed Programme Parameters (CPP) agreement within a 98-day timeframe. The CRU fixed a target of 28 projects in the 2023 Balanced Scorecard Information Paper. The outturn report demonstrated that 28 projects reached CPP agreed phase within the given timeframe.
3. **Joint Process Improvement:** This component requires the network companies to demonstrate further implementation of changes and improvements to the TOP process in 2023 and include the revised Transmission Line Assessment (TLA) being implemented

by the TSO and TAO. The TSO and TAO have submitted an independent audit report with a recommendation that the performance be regarded as "strong". After assessing the outturn report and the audit report the CRU found that sufficient evidence was presented to confirm the evaluation as "strong".

4. **Asset and Programme Data Exchange:** The TAO and TSO are committed to the proactive provision of information and data sharing to efficiently deliver transmission network capex for the PR5 programme. This component monitors the overall progress on digitisation of project management. An independent audit report was submitted with a recommendation that the performance was regarded as "strong". After assessing the outturn report and the audit report, the CRU determined that sufficient evidence was presented to confirm the evaluation as "strong".

The TSO and TAO provided information demonstrating that they had performed strongly under all four categories. The three categories assessed on a qualitative basis were accompanied by an independent audit report, which confirmed that a 'strong' performance had been achieved. The CRU decided therefore to apply the full reward available both to the TSO and the TAO, respectively of €0.2m and €1.5m, with respect to this incentive.

Aspect	Upside (€m)		Downside (€m)		CRU Decision (€m)	
	TSO	TAO	TSO	TAO	TSO	TAO
Deployment of New Technology	0.05	0.375	-0.025	0.375	0.05	0.375
Project Initiation to CPP Agreed	0.05	0.375	-0.025	0.375	0.05	0.375
Joint Process Improvement	0.05	0.375	-0.025	0.375	0.05	0.375
Data Sharing	0.05	0.375	-0.025	0.375	0.05	0.375
	0.20	**1.50**	**-0.10**	**-1.50**	**0.20**	**1.50**

The following charts show this incentive performance trend for the first three years of the PR5 respectively for the TSO and the TAO.

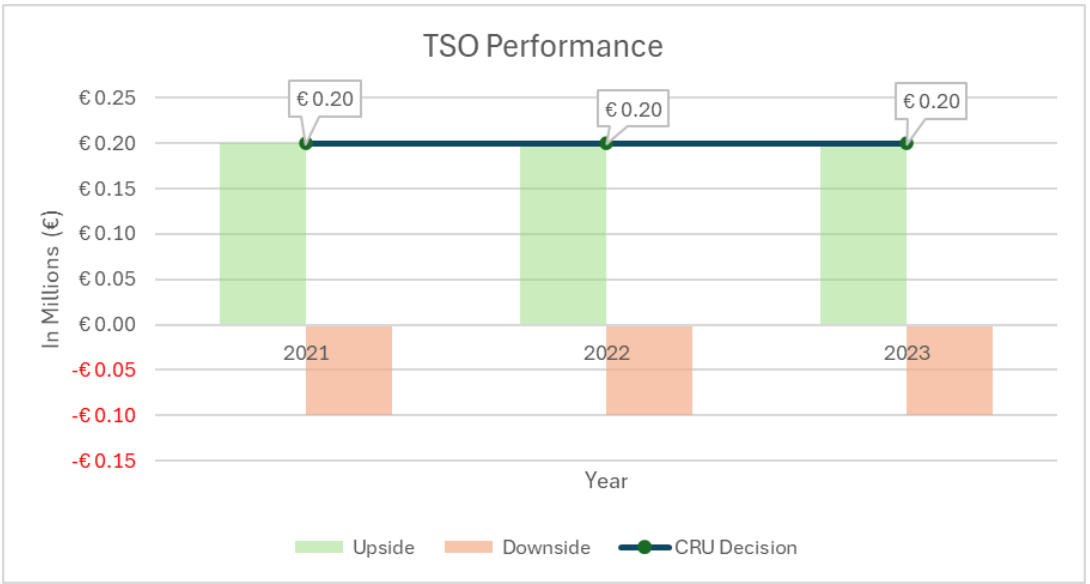


Figure 34 TSO/ TAO Joint Incentive, TSO Performance (2021-2023)

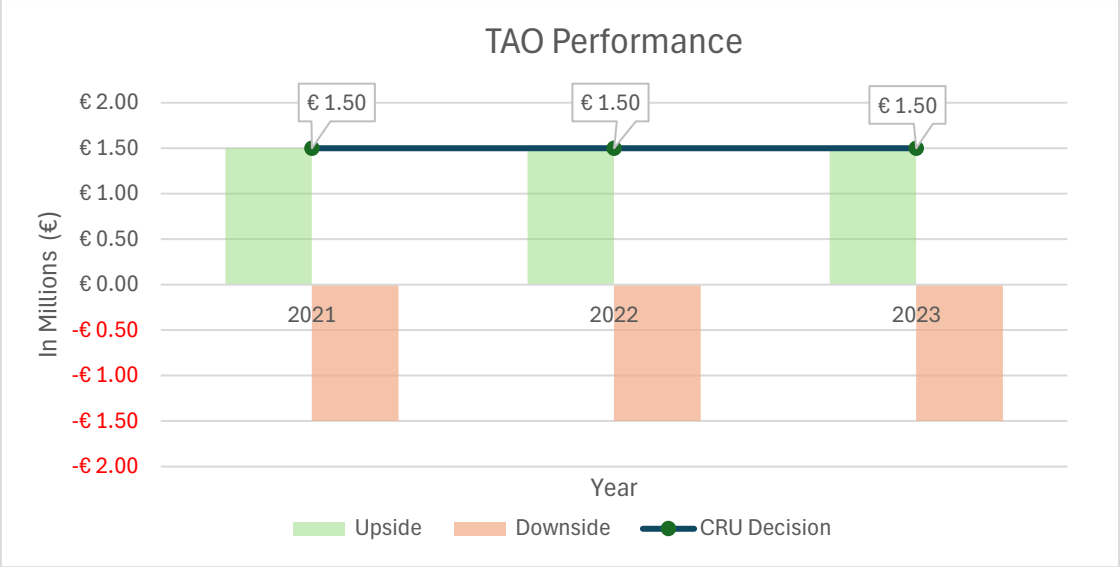


Figure 35 TSO/TAO Joint Incentive, TAO Performance (2021-2023)

6. Conclusions and Next Steps

The CRU has completed its assessment of 2023 PR5 incentives and reporting for the network companies.

There are some areas where performance has continued to be high, or where performance has improved, which is welcomed.

However, there are a number of areas where there is a clear need for performance to improve over the remainder of PR5 for both the TSO and DSO.

The CRU will set the remaining PR5 Balanced Scorecard requirements (2025) for the network companies at the end of this year, and the final two years of PR5 assessments will take place in 2025 and 2026.

The CRU will use learnings and results from the PR5 incentives and reporting to date to inform the development of the PR6 Incentives and Reporting Framework, which will cover the period 2026-2030.