An Coimisiún um Rialáil Fóntais
Commission for Regulation of Utilities

PR5 Regulatory Framework, Incentives and Reporting

Decision Paper

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CRU Mission Statement

The Commission for Regulation of Utilities ('CRU') mission is to protect the public interest in Water, Energy and Energy Safety.

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

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

Executive Summary

Every five years the CRU publishes a Price Review that determines the amount of revenue that EirGrid and ESB Networks (collectively the "network companies") can collect from customers over the next five-year period. The current period, "PR4", will come to an end at the end of this year, 2020. The next period, "PR5", will cover 2021-2025.

In addition to the allowed revenues, each Price Review outlines the set of arrangements that apply to how the network companies will be incentivised, how unexpected expenditure will be treated, and how under and over expenditure will be addressed. With potentially more unforeseen changes to the electricity sector, the regulatory model for PR5 will need to place more emphasis on the *results* that the network companies' activity need to deliver (their "outputs") rather than *how* they carry out that activity (their "inputs") to deliver those outputs. This means, the regulatory framework needs to be 'agile' and allow the network companies to adapt to changing circumstances delivering value to customers more quickly. More generally, customers would benefit from a regulatory framework that places more emphasis on the outputs being delivered rather than on the inputs being used. As this puts the focus of the process on what matters for customers, allowing the network companies the flexibility to do this is in the most cost-effective approach rather than "sticking to the plan".

In PR4 the CRU developed a regulatory framework that put greater emphasis on outcomes (rather than processes) for customers and on facilitating innovation in the Transmission System Operator (TSO) and the Distribution System Operator (DSO). For PR5, the CRU wants to build on the successes of the PR4 approach and continue to incentivise efficient costs, enable necessary investment, and hold the network companies accountable for delivering what customers need.

The *Climate Action Plan 2019*[1] (the 'CAP') sets targets that include 70% of electricity coming from renewable generation sources by 2030; increased uptake of micro-generation (including 'prosumers' selling power to the grid); and all new cars and vans sold in 2030 being electric (resulting in 950,000 EVs on the road by 2030). The network companies have an important facilitation role in the CAP and so it is important that the PR5 Regulatory Framework enables them to do so, while protecting customers' interests through effective oversight.

Monitoring and reporting gives visibility to what each company is delivering, and improves accountability. Incentive mechanisms go a step further by attaching additional financial rewards or penalties to specific reported measures of performance. Data generated through reporting and incentives helps to inform the more detailed cost assessments and forecasts involved in future price reviews, and ongoing regulatory scrutiny. They are, therefore, important instruments through which the CRU seeks to protect the interests of customers. In deciding on the right reporting framework an important consideration is the balance between the volume of data and the accessibility of the information that the data provides. The CRU and stakeholders must have sufficiently detailed information to make informed decisions on relatively complex issues and must ensure that information on the areas that matter most to stakeholders is readily available and accessible to a wide audience. The decisions set out in this Paper, build upon the reporting framework established in PR4, and aim to achieve that balance through differentiating between reporting intended to inform a wide audience, technical information intended for industry participants, reporting that will be an input into the annual review process by the CRU and lastly, detailed regulatory information collected contemporaneously for review in the next five-year Price Review.

This Paper sets out the enhancements to the current reporting and incentives arrangements, covering the totality of the activities undertaken by TSO, TAO and DSO/DAO on behalf of current and future customers and market participants. The objective of the PR5 reporting and incentives remains consistent with PR4, which is to ensure that network companies are focussed on:

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

The CRU intends that this approach, including the key elements of reporting and reputational and financial incentives, will further evolve as part of the PR6 process. This aligns with CRU's mission to regulate water, energy and energy safety in the public interest and its goal of ensuring best practice regulation.

[1] Climate Action Plan 2019: https://www.dccae.gov.ie/documents/Climate%20Action%20Plan%202019.pdf

Regulatory Framework: Building Blocks

The building blocks of the PR5 Regulatory Framework are set out in Figure 1 below. They can be considered in three broad categories, all of which will be supported through an enhanced reporting and monitoring framework:

- the *ex-ante* setting of allowances, outputs and deliverables;
- the incentivised delivery against those using the Agile Investment Framework as required; and
- the *ex-post* review in the next Price Review process.

The *ex-ante* process will have three main components. In terms of the inputs, there will be no change from the current PR4 framework. Inputs will be set on an Opex and Capex basis respectively and will be used to determine the network company's allowed revenues, against which an efficiency challenge will be set.

The move to an output-based approach is new to PR5 and so the CRU will be introducing a transitional approach. This will mean that outputs that can be well defined and clearly linked to inputs will be assessed. This approach will allow the network companies a level of flexibility to reallocate revenues between the inputs associated with that output (while maintaining the distinction between operational and capital expenditure). The CRU considers that this approach should facilitate innovation and improvements by incentivising the network companies to focus on delivering the outputs most relevant for customers and market participants.

Once the allowances are set, in the delivery phase over PR5 there are four main components:

1. cost incentives;
2. performance incentives;
3. the Agile Investment Framework; and
4. enhanced reporting and monitoring.

Cost incentives allow the network company to keep some or all of the difference between the allowance and efficiently incurred expenditure.

The performance incentives for PR5 build upon the PR4 incentives by retaining most of the PR4 mechanisms with updated targets, and the introduction of some new mechanisms to incentivise network companies in the delivery of the PR5 objectives.

The Agile Investment Framework comprises mechanisms to allow access to additional revenues in response to the changing needs of the system and to facilitate a flexible approach to network investments. The CRU considers that the Agile Investment Framework is an important part of the PR5 Regulatory Framework as it can address the uncertainties for the PR5 period, ensure customers are protected against unnecessary costs, and provide the revenues needed to deliver on the CAP as the associated investments become necessary. Supporting regulatory oversight of this delivery period is provided through the enhanced

reporting and monitoring framework which the network companies will be required to adhere to. This involves the publication of clear, concise, and accessible reports on the network companies' performance and network delivery. In addition, annual regulatory reporting to the CRU will provide a clear link between the *ex-ante* allowances and deliverables, spending decisions taken by the network companies during the PR5 period, and the holistic review of the network companies performance over the PR5 in the *ex-post* review. The reporting framework will allow the CRU to conduct effective oversight of the network companies while also allowing for greater flexibility in response to innovation and changing circumstances. The information and experience gained through this reporting framework will also facilitate the expansion of the output-based approach in PR6.

The Agile Investment Framework consists of five mechanisms:

1. the Uncertainty Mechanism, releases revenues in response to new identified needs on the system;
2. the Flexibility Mechanism, allows the DSO to reallocate allowances between Opex and Capex (bi-directional);
3. the Capex Adjustment Mechanism, this is retained from PR4 and allows the TSO and TAO to request changes to the overall Capex programme allowance;
4. the Innovation and R&D Mechanism, this provides revenues needed for innovation projects that cannot be funded through the *ex-ante* allowances or other mechanisms in the AIF; and
5. the TSO Monitoring Committee, will provide independent and on-going oversight of the TSO initiatives that have not been fully defined at the start of PR5 but will be required during PR5. The CRU will not be a member of the committee and the approvals of expenditure will be made by the CRU, not the committee.

As with previous price reviews the *ex-post* review will be carried out at the end of PR5, in the same manner as previous Price Reviews. The *ex-post* review will assess whether the network companies have achieved their deliverables and incurred their expenditure efficiently. Any expenditure not demonstrated to have been efficiently incurred will be disallowed and expenditure demonstrated to have been efficiently incurred will be allowed. For the avoidance of doubt the obligation rests with the network companies to demonstrate that their expenditure has been efficient. The network companies will be expected to make submissions under the cost incentive demonstrating this in order to retain any efficiency savings.

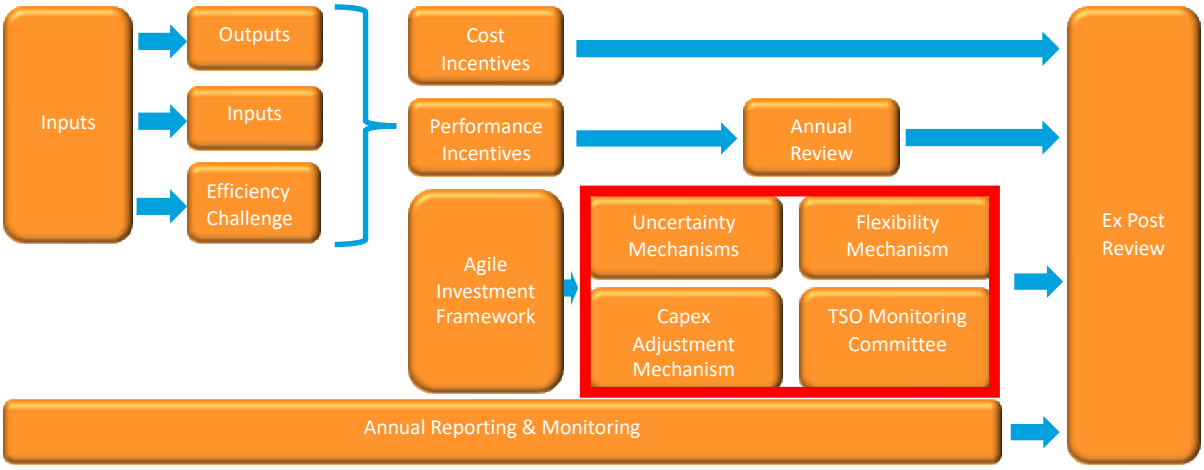

Figure 1: PR5 Regulatory Framework Building Blocks

Enhanced Reporting and Monitoring Framework

The CRU has decided to retain much of the PR4 Reporting and Monitoring Framework with a few changes and additions. These changes are to reflect the increased level of flexibility with the PR5 Regulatory Framework and the continued transition to a more outcome-based approach. This began in PR4 with a greater focus on outcomes in terms of reporting and incentives, this is expanding in PR5 to cover outputs in terms of allowances and reporting. The use of outputs in PR5 will ultimately provide the necessary certainty for the CRU to consider a fully output-based approach for PR6. In PR6 the CRU intends to build on the PR5 framework to further expand the focus on outcomes. Reporting and monitoring will be a key enabler of this.

The three broad categories of reporting are:

1. Stakeholder Reporting, the retention from PR4 of the Annual Performance Reports for the TSO and DSO, and the Investment Planning and Delivery Report for the TSO and TAO.
2. Regulatory Reporting Pack, an expansion of the current annual submissions made by the TSO, DSO and TAO for the TUoS and DUoS processes.
3. Detailed Expenditure Reporting, this is a new arrangement for PR5. It requires the network companies to provide detailed reporting in a similar format to the questionnaires used for the historic *ex-post* review, it is not intended that this information will be reviewed each year, but will be used for the five-year review process. The CRU considers that this additional reporting is necessary as the transition to output-based regulation has the potential to exacerbate the asymmetry of information between the network companies and the CRU creating the potential for windfall gains to the network companies.

The CRU will work closely with the network companies to develop the reporting package, ensuring that it meets the needs of stakeholders, the network companies and the CRU. The

CRU may also make changes to the format of the reporting requirements over the course of PR5 to ensure ongoing improvements in the reporting processes.

Transmission Performance Incentives

The TSO has an important role to play in the achievement of the targets set out in the CAP, and many of the decisions that the TSO takes in how it does its job can have a significant impact on the cost to customers. However, these customer costs and benefits are often not directly related to the costs and benefits felt by the TSO. Improvements in how the TSO makes decisions can have a proportionately larger impact on customers than the cost of incentivising the TSO. Therefore, the CRU has introduced a significant increase in the revenue at risk for the TSO, however there is a very large positive asymmetry in the TSO's favour (the potential upside is much greater than the potential downside).

For the TAO the CRU is also proposing a large increase in the revenue at risk but maintaining the symmetry of the PR4 incentives. The CRU has considered the difference in the nature of the roles and incentive mechanisms for the TSO and TAO. While the activities and outcomes for the TAO can be well-defined given its role, the TSO's activities and outcomes are harder to define *ex-ante* as the TSO can affect customer outcomes in many ways. Therefore, to encourage the use of innovation and new approaches, the CRU considers that it is appropriate to design the framework with a greater reward than penalty. In addition, the scale of the challenge in meeting the deliverables in the CAP by 2030 is significant and the TSO has a crucial role to play. If the TSO is successful in achieving the targets set out in this framework there will be large benefits for customers. Therefore, the CRU considers that it appropriate to put relatively large incentives in place for the TSO in order to deliver much larger benefits for customers.

Table 1: Value of PR5 Incentives for the TSO

	PR5 Values				PR4 Values	
	EirGrid Proposal		CRU Decision		CRU Decision	
	Upside	Downside	Upside	Downside	Upside	Downside
Total (€m)	58.8	22.5	40	20	10.0	10.0
Capped (€m)	35	15	40	15	-	-

Table 2: Value of PR5 Incentives for the TAO

	PR5 Values				PR4 Values	
	ESB Networks Proposal		CRU Decision		CRU Decision	
	Upside	Downside	Upside	Downside	Upside	Downside
Total (€m)	30	15	30	30	15	15

In PR4 the value of the incentives pot in terms of operating costs was ±4.5% for the TSO and ±5% for the TAO. In PR5 the CRU has determined a 13% (upside) and 5% (downside) for the

TSO. The TAO's PR5 upside/downside equates to ±9%. The following TSO incentives are included:

- Three new incentives, targeting increasing the RES-E to 55% by 2025, SNSP[2] to 85% by 2025 and significantly reducing the dispatch down of renewable generation. The CRU has adjusted the annual targets between 2020 and 2025 to ensure they reflect the ambition of PR5.
- The CRU has retained the System Minutes Lost and System Frequency incentives but has increased the targets in line with historic performance. The CRU considers that maintaining a high-quality and reliable electricity supply is an essential component of the electrification of heat and transport and the transition to a low carbon economy.
- The CRU will also retain the stakeholder engagement incentive in its current form. While still in the early stages of operation this incentive appears to have been effective in improving the quality and focus that the network companies have applied to stakeholder engagement.
- The CRU will retain the current structure of the Infrastructure, Planning and Delivery incentive, but will seek to enhance the balanced scorecard approach. This will ensure that stakeholder views are reflected, and the incentive remains appropriate for PR5.
- Two new strategic objective incentives will be introduced (i) improving local security of supply particularly in Dublin, and (ii) delivering enduring reductions in imperfections costs. This category of incentives relative to the rest of the incentives package has a large upside reward, and (in the case of security of supply) significant downside penalty. This reflects the CRU's view of the importance that delivery in these areas has for customers and the energy transition generally.
- An incentive mechanism for the timely issuing of connection offers has been established. Incentives and penalties will be awarded on a sliding scale in terms of the volume of offers delivered by the relevant batch deadline.
- The CRU has also introduced two new joint incentives (i) enhancing and improving TSO/TAO collaboration (ii) promoting a whole-of-system approach between TSO/DSO.

In relation to the TAO the CRU will retain the outage management incentive, including the flexibility to progress short-notice adjustments to outages plans. The PR4 targets have been revised to reflect historic performance and to ensure that the targets remain stretching as well as achievable. The CRU has recalibrated the incentive rewards/penalties. This recalibration more appropriately reflects the potential consumer benefits of achieving targets and plans.

[2] System Non-Synchronous Penetration

Distribution Performance Incentives

ESB Networks as DSO/DAO operates the distribution system in real-time, plans and delivers extensions, maintenance and reinforcements to the distribution network. The DSO will play a central and increasingly important role in Ireland's transition to a low carbon system and the achievement of the 2030 CAP deliverables. Therefore, the incentives package must facilitate this transformation of the role of the DSO and also incentivise the DSO to deliver on the CAP while maintaining a high quality of supply and customer service. In recognition of this the CRU has included a significant increase in the total revenue reward and at risk for the DSO (see Table 3 below).

Table 3: Value of PR5 Incentives for the DSO

Proposals/Decision	PR5 ESB Networks Proposal		PR5 CRU Decision		PR4 CRU Decision	
-Upside/downside	Upside	Downside	Upside	Downside	Upside	Downside
Total (€m)	351	246	228.7	217.7	147.5	178.5
As a % of revenues	8.16%	5.72%	5.1%	4.8%	3.57%	4.33%
Overall Cap (%)	-	-	-	-	4%	4%
Overall Cap (€m)	-	-	-	-	165.24	165.24

The upside of €228.7m (5.1% of allowed revenues) and downside of €217.7m (4.8% of allowed revenues) compare with PR4 which was €147.5m (3.57%) and €178.67m (4.33%) respectively. ESB Networks proposed a total upside of €351m (8.42% of allowed revenues) and a total downside of €246m (5.90% of allowed revenues). The CRU considers this too large an increase in value relative to PR4 and that the PR5 objectives can be incentivised for a smaller, but still significant, amount.

- The CRU has decided to maintain the incentives for continuity of supply (customer interruptions and customer minutes lost) and recalibrate the targets to account for a review of the DSO historic performance. An additional incentive has been introduced in relation to continuity of supply; estimated restoration time accuracy. As this is a new incentive it is not possible to establish metrics initially. Therefore, the incentive will be scored on a balanced scorecard basis initially and it is expected that it will transition to a quantified metric-based mechanism over time.
- The CRU has decided to maintain the incentives for the overall customer satisfaction survey and customer satisfaction, as well as the smart metering incentive. Additionally, the CRU will retain the stakeholder engagement incentive and the worst-served customer incentive as both are still in the early stages of operation and the CRU would like further data on their effectiveness before proposing changes. The upside/downside of these incentives has been adjusted with a view to the overall revenue balance of the incentives package.
- An incentive mechanism for the timely issuing of connection offers has been implemented. This will be awarded on a sliding scale in terms of the volume of offers delivered by the relevant batch deadline.

- The CRU has introduced four new incentives which will be assessed on a balanced scorecard basis; visibility, flexibility, a joint DSO/TSO coordination incentive and the independent role of the DSO incentive. The first three were proposed by the DSO and relate to the quality, process and milestones delivery of increased visibility by the DSO of conditions on the low voltage network, the ability of the DSO to design and deploy flexible solutions/products in response to system needs and the coordination of both SOs to focus on a whole system approach. The fourth incentive relates to the process, innovation, and governance issues that the DSO will need to address to facilitate its new role as a neutral market facilitator. The role of the DSO in facilitating the energy transfers of citizen energy communities and renewable energy communities is promoted through the new visibility incentive.

Value of PR5 Performance Incentives

The suite of incentives for the TSO/TAO and DSO are set out in Table 4 and Table 5 respectively. The TSO/TAO incentives are further discussed and detailed in Section 7 and the relevant annexes. The DSO incentives are further discussed and detailed in Section 8 and the relevant annexes.

Table 4: TSO/TAO Executive Summary Performance Incentives

TSO				
			€m (Annual Upside)	**€m (Annual Downside)**
Layer 1	RES-E (%)	New	0.4	0
	SNSP (%)	New	0.6	0.3
	Renewable Dispatch Down (%)	New	0.6	0.3
	System Minutes Lost	-	0.3	0.5
	System Frequency	-	0.3	0.5
	Connections (ECP-2)	-	0.5	0.2
	Stakeholder Engagement (NSEE)	-	0.5	0
Layer 2	Investment Planning and Delivery	-	0.9	0.5
	TSO/TAO Joint Incentive	New	0.2	0.1
	TSO/DSO Joint Incentive	New	0.2	0.1
Layer 3	Strategic Objective	-	0.5	0
	Constraints/Dublin Security of Supply	New	1.5	1
	Strategic Objectives: Imperfections	New	1.5	0.5
		Total (€m)	**8**	**4**
		Capped Total (€m)	**8**	**3**
TAO				
			€m (Annual Upside)	**€m (Annual Downside)**
TAO Project Delivery		-	3.5	3.5
Outage Management		-	1	1
TAO/TSO Joint Incentive		New	1.5	1.5
		Total (€m)	**6**	**6**

Table 5: DSO Executive Summary Performance Incentives

DSO					PR4 Incentives	
Outcome category	**Output**	**Measure**	**€/m (Upside)**	**€/m (Downside)**	**€/m (Upside)**	**€/m (Downside)**
Reliability and availability	Unplanned Outage Duration	CML	50	50	55.12	48.7
	Unplanned Outage Frequency	CI	50	50	55.12	48.7
	Worst served customers	WSC	6.7	6.7	6.7	6.7
	Outage information **(NEW)**	Balanced Scorecard	5	5	-	-
Customer Satisfaction	Customer Satisfaction	Red C %	13.5	13.5	8.16	8.16
	Care Centre Satisfaction	ESATRAT %	12.5	37.5	8.82	39.82
	Stakeholder Engagement	Scorecard	5	-	3	-
Transformation	Connections (ECP-2)	ECP Offers	15	10	1.5	1.5
	Smart Metering	Meter Volume, Services Delivered	6	20	4	20
	Flexibility **(NEW)**	Balanced Scorecard	15	5	-	-
	Visibility **(NEW)**	Balanced Scorecard	15	5	-	-
	Independent Role of the DSO **(NEW)**	Balanced Scorecard	20	10	-	-
	Joint DSO/TSO Coordination **(NEW)**	Balanced Scorecard	15	5	-	-
Traditional Metering	Metering	1 read/year	-	-	2.55	2.55
	Metering – Estimated reads	back to back block estimates	-	-	2.55	2.55
Total Incentive Package (€m)			**228.7**	**217.7**	**147.5**	**178.5**
Total as percentage of allowed revenue			**5.1%**	**4.8%**	**3.57%**	**4.33%**

Public/ Customer Impact Statement

The CRU allows ESB Networks and EirGrid ("the network companies") to charge money towards the cost of building, safely operating and maintaining the electricity system in Ireland. These charges are reflected in customers' electricity bills and make up the network companies revenue allowances.

The CRU's role is to protect electricity customers by ensuring that the network companies spend customers' money appropriately and efficiently to deliver necessary services. The CRU does this through what is called a Price Review which is carried out every five-years, the current Price Review (PR4) started in 2016 and will end in 2020, the next Price Review (PR5) will start in 2021 and will end in 2025.

In order to monitor the network companies during Price Reviews, the CRU requires the network companies to report annually on their activities by way of annual reporting. The annual reports assist the CRU in its decision-making and helps inform future Price Reviews.

Incentives work by rewarding companies financially when they beat their targets and deliver better service to customers. Conversely, they pay penalties when they miss their targets and deliver poor service to customers. This gives the network companies a financial incentive to provide a high quality of service in areas such as customer service and the quality of electricity supply.

The CRU has reviewed best practice, the existing incentives and reporting regime implemented in PR4 and is now introducing what it considers improvements to the current incentives and reporting regime. The aim is to provide the customer with better value for money and improve quality of service provided to the customer. Additionally, the focus of the incentives and reporting package is to ensure that the network companies focus on the outcomes that matter for customers – including the achievement of the goals set out in the Climate Action Plan. The CRU will monitor the performance of the network companies over the course of PR5 and will further develop the framework in PR6 (2026-2030).

It is the CRU's aim that the Reporting, Incentives and Regulatory Framework Paper will provide energy customers and the wider public with more and better information on what is being delivered in return for the revenue allowances being provided to the network companies. In addition, the information generated through these arrangements should over time lead to improvements in the CRU's ability to make regulatory decisions that protect the interests of customers.

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Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or Meaning
APR	Annual Performance Report
CAP	Climate Action Plan
CEP	Clean Energy Package
CI	Customer Interruptions - the average number of interruptions per customer connected in the year (CI) – Distribution System
CML	Customer Minutes Lost - the average number of minutes without supply per customer connected in the year (CML) – Distribution System
DAO	Distribution Asset Owner – ESB Networks
DSO	Distribution System Operation – ESB Networks
HAN	Home Area Network
LCT	Low Carbon Technologies
NSMP	National Smart Meter Programme
PAYG	Pay-As-You-Go
PIP	Project Implementation Plan
PR3	The third electricity price control set by the CRU, spanning the period January 2010 to December 2015
PR4	The fourth electricity price control set by the CRU, spanning the period January 2016 to December 2020
PR5	The fifth electricity price control set by the CRU, spanning the period January 2021 to December 2025
RAM	Return Adjustment Mechanism
RoCoF	Rate of Change of Frequency
RORE	Regulatory Return on Equity
SF	System Frequency (SF) – aims to maintain the frequency of the transmission system within a target operating range of 50 +/-0.1 Hz
SML	System Minutes Lost (SML) – is an index that measures the severity of each system disturbance relative to the size of the transmission system. It

	is determined by calculating the ratio of unsupplied energy during an outage to the energy that would be supplied for one minute, if the supplied energy was at its peak value
SNSP	System Non-Synchronous Penetration
TAO	Transmission Asset Owner – ESB Networks
TSO	Transmission System Operator – EirGrid
WSC	Worst-Served Customer: 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

1 Introduction

The CRU is responsible for the economic regulation of the system operators and asset owners for electricity transmission and distribution. This includes setting price reviews, which limit the revenues that the network companies can recover from electricity customers. Price Reviews are set every five-years and include incentives which are intended to align the interests of the regulated companies with those of their customers.

For PR5, the regulatory framework will encourage and support the network companies to play their role in delivering the CAP. It offers an opportunity for the network companies to transform their businesses to continue to deliver long-term value for money services to customers as the conditions, technologies and working practices in the electricity system change. The regulatory framework will enable delivery of the outputs that customers value most and in particular, support the delivery of the CAP. It will also be agile and flexible to the changing needs of the electricity system in an environment of potential uncertainty. The regulatory framework will incentivise efficiency from the network companies, both from new and business as usual activities, and ensure that efficient delivery is financeable given the scale of the transition and investment challenge that the network companies face. With these challenges in mind, the CRU has considered a set of guiding principles for the development of the regulatory framework, these are summarised in Section 2.

The PR5 Regulatory framework will be agile and flexible, allowing the licensees necessary funding to deliver what is required at a reasonable price and therefore, protecting customers.

1.1 Background

The reporting, incentives and regulatory framework for PR5 builds on the PR4 paper published in 2018 and considered proposals submitted by all three network companies and the responses to the PR5 Draft Determination. As aforementioned, the PR5 Regulatory Framework has been set out in a way that will facilitate more flexibility and agility for the network companies to respond to the challenges and uncertainties in delivering a low carbon electricity system as set out in the government's Climate Action Plan. In the case of the DSO, there is a further need to evolve the operating model in order to enable greater use of alternatives to network reinforcement, including from third parties.

The outcome that the regulatory framework aims to promote is the network companies responding flexibly to changing requirements to support the delivery of the Climate Action Plan. This needs to be achieved while ensuring that customers only pay for efficient expenditure.

Alongside this Paper, the CRU has published its Final Determination (CRU/20/152 and CRU/20/153) for the Price Review 5 ('PR5') period for EirGrid as Transmission System Operator (TSO), and for ESB Networks (ESBN) as Transmission Asset Owner (TAO) and Distribution System Operator (DSO)/Distribution Asset Owner (DAO).

1.2 Purpose of this Decision

The purpose of this document is to set out the CRU's decisions on the reporting, incentives and regulatory framework arrangements to apply for the PR5 period. The CRU will finalise the detail of the reporting, incentives and regulatory framework in three phases. These are:

1. **Phase 1:** This phase summarised the network company proposals, the CRU's views and sought for stakeholder feedback prior to finalising each element of the reporting, incentives and regulatory framework 'package'. This phase aligned with the CRU's PR5 Draft Determination.

2. **Phase 2:** This phase formalises the package and sets out the CRU's decision on the total revenues at risk (upside/downside). The outcome of this phase will be a decision on the incentives to apply, the monetary amount to be allocated to each metric (upside and downside), and the broad structure of the regulatory framework. This phase aligns with the PR5 Final Determination and therefore, with this Paper.

3. **Phase 3:** This phase will finalise the overall package in terms of the balanced scorecard-based incentives and the detail behind some aspects of the Agile Investment Framework. This phase will follow the Final Determination.

To provide advice and complete analysis, the CRU engaged the services of GHD and CEPA to review the network company proposals, as well as the feedback received from stakeholders, in order to make its decisions. The consultants' report is published alongside this Decision Paper, with the substantive points and decisions summarised within this Paper.

1.3 Consultation Responses

Responses received have been published as part of the Final Determination. The CRU received 36 responses, which have been summarised in Annex 1. The respondents are captured in Table 6 below.

Table 6: Responses to Draft Determination.

Amarenco Solar Ltd.	EDF Energy	Greencoat Renewables	Scottish Power Renewables
Bord Gais Energy	EirGrid	Huawei Technologies	SEAI
Bord na Mona	Electricity Association of Ireland	IBEC	Simply Blue Energy
Chambers Ireland	Enerco Energy	IFA	Smart Grid Ireland
Climate Change Advisory Council	Enercon	Irish Wind Energy Association	Smartwires
Codling Wind Park	Energia	Now	SSE plc
Coillte	EnergyPro Asset Management	Renwable Energy Systems	T. Freeman
DP Energy	ESB GT	RWE Renewables	UCD Energy Institute
DRAI	ESB Networks	Schwungrad Energie Ltd	Wind Turbine Engineering

1.4. Related Documents

Further background relevant to this Paper can be found in the following documents:

CRU/20/076	Draft Determination on DSO Distribution Revenue for 2021 to 2025	Draft Determination Paper
CRU/20/077	Draft Determination on TSO and TAO Transmission Revenue for 2021 to 2025	Draft Determination Paper
CRU/20/078a	Options for PR5 regulatory framework	Advisors report
CRU/18/087	Reporting and Incentives under Price Review 4	Decision Paper
CRU/19/150	Key Performance Indicators for Assessing TAO Performance for Project Delivery	Information Paper
CRU/20/039	Information Paper on the Balanced Scorecard Framework for Assessing the TSO Performance on Investment Planning and Delivery	Information Paper
CRU/20/038	Information Paper on the TSO-TAO Mechanism to Enable Short-Notice Adjustments to Outage Plans	Information Paper
CRU/20/153	Final Determination on DSO Distribution Revenue for 2021 to 2025	Final Determination Paper
CRU/20/152	Final Determination on TSO and TAO Transmission Revenue for 2021 to 2025	Final Determination Paper
CRU/20/150	Design of cost incentive for the electricity network licensees	Advisors report

1.4 Structure of Paper

This Decision Paper is structured as follows:

- Introduction
- PR5 Context
- Reporting and Monitoring
- Agile Investment Framework
- Cost Incentives
- Ex-Post Review
- Performance Incentives: Transmission
- Performance Incentives: Distribution
- Conclusion
- Next Steps
- Annexes
    - Monitoring and Reporting
    - Distribution Performance Incentives
    - Transmission Performance Incentives
    - Agile Investment Framework

2 PR5 Context

In this section, we set out the context for PR5, the industry structure and the role of reporting and incentives in the economic regulation of electricity networks.

2.1 Price Review 5

On 11 July 2019 the CRU issued a PR5 launch letter to EirGrid and ESB Networks. This letter set out the CRU's objectives and vision for PR5 and also requested a commitment from EirGrid and ESB Networks to deliver on these. As stated in the letter, The Climate Action Plan 2019 set out a collective challenge to decarbonise the electricity sector while facilitating customers and community engagement, significant electrification of heat and transport and rapidly increasing demand. EirGrid and ESB Networks have a crucial role to play in the successful delivery of this vision for Ireland's future. Greater flexibility on the network, and co-operation between EirGrid and ESB Networks, will be needed to securely accommodate more renewable generation, new technologies and new demand on the system. This will require transformational change, entailing the embedding of innovation, agility and developing new ways of working and delivering network services.

To that extent, the CRU established four strategic objectives for the network companies for PR5. The strategic objectives for PR5 aim to deliver a secure and sustainable system in a cost-effective manner that supports the delivery of our 2030 targets. These are:

1. facilitating a secure low carbon future;
2. transforming the role of the DSO;
3. increasing efficiency and protecting customers; and
4. resolving local security of supply (in the Dublin area).

Delivering on PR5 will ultimately lay the foundation to the transition to a sustainable, low-carbon electricity system and will be a key factor in meeting Ireland's 2030 targets.

2.2 Guiding Principles

The principles established by the CRU have guided the network companies' submissions on regulatory framework proposals for PR5. They have also guided CRU's proposals, considerations and decisions. The guiding principles set out for the PR5 regulatory framework are as follows:

- **Network companies remain solely responsible for their expenditure decisions.**

  The network companies are best placed to decide on how to embed innovation within investment decision-making and deliver on the strategic objectives within a changing operating environment. The regulatory framework must not, deliberately or unintentionally, transfer responsibility for the network companies' decisions to the CRU

(or to any other party). Where cost allowances are updated during the regulatory period, for example; through an uncertainty mechanism – the onus would remain on the network company to demonstrate that the right outcomes were delivered efficiently as part of the *ex-post* review.

- **Ease of implementation**

  PR5 occurs at a time in which the electricity system is transitioning, and likewise the regulatory framework in PR5 would represent a point in the evolution of regulation ahead of potentially more substantial changes in PR6. It is essential that any changes to the framework can be credibly implemented in the time available.

  This means that:

  - mechanisms must be proportionate to the scale of the Irish system and moderate the need for regulatory intervention which may introduce uncertainty into the framework;
  - outputs or outcomes required to achieve the agreed strategic objectives and incentives must be based on clear and accepted definitions, and established data that can be readily verified; and
  - the framework must minimise the requirement for regulatory intervention where changes to planned investments are considered.

- **Clarity of the outcomes achieved**

  As noted above, the CRU wishes to place a greater focus on outcomes for customers. The selection of the most appropriate outcomes will be key to this. Therefore, any changes that would focus the framework more on the outcomes being delivered by the network companies must not expose customers to additional risk of poorly or mis-specified outputs. The CRU is interested in evidence that the network companies are behaving flexibly to deliver what customers require amid the changing environment, so appropriate monitoring functions and processes must be integral to the framework.

- **Appropriate risk and reward**

  The CRU is open to considering changes that would allow the network companies to retain a different share of the benefits or savings delivered than under the current regulatory framework. Any such framework must be:

  - capable of demonstrating the added value for customers,
  - balanced so that the network companies would similarly bear a share of the dis-benefits or costs that result from their actions (or inaction); and
  - proportionate to the quality of information available to set baselines, and to the novelty of the mechanisms (i.e. newer incentives that have a less established

basis in the regulation of Irish electricity networks should have a narrower range of potential upside and downside).

- **Consistency between the frameworks**

  The CRU recognises the differences between transmission and distribution companies and there may be a need to apply somewhat different regulatory approaches to the DSO and TSO. The regulatory frameworks should consider how interaction between both the DSO and TSO can be facilitated to deliver the CRU's PR5 objectives. It is noted that solutions delivered on the distribution system may have transmission benefits and vice versa.

- **Appropriate level of oversight**

  Monitoring and reporting gives visibility to what each company is delivering and improves accountability. The regulatory framework must consider a practical level of monitoring and reporting requirements during the period. The reporting regime should be dynamic and allow the CRU to flexibly respond quickly where necessary. Such a regime would ensure that relevant information is easy to access and interpret and can adapt over time to ensure reporting on the full ways in which actions by the network companies impact stakeholders.

- **Facilitate target setting against 'best in class' KPIs**

  The scale of the challenge of achieving the 2030 targets, and likely upward pressure on costs associated with them, means incremental improvements to business-as-usual processes would not be sufficient to ensure an economically sustainable transition to a secure a low carbon future. The framework must ensure that there is an ambitious and systematic focus on increasing efficiency in terms of cost and quality of service delivery by demonstrating how companies compare to 'best in class' comparators. Comparisons against average performance internationally will not be sufficient to deliver the necessary transformation of the Irish electricity system.

2.3 Industry Structure

Price Review 5 covers two companies, and three distinct roles. In summary, the different roles and responsibilities are:

- Transmission System Operator (TSO) – EirGrid: the physical operation of the transmission system in real-time, including the procurement of system services; the planning of extensions and reinforcements to the transmission network, and associated interactions with the TAO; and the offering of rights to connect to and make use of the transmission system.

- Transmission Asset Owner (TAO) – ESB Networks: the owner of the transmission network. ESB Networks builds transmission infrastructure at the direction of the TSO, and maintains the existing network.

- Distribution System Operator and Asset Owner (DSO/DAO) – ESB Networks: the physical operation of the distribution system in real-time; the planning and delivery of extensions, maintenance and reinforcements to the distribution network; and the offering of rights to connect to and make use of the distribution system.

2.4 Purpose of the Reporting and Incentives Framework

The key task for the economic regulation of regulated monopolies such as EirGrid and ESB Networks is to align the interests of the regulated businesses more closely to the long-term interests of customers. There are a variety of methods used by regulators to pursue this objective.

The Price Review process determines how much revenue each network company is permitted to recover for a five-year period. The allowances are set to enable each network company to recover efficient operating and capital costs, including a reasonable return on capital. Companies can earn additional returns (for a limited time) by "beating" the cost forecasts used in setting the allowance. Cost savings are then shared with customers through lower charges in the next period.

Reporting requirements complement the "core" incentive to minimise costs in the short-term. By giving visibility to what each company is delivering, there is less potential for companies to boost short-term returns by reducing quality or storing up problems for the future by deferring necessary investment or maintenance. Incentive mechanisms go a step further by attaching additional rewards or penalties to specific reported measures of performance.

There are also wider informational benefits to use of reporting and incentives. They increase understanding by network users and other stakeholders on how EirGrid and ESB Networks are performing – which in turn improves accountability. Data generated through reporting and incentives also helps to inform the more detailed cost assessments and forecasts involved in future price review.

2.5 PR4 Incentives

Under PR4, the TSO, TAO and DSO/DAO were subject to a range of financial incentives, which resulted in reward or penalty during the price review period. The PR4 incentives have been the starting point for the PR5 incentives packages presented in this Paper. Behaviour and incentives targets have been calibrated with historical performance to ensure continued improvement in service provision for customers as well as that achievable targets are in place.

The objective of the reporting and incentives framework is twofold. First, to improve outcomes for electricity customers and market participants during the PR5 period. Second, to create a robust platform for the continuing development of reporting and incentives for PR6 and beyond.

Table 7: TSO Incentives under PR4

TSO incentive revenue reward for PR4 (upside)								
Incentives for the TSO (€m 2014)	**PR3 Annual %**	**PR4 Annual %**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
PR4 Internal Opex			**46.70**	**47.80**	**47.20**	**45.50**	**45.80**	**233.00**
Systems Minutes Lost	0.8%	0.5%	0.37	0.38	0.24	0.23	0.23	**1.44**
System Frequency	0.8%	0.5%	0.37	0.38	0.24	0.23	0.23	**1.44**
TSO Project Milestones	1.4%	-	0.65	0.67	-	-	-	**0.13**
Delivery of Enhanced Network Capacity	1.0%	-	0.47	0.48	-	-	-	**0.95**
Investment Planning and Delivery (IPD)	-	2.0%	-	-	0.94	0.91	0.91	**2.77**
Stakeholder Engagement		1.0%	-	-	0.47	0.46	0.46	**1.39**
ECP-1		0.5%	-	-	0.24	0.23	0.23	**0.69**
Total	**-**	**-**	**1.86**	**1.91**	**2.12**	**2.05**	**2.05**	**10.00**
Percentage of Internal Opex	**4.0%**	**4.5%**	**4.0%**	**4.0%**	**4.5%**	**4.5%**	**4.5%**	**4.29%**

TSO incentive Revenue at Risk for PR4 (downside)								
Incentives for the TSO (€m 2014)	**PR3 Annual %**	**PR4 Annual %**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
PR4 Internal Opex			**46.70**	**47.80**	**47.20**	**45.50**	**45.80**	**233.00**
Systems Minutes Lost	0.8%	1.0%	0.37	0.38	0.47	0.46	0.46	**2.14**
System Frequency	0.8%	1.0%	0.37	0.38	0.47	0.46	0.46	**2.14**
TSO Project Milestones	1.4%	-	0.65	0.67	-	-	-	**1.32**
Delivery of Enhanced Network Capacity	1.0%	-	0.47	0.48	-	-	-	**0.95**
Investment Planning and Delivery (IPD)	-	2.0%	-	-	0.94	0.91	0.92	**2.77**
Stakeholder Engagement		0.0%	-	-	-	-	-	**0.00**
ECP-1		0.5%	-	-	0.24	0.23	0.23	**0.69**
Total	**-**	**-**	**1.86**	**1.91**	**2.12**	**2.05**	**2.06**	**10.00**
Percentage of Internal Opex	**4.0%**	**4.5%**	**4.0%**	**4.0%**	**4.5%**	**4.5%**	**4.5%**	**4.29%**

Table 8: TAO Incentives Revenue at Risk/Reward for PR4

TAO incentive revenue at risk/reward for PR4								
Incentives for the TAO (€m 2014)	**PR3 Annual %**	**PR4 Annual %**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
PR4 Opex			**54.10**	**58.50**	**60.50**	**62.70**	**64.80**	**300.60**
Issue PIP	0.40%	-	0.22	0.23	-	-	-	**0.45**
Scheduled Outages	0.85%	0.85%	0.46	0.50	0.51	0.53	0.55	**2.55**
Construction and Energisation	3.75%	-	2.03	2.19	-	-	-	**4.22**
Investment Delivery (ID)	-	4.15%	-	-	2.51	2.60	2.69	**7.80**
Total	**-**	**-**	**2.71**	**2.92**	**3.02**	**3.13**	**3.24**	**15.02**
Percentage of TAO Allowed Opex	**5%**	**5%**	**5%**	**5%**	**5%**	**5%**	**5%**	**5%**

Table 9: DSO incentives and performance under PR4 (Upside)

DSO incentive revenue upside for PR4							
Incentives for the DSO (€m, 2014)	**Annual %**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
PR4 Allowed Revenue		**737.07**	**817.12**	**835.83**	**857.72**	**883.23**	**4130.97**
Continuity – Customer Interruptions	2.14%	-	-	17.88	18.35	18.89	**55.12**
Continuity – Customer Minutes Lost	2.14%	-	-	17.88	18.35	18.89	**55.12**
Overall customer satisfaction survey[3]	0.32%*	-	-	2.72	2.72	2.72	**8.16**
Customer Satisfaction	0.34%	-	-	2.86	2.94	3.02	**8.82**
Metering – 1 read/year	0.10%*	-	-	0.85	0.85	0.85	**2.55**
Metering – Estimated reads	0.10%*	-	-	0.85	0.85	0.85	**2.55**
Smart Metering	0.15%*	-	-	-	-	4.00	**4.00**
Stakeholder engagement	0.12%*	-	-	1.00	1.00	1.00	**3.00**
Worst served customer	0.26%	-	-	2.17	2.23	2.29	**6.69**
ECP-1	0.06%*	-	-	0.50	0.50	0.50	**1.50**
Total		**0.00**	**0.00**	**46.71**	**47.77**	**53.02**	**147.49**
Percentage of DSO allowed revenues		**0.00%**	**0.00%**	**5.59%**	**5.57%**	**6.00%**	**3.57%**

Table 10: DSO Incentives and performance under PR4 (Downside)

DSO incentive revenue at risk for PR4							
Incentives for the DSO (€m, 2014)	**Annual %**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
PR4 Allowed Revenue		**737.07**	**817.12**	**835.83**	**857.72**	**883.23**	**4130.97**
Continuity – Customer Interruptions	1.89%	-	-	15.80	16.21	16.69	**48.70**
Continuity – Customer Minutes Lost	1.89%	-	-	15.80	16.21	16.69	**48.70**
Overall customer satisfaction survey[4]	0.32%*	-	-	2.72	2.72	2.72	**8.16**
Customer Satisfaction	1.55%	-	-	12.92	13.25	13.65	**39.82**
Metering – 1 read/year	0.10%*	-	-	0.85	0.85	0.85	**2.55**
Metering – Estimated reads	0.10%*	-	-	0.85	0.85	0.85	**2.55**
Smart Metering	0.75%*	-	-	-	-	20.00	**20.00**
Stakeholder engagement	0.00%	-	-	-	-	-	**0**
Worst served customer	0.26%	-	-	2.17	2.23	2.29	**6.69**

[3] Currently carried out by RedC
[4] Currently carried out by RedC

ECP-1 (NEW)	0.06%*	-	-	0.50	0.50	0.50	**1.50**
Total		**0.00**	**0.00**	**51.60**	**52.82**	**74.25**	**178.67**
Percentage of DSO allowed revenues		**0.00%**	**0.00%**	**6.17%**	**6.16%**	**8.41%**	**4.33%**

2.6 Expertise Procured

Gutteridge, Haskins and Davy ('GHD') and Cambridge Economic Policy Associates ('CEPA') were procured to provide advice and review proposals. The advisors report (CRU/20/078a) was published with the Draft Determination and a further report (CRU/20/150) setting out the Cost Incentives for PR5 is published within alongside this Paper.

3 Reporting and Monitoring

The CRU has decided to retain much of the PR4 Reporting and Monitoring Framework with adaptations and additions to reflect the increased level of flexibility of the PR5 Regulatory Framework and continued transition to a more outcome-based approach. This began in PR4 with a greater focus on outcomes in terms of reporting and incentives, and it is expanding in PR5 to cover outputs in terms of allowances and reporting. In PR6, the CRU intends to build on the PR5 framework to further expand the focus on outcomes and outputs. Reporting and monitoring will be a key enabler of that PR6 process.

The CRU has decided on the following reporting arrangements for PR5:

1. **Stakeholder Reporting:** accessible reports clearly setting out the network company's annual performance and infrastructure delivery;

2. **Regulatory Reporting Pack:** an expansion of the current annual submissions made by the TSO, DSO and TAO for the TUoS and DUoS processes aimed at facilitating the Agile Investment Framework and the expansion of an output-based framework in PR6; and

3. **Detailed Expenditure Reporting:** this is a new arrangement included for PR5 and requires the network companies to provide detailed reporting in a similar format to the questionnaires used for the historic *ex-post* review, it is not intended that this information would be usually reviewed each year and would generally only be used for the five-year review process. The CRU considers that this additional reporting is necessary as the transition to output based regulation has the potential to exacerbate the asymmetry of information between the network companies and the CRU creating the potential for windfall gains to the network companies.

An overview of the PR5 reporting timeline and deliverables are set out in the table below.

Table 11: PR5 Reporting Arrangements

Timings	PR4 Deliverable	PR5 Deliverable
Q1	○ TSO and DSO publish Stakeholder Engagement Strategy. ○ DSO publishes the Strategic Innovation Fund Report for consultation; submission to CRU by 31 March.	○ TSO and DSO publish Stakeholder Engagement Strategy. ○ TSO Cyber Security Report submitted to CRU. ○ TSO and DSO publish Innovation Report for consultation; submission to CRU by 31 March.
Q2	○ TSO/TAO Detailed Capex Report. ○ TSO Innovation Report.	○ TSO/TAO Detailed Capex Report. ○ Network Company BPQ and Regulatory Reporting Pack submission, along with annual revenue requirement submission; sent to CRU by end of April.

Q3	○ TSO/TAO publish APR and IPD for consultation. ○ DSO publishes APR for consultation.	○ TSO/TAO publish APR and IPD for consultation ○ DSO publishes APR for consultation.
Q4	○ TSO/TAO submit final APR and IPD to CRU for approval and publish. ○ DSO submits final APR to CRU for approval and publish.	○ TSO/TAO submit final APR and IPD (by 1 Oct) to CRU for approval and publish. ○ DSO submits final APR (by 1 Oct) to CRU for approval and publish.

Given the additional reporting obligations in PR5, relative to PR4, the CRU has included an annual allowance in the PR5 allowances to cover the additional resources and/or consultancy services potentially required by the network companies to deliver the PR5 reporting requirements. The CRU expects that the reporting activities of the companies will become more business as usual in PR6, without a need for additional allowances.

The CRU will work closely with the network companies to develop the reporting package, ensuring that it meets the needs of stakeholders, the network companies and the CRU. It is expected that the reporting package may evolve as experience is gained in the process, with potential to streamline reporting based on year-on-year submissions from the network companies and experience in the process.

3.1 Output-based Reporting

3.1.1 Annual Performance Report

The CRU's objective for its output-based reporting is to increase transparency for all stakeholders on what is being delivered over time by the companies in return for the revenues made available through the Price Review. This is to ensure that relevant information is easy to access and interpret – and capable of adapting over time to continue to ensure reporting on the full range of ways in which actions by the network companies impact stakeholders.

Without a robust framework for reporting, there is a risk that customers, stakeholders and the CRU cannot easily discern how the network companies are performing – and hence are less able to hold the network companies to account, or understand the levels of performance that it is reasonable to expect the network companies to deliver. This could, over time, dilute the pressures on the network companies to deliver services effectively and efficiently. It could also constrain the quality of regulatory decision-making on behalf of customers. The CRU has decided to retain the Annual Performance Reports for PR5, the TSO and TAO will continue to report jointly, and the DSO shall publish its own report.

Consistent with the PR5 Strategic Objective of increasing efficiency and protecting customers, the network companies shall identify international best practice and compare their performance to the best performing utilities internationally. A comparative performance report will be included in the annual regulatory reporting pack, as explained in detail under the next section. A summary of the comparative information, where possible and for all relevant metrics of performance, will be incorporated in the Annual Performance Reports.

Further information on the form of the Annual Performance Report is set out in Annex 2.

3.1.2 Annual Regulatory Reporting Pack

In its PR5 submissions the DSO proposed a comprehensive output-based regulatory framework. The DSO also proposed new reporting to support this framework. The purpose of the regulatory reporting pack was to essentially provide assurance to the CRU that the outputs were being delivered and to track expenditure between the allowances, DSO activity, and the outputs. While the CRU does not consider it appropriate to move to a fully output-based framework for PR5, the CRU is of the view that there is considerable merit in the DSO's proposals. Accordingly, the CRU will link inputs to outputs where possible and use reporting on outputs that have not yet been fully defined to facilitate the continuing transition to output-based regulation in PR6.

Therefore, the CRU has decided to introduce this new reporting requirement for each of the network companies. The purpose of this reporting arrangement is to:

- Provide the detail supporting the Annual Performance Report, the data necessary for the CRU to analyse the network company's annual performance and complete the annual revenue review process for the setting of network tariffs.

- Provide high level expenditure information against total allowed Opex and Capex, and a RORE report in order to monitor the overall effectiveness of the PR5 framework and to identify issues that may impact the overall framework before the end of the PR5 period.

- Report against the PR5 outputs both those clearly linked to inputs and those that are not. The network companies can use this submission to examine how well the outputs link to the associated inputs and the intended outcomes, and to propose amendment and/or new outputs. The CRU will use the learnings from this annual process to inform the development of the PR6 regulatory framework. It is worth noting that not all outputs are incentivised and therefore this form of reporting will be in addition to the performance incentives framework and other reports such as the APR or IPD.

- The network companies shall identify international best practice and compare their performance to be best performing utilities internationally. The network companies shall provide international comparisons and the supporting information and data that informed the comparisons, a summary of this will be incorporated into the Annual Performance Report. The analysis should cover network utilities in OECD countries, and others as considered relevant by the network companies, in relation to core network activities setting out lessons learned and improvements to be implemented. The CRU has chosen OECD countries for comparison to ensure that the network companies consider a broad range of international experience and do not focus only on the most familiar markets. The network companies should also give particular attention to activities in which they are not meeting the PR5 performance targets and in new areas such as innovation and renewable integration where there is limited established practice and diverse experiences.

- Report against regulatory deliverables. The network companies shall report on the timeliness of submissions agreed *ex-ante* with CRU in the annual workplan. The network companies shall also provide a summary of progress against implementation of the EU Network Codes.

- Report on the trends and data that underly the AIF to provide forecasts on the expected use of the mechanisms in the AIF in PR5. This information will assist the CRU in forecasting likely changes in network tariffs, and allow the CRU to plan for likely submissions under the AIF.

- Provide an audit 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 network companies shall put in place, and report on, a process to assess the quality and accuracy of their data processes, and identify any proposed improvements or areas of concern. The CRU considers that it is important that the CRU can rely upon the network companies to provide clear, candid, and complete submissions to the CRU. Accordingly, the network companies will be required to carry out audits to ensure that they work towards meeting the standards set out in Annex 6. Initially the audits will be carried out annually, however, the CRU intends to reduce the frequency of the audits once the process has become well established. Annex 6 sets out four categories to outline the necessary elements of a high-quality regulatory submission. The TSO and DSO will separately appoint auditors to conduct an audit on their regulatory submissions to the CRU, as detailed in Annex 6.

The annual regulatory reporting pack will be submitted as a complete package. The precise format will be as directed by the CRU from time to time, as it is expected that the format and structure of the reporting pack may evolve over time. In preparing this, the network companies shall ensure that it is accessible, clearly structured and easily compared to previous reports.

While these reports are not intended for a wide audience the network companies should, where practicable, prepare them in format suitable for publication with any confidential information clearly marked and, where possible, contained in a separate annex.

The annual regulatory reporting pack will be submitted to CRU by end of April, along with the annual revenue requirement submission.

3.2 Capex Monitoring

While the CRU reviews capital projects in detail at the end of the five-year review period, an active and ongoing annual Capex monitoring process has been in place over the past few years. The Capex monitoring framework increases the CRU's capacity to understand the processes that result in transmission investment, and hence enables the CRU to better protect customers from the risks and costs of inefficient investment in its regulatory decision-making.

Regulatory reporting is a core function of any regulatory price review process. It allows regulators to monitor the progress of companies both during the price review and in reconciliation at the end of the review. Effective reporting helps to overcome the asymmetric

information problem inherent in monopoly regulated network industries – including by helping network users and other stakeholders better understand, and engage with, plans for how the network is being developed.

- With regard to the PR5 Capex monitoring framework, the CRU has decided the following: the TSO and TAO shall continue the annual cycle of Capex reporting. The annual cycle shall include, in addition to the project-level reporting to the CRU (i.e. detailed Capex report), a report designed for stakeholders (i.e. IPD report) – as a companion document published alongside the consolidated annual performance report, with comparable levels of accessibility for the reader.

- The detailed TSO/TAO Capex reports shall be submitted to the CRU in Q2 each year as part of the Regulatory Reporting Pack. These will provide the CRU with a "snapshot" of the Capex Programme at the end of the relevant year. The reports will include sufficient detail to identify the progression of all projects across years, particularly projects that have been changed or deferred. The reporting scope for the IPD reports shall include reporting on all aspects of investment planning and delivery, from the initial identification of needs based on planning studies through to the delivery and energisation of individual projects. The choice of metrics of performance will be informed by the CRU guidance provided in Annex 3, under the Investment Planning and Delivery Annual Reporting. The IPD reports shall follow the same timings as the Annual Performance Report (Section 3.1.1) as set out in Annex 2 and 3.

In addition to the transmission Capex reporting requirements, EirGrid shall publish quarterly updates on the progress of all its transmission infrastructure projects in the first week for each quarter in respect of the previous quarter. The intended audience for this information is industry participants.

3.3 Innovation

The CRU has decided to maintain the PR4 innovation reporting for PR5 for both the TSO and DSO. For the DSO, this will replace the current report prepared in relation to the Strategic Innovation Fund. The core incentive shall be reputational, delivered by lodging with the CRU and publishing a submission each year on its pipeline of innovation projects. The submission shall cover:

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

The report shall include relevant, proportionate evidence on the scope, cost, rationale for and impacts (including expected benefits) of each project with either activity or impacts during the reporting year. Guidance is set out in Annex 4 for the TSO and Annex 5 for the DSO; this guidance combines the PR4 reporting process in place for the DSO with that for the TSO based on the CRU's experience with both processes over the PR4 period.

The TSO or DSO may also include in its submission a business case for additional funding for new projects as provided for in the Agile Investment Framework. As with the process in place for the TSO in PR4, this must include rationale for why the project is innovative, the nature of the potential benefits at stake, and a description of how the project will be managed, reported on and evaluated. If the application is accepted by the CRU, then reporting on progress will be folded into the annual innovation reporting process – and commensurate funding will be made available through the tariff-setting process.

The TSO and DSO shall lodge their respective submissions by 31st March following the end of the reporting year. The network companies will consult publicly on their innovation reports before making their submissions to the CRU.

3.4 Business Plan Questionnaires

As part of the CRU's price review, each network company is required to submit its Business Plan Questionnaire ('BPQ') setting out the detailed breakdown of expenditure (Opex and Capex). This is then used to assess network company performance over a price review period. As part of PR5, the CRU has decided to request each network company to submit an updated BPQ reflecting the outturn in the previous year. This may then be used to assist in the analysis of the final BPQs submitted as part of the next Price Review (i.e. PR6) and help show how the network companies expenditure developed over the period. Such reporting would be likely necessary in a purely output based framework and therefore this reporting may facilitate the CRU continuing the transition to an outcome-based framework while maintaining adequate oversight of the network companies.

For the avoidance of doubt, the CRU does not propose to review or analyse the BPQ each year. This analysis will be carried out as part of the five-year Price Review process. However, the CRU may use these reports to examine an issue further if a concern is identified as part of the review of the annual regulatory report.

The BPQ shall take the form of an excel spreadsheet and follow the same format used by the network company in PR5[5], with updates that might be required to reflect the PR5 framework, remove no longer relevant legacy fields and improve the communication and presentation. However, any changes to the BPQ over the course of PR5 should not impact the ability to compare submissions with previous years. The BPQ will be submitted to the CRU by the end of April, along with the annual revenue requirement submission and the annual regulatory reporting pack.

3.5 Cyber Security

The TSO will be required to report to the CRU annually on its progress to enhance its cyber security:

[5] It is noted that as part of the PR6 process the BPQs (future and/or historic) may be revised and discussed with the network companies.

- this requires the TSO to report on an independently assessed score which comprises NIST[6] and ISO[7] best practices (as proposed by the TSO). This is currently based on the EY Cybersecurity Programme Assessment (CPA);

- the assessment shall cover system resilience and system restoration, in addition to prevention measures, as the CRU considers it important that the electricity system can remain operational even where security measures fail; and

- the report issued to the CRU shall be concise, contain no sensitive information and contain limited, if any, technical information.

The CRU acknowledges that there is clear customer value in cyber security, however, care must be taken if information about cyber security is to be published. The CRU has decided that the cyber security report will not be published over the PR5 period; however, consideration will be given to potential publication of this report in the future. Costs associated with the audits will be recoverable. The CRU has included additional revenues in the TSOs Opex for the additional reporting requirements set out in this Regulatory Framework Decision Paper.

[6] National Institute of Standards and Technology.
[7] International Organization for Standardization (ISO7001).

4 Agile Investment Framework

The decisions set out in this Paper aim to create additional flexibility for the network companies to allow them to innovate and make expenditure decisions that deliver on outcomes important for customers. The set of mechanisms in the Agile Investment Framework aims to facilitate that flexibility and also to address the level of uncertainty in the PR5 period. The CAP has set ambitious and challenging national targets, which the network companies have a central role in delivering. Therefore, the CRU considers it important that the network companies have access to sufficient funding to enable them to deliver on that challenge. However, there is significant uncertainty on the timing and scope of this additional expenditure. To take one example, a large increase in the ownership of electric vehicles is expected, but how many of these new EVs are connecting to which parts of the network, and when cannot be predicted in advance. This has a direct impact on the scope and timing of necessary works, as the condition and capacity of the network varies by location. Therefore, we know that more investment is needed on the distribution network but not which part of the network, what exactly is needed, or when.[8] Accordingly, there is a risk that large investments will be made before they are needed, which would result in increasing customer bills.

The Agile Investment Framework comprises a number of mechanisms to access additional revenues in response to the changing needs of the system and to facilitate a flexible approach to network investments. The CRU considers that the Agile Investment Framework is an important part of the PR5 Regulatory Framework as it can address the uncertainties for the PR5 period, ensure customers are protected against unnecessary costs, and provide the revenues needed to deliver on the CAP as the associated investments become necessary.

The Agile Investment Framework consists of five mechanisms:

1. the Uncertainty Mechanism, which releases revenues in response to newly identified needs on the system;

2. the Flexibility Mechanism, which allows the DSO to reallocate allowances between Opex and Capex;

3. the Innovation and R&D Mechanism, which provides revenues needed to innovation projects that cannot be funded through the *ex-ante* allowances or other mechanisms in the AIF;

4. the Capex Adjustment Mechanism, which is retained from PR4 and allows the TSO and TAO to request changes to the overall Capex programme allowance; and

5. the TSO Monitoring Committee, which will provide independent and on-going oversight of the TSO initiatives that have not been fully defined at the start of PR5 but will be

[8] It should be noted that the network companies have included analysis in relation to their view on when investment is needed. However, significant uncertainty remains.

required during PR5, the CRU will not be a member of the committee and the approvals of expenditure will be made by the CRU.

4.1 Uncertainty Mechanism

The CRU considered that there was merit in the proposals made by the DSO in relation to uncertainty mechanisms and requested our advisors to review their proposals. We also considered the TSO proposals. The TSO proposal on the monitoring committee is discussed separately below, and discussed in Section 4.5. Taking the DSO and TSO submissions in addition to our advisor's analysis into consideration the CRU has decided to implement the following uncertainty mechanisms:

1. New domestic connections (DSO)
2. Pay-as-you-go (PAYG) Meters (DSO)
3. Large customers (DSO)
4. Low carbon technology (DSO)
5. Force majeure (DSO & TSO)
6. System Control (DSO)
7. LV model (DSO)

Each uncertainty mechanism is outlined below and further details are available in Annex 17.

The companies will report annually, as part of the Regulatory Reporting Pack, on if and when it is likely that the mechanisms will be triggered. The companies will also report annually on the level of investment delivered under each mechanism, including total investment and number and type of interventions delivered.

4.1.1 New Domestic Connections (DSO)

The CRU has decided to adopt the mechanism proposed by the DSO for new connections. This mechanism will allow for the DSO to request additional allowances during the annual revenue review process where there is a material difference between the PR5 forecast for new connections and the DSO's updated actual or forecast figures for new connections. If there is significant and/or persistent under or over estimation in the DSO's forecasts the CRU may review this mechanism. The additional revenues may not be made available to the DSO in the case where the DSO's forecasting did not include reasonably predicable factors. The additional revenues will be consistent with the unit costs approved in PR5.

4.1.2 Pay-as-you-go (PAYG) Meters (DSO)

The DSO did not request an uncertainty mechanism for PAYG meters however there was significant underspend in PR4 and the roll-out of smart meters suggests the possibility of low demand for PAYG meters. However, the CRU considers it important to ensure that the DSO has sufficient revenues to install PAYG meters as required. Therefore, the CRU has decided

to implement a volume-based uncertainty mechanism that will operate in the same way as the new domestic connections mechanism. The DSO will make a submission, based on actual or forecast figures, as part of the annual revenue review process, and the additional revenues will be consistent with the unit costs approved in PR5.

4.1.3 Large customers (DSO)

The DSO requested an uncertainty mechanism to address large customers. These customers, for example large data centres, have materially larger costs associated with their connections and there are relatively few such customers. This makes accurate forecasting difficult. The CRU considers it prudent to avoid including revenues into the DSO's allowed revenues that it ultimately does not need yet. The CRU also considers it important to ensure that all customers receive a timely connection (and that ESB Networks is adequately funded to do this). Therefore, the CRU has decided to adopt this mechanism.

However, it will not be possible to use a volume-based forecast as for the new connections mechanism. Therefore, the DSO will have to make a submission for the costs associated with the actual large customer connections it has carried out. The CRU has decided that the mechanism will operate in the following manner:

- The DSO will make a submission as part of the annual revenue review process, following the completion of the connection.
- The submission will detail the Least Cost Technically Acceptable (LCTA) solution and the flexibility alternatives that the DSO explored to minimise the reinforcement costs; as well as demonstrate that the costs were efficient and incremental to PR5 allowances.
- The mechanism will only be triggered where the HV system development allowance is likely to be exceeded by more than 10% in the forthcoming calendar year, after taking into account the remaining HV system development Capex output commitments for the remainder of PR5.
- The DSO shall demonstrate the impact of the new large customer request on its existing plans, e.g. whether the new request displace other projects in the HV system development Capex programme.
- Where the DSO expenditure is expected to remain within the overall Capex allowance, the CRU may defer the assessment to a subsequent year or the end of the PR5 period unless the deferral of the assessment was expected to negatively impact the DSO's output delivery.

This reopener mechanism will involve the DSO's allowances being adjusted, at the annual revenue review process, if more large customers connect to the distribution network than was assumed in the DSO's business plan. The efficiency of the outturn HV system development Capex will be assessed against the corresponding adjusted allowance as part of the PR5 *ex-post* review.

4.1.4 Low carbon technology (DSO)

The DSO proposed low carbon technology (LCT) mechanisms to address the take up of LCT on the network and the TSO described a 'package' mechanism to address initiatives that have defined costs and outcomes but the timing or need for the expenditure is uncertain. This is consistent with the DSO approach; however the TSO has not specified the projects that could be covered by such a mechanism. The TSO did not submit the relevant analysis and information during the consultation period in relation to an LCT uncertainty mechanism that would enable the CRU to be consider it for PR5. Accordingly, this mechanism will only apply to the DSO.

There CRU has decided to implement two LCT related uncertainty mechanisms i.e. (i) the MV and LV system improvements and (ii) the 20kV conversion works.

(i) MV and LV system improvements

The interaction between the volume of LCT take-up and costs are not directly proportional. This makes the process more complex than a volume related uncertainty mechanism. The CRU agrees with the DSO's proposed triggers for the mechanism and has included them in the mechanism. For this mechanism to be triggered the following requirements must be met:

- ESB Networks has evidence that LCT are connecting in a location, as a result of (but not limited to) customer or third-party notification or connection request, inter organisational data sharing, smart meter or other monitoring data analysis; and

- ESB Networks has evidence that there is limited residual voltage or thermal headroom. This could be evidenced through a complaint, monitoring, smart metering data, power flow analysis or other network capacity analysis.

- The mechanism will be triggered where the LV and MV reinforcement allowances are likely to be exceeded by more than 10% in the forthcoming calendar year, after taking into account the remaining LV and MV reinforcement Capex output commitments for the remainder of PR5.

- ESB Networks shall demonstrate that it has examined flexibility options to defer network investment and that the it has carried out analysis of the likely take up of LCT. It is noted that initiatives related to visibility and flexibility will be important in the context of LCT.

- The forecasts set out in this analysis shall be updated in response to actual data of take-up as it becomes available. The analysis shall also examine which investments will have the largest positive impact relative to cost in terms of system operation, availability of flexibility services and capacity for further expected LCT take-up.

- This mechanism will allow for the DSO baseline allowance to be adjusted, at the annual revenue review process, based on the difference between the original and the updated forecast. The efficiency of outturn expenditure against the corresponding adjusted allowance will be assessed by the CRU in the PR5 close-out.

(ii) 20kV conversion works

The CRU has decided to adopt this mechanism, as proposed by the DSO. This volume driver mechanism will involve the DSO's allowances being adjusted, at the annual revenue review process, based on the difference between forecast and outturn 20 kV rural conversion works delivered[9]. The mechanism will be applied as a true-up at the PR5 closeout (as part of the *ex-post* review). The need for additional volumes above and beyond those allowed in the PR5 *ex-ante* allowance must be justified by the DSO as part of the PR5 close-out.

4.1.5 Force majeure (DSO & TSO)

The DSO proposed a specific mechanism on exceptional weather events based on a set of criteria that, if in place, would have triggered additional revenues (six times). Whereas, only one event (Storm Ophelia in 2017) under the PR4 process resulted in additional pass-through revenues. The CRU did not consider such a mechanism appropriate.

However, the CRU does consider it reasonable that the DSO and TSO should be able to recover their costs in response to exceptional and unforeseen events. Therefore, the CRU has included a specific mechanism based around the process in PR4. The DSO or TSO will be able to make a submission, as part of the annual revenue review, to the CRU for the recovery of efficiently incurred costs that directly relate to a force majeure event such as a severe storm.

It is the nature of such events that they cannot be clearly defined in advance, however the CRU will apply the following criteria in deciding whether an event has triggered the mechanism:

- The impact of the event is material in terms of cost;
- The event could not have reasonably been foreseen in advance;
- Reasonable mitigation measures and preparatory planning were carried out in advance; and
- The response to the event has been reviewed and an analysis of the effectiveness of the response carried out including any recommendations for preparing for or responding to similar events in the future.

The onus rests with the network company to demonstrate the exceptional nature of the event, its impact, and that all expenditure requested has been efficiently incurred.

4.1.6 System Control (DSO)

The DSO proposed that a volumetric uncertainty mechanism applies to its system control activities on the basis that the works are critical to the continued safe and secure operation of

[9] Station upgrades and interface transformers are excluded from the mechanism and will be reviewed at the PR5 closeout (*ex-post* review), further details are set out in Annex 17.

the distribution system. The mechanism, as proposed by the DSO, covers its SCADA Control and Monitoring programme of work (i.e. RTU replacements, SCS upgrades, etc.). The replacement of the aging equipment is recognised by the CRU; however we had concerns regarding the DSO ability to deliver the programme of work. Therefore, the CRU has decided to implement this uncertainty mechanism, which will involve the DSO's allowances being adjusted, at the annual revenue review process, based on the difference between forecast and outturn works delivered. The mechanism will use the efficient unit costs and allowed volumes associated with the programme of work as determined by the CRU for PR5 (informed by GHD/CEPA cost assessment reports).

4.1.7 LV model (DSO)

The need for the LV model is linked to the development of congestion management applications. Similarly, the CRU had concerns with the deliverability of the installation programme of LV monitoring by the DSO. Therefore, the CRU has decided to implement an uncertainty mechanism which will allow for the DSO allowance to be adjusted, at the annual revenue review process, based on actual number of installations completed and on the unit costs (as informed by GHD/CEPA cost assessment reports).

4.2 Flexibility Mechanism

The DSO proposed ambitious plans for the use of flexibility. While the CRU supports this approach it notes that the use of flexibility services is new to the Irish distribution system and there is uncertainty regarding the timing of the capability of the DSO to define and use such services, as well as the availability of these services (which will in part be driven by the uptake of LCT). Therefore, the CRU has decided to put in place a flexibility mechanism to provide the DSO with the ability to reallocate allowances between Opex and Capex (bi-directional).

There may be cases where the DSO identifies during PR5 that a capex solution would be more efficient than an opex solution that was assumed in setting the *ex-ante* allowance – or vice versa. Therefore, the CRU has decided that the flexibility mechanism will be open to any cost category. Any adjustment to the final Opex and Capex allowances will be conditional on the DSO demonstrating that the costs reallocated between Opex and Capex (or vice versa) are material, and that the expenditure undertaken is expected to be Net Present Value (NPV) neutral or positive when compared to the assumed expenditure that was foregone.

The DSO will be able to use the mechanism during each year and will report annually on how it has used the mechanism as part of the annual revenue review process (in the regulatory reporting pack). The DSO's report will be required to demonstrate that the use of the flexibility mechanism delivers against defined outputs and is value for money, providing a net benefit for customers.

The CRU will review the effectiveness of the mechanism and may issue additional guidance during PR5 on the use of the mechanism.

4.3 Innovation and R&D Mechanism

The Innovation and R&D Mechanism will provide revenues needed to innovation projects that cannot be funded through the *ex-ante* allowances or other mechanisms in the AIF.

As part of their innovation reporting, the TSO and DSO will be able to include in their submission a business case for additional funding for new projects. This must include the rationale for why the project is innovative, the nature of the potential benefits at stake, and a description of how the project will be managed, reported on and evaluated. If the application is accepted by the CRU, then reporting on progress will be folded into the proposed annual process – and commensurate funding will be made available through the tariff-setting process. This has been set out in Annex 4, as well as under the innovation reporting section of this document.

The business case should be sufficiently detailed and must include the following areas:

- The business case should establish the problem that the trial is attempting to solve or contribute to solving;
- the project governance structure;
- the project approval and evaluation milestones;
- a clear stage-gate process setting out the criteria for continuing to the next stage-gate, modifying the project, and for discontinuing the project; and
- how success will be defined, the overall cost-benefit or multi-criteria analysis for the proposed project and the role that the TSO will have compared to external parties.

While CRU encourages the TSO to be innovative and explore options to improve the efficiency and effectiveness of system operation and development, it is important that any monies committed by consumers in this area are fully justified and analysed. In many cases, it may be more appropriate for external research bodies or agencies to be carrying out research, development and demonstration activities rather than the TSO. In this case, it is important that TSO is involved most appropriately in identifying system challenges and problems and developing terms of reference for research, development and demonstration projects rather than carrying out such work itself (in many cases).

A key element of submissions under this mechanism will be the demonstration of a robust ongoing evaluation process with clear objectives and decision milestones. It is important that any trials, which are not delivering against objectives, are identified and ended early and equally that trials proving successful can be assessed and their objectives refined at set milestones.

4.4 Capex Adjustment Mechanism

The Capex adjustment mechanism allows for changes to the TSO/TAO PR5 Capex plan. Specifically, material change in circumstances (relative to when the Capex allowance was originally set) such that either: (a) the total Capex allowance for the 5-year PR period is likely to be breached by more than [10%] in the next calendar year; or (b) there is a high likelihood that the total Capex allowance will be underspent by more than [20%] by the end of the 5-year PR period. If triggered, stakeholders will remain informed by consult on the application and proposed decision to modify the allowances used for the purposes of setting tariffs

The CRU will retain the existing transmission Capex Adjustment Mechanism put in place during PR4. Further information is set out in Annex 16.

4.5 TSO Monitoring Committee

The CRU considers a TSO Monitoring Committee to be an effective way to progress system operator projects which remain uncertain at the start of PR5. Accordingly, the CRU has determined that such a Committee should be established in PR5. The CRU has summarised the purpose, objective and operation of the Committee below and further detail has been provided in Annex 15.

Purpose and Objective

The function of the Monitoring Committee will be to progress projects deemed too uncertain to be included within the *ex-ante* allowances for PR5. The Committee will ensure that projects, important to the achievement of 2030 targets, are progressed.

The purpose of the Monitoring Committee is to provide an effective challenge to EirGrid's plans and approach to projects progressed through the Committee in PR5. The Committee will ensure that a credible range of options have been explored and considered by the TSO and that projects are re-evaluated at each stage-gate. The Monitoring Committee will also ensure alignment with PR5 strategic objective of facilitating a low carbon future and customer protection.

This process will ensure a robust process for *ex-post* review, by requiring that additional projects are thoroughly considered and reviewed within the period. This will minimise the risk to the consumer that EirGrid will incur inefficient expenditure. Such an approach is a robust way to; minimise the risk that EirGrid will incur inefficient expenditure, protect consumers and ensure strategically important projects are progressed in a timely manner.

Operation

EirGrid will engage with the Monitoring Committee and align with its own internal stage-gate processes to seek feedback on its expenditure plans (not included within the *ex-ante*). An Independent expert will be appointed by the TSO and approved by the CRU. The independent advisor plays a pivotal role in the successful operation of the Committee. The advisor will act as chair and will:

- draft the Committees terms of reference in consultation with EirGrid;
- administer recruitment process for six Committee members;
- assess proposals and submit a report to the CRU directly.

EirGrid will make a submission to the CRU requesting approval for cost recovery (above a threshold of €3.6m[10]). Alongside this request, the independent advisor will submit their report on the request to the CRU directly. The TSO submission will include:

- recommendation from Monitoring Committee;
- EirGrid Board approval;
- clear demonstration of need, additionality and cost efficiency;
- a stage-gate process set out with clearly defined decision points and evaluation criteria (i.e. setting out what success/failure looks like, why the project may be discontinued and why other activities/approaches may need to be considered);
- the requested revenue and an estimate of costs in a range. The different points on the range must be tied to the activities that may/may not be needed, enabling the Monitoring Committee to then assess which activities are needed.

Once the CRU approves the submission, the work can proceed and can only move to the next stage-gate with Monitoring Committee approval. The Committee will also assess the progress of the projects (e.g. timeliness and quality). Once the project is completed, EirGrid will submit a close-out report which will be approved by the Monitoring Committee and the EirGrid Board. The close-out report must include demonstration of need, additionality, cost efficiency and that the stage-gate process was followed. The report should also set out how decisions made along the way were consistent with the criteria set out at the beginning of the process. The independent advisor will also send a separate close-out report directly to the CRU. If projects run between price reviews (i.e. between PR5 and PR6). The TSO and advisor will submit a report similar to the close-out report as part of the required price review submissions.

As stated previously, the CRU will not be a member of the Committee and the Committee will not have any formal decision-making power regarding the approval of revenue allowances. The views of the Committee and independent advisor will form an input into the CRU's consideration of the TSO's proposals. The balance being sought by the CRU in this process is to give the TSO a process that provides the evidence to support the TSO in its *ex-post* submission regarding cost recovery to progress projects and at the same time to ensure that costs are subject to analysis and oversight to protect the customer. The Cost Incentive is also discussed in the report published alongside this Paper (CRU/20/150).

[10] Smaller projects may be grouped together to meet the threshold only where there is clear rationale for doing so (e.g. they are closely related and deliver the same specific output/outcome).

5 Cost Incentives

As discussed in previous sections of this Paper, building on the PR4 framework, the CRU has decided to begin the transition to a more output-based framework for PR5. One element of this, which has been enhanced in PR5, is the cost incentives. What the CRU aims to achieve with the cost incentives is:

- that the network companies remain solely responsible for their expenditure decisions;
- that the network companies are not rewarded for under-delivery;
- that the network companies are indifferent about the timing of expenditure/savings;
- that the network companies are able to change their expenditure plans in light of new information, while providing the CRU with sufficient oversight over such changes; and
- where possible, the cost incentives will take into consideration output delivery.

The purpose of the cost incentives is to compare cost allowances to outturn costs, in the context of how the licensee's delivery compares to the expectations that informed the cost allowance. Noting that things will change over the course of PR5, given the uncertainty – licensees may need to do more or less in some areas than was expected, and new work may emerge that was not expected when setting the PR5 allowance. Hence, for PR5, the concept of an adjusted allowance has been introduced – which is the allowance against which actual costs will be compared. The adjusted allowance will not be going back with hindsight to reset the allowances. It is a rebasing for delivery before the cost incentive is applied.

For example, the *ex-ante* allowance may need to be updated to reflect the application of uncertainty mechanisms (Including TSO Monitoring Committee), under-/over-delivery of outputs, and/or costs that have been reallocated by the DSO between Opex and Capex ('flexibility mechanism'). A report from CEPA discussing the cost incentives has been published alongside this Paper. This report outlines how the adjusted allowance will be calculated at the end of the PR5 period and includes worked examples that illustrate how the cost incentives will be applied under plausible scenarios.

The CRU has decided to retain much of the current cost incentive approach to maintain continuity with the PR4 framework and expand the mechanism to account for the mechanisms within the Agile Investment Framework. The CRU has also decided to introduce an output-based approach into the process. For the avoidance of doubt, an underspend on allowed revenues does not automatically equate to an efficient underspend. The onus will be on the network companies to demonstrate the underspend was efficient and the steps they took to deliver the efficiencies.

The following summarises the application of the cost incentive for each Mechanism:

1. Uncertainty Mechanisms: for mechanistic uncertainty mechanisms (e.g. connections capex for DSO), the impact on the adjusted allowance will be clear if the mechanism

is triggered – e.g. if relevant volumes exceed a certain threshold. For non-mechanistic uncertainty mechanisms (e.g. large customer capex for the DSO) the impact on the adjusted allowance will be captured in the CRU's determination of any additional funding allowed when the mechanism is triggered.

2. TSO Monitoring Committee: a cost target will be identified and will feed into the annual revenue process. This will be based on the TSO's submission. The TSO will clearly identify the activities likely to be required and the expected costs of those activities. When reviewing the costs, and making any adjustment to the *ex-ante* allowances, the CRU will have regard to which activities were required to be carried out, and which were not. The variance in the actual and forecast expenditure for those activities will be considered in a similar manner to the CRU's assessment of *ex-ante* inputs relative to outturn costs. Costs will be considered in the round, consistent with the bottom-up/top-down approach.

3. Outputs: outputs feed into the approach to setting the adjusted allowance in two ways: (1) a "top-down" approach that informs the scope and level of detail that the CRU goes into when reviewing output delivery for the purpose of setting the adjusted allowance; and (2) a "bottom-up" review of outputs delivered during PR5 to inform any changes to the allowance.

4. Flexibility Mechanism: any adjustment is conditional on the DSO demonstrating that the costs reallocated between Opex and Capex (or vice versa) are material, and that the expenditure undertaken is expected to be NPV neutral or positive when compared to the assumed expenditure that was foregone. The CRU will adjust the Opex and Capex allowances after establishing the level of (efficient) avoided expenditure and the level of (efficient) additional expenditure.

5.1 Guiding Principles

The following principles will be applied:

1. **No hindsight regulation.** The cost incentive will be applied by comparing outturn costs to an adjusted allowance. In doing so, the CRU will have regard to the information that the licensee had available, or should reasonably have had available, at the time of making expenditure decisions.

2. **The burden of proof is on the licensee.** It is for the network company to demonstrate to the CRU that its expenditure has been efficient:

    a. The expenditure and investment decision making by the network company that took into account all information that could reasonably have been expected to be available to the network company at the time of making the decision; and which,

    b. resulted in expenditure during PR5 that would reasonably, at the time of making the expenditure and investment decision, be expected to be required to meet

the changing and uncertain needs and requirements of the network company's regulated electricity business or transmission system.

3. **Accounts for delivery.** The adjusted allowance will account for the cost impact of actual outputs delivered by the licensee.

4. **Applied at the level of total Opex and total Capex.** The cost incentive will be applied to the difference between:

    a. Total allowed Opex and total outturn Opex.

    b. Total allowed Capex and total outturn Capex.

    Notwithstanding this, in order to determine the level of the adjusted allowance it is likely that Opex and Capex will each need to be reviewed at a more granular level and then summed up.

5. **No double-reward or double-penalty.** The cost incentive will be applied to the difference between outturn costs and an adjusted allowance. The adjusted allowance may include adjustments for under-/over-delivery of outputs, but only so far as is required to reflect a corresponding under-/over-spend. Any penalty for under-delivery of the outputs themselves will be captured in any applicable performance incentives, and there should not be further penalties for under-delivery as part of the cost incentive. The same applies to over-delivery and over-spend.

6. **Neutral in net present value terms**. Adjustments to a network company's revenues at PR6 that result from application of the PR5 cost incentive will be done on an NPV-neutral basis. This will ensure that the network company is indifferent between efficiency savings that are incurred early or later during PR5.

5.2 Capital Expenditure

For PR5, as set out within the CRU's Draft Determination (CRU/20/076 and CRU/20/077), the CRU will use a five-year rolling retention mechanism since this will deliver the most even distribution of efficiency savings across the duration of the price review.

Where the network company considers that their underspend is the result of efficiencies they can apply, as part of their PR6 submission, for the retention of those efficiencies. In assessing the benefit to be retained on Capex, the CRU will consider the cost, volume and quality of the investment made and information provided by the network company. For example, no benefit will be retained if the network companies were to make savings through reducing the volume of their respective investments, as this is independent of the benefits defined in their Capex plans. At the PR5 close-out, the network company's lookback submission and data tables will be reviewed to establish:

- the volume of work assumed in the *ex-ante*;

- if more work (or equal amount of work) is delivered than anticipated by the *ex-ante* allowance,
    - the quantity of work delivered up to the quantity anticipated by the *ex-ante* allowance;
    - the additional volume of work justified which is above the *ex-ante* allowance quantity; and
    - any volume of work which is above the *ex-ante* allowance quantity and is not justified and should be disallowed.
- If less work is delivered than anticipated in the *ex-ante* allowance,
    - the quantity of work delivered; and
    - the quantity of work deferred.

The CRU has also detailed projects and initiatives within the Final Determination Paper that has an *ex-ante* allowance. The efficiency savings (and indeed inefficient expenditures if they occur) will be reviewed as part of the next price review and as in this review inefficient expenditure will not be allowed into the Regulatory Asset Base ('RAB'). Revenue earned on Capex not spent will be clawed back, except where the network company can show that the avoided spend is due to efficiencies on their own part. This approach can work well for transmission Capex programme but is more challenging for distribution given the nature of the distribution Capex programme. However, the CRU considers that where the Capex inputs are linked to outputs this mechanism can be applied at the output level.

The cost incentive will be applied at the level of total Capex. The assessment will take into consideration, a bottom up analysis, a top down analysis, and an analysis of the output delivery. The CRU will then make its evaluation based on a holistic assessment of these analyses.

The onus is the network companies to demonstrate Capex efficiencies. The network companies shall submit a standalone submission to demonstrate how efficiencies were achieved and the impacts measures had on the specific cost categories. The submission shall be both qualitative and quantitative. The CRU will examine over and under expenditures and make an in the round assessment during the close-out of the Price Review. For the avoidance of doubt, the four potential treatments of Capex during close-out are:

- Inefficient overspend: cost will be disallowed from outturn Capex. The licensee will not be able to recover those costs in PR5, nor in later price controls.
- Efficient overspend: an adjustment will be made to the allowed revenues in PR6 to reflect the cost of capital and depreciation that would have been earned on the overspend in PR5. The Opening RAB for PR6 will be updated to reflect actual Capex.

- Efficient saving: this reflects outputs that are delivered at a lower cost than the adjusted allowance. An adjustment will be made to the allowed revenues in PR6 to reflect the licensee retaining the cost of capital and depreciation benefits for five years (rolling retention). The opening RAB for PR6 will be updated to reflect actual Capex.

- Efficient deferral: this reflects outputs that were deferred during PR5, distinctly from any under delivery (or non-delivery) of outputs which is corrected for under the adjusted allowance. No adjustment will be made to the allowed revenues in PR6, as the licensee will be allowed to retain the cost of capital and depreciation benefits during PR5. The opening RAB would for PR6 will be updated to reflect actual Capex.

5.3 Operational Expenditure

Currently the network companies can retain Opex efficiencies if they can demonstrate the underspends to be efficient. As part of the *ex-post* review both underspends and overspends are examined to enable an in the round assessment of the appropriate level of cost recovery, and potentially, revenue retention above expenditure. This assessment is carried out at the input level.

The cost incentive will be applied at the level of total Opex. The assessment will take into consideration, a bottom up analysis at the input level, a top down analysis, and an analysis of the output delivery. The CRU will then make its evaluation based on a holistic assessment of these analyses. To establish whether the outturn Opex should be allowed, the CRU will consider unexplained material variations between outturn Opex and the adjusted allowance.

In summary, at the close-out of the Price Review efficient and inefficient over/under spend on Opex will be treated in the same way as in PR4; with efficient spend subject to be fully recovered by the network companies and inefficient spend subject to be clawed back by the CRU. It is for the network company to demonstrate to the CRU that its expenditure has been efficient and the impact that efficiency gains had on other costs. For the avoidance of doubt, the three potential treatments of Opex are:

- Inefficient overspend: these costs will be disallowed from the outturn Opex. The licensee will not be able to recover these costs. Inefficient Opex would typically not feed into the baseline Opex allowance for PR6.

- Efficient overspend: once proven to be efficient by the licensee, it will be allowed during PR5. Efficient Opex overspend would typically be included into the baseline Opex allowance for PR6.

- Efficient underspend: the licensee will retain the efficient underspend during PR5. No clawback will be applied in PR5 and the level of efficient underspend would typically feed into the baseline Opex allowance for PR6.

6 Ex-Post Review

The *ex-post* review is a fundamental part of the CRU's regulatory framework and will be retained for PR5. It involves a detail assessment and review of the submissions made by each network company. Submissions made set out outturn expenditure against forecast expenditure and should include details on over/under expenditures, outputs delivered/underdelivered, efficiencies achieved etc. The *ex-post* review not only protects consumers from inefficient expenditure but also protects network companies, by allowing outturn costs above the *ex-ante* allowance (that have been proven to be efficiently incurred). The key principles that will underpin the *ex-post* process are as follows.

The CRU has set out principles below to provide additional guidance on how the CRU conducts the *ex-post* review. The CRU has decided, consistent with its approach to date, on a set of principles to guide the *ex-post* review as opposed to a prescriptive set of criteria. The CRU considers that a principle-based approach provides for a much more stable framework that protects consumers than the alternative approach. This is because costs are better managed and controlled by the network companies and the people closest to the activities as opposed to detailed processes set by the regulator every five years. Further, this ensures that the network companies are genuinely accountable for their costs and not to incur excessive costs due to following a set of steps that may not be appropriate for the circumstances. The oversight, accountability, and consumer protection provided by the principle-based *ex-post* review also ensures the stability of the overall framework by removing the possibility that customers will be required to cover costs that are objectively unreasonable; such an outcome would likely require regulatory intervention.

- **Accountability**: the network companies are accountable for their expenditure and expenditure decisions. The onus is on the network companies to demonstrate the efficiency of their expenditure. For the avoidance of doubt, expenditure cannot be assumed to be efficient in the absence of evidence.

- **Clear Justification**: material over and/or under expenditures, when compared to the PR5 *ex-ante* revenues, should be well justified and explicitly detailed. The onus is on the network companies to demonstrate this within its submissions and where appropriate, quantitative as well as qualitative information should be presented.

- **No "hindsight regulation"**: the assessment should only be based on the efficiency of the companies' incurred expenditure in the context of the information that it had available, or should reasonably have had available, at the time of making their investment decisions. This is a key principle that must underpin the *ex-post* review.

- **Reasonableness:** the decisions taken by the network company were reasonable including that:

    - the expenditure and investment decision making by the network company that took into account all information that could reasonably have been expected to

be available to the network company at the time of making the decision; and which; and

- resulted in expenditure during PR5 that would reasonably, at the time of making the expenditure and investment decision, be expected to be required to meet the changing and uncertain needs and requirements of the network company's regulated electricity business or the system.

7 Performance Incentives: Transmission

As part of the Draft Determination, the CRU proposed a number of adjustments to the TSO and TAO's incentives package which were discussed in detail within the CRU's Consultation Paper (CRU/20/078). For the Final Determination, the CRU's finalised incentives package for the TSO translates to 13% (upside) and 5% (capped downside) of controllable Opex, while for the TAO, the package represents ±2% of Opex. This is a substantial monetary increase compared to the PR4 Incentives and Reporting Decision (CER/18/087) and will provide for effective remuneration or penalisation on important outcomes in PR5.

7.1 Overview

The CRU is establishing a performance incentives framework for the TSO that encompasses three layers, these are; Layer 1: Outcome Metrics; Layer 2: Investment Planning and Delivery and Joint Incentives and Layer 3: Strategic Objectives. The TAO framework includes an additional incentive focused on TSO and TAO collaboration. Each incentive is set out in the tables below.

Table 12: TSO PR5 Incentives

TSO Final Determination				
			€m (Annual Upside)	€m (Annual Downside)
Layer 1	RES-E (%)	New	0.4	0
	SNSP (%)	New	0.6	0.3
	Renewable Dispatch Down (%)	New	0.6	0.3
	System Minutes Lost	-	0.3	0.5
	System Frequency	-	0.3	0.5
	Connections (ECP-2)	-	0.5	0.2
	Stakeholder Engagement (NSEE)	-	0.5	0
Layer 2	Investment Planning and Delivery	-	0.9	0.5
	TSO/TAO Joint Incentive	New	0.2	0.1
	TSO/DSO Joint Incentive	New	0.2	0.1
Layer 3	Strategic Objective	-	0.5	0
	Constraints/Dublin Security of Supply	New	1.5	1
	Strategic Objectives: Imperfections	New	1.5	0.5
		Total (€m)	**8**	**4**
		Capped Total (€m)	**8**	**3**

Table 13: TAO PR5 Incentives

TAO Final Determination			
		€m (Annual Upside)	€m (Annual Downside)
TAO Project Delivery	-	3.5	3.5
Outage Management	-	1	1
TAO/TSO Joint Incentive	New	1.5	1.5
	Total (€m)	**6**	**6**

7.1.1 CRU's Considerations

The CRU received a large number of responses and comments focused on the proposed transmission incentives for PR5 (see Annex 1). The CRU has considered the responses received from stakeholders and the licensees and is implementing a number of changes to the incentives framework.

The CRU has carefully considered whether incentives should have asymmetrically higher rewards than penalties. There is also a need to ensure that incentive targets are set at stretching but achievable levels. In general, there is merit in accepting more asymmetry within the PR5 incentives framework (i.e. more upside than downside), however there is rationale for treating incentives differently when allocating costs to either the upside or downside. The need to transform the energy system and encourage actions that help to avoid the network companies to just "sticking to the plan" and promote innovation by adopting new working approaches or technologies merit more revenues to be allocated to the upside. However, maintaining system security, which is a core performance commitment for the TSO, merits more downside risk. Each incentive is set out in the following sub-sections. The main changes to note are summarised below:

- **RES-E:** a large number of respondents requested the reinstatement of this metric. In the Consultation Paper, the CRU acknowledged that the share of RES-E directly links to the CAP targets**.** However, the CRU also highlighted that it can be influenced by some factors that are outside of the TSO's control. This has been partially acknowledged by the TSO within its response. The CRU has however revised its proposals and will include a RES-E performance incentive for PR5. A reward will only apply once the target has been reached and following a CRU evaluation. The TSO's performance will be evaluated based on a balanced scorecard. The balanced scorecard metrics will be determined in early 2021. In order to accommodate this incentive and ensure that the overall upside and downside do not change materially, the SNSP and Renewable Dispatch Down incentives have been revised downwards.
- **Balanced Scorecards**: a significant number of respondents (Annex 1) commented on the proposed changes to the PR4 balanced scorecard framework, particularly the investment planning and delivery incentives. With submissions from licensees, the CRU will reflect on responses and finalise the balanced scorecards in 2021. This will allow the CRU to determine a comprehensive set of scorecard metrics and weightings. The following Balanced Scored cards will be finalised:
    - RES-E;
    - TSO Investment Planning and Delivery;
    - TSO/TAO Joint Incentive;
    - TSO/DSO Joint Incentive;
    - Imperfections & Constraints; and

- Local Security of Supply.

- **Imperfections:** the CRU has maintained the imperfections incentives as proposed but will allow the TSO to request additional funding through the Innovation Reporting Mechanism (see Annex 4).

- **Revenues:** revenues (upside/downside) have been re-calibrated to facilitate the inclusion of the RES-E incentive and to also enhance the strength of the entire package. The CRU has capped the downside to €3m. This maintains the strength of the package, but also protects the TSO from significant downside shock. The CRU's PR5 strategic objectives also informed the changes made.

The detail of the PR5 transmission performance incentives are set out in the following sub-sections.

7.2 Renewable Energy Source – Electricity (RES-E)

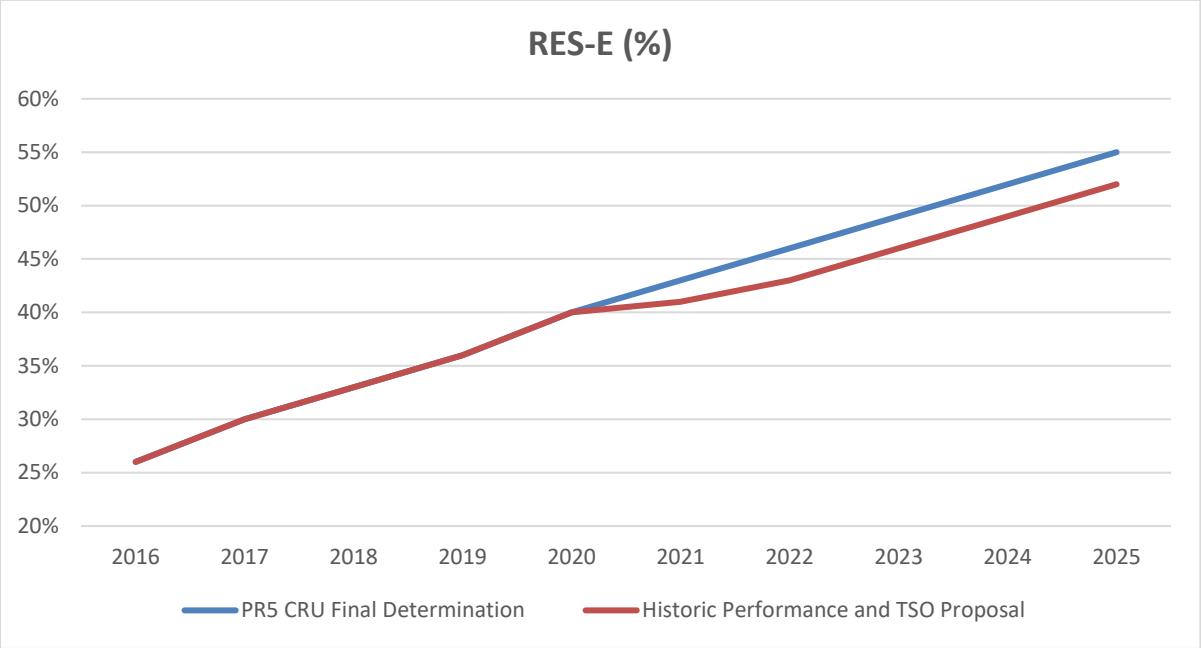
Objective

This will measure the portion of electricity coming from renewable sources for each year. The aim of this metric is to incentivise the TSO to contribute to the achievement of the 70% renewable electricity by 2030 and lay the foundation for achieving net zero carbon emissions by 2050. This incentive will reward the TSO for the actions that it has taken to achieve the annual RES-E targets set out in Table 14. The incentive aligns with the CRU's PR5 strategic objective to *facilitate a secure low carbon future* and was proposed by the TSO as a new incentive metric for PR5.

Decision

The CRU will introduce an incentive for the achievement of the RES-E targets as set out in Table 14 below. This incentive was strongly supported by responses received as part of the Draft Determination consultation; however, concerns remain regarding the adjustments that may be made by the TSO to account for factors outside of its control. For example, the TSO may be rewarded in instances where the target was achieved without the deliberate action of the TSO e.g. changes in demand. For this reason, the CRU will enhance this incentive by introducing a balance scorecard to evaluate the TSO's actions.

The TSO's historic performance demonstrates incremental improvements of circa 3% year on year. Assuming EirGrid achieve 40% in 2020, the CRU has established 3% incremental targets towards 2025. This results in a target of 55% set for 2025 and also sets the TSO on a path to 70% by 2030. Without increments of 3% annually, the TSO would not achieve the 2030 of 70%.



PR4	2016	2017	2018	2019	2020
Historic Performance	26%	30%	33%	36%	-
PR5	**2021**	**2022**	**2023**	**2024**	**2025**
PR5 TSO Proposal	41%	43%	46%	49%	52%
PR5 Targets	43%	46%	49%	52%	55%

Table 14: RES-E PR5 Targets

To measure and assess the actions undertaken by the TSO to achieve the RES-E targets, a balanced scorecard will be established. The TSO will be required to submit a multi-year plan setting out the planned actions involved in achieving the annual RES-E targets. The multi-year plan will be submitted to the CRU in September each year, at the same time that is published for consultation with stakeholders.

This detailed plan will cover the three following years (and the following two years at high-level). Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high-level). With respect to 2021, the TSO shall make its submissions of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

The CRU will be assessing the TSO on the following four areas:

- Achievement of RES-E target,
  - if the annual target has not been achieved, no reward will be applied.
- Quality of the plan,

    - has the plan tied TSO actions are to increasing RES-E?
- Quality implementation,
    - has the TSO achieved the milestones to the expected quality?
- Effectiveness of plan,
    - did the actions, within the TSO's plan, contribute to RES-E as well as expected?

The TSO's proposals should allow for the evaluation of areas within the TSO's control and those not within the TSO's control. The CRU can then more appropriately allocate the reward based on actions or initiatives the TSO successfully undertook.

This incentive will have an upside only and will equate to €0.4m per annum or €2m over PR5.

Reasoning

The CRU will introduce this incentive due to its clear customer value and the fact that the TSO can play an active role in achieving RES-E targets. The CRU is cognisant of the fact that this incentive is a broad, economy-wide metric which the TSO acknowledges would involve baselining and measurement issues. Control over outcomes is one of the principles we consider essential for an incentive, and as such, a balanced scorecard will ensure the TSO is rewarded based on its actions.

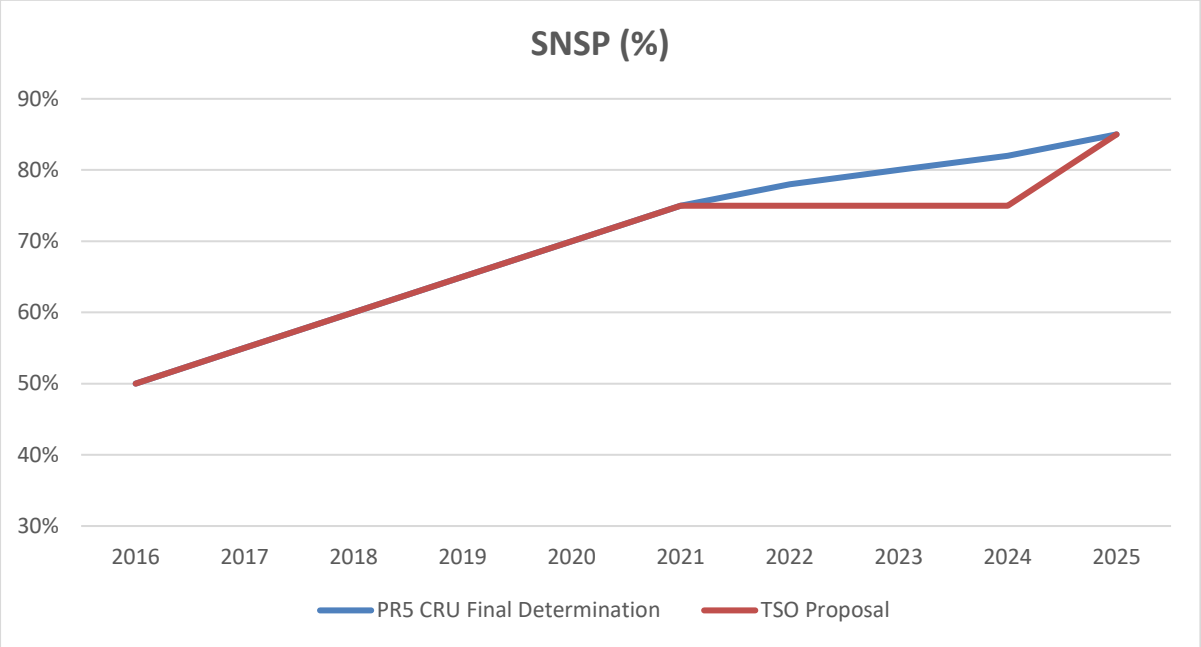
7.3 System Non-Synchronous Penetration (SNSP)

Objective

System Non-Synchronous Penetration is an important enabler for increasing the level of renewable sources of electricity generation on the power system and the TSO must introduce new tools and processes to allow for annual increases in the SNSP. This incentive aligns with the CRU's PR5 strategic objective to *facilitate a secure low carbon future* and was proposed by the TSO as a new incentive metric for PR5.

Decision

As part of the PR5 framework, the CRU has introduced a new annual incentive focussed on increasing SNSP. The TSO's historical performance over PR4 showed an annual increase of 5%. The CRU has introduced incremental targets that aim to incentivise the TSO to make annual improvements over PR5. The CRU considers 75% to be a reasonable starting point, with a final target of 85% SNSP by 2025. Increasing the SNSP up to and beyond 90% is necessary to achieve Ireland's 2030 targets and is technically challenging, therefore it is important that the TSO makes significant progress in the first part of the decade. The TSO's practice over PR4 was to move in increments of 5%. The TSO has argued that they continue this practice, however incremental improvements will deliver benefits to consumers and will also incentivise the TSO to consider delivering step changes earlier within the PR5 period.



PR4	2016	2017	2018	2019	2020
Historic Performance	50%	55%	60%	65%	-
PR5	**2021**	**2022**	**2023**	**2024**	**2025**
PR5 TSO Proposal	75%	75%	75%	75%	85%
PR5 Targets	75%	78%	80%	82%	85%

Table 15: PR5 SNSP PR5 Targets

The annual upside has been revised downwards to accommodate the inclusion of the RES-E incentive. The upside has been set to €0.6m per year or €4m over PR5 and downside of €0.3m per year or €1.5m over PR5. The payments are asymmetrically positive to reflect the potential value to customers and the difficulty of the targets. The full annual incentive payment (€0.6m) will be awarded if the TSO meets or exceeds the target and the full annual penalty (€0.3m) will be imposed if the target is not met in a given year.

Reasoning

The CRU has introduced this incentive due to its clear customer value and the fact that the TSO plays an active role in managing SNSP. Given its value to consumers, the CRU wants to incentivise incremental gains in SNSP and therefore has established annual targets rather than the TSO's single five-year target of 85%.

7.4 Renewable Dispatch Down

Objective

The objective of this metric is to incentivise the TSO to reduce/minimise renewable dispatch down levels over the PR5 period. Renewable generation receives priority dispatch within the scheduling and dispatch algorithms in the Control Centres. However, there are times when it is not possible to accommodate all priority dispatch generation. This is due to the TSO's requirement to maintain the safe and secure operation of the power system. Issues may arise due to lack of grid infrastructure to accommodate the renewable generation. Excessive dispatch down of renewable generation may result in wholesale energy prices being higher than necessary in addition to the costs associated with constraining on more expensive units. Higher levels of dispatch down will also impact on the output of renewable projects and ultimately affect Ireland's ability to meet its 70% target by 2030.

Decision

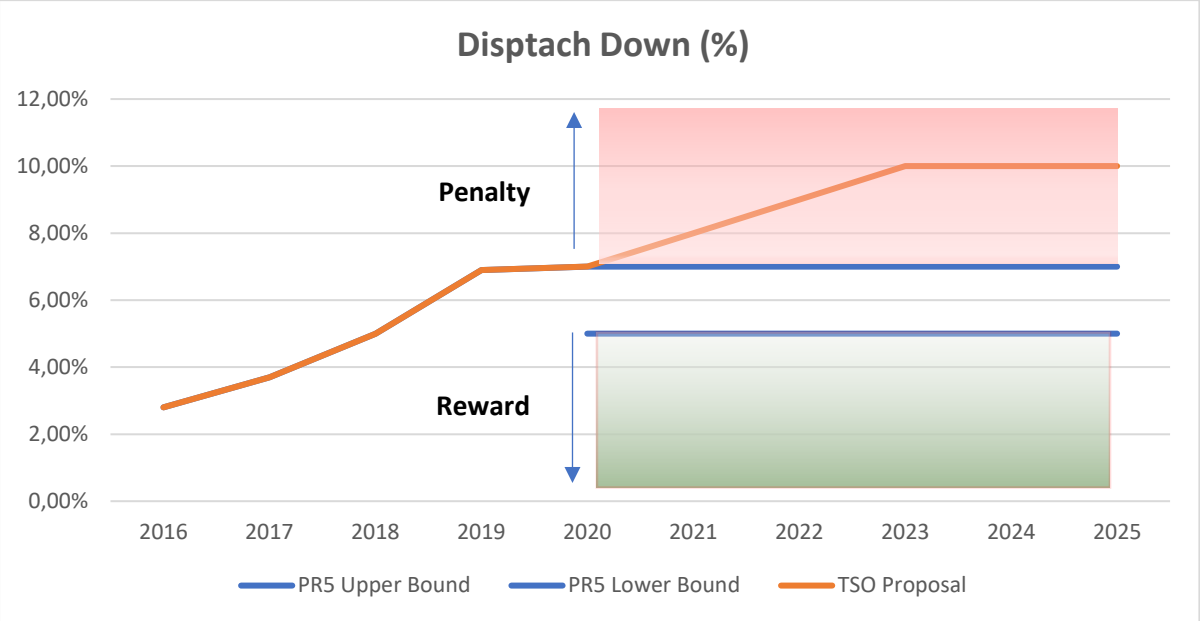
The CRU has introduced a new annual incentive focussed on the total dispatch down percentage. The CRU has introduced a fixed target of 5%[11] over PR5 and has sought to balance this ambitious target with the payment mechanism and deadband applied. A number of respondents queried the deadband and suggested that it be narrowed, or an incremental penalty be applied after 5%.[12] As such, the CRU has reduced the deadband from 5% and 8% to 5% and 7%. This decision will result in a maximum penalty being applied at a much lower dispatch down percentage compared to the TSO's proposal. Dispatch down percentage will also be based on both constraint and curtailment (as currently measured) and will be based on the average renewable dispatch down over 12 months.

The TSO has proposed that variables and High Impact Low Probability (HILP) events outside of the TSO's control should be accounted for. The CRU is unsure how such events would be accounted for. No specific additional information was received from the TSO to consider such a stipulation, however EirGrid has noted that it will assess this and provide information to the CRU as part of stage 3 of the finalisation of the incentives. The CRU will consider this additional information at that stage.

The annual upside has been revised downwards to accommodate the inclusion of the RES-E incentive. An upside payment of €0.054m will apply if the TSO meets the target of 5.0% and an additional €0.054m for every 0.1% below 5.0% up to a maximum of €0.6m. A downside penalty of €0.014m will apply if the TSO meets the limit of 7.0% and an additional €0.014m for every 0.1% above 7.0% up to a maximum of €0.3m.

[11] In terms of the targets, Article 13(5) of the EU Clean Energy Package (CEP) refers to a 5% curtailment level for renewable energy.

[12] EirGrid has noted in its response that Regulation (EU) 2019/943 is being considered by SEMC.



PR4	2016	2017	2018	2019	2020
Historic Performance	2.8%	3.7%	5.0%	6.9%	-
PR5	**2021**	**2022**	**2023**	**2024**	**2025**
PR5 TSO Proposal	8%	9%	10%	10%	10%
PR5 Upside Target	5%	5%	5%	5%	5%
PR5 Downside Target	7%	7%	7%	7%	7%

Table 16: PR5 Renewable Dispatch Down incentive targets for the TSO

Reasoning

The CRU has introduced this incentive due to its clear customer value and the fact that the TSO has an active role in managing dispatch down.

The CRU adjusted the TSO's proposed dispatch down targets to reflect the ambition and objectives of PR5. In the CRU's view the targets are in line with the ambition of the CAP and the CEP. Dispatch Down will also become a relevant issue for distribution system over the course of PR5 and TSO/DSO coordination will be important (see Section 7.9).

7.5 System Minutes Lost

Objective

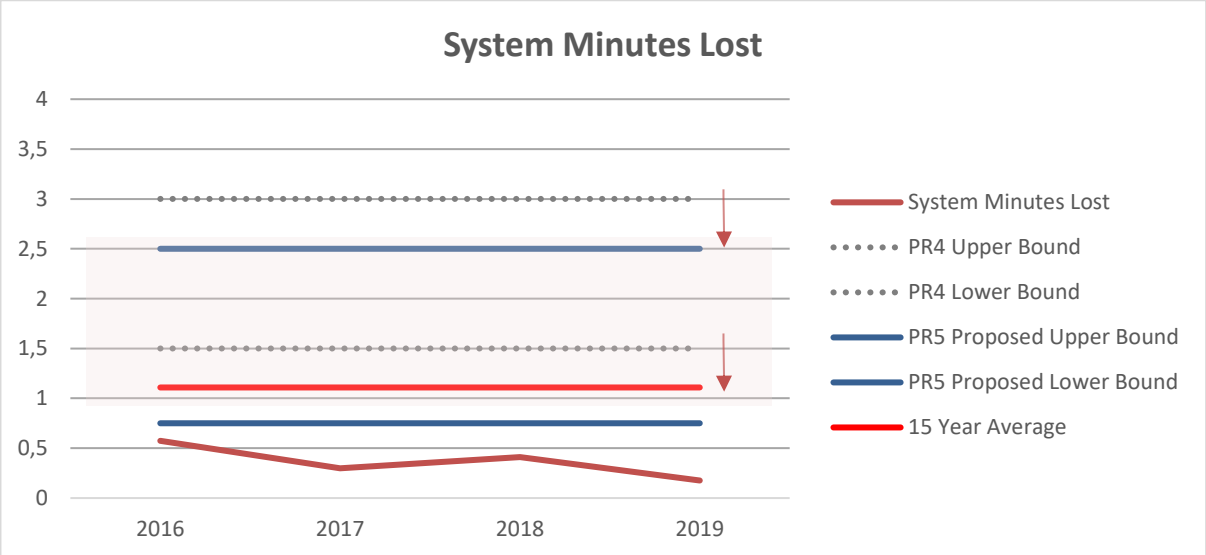
The System Minutes Lost (SML) metric measures the severity of each system disturbance relative to the size of the system. It is determined by calculating the ratio of unsupplied energy during an outage to the energy that would be supplied for one minute, if the supplied energy was at its peak value.

The CRU's objective in maintaining an incentive for System Minutes Lost is to give the TSO an appropriate financial stake in maintaining appropriately high standards of system performance. It reflects that customers and market participants place a high value on supply reliability and quality, and that the actions of the TSO can be a significant influencing factor on outcomes.

Decision

There was broad support for this incentive and the adjustments made to the targets. The incentive payment or penalty will be calculated based on the difference between actual performance and the levels of target performance. The CRU has revised the PR4 targets to be more consistent with the TSO's historic performance and to reflect the importance of maintaining a high-quality electricity supply. PR4 performance (2016-2019) shows an average SML of 0.365. The TSO has also only failed to achieve an incentive once in the last ten years. On balance, the CRU considers that historic performance shows that the revised targets are achievable and the potential for an increase in outages reinforces the need to incentivise the TSO to maintain the reliability of the system. The CRU will apply 20% of the upside/downside per 0.1ML deviation from the deadband set out in Table 17.

Retaining the asymmetry of the PR4 incentive and the magnitude of revenue-at-risk relative to controllable Opex will result in an upside of €1.5m and downside of €2.5m over PR5.



PR4	2016	2017	2018	2019	2020
Historic Performance	0.574	0.3	0.411	0.176	-
PR5	**2021**	**2022**	**2023**	**2024**	**2025**
PR5 TSO Proposal	1.5 – 3.0				
PR5 Target	0.75 – 2.5				

Table 17: PR5 SML Target

Reasoning and Considerations

System Minutes Lost is a well-recognised metric for measuring the reliability and quality of supply delivered by an electricity transmission system. The metric is proximate to outcomes that users of the transmission system place a high value on. The use of standard metrics also allows the TSO's performance to be understood over time, and relative to other jurisdictions.

7.6 System Frequency

Objective

The Grid Code requires that the frequency is kept within the normal operating limits of 50 Hz ± 0.2. This is to ensure a quality supply of electricity to end users. In a synchronous AC power system, such as Ireland, all of the generating units are synchronised together, producing electricity at a nominal frequency of 50Hz. Frequency excursions outside the limits can occur if there is a sudden change in load or generation and it is one of EirGrid's primary duties to manage frequency in real time.

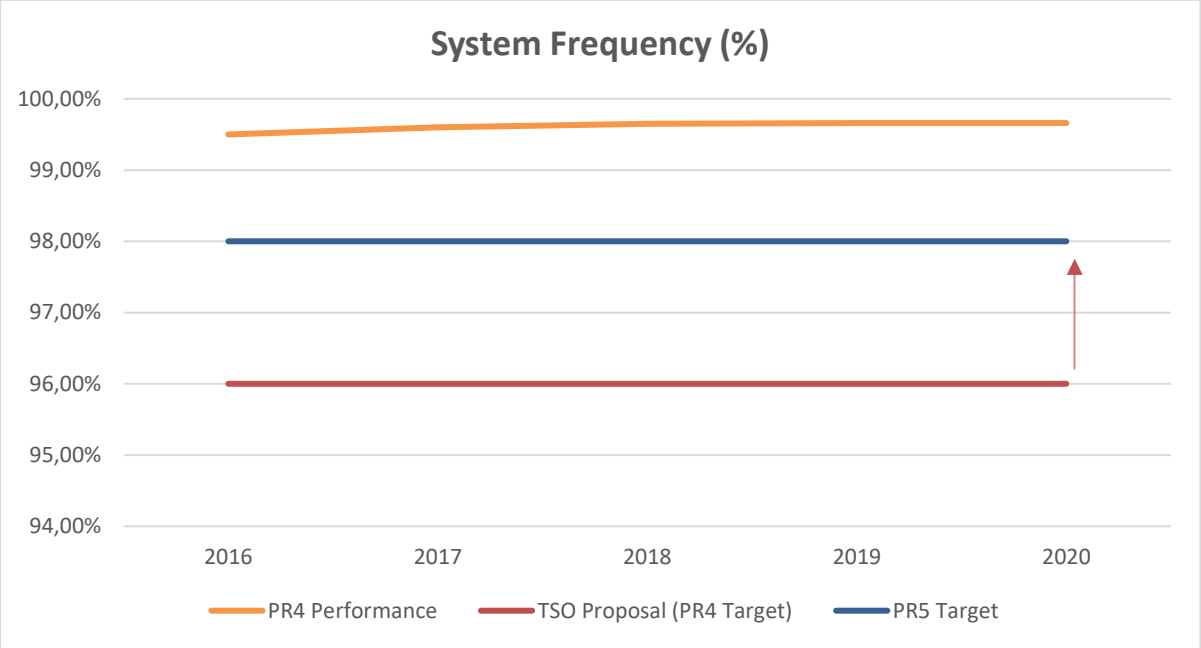
As with the CRU's SML incentive, the CRU's objective in putting in place a system frequency incentive is to give the TSO an appropriate financial stake in maintaining appropriately high standards of system frequency performance. It reflects that customers and market participants place a high value on supply reliability and quality, and that the actions of the TSO can be a significant influencing factor on outcomes. As renewable penetration increases, system frequency control will be a key challenge for the TSO and as such, an appropriate incentive has been established for PR5.

Decision

There was broad support for this incentive and the adjustments made to the targets. The TSO shall be subject to financial incentives in respect of System Frequency (SF). The incentive payment or penalty will be calculated based on the difference between actual performance and the levels of target performance.

The TSO's historic performance demonstrates that it can consistently operate above the 98% target. As such, the target has been set at 98% and every 0.1% away from the central target will equate to 5% of the penalty, as applicable, up to 2%. For example, if the TSO operates at

97% over one year, 50% of the annual penalty (€0.5m) will apply. On the upside the TSO will award €0.1m each year if performance exceeds: 98.0%, 99.0% and 99.5%.



PR4	2016	2017	2018	2019	2020
Historic Performance	99.5%	99.6%	99.65	99.66%	-
PR5	**2021**	**2022**	**2023**	**2024**	**2025**
PR5 TSO Proposal	96%				
PR5 Target	98%				

Table 18: PR5 System Frequency Target

Reasoning

System frequency is a robust way of measuring the reliability and quality of supply delivered by an electricity transmission system. The metric is proximate to outcomes that users of the transmission system place a high value on. The use of standard metrics also allows the TSO's performance to be understood over time, and relative to other jurisdictions.

To reflect ambition and objectives of PR5, the CRU has adjusted the system frequency target for PR4. It is noted that the TSO would not have breached the revised target in any of the PR4 years and therefore the CRU considers that the target is clearly achievable.

7.7 Stakeholder engagement – NSEE Panel

Objective

The CRU's objective in maintaining the stakeholder engagement incentive mechanism is to continue the benefits of effective stakeholder engagement. It reflects that innovation in how stakeholders are communicated with, and how their input is used to improve how network services meet the needs of stakeholders has significant potential value but is inherently difficult to quantify. Hence, without an incentive mechanism there is a risk of "under-investment" in stakeholder engagement.

Decision

There was broad support of the stakeholder engagement incentive, with respondents stating that it has worked well in PR4. As such, the TSO shall continue to be subject to a financial incentive on the scope, quality and outcomes/impacts of its stakeholder engagement activities. Performance shall be measured through an annual assessment of the TSO's strategy for stakeholder engagement, and the processes and activities undertaken by the TSO pursuant to that strategy over the preceding calendar year. The evidence to inform this assessment shall take the form of an annual submission by the TSO, consistent with guidance set by the CRU.

A number of respondents requested the inclusion of a Generator Customer Satisfaction Survey. Although the CRU does not disagree with the principle of establishing such a survey, the CRU does not consider it necessary to codify approaches in relation to any particular group of stakeholders. The purpose of the incentive, as constructed, is that the TSO should respond appropriately to the engagement needs of all stakeholders and that its approach should evolve over time. The NSEE process itself should highlight the value, and areas for improvement, in the TSO's engagement strategy.

The assessment shall be undertaken by a panel constituted by the CRU for this purpose and chaired by the CRU – and conclude with the award of a score on a scale of 1 to 10, consistent with guidance set by the CRU. The guidance on the submission and the assessment criteria is in Annex 14.

Reasoning

The stakeholder incentive provides a clear framework for the CRU to assess the measures taken by the TSO (and DSO) to understand and address the needs of stakeholders – in an environment in which the energy sector, and hence what different stakeholders might need, is in a process of transformation.

A consistent assessment approach across TSO and DSO (and, potentially, other regulated entities over time) gives both the CRU and stakeholders an opportunity to learn from demonstrated good practice and continually improve engagement methods. It also provides a platform for the network companies to demonstrate their efforts and success in these areas.

The CRU guidance and the process of moderation through a panel convened by the CRU, based on evidence presented by the TSO, provides a workable objective framework for assessment in the first instance – and a basis from which greater rigour in evaluation can evolve. The Networks Stakeholder Engagement Evaluation (NSEE) Panel, made up by stakeholders of CRU, was established by the CRU in 2019 through a consultation process.[13] The NSEE Panel evaluated and scored the stakeholder engagement activities of the TSO (and TSO) over 2018 and 2019. The process worked very well, with the TSO (and DSO) receiving and implementing recommendations for improvements provided by the NSEE Panel.

The CRU will continue with this approach over PR5, with the membership of the NSEE Panel being reviewed ahead of the 2021 process (when the SOs' performance over 2020 will be assessed) and every two years after 2021.

7.8 Investment Planning and Delivery

Objective

The CRU's objective in putting in place an incentive mechanism for investment planning and delivery is to improve transparency over the efficiency with which these key processes are undertaken. Further, to give the TSO a proportionate financial stake in maintaining consistently high standards in what these processes deliver. It reflects the fact that the TSO has significant discretion over investment planning and delivery, and these decisions ultimately (and cumulatively) have a significant impact on network performance and customers' bills. PR5 is a key enabler of the 2030 targets set out in the Climate Action Plan and the building of new and strategic transmission infrastructure will require appropriate focus on delivery.

Decision

The CRU has received a large number of comments and suggestions that relate to the Investment planning and Delivery incentive. As such the CRU has decided that the TSO shall be subject to a financial incentive on the quality and rigour of its end-to-end processes for investment planning and delivery, however, the detail of the balanced scorecard will be reflected on in 2021. This will encompass how options and needs are identified and optimised, and how investment schemes are delivered in a timely manner. Overall performance across the full range of activities will be evaluated and reported on annually. The CRU will expand the incentive to ensure it factors in stakeholder feedback received as part of Draft Determination (for example ensuring timely network project handover).

The incentive payments shall be set by the CRU and will be informed by an independent audit. The audit will use the "Balanced Scorecard" framework and will be consistent with guidance published by the CRU. As with the current balanced scorecard framework, based on the audit report and other evidence deemed relevant by the CRU, performance shall be graded as "strong", "acceptable" or "below acceptable": More detail on the PR4 framework was published

[13] The establishment of the NSEE Panel (2019-2020, inclusive), as well as other relevant documents related to previous stakeholder engagement processes, can be found on the CRU's website here.

in March 2020.[14] The TSO will be required to submit its balance scorecard proposals in Q1 2021 for consideration.

Reasoning

Incentivising the TSO to improve the quality and rigour of its end-to-end processes for electricity transmission network investment planning and delivery of infrastructure has clear consumer benefits. The investment planning and delivery framework provides a basis to assess the TSO and TAO on the quality and decision-making process.

7.9 Joint Incentives

Objective

Price Review Five will establish the pathway towards achieving the targets as set out in the CAP. Collaboration and innovation will be key for all licensees. As such, the CRU will establish two joint incentives between the TSO/TAO and the TSO/DSO.

Decision

The joint incentives between the TSO/TAO and TSO/DSO will aim to promote efficiencies through enhanced collaboration. The TSO/TAO incentive package will focus on network project delivery, while the TSO/DSO will promote a whole-of-system approach. In the electricity sector, decentralised generation, decentralised storage, and increasingly flexible demand will lead to a system wherein electricity flows are not one-directional, and distribution-connected assets can provide system services traditionally offered by transmission-connected power-plants. This change of the structure of our electricity system, along with an increased interaction between the electricity, gas, heat, and transport sectors creates a need for a more collaboration and coordination.

Metrics to evaluate performance may include both quantitative and qualitative metrics which will be evaluated through a balanced scorecard framework. The CRU will consider the responses received as part of the consultation when it established both joint incentive balanced scorecard in 2021. The incentive payments shall be set by the CRU and will be informed by an independent audit[15] (similar to the IPD Incentive). The balanced scorecard framework will evaluate performance and be graded as “strong”, “acceptable” or “below acceptable”. The TSO will be required to submit its balance scorecard proposals in Q1 2021 for consideration.

The following areas will be considered when finalising the evaluation metrics.

[14] Balanced Scorecard Framework for assessing TSO Performance on Investment Planning and Delivery: https://www.cru.ie/wp-content/uploads/2020/03/CRU20039-Information-Paper-on-the-Balanced-Scorecard-Framework-for-Assessing-the-TSO-Performance-on-Investment-Planning-and-Delivery.pdf

[15] Costs associated with the audits will be recoverable. The CRU has included additional revenues in the TSOs Opex for the additional reporting requirements.

TSO/DSO

The TSO/DSO joint incentive will require the TSO (and DSO) to submit a multi-year plan which sets out key milestones and targets against the following areas:

- **Dispatch Down and Curtailment**: historically the TSO has played a central role in managing curtailment. However, with changes to the electricity system there is potential for a greater role for the DSO. The additional generation from the distribution system, the electrification of heat and transport and the changing role of the DSO will mean it could play an increased role in managing dispatch down.

- **Security of Supply/Constraints:** while this is currently set out as a TSO incentive, it is noted that the DSO has an important role to play in security of supply and in particular given the operational arrangements in the Dublin region.

- **Whole of system Approach:** the DSO and TSO will be incentivised to optimise the network as a whole rather than focusing on each network separately. Better coordination between the DSO and TSO could bring beneficial outcomes to consumers in the form of lower network tariffs compared to a scenario without coordination, a more efficient market and/or more reliable electricity supply. This coordination may also allow for the development of infrastructure that benefits both the distribution system but located on the transmission network and vice versa.

The CRU will then review the plan and consider the quality of the plan, the quality of implementation and the quality of the plans impact across the areas set out above.

TSO/TAO

As with the TSO/DSO joint incentive, the TSO/TAO joint incentive will require the TSO (and TAO) to submit a multi-year plan which sets out key milestones and targets against the following areas:

- **Deployment of New Technology**: ensure that not only are the processes effective in enabling the trialling and piloting of new technology. But also, that the TSO and TAO actively deploy and use new technology on the grid. This metric could include optioneering assessments, deployment of technology and a review of effectiveness.

- **Project Initiation to CPP Agreed Phase:** this is an area where efficiencies can be achieved through enhanced collaboration. The TAO and TSO proposed a joint incentive to measure time taken from the issue of Indicative Programmes and CPPs by TSO to reaching CPP agreed with TAO in a calendar year.

- **Joint Process Improvement:** examine the TSO and TAOs performance on the quality and rigor of application of joint processes for identifying and implementing efficiencies in project and programme delivery and other areas of collaboration.

- **Asset and Programme Data Exchange**: examine the TSO and TAOs performance on the exchange of information and provision of access to transmission asset and

transmission work planning and delivery IT systems, data libraries, asset data, and programme & portfolio data with respect to delivery of transmission network Capex for the PR5 programme. The TSO and TAO will prepare a list of systems and data records relating to transmission assets and transmission work planning and delivery that are required to be shared along with timelines for the provision of data to ensure efficient throughput of the PR5 common design and construction quality review process and eliminate the potential for conflicts. The PR5 reporting framework on data verification may also provide useful insights into the effectiveness of this metric.

The CRU will then review the plan and consider; the quality of the plan, the quality of implementation and the quality of the plans impact across the areas set out above.

Reasoning

As stated previously, establishing joint incentives should provide a positive signal to all licensees to strive to improve collaboration and innovation in delivery of transmission network improvements as well as promoting a whole-of-system approach to the transmission and distribution networks.

7.10 Strategic Incentives

Objective

The CRU's objective in putting in place a strategic incentive is to create 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. The areas relate, in various ways, to the ability of different parties to participate in the markets for energy, capacity and system services.

Decision

The TSO shall be subject to a financial incentive on delivering against its strategic objectives relating to its role in supporting and managing the transition to a low carbon energy system in PR5 and beyond.

Performance shall be measured through an annual assessment of evidence submitted by the TSO, against objectives and criteria approved by the CRU, and reflecting stakeholder input. The TSO will be required to submit a multi-year plan setting out the planned actions. The multi-year plan will be submitted to the CRU in September each year, at the same time that is published for consultation with stakeholders.

This detailed plan will cover the three following years (and the following two years at high level). Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the TSO shall make its submissions of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

The CRU's initial objectives, criteria and process for the TSO to follow are in Annex 11. In framing its submission, the TSO may propose and seek the CRU's guidance on individual KPIs that it considers relevant to the objectives and criteria. The KPIs will be established at the beginning of PR5 with the option for the TSO to propose revisions in their annual submission for the KPIs to apply in subsequent years (no revision within the year in which the submission relates to is envisaged).

Reasoning

The power system that the TSO is operating, and the market arrangements which sit alongside that power system, are in a period of rapid change. The TSO has a key role to facilitate and manage this process change, and in some areas actively leading it. While it is difficult for the CRU to define specific KPIs in advance that will accurately and comprehensively capture the quality of the TSO's performance in this regard, the value at stake for the market and for customers is significant. Hence, some form of incentive mechanism appears to be appropriate. The CRU will also place a focus on what the TSO is undertaking in preparation for PR6. Stakeholder feedback noted that there should be a more forward-looking approach to investments and planning. The CRU aims to consider appropriate KPIs within PR5 to assess the TSO's activity to ensure that the TSO is maintaining a proactive approach to investments and is looking ahead to PR6 and 2030.

In principle, the outcomes consistent with such "performance bonuses" should be both demonstrably challenging, and strategically important for the system or market. The approach, based on an evidence-based assessment against identified strategic objectives, is in the CRU's view a reasonable and proportionate incentive for the TSO to respond to.

The CRU recognises that to some extent this framework puts the onus on the TSO to "make the case" against pre-defined but broad objectives. Hence, relative to other more mechanistic incentive schemes there is a degree of uncertainty about outcomes for the TSO. However, the objectives and criteria set by the CRU, in concert with the option for the TSO to propose and seek guidance on individual KPIs, represents in the CRU's view an objective and balanced approach – with the ability to flex as the nature and importance of strategic objectives shifts over time.

7.11 Local Security of Supply

Objective

The CRU highlighted the importance of resolving the local security of supply issues within its PR5 Strategic Objectives. Given the significant forecasted growth in demand in the Greater Dublin Region, constraints in the Dublin Region represent a security of supply risk. The aim of this incentive is for the TSO to demonstrate progress in addressing and managing key transmission network security of supply / constraint areas during PR5.

Decision

Under this incentive, CRU will require a multi-year plan setting out milestones and timeline of strategic actions planned to be undertaken by the TSO to address issues related to power transfer capacity, voltage support and local demand/generation conditions which are contributing to potential security of supply issues in the Dublin region. There may also be a role for the DSO on the operational side and the TSO may need to consider if engagement with the DSO is needed. The CRU considers that it is appropriate for this incentive to apply to the TSO given its role in relation to security of supply across the system and the importance of balancing measures to improve Dublin's security of supply with local security of supply concerns in other parts of the country. However, the TSO shall engage with the DSO with a view to ensuring a co-ordinated DSO/TSO approach in the Dublin region - and will include this in its submission.

The TSO will be required to consult on this plan and seek the feedback and input from stakeholders prior to finalising. This finalised multi-year plan can then be submitted to the CRU for approval. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the TSO shall make its submissions of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

The ultimate aim of the incentive is for the removal of the Dublin constraints and to ensure that the electricity supply to Dublin would not be materially impacted by the loss of generation in the Dublin area. The TSO should consider a combination of infrastructure, market based, and operational solutions. The TSO should also clearly identify the underlying technical scarcities responsible for the constraints such that technology-neutral service definitions can be developed.

The report should include a milestone timeline that sets out measures and initiatives that it will undertake to manage/resolve the issue for PR5 (e.g. by accelerating transmission network reinforcement to resolve a constraint). The TSO shall make an annual submission reporting progress on the initiatives and quantifying the reduction in constraint actions taken by the TSO. The TSO submission should outline the market-based approaches they have taken and identify improvements to be made in the operational measures undertaken. The TSO's performance would be reviewed by the CRU against the balanced scorecard both annually and at the end of the PR5 period.

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. The definition for the resolution will be included within the balanced scorecard and may consider recent DMILC[16] volumes and/or the specific L2 constraint region. It is also important to ensure that any resolution is robust enough to account for demand forecasts in the medium to long-term. The

[16] https://www.cru.ie/wp-content/uploads/2018/10/CRU18228-Information-Note-on-DMILC-process-1.pdf

TSO will also be expected to address/consider other locational security of supply issues, outside the Dublin area, and performance elsewhere will be assessed under this process.

Reasoning

One of the CRU's strategic objectives for PR5 is *resolving local security of supply*. Given the national importance of maintain a secure electricity supply in Dublin, the CRU considers that these constraints must be resolved as a matter of urgency. The removal of constraints in Dublin and elsewhere in the country will have wider benefits for customers across Ireland and in Northern Ireland in terms of efficiency of the market and reduced costs for customers.

7.12 Imperfections & Constraints

Objective

The higher share of renewables envisaged in the Climate Action plan would typically be expected to result in higher imperfection charges – for example, an increase in the available priority dispatch generation (e.g. wind) added €29 million to the modelled 2019/20 imperfections costs target.[17] The TSO can counter this effect through its role in grid development and operational processes.

The imperfections metric as proposed by the TSO is an existing all-island metric which aims to minimise constraints costs which the CRU is not addressing as part of the PR5 incentives framework. This may be considered separately by the SEMC. For PR5, the CRU sees merit in introducing an incentive to promote TSO actions to mitigate and reduce imperfection costs which will ultimately be passed onto electricity customers.

Decision

The TSO will be required to establish a set of planned measures to reduce/curtail imperfection costs over the PR5 period. Performance against which will be reported on annually and the TSO will have the opportunity to also report on additional initiatives that it undertook. The TSO will need to identify the technical issues related to imperfection costs and put in place plans to relieve issues. The TSO will be required to consult on this plan and seek the feedback and input from stakeholders prior to finalising. This finalised multi-year plan can then be submitted to the CRU for approval. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the TSO shall make its submissions of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

The incentive is intended to reward the TSO for the actions it takes to reduce the cost pf constraints on the system, however, imperfections costs are influenced by many factors

[17] SEM Committee, Imperfections Charge October 2019 – September 2020 And Incentive Outturn October 2017 – September 2018, Decision Paper, SEM-19-040: https://www.semcommittee.com/sites/semc/files/media-files/SEM%2019-040%20Imperfections%20Charge%202019-20%20and%20Incentive%20Outturn%202017-18.pdf

outside the control of the TSO. Therefore, the balanced scorecard evaluation will be tied to the actions the TSO takes and the demonstrated success of those actions. Constraints identified must be in place for longer than 12 months and the TSO must set out:

- the technical scarcity that is causing the constraint;
- the estimated annual cost of the constraint;
- the options considered to remove the constraint, at least including,
    - market-based measures;
    - infrastructure-based measures; and
    - operational-based measures.
- The TSO's plan to remove the constraint (if the TSO considers it is not economic to resolve the constraint the CBA should be included).

The CRU will undertake a holistic evaluation of the TSO's performance against its plans in addition to its overall success at reducing the total number and cost of constraints. The assessment of the plans will look at the quality of the plans, the quality of the TSO's implementation of those plans and its achievement of its milestones, and the demonstrated effectiveness of the measures taken. The CRU will also consider how effectively the TSO uses interim measures where the enduring solutions have a long lead-time.

To allow the CRU carry out this assessment, the TSO shall submit a report that provides a concise summary of the TSO's performance in reducing the volume and cost of constraints on the system. In addition to the above detail on each constraint the TSO's report shall contain the following information:

- number of constraints on the system, how long each constraint has been in place, and how long each is forecast to be in place;
- the number of constraints that have been removed in the last year;
- the volume of system services dispatched by the TSO through non-energy actions during periods when there were available volumes of system services at FPN that were not dispatched;
- the total cost of imperfections relative to the expected cost that year; and
- the total savings directly attributable to TSO actions.

It is noted that, in addition to the significant funding in the *ex-ante* PR5 allowances, the TSO also has access to funding for innovation and R&D projects. The TSO can make use of such funding where it considers that innovative projects may deliver solutions to imperfections costs.

The CRU will review the TSO's submission and the actions it undertook to reduce imperfections costs annually. These actions will need to be additional to the initiatives as proposed under PR5. The TSO should also report on new constraints that have arisen, and the expected timeframe for removing each constraint along with a milestone plan for the set of initiatives to remove the constraint. Where the TSO considers it is not economically efficient to remove a constraint this should be clearly demonstrated in the report.

The TSO will be assessed against a balanced scorecard each year as part of the annual revenue review process.

Reasoning

Imperfection costs have been increasing in recent years and have a real impact on the end electricity customers.[18] EirGrid as TSO plays an active role in curtailing and reducing costs imperfection costs.

The TSO can counter that effect through its role in grid development and operation – higher flows on the interconnectors and the North-South Tie Line, along with operational constraints improvements, were modelled to reduce the cost of constraints by €19 million in 2019/20.[19]

7.13 Connections – ECP

Objective

As with PR4, the CRU's objective in putting in place an incentive mechanism for the timely processing of connections applications under the CRU's Enduring Connection Policy is because new connections are critical to well-functioning, competitive wholesale markets and to the process of decarbonising the energy sector – and the TSO has a key, enabling role.

Decision

The CRU has introduced an incentive which aligns with its recently published decision on ECP-2[20], which encompasses one application window per year for three years (2020[21], 2021 and 2022). It is expected that there will be one annual application window over the remaining PR5 period. Batch offers are in three categories i.e. (A) non-batch projects, (B) community-led projects and (C) standard batch projects.

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[18] A recent SEMC Decision paper on imperfection charges showed an increase in imperfections costs (all-island) for the 2019/2020 tariff year which was 53% higher than that approved for the 2018/2019 tariff year.

[19] SEM Committee, Imperfections Charge October 2019 – September 2020 And Incentive Outturn October 2017 – September 2018, Decision Paper, SEM-19-040: https://www.semcommittee.com/sites/semc/files/media-files/SEM%2019-040%20Imperfections%20Charge%202019-20%20and%20Incentive%20Outturn%202017-18.pdf

[20] Enduring Connection Policy Stage 2 (ECO-2): https://www.cru.ie/wp-content/uploads/2020/06/CRU20060-ECP-2-Decision.pdf

[21] It is worth noting that 2020 has already been covered in the PR4 "delivering new connections" incentive, as set out in CER/18/087

- The TSO shall be subject to a financial incentive on its performance in issuing connection offers to all applicants being processed pursuant to the ECP batches carried out over the PR5 period. The CRU may introduce an incentive on microgeneration during the PR5 period, when connection policy on this is implemented.

- The overall payment or penalty will be based on the percentage of offers issued before each milestone. Where the milestones are set at fortnightly intervals, the first being directly one month before each batch deadline and the last being 2 months after each batch deadline. The payment will range from 100% of the incentive for the percentage of offers issued before the first milestone to 100% of the penalty for the percentage of offers not issued by the final milestone. The applicable sliding scale for each ECP batch is shown in the table below. The maximum upside and downside relating to each batch will be €0.5m and €0.2m, respectively; with a maximum reward and penalty of €2.5m and €1m, respectively, over the PR5 period.

% of offers delivered [22]	**Milestone 1** (30 days before deadline)	**Milestone 2** (15 days before deadline)	**Milestone 3** (batch deadline)	**Milestone 4** (15 days after deadline)	**Milestone 5** (30 days after deadline)	**Milestone 6** (45 days after deadline)	**Milestone 7** (60 days after deadline)
	100% incentive	66% incentive	33% incentive	0% incentive	33% penalty	66% penalty	100% penalty
100%	€0.50m	€0.34m	€0.17m	€0m	-€0.07m	-€0.13m	-€0.20m
90%	€0.45m	€0.31m	€0.15m	€0m	-€0.06m	-€0.12m	-€0.18m
80%	€0.40m	€0.27m	€0.14m	€0m	-€0.06m	-€0.10m	-€0.16m
70%	€0.35m	€0.24m	€0.12m	€0m	-€0.05m	-€0.09m	-€0.14m
60%	€0.30m	€0.20m	€0.10m	€0m	-€0.04m	-€0.08m	-€0.12m
50%	€0.25m	€0.17m	€0.09m	€0m	-€0.04m	-€0.07m	-€0.10m
40%	€0.20m	€0.14m	€0.07m	€0m	-€0.03m	-€0.05m	-€0.08m
30%	€0.15m	€0.10m	€0.05m	€0m	-€0.02m	-€0.04m	-€0.06m
20%	€0.10m	€0.07m	€0.03m	€0m	-€0.01m	-€0.03m	-€0.04m
10%	€0.05m	€0.03m	€0.02m	€0m	-€0.01m	-€0.01m	-€0.02m
0%	€0m	€0m	€0m	€0m	€0m	€0m	€0m

- Every % performance will fall within its category of the sliding scale (e.g. 40% to 49% performance will pertain to the 40% category; 50% to 59% performance will pertain to the 50% category; etc); with the exception of % performance between 0% and 9%, which will pertain to the 0% category for the upside and to the 10% category for the downside.

- The TSO shall report the outcome of this incentive to the CRU within three months of when the last connection offers are issued. The report submitted to the CRU shall also include (i) the breakdown by quarter of the number of offers issued, including the project name, technology type, MEC, connection offer cost and the connection offer

[22] For milestone 7 this includes offers not delivered.

issuance date for Category A, B and C as per the ECP 2 decision paper; (ii) the processing and delivery time of grid connection offers (average or per different categories) and grid connection offer modifications; and (ii) how long, on average, it takes to connect generators to the grid.

- The reports will mainly include data, accompanied by a small amount of narrative, including a brief explanation as to how the overall connection process has worked. The reports will include factors, outside of the TSO's control, that may have delayed the completion of the process and that the TSO wishes the CRU to take into consideration when evaluating performance. They will also include evidence that will justify and quantify the impact of factors outside of the TSO's control.

- The mechanism will be settled after the outcome of each ECP application window is known and financial rewards/penalties will feed into the annual allowed revenues.

Reasoning

Receipt of a connection offer is a key step in the process of new generators being able to participate in the market. The date of receipt is objectively measurable, and in large part under the control or influence of the TSO.

Absent an incentive mechanism, the TSO may undervalue timeliness relative to the needs of the connecting party (and future parties wishing to connect in subsequent batches). While reputational incentives obviously have a role to play, the CRU considers that outcomes can potentially be improved for parties seeking a new connection if the TSO is subject to a financial incentive also in respect of the speed with which it issues connection offers.

7.14 TAO Project Delivery

Objective

The CRU's objective in putting in place an incentive mechanism for project delivery by the TAO is to give the TAO a proportionate financial stake in the efficient and timely implementation of the TSO's investment plans. While the role of the TAO is narrower than the TSO's in the sense that the TSO does generate the investment plans, the TAO's efficiency and timeliness in delivery can have significant impacts for market participants and customers.

Decision

The TAO shall be subject to a financial incentive on its performance in contributing to investment planning and delivery. The incentive payment shall be based on performance against a KPI framework proposed by the TAO to be consistent with relevant aspect of guidance published by the CRU. Guidance has been updated and set out in Annex 12.

Based on performance against KPIs and other evidence deemed relevant by the CRU, performance shall be graded as "strong", "acceptable" or "below acceptable". The CRU has improved upon the current KPIs to reflect the ambition of PR5 and the revised the targets are set out in Annex 12. To summarise, the CRU has tightened the targets that determine whether

the TAO achieves "acceptable" or "below acceptable" in the review. This enhancement of the targets and metrics reflects the ambition of PR5. The CRU may seek to revise/enhance the metrics or scoring within PR5 to take account of changes that occur.

Reasoning

The role of the TAO within the framework of investment planning and delivery is much narrower that the TSO. In broad terms, responsibility for investment planning sits with the TSO, and the TAO's role is to build the projects defined by the TSO as necessary.

The PR4 framework enabled an appropriate set of KPIs to be developed, based on TAO input. This provides a flexible and transparent mechanism for ensuring that an appropriate range of evidence is considered in a balanced way, when determining incentive rewards or penalties for the TAO. The CRU considers that this approach remains broadly appropriate for PR5 taking into account the improved targets.

7.15 TAO Outage Management

Objective

The CRU's objective in putting in place an 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. It reflects that at times, there can be a tension between the least cost outage plan for the TAO, and the least cost outage plan for the system as a whole (and, by extension, customers).

Decision

As with PR4, the TAO shall be subject to a financial incentive on its management of outages. The core mechanism shall continue to relate to its ability to meet the 3-weekly outages plans published on the TSO website. Performance is measured as number of actual outage days relative to the baseline of the published plans and the targets have been revised based on the TAO's performance since 2012. The CRU will retain the mechanism to facilitate short-notice adjustments to outages plans, but the mechanism for rewarding/penalising the TAO has been adjusted to account for historic performance. Specifically, the TAO has achieved and even surpassed its PR4 outage days target each year of PR4. As such, the CRU considers it appropriate to stretch and update these targets to reflect the ambition of PR5. Further information and detail on the mechanism to enable short-notice adjustments to outage plans was published in March 2020[23] and more detail is provided in Annex 13.

[23] Mechanism to Enable Short-Notice Adjustments to Outage Plans: https://www.cru.ie/wp-content/uploads/2020/03/CRU20038-Information-paper-on-the-TSO-TAO-Mechanism-to-Enable-Short-Notice-Adjustments-to-Outage-Plans.pdf

Reasoning

The joint management of outages by the TSO and TAO is an important process that has potentially significant impacts on market participants and customers. It can help minimise maintenance costs (for network business and generators), constraint costs and supply interruption risks. Hence, in principle it is an appropriate activity to incentivise. The focus on incentivising the TAO to meet the rolling plans agreed with the TSO remain relevant and useful, and will therefore continue.

8 Performance Incentives: Distribution

This section sets out the CRU's decisions on the incentive mechanisms to apply to ESB Networks as DSO/DAO, for the period 2021 to 2025. In making these decisions, the CRU is seeking to put in place arrangements that can endure, subject to review, refinement and updating as part of the PR6 process.

The CRU's overarching objective in setting these incentive mechanisms is to ensure that the performance targets against which the DSO is incentivised are based on the most appropriate and up-to-date data. Further, the incentives are targeted on the DSO behaviours that matter most to network users and customers, including incentives that relate to the transformation of the DSO role.

8.1 Overview

In summary, the CRU has put in place a performance incentive framework for the DSO that supports three key outcomes 1) Reliability and Availability; 2) Customer Satisfaction; and 3) Transformation. The PR5 Framework is designed to build on the PR4 Reporting and Incentive Framework and includes specific incentives related to the CRU PR5 Strategic Objective of transforming the role of the DSO.

The CRU's decisions on performance incentives (set out in the table below) are broadly similar to the incentives proposed by the DSO. However, the CRU has put in place an additional incentive that aims to strengthen the independence of the DSO (further details on this incentive is included in Section 8.11). The CRU has decided to set the cap and collar at the incentives upside and downside totals, which is circa 5% of the allowed revenues (this compares to 4% in PR4).

Table 19: CRU DSO Performance Incentives

CRU DSO PR5 Decision					PR4 Incentives	
Outcome category	**Output**	**Measure**	**€/m Upside**	**€/m Downside**	**€/m Upside**	**€/m Downside**
Reliability and availability	Unplanned Outage Duration	CML	50	50	55.12	48.7
	Unplanned Outage Frequency	CI	50	50	55.12	48.7
	Worst served customers	WSC	6.7	6.7	6.7	6.7
	Outage information **(NEW)**	Balanced Scorecard	5	5	-	-
Customer Satisfaction	Customer Satisfaction	Red C %	13.5	13.5	8.16	8.16
	Care Centre Satisfaction	ESATRAT %	12.5	37.5	8.82	39.82
	Stakeholder Engagement	Scorecard	5	-	3	-
Transformation	Connections (ECP-2)	ECP Offers	15	10	1.5	1.5

	Smart Metering	Meter Volume, Services Delivered	6	20	4	20
	Flexibility **(NEW)**	Balanced Scorecard	15	5	-	-
	Visibility **(NEW)**	Balanced Scorecard	15	5	-	-
	Independent Role of the DSO **(New)**	Balanced Scorecard	20	10	-	-
	Joint DSO/TSO Coordination	Balanced Scorecard	15	5	-	-
Traditional Metering	Metering	1 read/year	-	-	2.55	2.55
	Metering – Estimated reads	back to back block estimates	-	-	2.55	2.55
Total Incentive Package (€m)			**228.7**	**217.7**	**147.5**	**178.5**
Total as percentage of allowed revenue (cap and collar)			**5.1%**	**4.8%**	**3.57%**	**4.33%**

The CRU has determined a maximum upside of €228.7m which is 5.1% of the allowed revenue for PR5 (CRU/20/153). This compares to €147.5m or 3.57% of allowed revenues for PR4. The power of the upside relative to PR4 is 1.55 times. This increase relative to PR4 is primarily driven by new incentives that relate to the transformation of the DSO role. For the downside, the CRU has decided a maximum value of €217.7m, which is 4.8% of the allowed revenue for PR5. This compares to €178.7m or 4.33% of allowed revenues for PR4. The power of the downside relative to PR4 is 1.22 times. The CRU has also decided to set the cap and collar at the incentives upside and downside totals, which is circa 5% of the allowed revenues (this compares to 4% in PR4).

Regarding traditional meter incentives, these incentives were in place for PR4 however the DSO did not propose any traditional metering incentive for PR5 as it is expected that these incentives will become redundant as smart meters replace the existing meter stock. Therefore, the CRU has decided to drop the financial aspect of these incentives for PR5. However, the PR4 targets will be maintained for PR5 with the DSO getting at least one actual meter read from 98% of its customers and ensuring that 99% of customers do not receive back-to-back meter estimates. Furthermore, the DSO will report on measures of performance that relate to the traditional meter stock until smart meters are rolled-out to all homes and business across the country. This includes reporting on the percentage of meters that fall under the “unread” or “block estimates” categories and roll-over from one year to the next one without a plan in place to address them.

The detail of the PR5 distribution performance incentives are set out in the following sub-sections.

8.2 Unplanned Outages

Objective

As with PR4, the CRU’s objective in putting in place an incentive mechanism for unplanned outages is to give the DSO an appropriate financial stake in maintaining appropriately high

standards of supply reliability. It reflects the high value of supply reliability to customers, and that behaviours of the DSO can be a significant influencing factor on reliability outcomes.

Decision

The CRU has decided to retain the core mechanism that has been in place during PR4, updated for new information on the levels of performance achievable by the DSO.

- The DSO shall be subject to financial incentives in respect of unplanned Customer Minutes Lost (CML) and Customer Interruptions (CI). The incentive payment or penalty will be calculated based on the difference between actual performance and the levels of target performance set out in Annex 7.

- Target levels for CML and CI in PR5 are based on a review of the DSO's historic performance. The 2021 targets have been at the PR4 average performance for CI and at the PR3 and PR4 average performance for CML, with sequential targets decreasing at a rate of 2.1 per annum. The reward/penalty for each incentive is set at €500K[24] per deviation from target, to a maximum of ±€10m per year or ±€50m over PR5.

- The outcome of performance will be reported to the CRU annually, over the PR5 period, as part of the revenue requirement submission.

Reasoning

The key reasoning for the decision can be summarised as follows:

  - Unplanned interruptions in supply can impose significant costs and inconvenience on customers, and it is appropriate for (a) high standards to be set for the DSO, and (b) the DSO to have a proportionate financial stake in outcomes, both positive and negative.

  - The PR5 targets have been recalibrated based on a review of the DSO's historic performance - with 2021 targets set at the DSO's PR4 average performance level and sequential targets decreasing at a rate of 2.1 per annum - to ensure that the scheme remains achievable by the DSO. The DSO's investments over the PR5 period may allow the CRU to set more stretching targets for PR6.

  - The changes to the penalty/reward per deviation from targets seeks to increase customer protection, by strengthening the value of this mechanism. The CRU considers this appropriate given the transformational change that can be expected over PR5 and beyond.

It is noted that the DSO's performance over PR4 has consistently missed the targets. This raised concerns regarding the ability of the DSO to meet the PR5 targets as proposed in the

[24] This compares to €267K per deviation from target applied for CML and €211K applied for CI over the PR4 period.

Draft Determination. After considering how the scheme is functioning, engaging with the DSO and review of responses to the Draft Determination, the CRU has decided to set sufficiently stretching targets based on an achievable level of performance.

8.3 Worst-Served Customer

Objective

The purpose of the worst-served customer[25] (WSC) incentive is to improve outcomes for those households and business who would otherwise have a sustained and materially lower standard of supply reliability. It reflects a desire to introduce a greater degree of social fairness into the outcomes that would otherwise prevail if investments to improve supply reliability were chosen on the basis of narrow economic cost-benefit alone.

Decision

The CRU has decided to retain the PR4 revenue at risk for PR5; however, with regard to the structure, this PR5 incentive will be an annual mechanism, as opposed to the 3-years mechanism in place during PR4.

- The DSO shall be subject to financial incentives in respect of its use of allocated funding to improve service quality for its worst-served customers, aligned to funding of €6.7m. This is considered sufficient to improve the quality of service to at least 6,000 WSC.

- The WSC incentive will be symmetrical and will include a dead-band with no incentive payment or reward where successful delivery against the incentive, measured where a WSC receives a 20% improvement in reliability, is achieved for 70-80% of the 6,000 customers included in the incentive. The incentive rate, upside and downside, is equal to €1,595 per customer calculated based on:

$$\frac{€6.7m}{(6{,}000 \times 70\%)}$$

- The total downside penalty for ESB Networks will be aligned with the total value of the funding available for the WSC programme. Where success falls below 70%, the value of the incentive will reduce on a straight-line basis such that zero success means the incentive penalty is equal to the initial funding awarded (i.e. ESB Networks receive no funding).

- The outcome of performance will be reported to the CRU annually, as part of the annual revenue review process, and will set the incentive payment/penalty that will

[25] 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.

feed into the allowed annual revenues. The outcome of performance will also be reported on in the annual performance reports.

The symmetrical nature of the incentive means that should ESB Networks successfully deliver reliability improvements to more than the target volume of customers, i.e. greater than 80% success rate, they will receive an incentive reward. This provides a strong incentive for ESB Networks to exceed the customer volume target and overachieve against the incentive. The upside will be capped at €6.7m, the total value of the fund.[26]

Reasoning

The reason for maintaining the PR4 financial weighting is that this a relatively new incentive which was introduced in 2018 through the CRU's Decision Paper on Reporting and Incentives under Price Review 4 (CER/18/087).[27] Furthermore, the outcome of performance, relating to the 2018 – 2020 period, has not yet been reported on.

With regard to the incentive structure, the CRU has decided that the incentive will work as an annual mechanism in PR5 (compared to the 3-years mechanism in place during PR4). The decision follows engagement with ESB Networks, where the DSO has guaranteed that the outcome of the incentive can be known on an annual basis; and therefore, the reward/penalty can feed into the annual allowed revenues.

8.4 Estimated Restoration Time Accuracy

Objective

The objective in putting in place a new outage information incentive is to provide customers and network users with accurate and reliable outage information, including time for restoration of outages. This reflects the importance of the provision of specific outage information and estimated restoration times for outages affecting customers.

Decision

- The DSO shall be subject to a financial incentive in respect of the outage information provided to customers and network users. The CRU has established an annual balanced scorecard approach which is based on high-level milestones that were proposed by the DSO (see Annex 10). Early milestones of the balanced scorecard will focus on process and data assurance, while the milestones in the final years of PR5 will focus on targets and the performance against targets.

- The DSO shall submit to the CRU in September each year, aligning with its consultation with stakeholders, a detailed multi-year plan covering the three following years (and the two years after at high level). Based on the submission, the CRU will

[26] This means that if ESB Networks exceeds the 6,000-customer target, improving reliability by greater than 20% for 9000 customers, ESB Networks will receive the full incentive upside of €6.7m.

[27] Reporting and Incentives under Price Review 4 Decision.

make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the DSO shall make a submission of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

- In assessing the outcome of performance, the CRU will consider 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.
- The outcome of performance will be reported to the CRU annually, over the PR5 period, as part of the revenue requirement submission. The maximum reward/penalty shall be €1m per year.
- The DSO shall report, as part of the annual revenue review process, on the accuracy of restoration estimates commencing 2021 as set out below. This information will also be included in the APRs. Given the importance of customers planning around the outage information provided by the DSO, this incentive will focus on the accuracy of information as opposed to the speed of power restoration.
  - The DSO will report on the time between the commencement of the power disruption and the time that the first restoration time estimate was made publicly available.
  - The DSO will report on restoration of power within 15 minutes of the initial estimated restoration time.
  - The DSO will report on restoration of power within 1 hour of the initial estimated restoration time.
  - The DSO will report on restoration of power outside 1 hour of the initial estimated restoration time.

Reasoning

The key reasoning for the decision can be summarised as follows:

- The introduction of an incentive that encourages the DSO to provide outage duration information recognises the need to deliver accurate outage information to customers and network users.
- The balanced scorecard will allow the CRU to place more weight on key milestones that can deliver outcomes for customers and network users, but also incentivises the DSO to put in place the processes that are required to deliver accurate outage information to customers and network users. Further, the balanced scored allows the

CRU to consider qualitative factors when assessing the DSO's performance under this incentive, so that the DSO is not excessively penalised or rewarded for factors outside of the DSO's control that could have an impact on the development of this incentives during PR5 (e.g. for delays outside the DSO's control).

- The milestones set out in Annex 10 seek to calibrate this incentive to:
    - incentivise the DSO to put in place processes and quality data in the early years PR5; and
    - emphasises the importance of delivering against the targets that will be put in place following the successful delivery of processes and the gathering of quality data.
- The requirement for the DSO to report on its performance from the outset of PR5 will give the CRU historical performance data to consider when setting the DSO's incentivised targets post 2023.

8.5 Customer Service

Objective

The purpose of an incentive mechanism for customer service is to give the DSO an appropriate financial stake in maintaining appropriately high standards of service. It reflects that customers and market participants rely on the quality of services provided by the DSO, and they do not have the option of choosing an alternative service provider in response to poor service quality.

Decision

For PR5 the CRU has decided to retain the PR4 incentives, as they remain fit for purpose.

- The DSO shall be subject to financial incentives in respect of the quality of its customer service/satisfaction. As under PR4, this will continue to be measured using a range of metrics relating to the performance of the DSO's contact centre (National Customer Contact Centre (NCCC) metrics), and through the overall customer satisfaction survey.[28] Combined, these incentives provide a comprehensive assessment of ESB Networks customer's perceptions of services regarding planned and unplanned outages, connection and voltage complaints, through the overall customer satisfaction survey; and direct engagement with customers, through the national customer contact centre.
- The incentive payment or penalty will be calculated based on the difference between actual performance and the levels of target performance set out in Annex 8.

[28] Currently carried out by Red C.

- For the overall customer satisfaction survey (Red C), the PR4 target has been maintained with an annual improvement of 0.5% per annum which will result in an 83% target for 2025. There is risk and reward symmetry for this incentive and the value per percentage point deviation from target is €738K (see Annex 8). ESB Networks will be required to conduct a similar survey for its vulnerable customers, in parallel to the Red C survey.

  There will not be any financial incentive mechanism for the vulnerable customers survey; ESB Networks will publish a report annually on the results of the survey, and should directly seek the views of appropriate representative organisations on potential measures to improve service quality to vulnerable customers.

- For the customer satisfaction incentive (NCCC), a more downside-weighted incentive will apply as in PR4. For the upside percentage point deviation from target the value is €833K (see Annex 8), with rewards earned up to 3% above the target of 90, resulting in a maximum reward of €12.5m over PR5. For the downside percentage point deviation from target, the value is €833K (see Annex 8), with penalties down to 9% below the target, resulting in a maximum penalty of €37.5m over PR5. The incentive structure and revenue at risk provides a strong incentive to meet the PR5 targets.

  The CRU has included an additional metric within the incentive, i.e. time to resolution from first contact. There is a target with a weighting of 0% (and so no financial impact) associated to this new metric, as set out in Annex 8. This will assist the CRU to decide whether the metric should be included within the overall financial incentive mechanism in future Price Reviews.

- The outcome of performance will be reported to CRU annually, over the PR5 period, as part of the revenue requirement submission.

Reasoning

The customer service incentives are core elements of the DSO incentive package. The DSO has a central responsibility to its customers and should therefore take every effort to continue to improve customer services. To ensure improvement in performance over PR5, the incentive targets for PR5 are more stretching. The total value of the incentives is increased relative to PR4 to:

- provide the DSO with a strong incentive to deliver a quality customer service through the PR5 period; and

- reflect the increasing role of the DSO's services in supporting customers queries and requirements with respect to low carbon technology adoption.

8.6 Smart Metering

Objective

The objective in putting in place an incentive mechanism for smart metering is to give the DSO an appropriate financial stake in delivering its part of the National Smart Metering Programme (NSMP). It reflects that customers and market participants are reliant on DSO delivery before the benefits of smart metering can be realised in full.

Decision

The CRU has decided to retain the core mechanism that has been in place during PR4:

- The DSO will be subject to a financial incentive on (a) the number of smart meters deployed, (b) the smart meters functionality delivery and (c) customers' satisfaction around the smart meter deployment process. These three categories be included for each year of PR5, ensuring that there is an appropriate level of granularity within the incentive mechanism.

- A total upside of €6m and a downside of €20m has been set for PR5, which is broadly in line with PR4 in monetary and percentage of allowed revenue terms. There will be symmetrical annual upsides and downsides (i.e. annual €1.2m upside and -€4m downside), which will be asymmetrically allocated to the three categories for each year of PR5.

- Given that ESB Networks is already in a good position to meet the deployment targets of the NSMP, the smart meters deployment category will have lower upsides and higher downsides. A more upside-weighted incentive will apply to the smart meters functionality delivery category, given the importance and challenging aspect of this in the programme.

- The detailed parameters, including interim targets and scope for the DSO to present evidence to support an adjustment to target profiles (via a "grace period" to reflect factors outside the control of the DSO), are set out in Annex 9.

- The CRU has also introduced an incentive on the delivery of a full smart meter data repository by Q3 2021. This is a key aspect of the Smart Metering Programme. As on completion, it will store data from smart meters in a single repository to support delivery of the DSO and energy suppliers' clean energy package requirements, and other retail market uses as well as enabling third-party access to data with customer permission. The outcome of performance will be reported to CRU as part of the revenue requirement submission.

Reasoning

The key reasoning for the decision can be summarised as follows:

- Given the smart metering programme was long under development and is funded by customers, the CRU does not consider that the incentive structure should change materially from PR4.

- The plan for delivery was developed in a large part by the DSO, in consultation with the CRU and other stakeholders. Hence, it is reasonable to assume that the delivery plan should be capable of being adhered to.

- There are substantial benefits at stake for customers and for market participants through the delivery of the National Smart Meter Programme (NSMP), and significant costs for market participants in managing their own readiness. The relatively high value associated with the incentive is, in the CRU's view, proportionate.

- The mechanism is focused on the measurable delivery of outputs that impact directly on customers and market participants.

- The option for the DSO to apply for a "grace period" reflects that not all factors influencing delivery are within the control of the DSO. Hence a degree of flexibility might be appropriate, if there are mitigating factors.

8.7 Stakeholder Engagement – NSEE Panel

Objective

The CRU's objective in maintaining the stakeholder engagement incentive mechanism is to maintain the benefits of effective stakeholder engagement. It reflects that innovation in how stakeholders are communicated with, and how their input is used to improve how network services meet the needs of stakeholders has significant potential value but is inherently difficult to quantify. Hence, without an incentive mechanism there is a risk of "under-investment" in stakeholder engagement.

Decision

- The DSO shall continue to be subject to a financial incentive on the scope, quality and outcomes/impacts of its stakeholder engagement activities.

- Performance shall be measured through an annual assessment of the DSO's strategy for stakeholder engagement, and the processes and activities undertaken by the DSO pursuant to that strategy over the preceding calendar year. The evidence to inform this assessment shall take the form of an annual submission by the DSO, consistent with guidance set by the CRU.

- The assessment shall be undertaken by a panel constituted by the CRU for this purpose and chaired by the CRU – and conclude with the award of a score on a scale of 1 to 10, consistent with guidance set by the CRU. The guidance on the submission and the assessment criteria is in Annex 14.

- The maximum incentive payment shall be €1m per year (upside only). How the incentive payment is calculated, based on the awarded score by the panel, is explained in Annex 14.

Reasoning

The stakeholder incentive provides a clear framework for the CRU to assess the measures taken by the DSO to understand and address the needs of stakeholders – in an environment in which the energy sector, and hence what different stakeholders might need, is in a process of transformation.

A consistent assessment approach across DSO and TSO (and, potentially, other regulated entities over time) gives both the CRU and stakeholders an opportunity to learn from demonstrated good practice and continually improve engagement methods. It also provides a platform for the network companies to demonstrate their efforts and success in these areas.

The CRU guidance and the process of moderation through a panel convened by the CRU, based on evidence presented by the DSO, provides a workable objective framework for assessment in the first instance – and a basis from which greater rigour in evaluation can evolve. The Networks' Stakeholder Engagement Evaluation (NSEE) Panel, made up by stakeholders of CRU, was established by the CRU in 2019 through a consultation process.[29] The NSEE Panel evaluated and scored the stakeholder engagement activities of the DSO (and TSO) over 2018 and 2019. The process worked very well, with the DSO (and TSO) receiving and implementing recommendations for improvements provided by the NSEE Panel. After each of both processes, a close-out report was published by the CRU, setting out the discussions of the NSEE Panel, its conclusions and recommendations for the DSO (and TSO). The CRU will continue with this approach over PR5, with the membership of the NSEE Panel being reviewed ahead of the 2021 process (when the SOs' performance over 2020 will be assessed) and every two years after 2021.

8.8 Connections – ECP

Objective

As with PR4, the CRU's objective in putting in place an incentive mechanism for the timely processing of connections applications under the CRU's Enduring Connection Policy is because new connections are critical to well-functioning, competitive wholesale markets and to the objective of decarbonising the energy sector. The DSO has a key enabling role.

[29] The establishment of the NSEE Panel (2019-2020, inclusive), as well as other relevant documents related to previous stakeholder engagement processes, can be found on the CRU's website here.

Decision

The CRU has introduced an incentive which aligns with its recently published decision on ECP-2[30], which encompasses one application window per year for three years (2020[31], 2021 and 2022). It is expected that there will be one annual application window over the remaining PR5 period. Batch offers are in three categories i.e. (A) non-batch projects, (B) community-led projects and (C) standard batch projects.

- The DSO shall be subject to a financial incentive on its performance in issuing connection offers to all applicants being processed pursuant to the ECP batches carried out over the PR5 period. The CRU may introduce an incentive on microgeneration during the PR5 period, when the connection policy on this is implemented.

- The overall payment or penalty will be based on the percentage of offers issued before each milestone. Where the milestones are set at fortnightly intervals, the first being directly one month before each batch deadline and the last being 2 months after each batch deadline. The payment will range from 100% of the incentive for the percentage of offers issued before the first milestone to 100% of the penalty for the percentage of offers not issued by the final milestone. The applicable sliding scale for each ECP batch is shown in the table below. The maximum upside and downside relating to each batch will be €3m and €2m, respectively; with a maximum reward and penalty of €15m and €10m, respectively, over the PR5 period.

% of offers delivered [32]	**Milestone 1**(30 days before deadline)	**Milestone 2** (15 days before deadline)	**Milestone 3** (batch deadline)	**Milestone 4** (15 days after deadline)	**Milestone 5** (30 days after deadline)	**Milestone 6** (45 days after deadline)	**Milestone 7** (60 days after deadline)
	100% incentive	67% incentive	33% incentive	0% incentive	33% penalty	67% penalty	100% penalty
100%	€3m	€2.01m	€0.99m	€0m	-€0.66m	-€1.34m	-€2m
90%	€2.7m	€1.81m	€0.89m	€0m	-€0.59m	-€1.21m	-€1.8m
80%	€2.4m	€1.61m	€0.79m	€0m	-€0.53m	-€1.07m	-€1.6m
70%	€2.1m	€1.41m	€0.69m	€0m	-€0.46m	-€0.94m	-€1.4m
60%	€1.8m	€1.21m	€0.59m	€0m	-€0.40m	-€0.80m	-€1.2m
50%	€1.5m	€1.01m	€0.50m	€0m	-€0.33m	-€0.67m	-€1m
40%	€1.2m	€0.80m	€0.40m	€0m	-€0.26m	-€0.54m	-€0.8m
30%	€0.9m	€0.60m	€0.30m	€0m	-€0.20m	-€0.40m	-€0.6m
20%	€0.6m	€0.40m	€0.20m	€0m	-€0.13m	-€0.27m	-€0.4m
10%	€0.3m	€0.20m	€0.10m	€0m	-€0.07m	-€0.13m	-€0.2m
0%	€0m	€0m	€0m	€0m	€0m	€0m	€0m

[30] Enduring Connection Policy Stage 2 (ECO-2): https://www.cru.ie/wp-content/uploads/2020/06/CRU20060-ECP-2-Decision.pdf

[31] It is worth noting that 2020 has already been covered in the PR4 "delivering new connections" incentive, as set out in CER/18/087.

[32] For milestone 7 this includes offers not delivered.

- Every % performance will fall within its category of the sliding scale (e.g. 40% to 49% performance will pertain to the 40% category; 50% to 59% performance will pertain to the 50% category; etc); with the exception of % performance between 0% and 9%, which will pertain to the 0% category for the upside and to the 10% category for the downside.

- The DSO shall report the outcome of this incentive to the CRU within three months of when the last connection offers are issued. The report submitted to the CRU shall also include (i) the breakdown by quarter of the number of offers issued, including the project name, technology type, MEC, connection offer cost and the connection offer issuance date for Category A, B and C as per the ECP 2 decision paper; (ii) the processing and delivery time of grid connection offers (average or per different categories) and grid connection offer modifications; and (ii) how long, on average, it takes to connect generators to the grid.

- The reports will mainly include data, accompanied by a small amount of narrative, including a brief explanation as to how the overall connection process has worked. The reports will include factors, outside of the DSO's control, that may have delayed the completion of the process and that the DSO wishes the CRU to take into consideration when evaluating performance. They will also include evidence that will justify and quantify the impact of factors outside of the DSO's control.

- The mechanism will be settled after the outcome of each ECP application window is known and financial rewards/penalties will feed into the annual allowed revenues.

Reasoning

Receipt of a connection offer is a key step in the process of new generators being able to participate in the market. The date of receipt is objectively measurable, and are in large part under the control or influence of the DSO.

Absent of an incentive mechanism, the DSO may undervalue timeliness relative to the needs of the connecting party (and future parties wishing to connect in subsequent batches). While reputational incentives obviously have a role to play, the CRU considers that outcomes can potentially be improved for parties seeking a new connection if the DSO is subject to a financial incentive also in respect of the speed with which it issues connection offers.

8.9 Flexibility Markets

Objective

The objective in putting in place an incentive mechanism for flexibility is to give the DSO an appropriate financial stake in delivering flexible non-wire alternative solutions to the network's needs. It reflects the need to achieve more quickly and effectively deliver efficient outcomes for customers and market participants by using flexible solutions rather than, or as a

complement to, Capex solutions. The incentive will support the transformation of the DSO's role which is a key strategic objective of PR5.

The incentive is also in line with the requirements of Article 32 of the Electricity Market Directive 2019 (Incentives for the use of flexibility in distribution networks). [33]

Decision

- The CRU will use an annual balanced scorecard approach which will be based on high-level milestones that were proposed by the DSO (see Annex 10). The key milestones from the scorecard aim to:
    - introduce tenders for flexible non-wire alternative within ESB Network's system development plan;
    - establish standard products and services to the benefit of all system users; and
    - establish robust reporting and transparency arrangements.
- The DSO shall submit to the CRU in September each year, aligning with its consultation with stakeholders, a detailed multi-year plan covering the three following years (and the two years after at high level). Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the DSO shall make a submission of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.
- In assessing the outcome of performance, the CRU will consider 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.
- The outcome of performance will be reported to CRU annually as part of the revenue requirement submission. The maximum reward shall be €3m per year and the maximum penalty €1m.

Reasoning

The incentive reflects the need to introduce tenders for flexible non-wire alternatives and establish standard flexible products and services in line with the Electricity Market Directive

[33] DIRECTIVE (EU) 2019/944

2019. It also recognises the potential to achieve more quickly and effectively deliver efficient outcomes for customers and market participants by using flexible solutions.

The balanced scorecard will allow the CRU to place more weight on key milestones that can deliver outcomes for customers and network users, but also incentivises the DSO to put in place the processes that are required to enable use of flexibility. Further, the balanced scored allows the CRU to consider qualitative factors when assessing the DSO's performance under this incentive.

8.10 Visibility

Objective

The objective in putting in place an incentive mechanism for LV 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 LV networks. This will allow the DSO to improve the efficiency of its decision making in operating and investing in the network. Increased visibility will also allow the DSO to actively manage its network to accommodate a greater number of LCTs and avoid expensive Capex reinforcements. The incentive will support the transformation of the DSO's role which is a key strategic objective of PR5.

The incentive also considers the requirement to deliver on aspects of the EU Clean Energy Package, including:

- the integration of resources connected to the distribution network (e.g. renewables, distributed generation, storage) in the Renewable Energy Directive of 2018[34];
- the digitalisation of the distribution system (e.g. smart grids, smart metering) the Electricity Market Regulation of 2019;
- facilitating the energy transfers of citizen energy communities in Article 16 of the 2019 Electricity Market Directive; and
- facilitating energy transfers of renewable energy communities in Article 22 of the 2018 Renewable Energy Directive.

Decision

- The CRU will use an annual balanced scorecard approach which will be based on high-level milestones that were proposed by the DSO (see Annex 10). The key milestones from the scorecard will incentivise the DSO to:
  - achieve 50% visibility of its LV network by 2025;

[34] DIRECTIVE (EU) 2018/2001

  - gather and validate reference information required to support the visibility of the LV networks; and
  - deliver system interfaces required to enable visibility of its LV network.

- The DSO shall submit to the CRU in September each year, aligning with its consultation with stakeholders, a detailed multi-year plan covering the three following years (and the two years after at high level). Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the DSO shall make a submission of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.
- In assessing the outcome of performance, the CRU will consider 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.
- The outcome of performance will be reported to CRU annually as part of the revenue requirement submission. The maximum reward shall be €3m per year and the maximum penalty €1m.

Reasoning

The incentive reflects the need for better information on, and visibility of the LV networks. Thereby allowing the DSO to manage the networks more efficiently and delivering better outcomes for customers and market participants. It also recognises the potential to achieve more efficient outcomes for customers and network users.

The balance scorecard allows the CRU to place more weight on key milestones that the CRU considers more important for customers, but also incentivises the DSO to put in place the processes that are required to achieve a high level of visibility on the network. Further, the balanced scored allows the CRU to consider qualitative factors so that the DSO is not excessively penalised or rewarded for factors that are outside of the DSO's control that could have an impact on the development of this incentive during PR5.

8.11 Independent Role of the DSO

Objective

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

(i) transparency in the finance arrangements of ESB Networks; visibility and transparency of the DSO's debt allocation will be of utmost importance for the CRU;

(ii) governance and independence, including ESB Networks Board and Executive Director independence. The role of governance and independence is crucial for the DSO to successfully fulfil the new, more market-facing and pro-active role required by the Clean Energy Package and envisaged by the CAP. For the DSO to successfully act as a neutral market facilitator, the DSO must be able to operate with the capability and independence to act flexibly and innovatively without regard for the commercial interests of the ESB generation or supply businesses, this is essential;

(iii) neutral market facilitator; consumers', communities' and market participants' perception of the DSO as an independent entity will be important as the DSO will play a central role in the transition to a low carbon system and the new requirements placed on it by the Clean Energy Package. Therefore, it will be important that the DSO can act as an innovative neutral market facilitator and that it is clear that there is independence in planning and creating/operating new markets. Independence in planning, prioritisation and in the decision-making of IT related projects to support the DSO's role as a neutral market facilitator will be important, as well as increased visibility of network services provided to customers;

(iv) enhancement of the compliance officer role and the existing ring-fencing arrangements; and

(v) innovation independence and third-party collaboration; including independence in the decision-making across the innovation strategy and governance, independence of the innovation project pipeline prioritisation and project delivery, proactive dissemination of learnings and outcomes and third-party collaboration (i.e. project partners) as appropriate for the DSO's size and scale.

The criteria relating to finance, governance, and transparency (i and ii above) will be weighted more heavily relative to the other criteria, given their importance. The weightings may evolve in response to the progress of the DSO over the course of PR5.

A process of dialogue between the CRU and ESB Networks, as well as an extensive engagement phase, has occurred after the draft determination. The DSO has provided the CRU with proposals which will serve as the basis for the development of the balanced scorecard framework (which is covered in more detail below).

A total upside of €20m and a downside of €10m has been allocated to this incentive for PR5. This reflects the importance that progress in the area of DSO transformation has for the rest of the PR5 framework.

Decision

- The DSO shall be subject to a financial incentive in respect of the timely and robust transformation of the DSO's role and strengthening of independence of the DSO. The

CRU will use an annual balanced scorecard approach, which will use, as a starting point, the proposals already provided by ESB Networks post draft determination. The ESB Network's proposals represent an important first step in improving the independence of ESB Networks and this will be built upon further over the course of PR5. The criteria relating to finance, governance, and transparency will be weighted more heavily relative to other criteria given their importance, as explained above.

- The DSO shall submit to the CRU in September each year, aligning with its consultation with stakeholders, a detailed multi-year plan covering the three following years (and the two years after at high level). Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the DSO shall make a submission of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

- In assessing the outcome of performance, the CRU will consider the following criteria:

    - (20%) quality of the plan and defined actions that improve independence;

    - (40%) quality of implementation of the plan; and

    - (40%) effectiveness of the plan and demonstrable impacts.

- The outcome of performance will be reported to CRU annually as part of the revenue requirement submission. The maximum reward shall be €4m per year and the maximum penalty €2m.

Reasoning

The ambitious targets of the CAP require a step-change in performance from the DSO at the same time as its role is changing and expanding. This transformation of the DSO underpins all of the other incentives and objectives the CRU has put in place for PR5. Given the relatively short time to achieve the 2030 targets it is important that this transformation is done well and quickly. Therefore, the CRU considers that putting an incentive and reporting structure around this activity it will help support the overall PR5 objectives by encouraging strengthening of the independence of the DSO, whilst identifying and addressing any governance or capability issues that do not benefit of customers.

It is also noted that further measures to strengthen ESB Networks' separation from the ESB group were required as part of the European Commission's certification decision, with implementation ongoing. During the PR5 process the lack of visibility of the funding arrangements between ESB and ESB Networks have created difficulty in understanding the true financing requirements of ESB Networks. Given the scale of investment required over PR5 and PR6 this could be significantly problematic, in terms of either ESB Networks not being sufficiently funded to finance the necessary investment or in terms of the customer paying more than is necessary.

In terms of innovation, this incentive builds upon the success of the PR4 Strategic Innovation Fund which facilitated ESB Networks developing a structured and robust approach to identifying and quantifying the benefits of innovation projects. And the incorporation of that innovation into business as usual activities. The move away from the explicit focus on innovation in PR5 is a recognition that significant progress has been made in PR4 and that the appropriate focus for PR5 is on outcomes, with innovation as an enabler but not necessarily the aim itself. However, the CRU considers that there is merit in maintaining a structure around the approach to reporting on innovation and therefore ESB Networks' submission on its transformation will include an examination of the quality of ESB Networks' innovation approach.

8.12 Joint TSO/DSO Coordination

Objective

The purpose of this incentive is to 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. The SOs will be incentivised for ensuring that:

(i) their processes are effective in enabling the trialling, piloting, deployment and use of new technology on the grid and in their operations;

(ii) they optimise the existing grid to minimise the need for new infrastructure, by using new technology where appropriate; and where new infrastructure needs to be built, they work together collaboratively to ensure timely delivery of this;

(iii) they enable the provision of system services through new technology or remove barriers for existing technology to provide these services on the transmission and distribution systems; and

(iv) they address whole system challenges such as dispatch down of renewable generation or security of supply challenges, particularly in the region of Dublin.

Decision

- The CRU will use an annual balanced scorecard approach for assessment of performance by the DSO and TSO.

- The SOs shall submit to the CRU in September each year, aligning with their consultation with stakeholders, a detailed multi-year plan covering the three following years (and the two years after at high level). In the multi-year plans, the SOs will set out their planned activities to enable deployment of new technology, which will account for technical scarcities or challenges identified by the DSO and/or TSO. Based on the submission, the CRU will make a decision, by year-end, on the milestones, deliverable targets and weightings for the following year. The first multi-year plan and balanced scorecard proposals will be submitted by 1 October 2021 and will cover 2022 to 2024 (as well as 2025 and 2026 at high level). With respect to 2021, the SOs shall make a

submission of its 2021 plan/programme in January 2021. The CRU will make a decision shortly after.

- In assessing the outcome of performance, the CRU will consider 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.
- The outcome of performance will be reported to CRU annually, over the PR5 period, as part of the revenue requirement submission. The DSO and TSO will provide the CRU with a report on the effectiveness of their approach to "enabling new technology and solutions" and the activities carried out over the previous calendar year.
- The incentive payment shall be set by the CRU informed by an independent audit. The audit will use the balanced scorecard framework that will have been approved by the CRU, by year-end, two years before the audit takes place[35]. Based on the audit report, and other evidence deemed relevant by the CRU, performance shall be graded as Average (0%), Above standard (50%), Significantly Above Standard (100%). The first audit will be undertaken in 2022, reviewing processes and activities during 2021. The maximum incentive payment for the DSO shall be €3m per year (upside) and €1m per year (downside).

Reasoning

It is necessary that the DSO and TSO have a strong regulatory signal to work progressively to deliver new business as usual solutions, where both DSO and TSO have a role to play with regard to:

- enabling the market to respond to technical scarcities or security challenges;
- enabling increased renewable integration or reduce their downward redispatch; and
- addressing security of supply challenges.

"New Technology" includes technology used by transmission and distribution connected customers, as well as technology used by the TSO on the transmission system, in the Control Centre, or in the TSO's interactions with the DSO with respect to provision of system services by distribution connected services.

[35] For 2021, the balanced scorecard framework will be approved by the CRU in 2021, shortly after the 2021 plan/programme is submitted by the SOs to CRU in January 2021.

9 Conclusion

The network companies have an important facilitation role in the facilitating the achievement of targets set out in the *Climate Action Plan*. The PR5 Incentives and Regulatory Framework will enable the network companies to do so, while protecting customers' interests through effective oversight. For PR5, the CRU has built on the successes of the PR4 approach and will continue to incentivise efficient costs, enable necessary investment, and hold the network companies accountable for delivering what customers need.

The mechanisms in the Agile Investment Framework will facilitate flexibility and also address the level of uncertainty in the PR5 period. The CRU considers it important that the network companies have access to sufficient funding to enable them to deliver on the CAP challenge while also protecting consumers.

The decisions set out within this Paper and the allowances set *ex-ante* within the Final Revenue Determinations are significant and reflect the CRU's ambition to enable the transition to a secure low carbon future.

10 Next Steps

As previously set out in this Paper, the CRU has approached the establishment of the Regulatory Framework, Incentives and Reporting for PR5 in three phases. These are:

1. **Phase 1:** this phase summarised the network company proposals, the CRU's views and sought for stakeholder feedback prior to finalising each element of the reporting, incentives and regulatory framework 'package'. This phase aligned with the CRU's PR5 Draft Determination.

2. **Phase 2:** this phase formalises the package and sets out the CRU's decision on the total revenues at risk (upside/downside). The outcome of this phase will be a decision on the incentives to apply, the monetary amount to be allocated to each metric (upside and downside), and the broad structure of the regulatory framework. This phase aligns with the PR5 Final Determination and therefore, with this Paper.

3. **Phase 3:** this phase will finalise the overall package in terms of the balanced scorecard-based incentives and the detail behind some aspects of the Agile Investment Framework. This phase will follow the Final Determination.

The CRU will work with licensees to finalise the balanced scorecard-based incentives for phase three.

Annexes

The Annexes for this Paper include the following:

Annex 1. Responses to the Draft Determination

Monitoring and Reporting

Annex 2. Guidance on Annual Output Reporting

Annex 3. Guidance on Investment Planning and Delivery Annual Reporting

Annex 4. TSO Innovation Reporting

Annex 5. DSO Innovation Reporting

Annex 6. Quality of Regulatory Submissions

Distribution Performance Incentives

Annex 7. DSO PR5 Unplanned Outages/Continuity Incentives

Annex 8. DSO Customer Service Incentives

Annex 9. DSO Smart Metering Incentive

Annex 10. DSO Balanced Scorecards

Transmission Performance Incentives

Annex 11. TSO Strategic Incentives

Annex 12. TAO KPI Framework

Annex 13. TAO Outage Management

Annex 14. Guidance on Stakeholder Engagement Incentive (TSO and DSO)

Agile Investment Framework

Annex 15. TSO Monitoring Committee

Annex 16. TSO/TAO Capex Adjustment Process

Annex 17. CRU Decision on Uncertainty Mechanisms

1 Annex: Responses to the PR5 Draft Determination

This Annex summarises the main points and themes raised by respondents to the CRU's consultation paper on the PR5 Regulatory Framework, Incentives and Reporting. The CRU received a total of 36 responses, all of which were non-confidential. These responses have been published alongside this Paper.

Decision area	Response overview
Monitoring and Reporting	
Regulatory reporting pack	- The proposal was broadly supported by ESB Networks. The enhancement of reporting was supported by EirGrid; however, the TSO considered that with the scale of PR5 reporting obligations, there might potentially be duplication of reporting. Also, EirGrid highlighted that the report against PR5 outputs was unclear to them and questioned whether the performance incentives framework (and reports such as the APR) address this already. - The network companies were concerned about the cost recovery for the additional resources and consultancy support required to deliver this. Also, they sought clarity as to what is required under this reporting requirement and the timeframe for the provision of same. - Respondents were broadly supported of this reporting requirement and sought that the regulatory reporting pack is made publicly available. - One respondent highlighted that this should reflect the benefits of the actions undertaken by the companies for consumers. - One respondent sought that a list of the uncertainty mechanism items and quantum should be provided annually by the companies. - Another respondent sought that there are linkages between the Flexibility Mechanism and the flexibility and visibility incentives; and that the DSO demonstrate how they have used the Mechanism to deliver against defined flexibility and visibility outputs.
BPQ	- The proposal was broadly supported by ESB Networks. EirGrid questioned the benefit of this given that it will not be subject to annual analysis. - Respondents were broadly supported of this. One respondent outlined that the network companies' views on barriers to achievement of expected PR5 deliverables should be incorporated. - Two respondents sought that this is made publicly available.
Connection process	- One respondent sought that there is annual reporting on (i) benchmarking of costs of generator connections and (ii) the average length of delay of connection of generators to the gird. - Several responses sought that there is stronger reporting and transparency on the processing time of grid connection offers and modifications.
Capex monitoring	- The proposal was broadly supported by respondents.

	- Several respondents sought more up to date information on network development, including details on progress of projects through EirGrid's six-step framework for grid development. - One respondent highlighted that capex reporting should be extended to the DSO given the step change in their PR5 capex allowances and that these reports should be published, including an overview of the use of the Flexibility Mechanism. - Several respondents sought that emissions are monitored and reported on, in particular emissions related to dispatch down levels and constrained on generators.
Innovation reporting	- The proposal was broadly supported by ESB Networks. They suggested amendments to the DSO's innovation reporting annex to link it to the DSO's independence incentive, which covers the area of innovation. EirGrid highlighted that the TSO's innovation reports are obsolete as innovation is inherent in their PR5 proposals. - The proposal was broadly supported by respondents. - One respondent sought that when the companies report on activities to enable deployment of new technology, the focus should be on embedding the use of this technology into the network planning tool.
Cybersecurity report	- This has been supported by EirGrid. They have sought that the report is not made publicly available as the risks associated with publication would greatly outweigh the benefits of publication.
Traditional metering	- The only respondent suggested that the DSO reports on the number of meters that fall under the "unread" or "block estimate" categories and roll-over from one year to the next one without a plan to address the issue.
Distribution Performance Incentives	
Unplanned outages	- One respondent suggested that this incentive should be more Business As Usual at this point of time. They also raised that not all storms should be excluded from measurement of network resilience in terms of CML or CI. - The DSO was concerned about the challenge to achieve the stretching targets proposed. They raised that there is a gap between performance and targets over PR4 and that if the PR5 targets are set with this gap built in, there will be significant penalties for them.
Worst served customers	- The incentive was supported by respondents and by the DSO. The DSO suggested that the incentive works annually, as opposed to every three years, so that the payment/penalty can feed into the annual revenues every year. - One respondent sought that when the DSO reports on outcome of performance, they include information as to how the WSC base is determined. They also suggested that the CRU retains the right in the annual revenue review processes to tweak the targets to extend coverage of this incentive.
Outage duration accuracy	- The proposal was broadly supported by respondents and by the DSO. - The DSO suggested to submit annual multiyear plans to CRU to update the balanced scorecard framework every year based on more up to date information.
Customer service	- The proposals were broadly supported by respondents and by the DSO. - One respondent suggested that the weightings of the national customer contact centre are adjusted to reflect that the speed at which issues are resolved is what matters most to customers. They also suggested more ambitious targets for the overall customer satisfaction survey.

Smart metering	- One respondent suggested that the provision of this incentive should be determined by a qualitative stakeholder forum. - Another respondent raised concerns about the alignment of the smart metering programme high level design and the proposed targets. They also sought more insights on the incentive on the data repository delivery and the circumstances that would lead to a grace period. - ESB Networks was supportive of the proposals and submitted a few adaptations suggestions around the application of appropriate grace periods, the data repository delivery, the targets for the last two years of PR5 as well as the functionality delivery targets.
Stakeholder engagement	- The proposal was broadly supported by respondents and by the DSO. - Several respondents suggested that there is a customer satisfaction survey for generation customers with KPIs to measure outcomes and incentives against performance targets.
Connections (ECP-2)	- The DSO was supportive of the proposals. - Several respondents suggested that the incentive mechanism also includes delivery of grid connection offer modifications. - Generally, respondents supported applying graduated incentive payments and penalties but they showed concerns about the proposed 5-months delay before the full penalty applies. - Several respondents suggested that the incentive should focus on getting the entire offer process working more efficiently and not just the issuing of new connection offers. - One respondent suggested that the incentive mechanism should account for delivering RESS awarded connection projects before the longstop date. Another respondent suggested that inclusion of timely delivery of the 25 largest renewable generator projects in the incentive should be considered.
Flexibility incentive	- The proposal was broadly supported by respondents and by the DSO. - One respondent showed concerns about the reduction by the CRU to the DSO's proposed incentive upside. - Another respondent suggested that more revenues are allocated to this incentive and deducted from other incentives (e.g. unplanned outages) as well as closer symmetry in the reward/penalty level. They also questioned how the DSO and TSO will align on the flexibility procurement processes. - One respondent raised that the development of dynamic validation of Demand Side Units bids and offers would be welcomed. - The DSO suggested to submit annual multiyear plans to CRU to update the balanced scorecard framework every year based on more up to date information.
Visibility incentive	- The proposal was broadly supported by respondents and by the DSO. - One respondent questioned whether the incentive mechanism will include prioritisation of specific areas or reflect the increasing take up of EVs/heat pumps, etc. - Another respondent suggested that the actions to improve the ability of certain Demand Side Units sites to contribute to flexibility services should be included in the incentive mechanism. They also raised that there would be potential benefits in liking this incentive to the Flexibility incentive and leveraging both.

	- The DSO suggested to submit annual multiyear plans to CRU to update the balanced scorecard framework every year based on more up to date information.
Independence of the DSO	- Respondents raised that they would welcome further details and a separate consultation process on the balanced scorecard. - Suggestions for the metrics were provided, e.g. demonstrable and ongoing increase in the number of market participants providing services to the DSO, clarity and annual reporting on the cost allocation of the DSO activities, development of the DSO's role as the guardian of innovation (rather than the owner) or certification of the independence of the DSO. - ESB Networks provided the CRU with a proposal of metrics under the following areas: finance, transparency and assurance, innovation and third-party collaboration and capacity of the DSO.
DSO and TSO proposal of a joint incentive	- The DSO and TSO provided CRU with a proposal on a joint DSO/TSO incentive aims at enabling deployment of new technology to address whole system challenges such as dispatch down of renewable generation or security of supply. - The SOs suggested to apply a balanced scorecard approach, similarly to the other balanced scorecard frameworks proposed, with multiyear plans provided to CRU on an annual basis.
Cap and Collar	- The proposed 4% cap and collar was fully supported by one respondent. - Another respondent suggested a small increase of the limits (whilst retaining a slight upside versus the risk of downside). - The DSO outlined that the cap and collar should be set at the sum of the individual incentive maximum upside/downside (i.e. 4.97% upside and 4.95% downside) rather than at 4%.
Misc.	- Several respondents suggested that the SOs are incentivised to ensure consultation into all areas of contestable asset specifications and outlining of designs are part of stakeholder engagement. - They also suggested that the SOs are incentivised to maximise the number of projects with "Final Operation Certificate" status and to minimise the duration for which projects remain with "Intermediate Operational Certificate" only status. - Furthermore, they suggested that additional specific incentives are introduced on timelines to ensure that the SOs issue Firm Access to sufficient generator projects in order to hit the 2030 targets. - One respondent suggested to incentivise ESB Networks and EirGrid for competing for EU funding to help finance their activities, as this would be in the interest of consumers.
Transmission Performance Incentives (incl. overall TSO's response to the draft determination)	
TSO Response	- Increasing the ratio between upside and downside to 2.5:1. - Reinstating the RES-E incentive with a €1.0m upside and €0.4m downside. The TSO also propose to retain the targets as proposed in its original submission. - For the SNSP incentive, the TSO proposed a €1.0m upside and €0.4m downside. EirGrid note that the main item on the critical path is the System Services Future Arrangements which will be operational in 2023, as such the targets should be revised to increments of 5% and a target of 80% set for 2024 and 85% set for 2025.

	- For the Renewable Dispatch Down incentive, the TSO proposed a €1.0m upside and €0.4m downside. EirGrid disagree with the proposed annual target of 5%. EirGrid suggested that the CRU further considers the precise interpretations of dispatch down, redispatch and curtailment as used in the context of the Clean Energy Package. EirGrid also state that merit in investigating DSO/TSO incentive; but noted that the detail surrounding this would not be completed before the start of the PR5 period. - For the Stakeholder Panel, EirGrid propose that the upside gets increased to €1m per annum. - EirGrid proposed that the Strategic Objective metric is removed and that the €0.5m upside for this incentive is spread evenly across the SNSP and Renewable Dispatch Down metrics. - For the investment planning and delivery incentive, EirGrid propose that the upside gets increased to €1m per annum. The TSO does not believe a joint TAO/TSO Balanced Scorecard is appropriate. Rather as has been implemented in PR5 the TAO and TSO have separate Balanced Scorecards that reflect the separate roles and responsibilities and also separate governance arrangements for both companies. EirGrid proposes that the Deployment of New Technology Metric becomes a joint TAO/TSO incentive. EirGrid requested that the full costs associated with the independent audit be based on an agreed Terms of Reference with the CRU and that the costs are recoverable. - For Local Security of Supply, the TSO welcomed the €1m upside but feels that the downside risk should be set to €0.5m. EirGrid suggest updating the mitigant measures report and also note that they must be the party charged with bringing the overarching view. - For the CRU's proposed Imperfections incentive, EirGrid noted that significant cost savings can be achieved for customer, provided the appropriate incentive is in place. EirGrid state that if it can invest €0.5m to unlock €1m in savings then the proposal does not facilitate this. - For the Connections incentive, EirGrid welcomes clarification as to whether this applies to future batches beyond Enduring Connections Policy 2 (ECP-2) during PR5. - For the joint TSO/DSO metric, EirGrid propose that a metric "Deployment of New Technology" becomes a joint incentive. - For the monitoring committee, EirGrid proposed a stage-gate process that aligns with its own internal six step process. EirGrid envisages that the CRU would re-assess projects in 4 out of 6 stages (steps).
Investment Planning and Delivery Incentive	- A large number of respondents commented on the Investment Planning and Delivery Incentive. In summary, respondents requested: o Delivery of projects to support onshore and offshore; o New metrics focused on access rights from non-firm to firm, removal of associated transmission reinforcements, connection of new generation assets; o Targeted improvements in grid delivery and incentives EirGrid and ESB N to deliver infrastructure on time (timeliness);

	○ Mechanism to incentivize the TSO to have completed the pre-construction development of onshore grid reinforcements projects required for East coast offshore wind projects by the end of the PR5 period; ○ A 5th new assessment criteria should be included in the balanced scorecard - "overall adequacy of development activity". ○ PR5 should incentivise the SOs to start new grid development projects earlier; ○ Changes to address the delays associated with qualifying and deploying new technology.
Joint Incentive	- A number of respondents largely welcome TSO/TAO joint incentive and suggested high payment on the upside. - Additional revenue for delivering earlier than planned timelines for IP to CPP. - The TSO and TAO should be incentivised to have a common design and construction quality review process and eliminate the potential for conflicts. - Projects with ION (Intermediate Operational Certificate) and FON (Final Operational Certificate) should be monitored and that both DSO and TSO should be incentivised to maximise the number of projects with FON status and minimise the duration for which projects remain with ION only status. - The TSO and TAO should be incentivised to have a common design and construction quality review process and eliminate the potential for conflicts. - Implementation of signal exchange between the TSO, DSO and connecting parties via digital communications should be specifically incentivised. - SO's should be incentivised to ensure consultation into all areas of contestable asset specifications and outline designs is considered as part of wider stakeholder engagement. - The TAO should be incentivised to deliver timely transfer of assets.
Dispatch Down Incentive	- Respondents welcomed the proposal and inclusion of the Dispatch Down Incentive. - One respondent questions the delivery of Dispatch down given the under delivery of infrastructure. - A number of respondents suggested the deadband was too wide and should be reduced. Respondents questioned why penalties start at 8% with one respondent recommending a sliding scale after 5%. - One respondent suggested that dispatch down could be caused by system issues or network congestion and should be measured and incentivized separately, while another respondent recommended including both curtailment and congestion.
SNSP	- Respondents welcomed the proposal and the inclusion of the SNSP Incentive. - Respondents strongly supported proposal to adjust SNSP to include interim targets. - One respondent supports the form of the SNSP but has reservations over placing linear target. - Two respondents also recommended that an SNSP incentive should be progressed in combination with an incentive on the TSO to reduce minimum generation levels out to 2025.
Security of Supply	- Respondents welcomed the inclusion of an incentive to minimise constraints. - Reduction of constraints cannot be limited to Dublin. - One respondent suggested that this incentive be extended to the DSO. - One respondent sought that the recognition of the heavily complementary role the Loc. Scalar decision can play in alleviating constraints.

	- Reports should be published to enhance transparency. - One respondent noted that there should be a clear cost benefit in investment decision.
RES-E	- Three respondents sought the introduction of the TSO's proposed RES-E incentive. One respondent suggested that this be a joint EirGrid and ESB Networks incentive.
Connections	- Respondents welcomed the incentive mechanism for timely delivery of connection offers. - Also suggest target for grid modifications. - One respondent fully agreed with the need to ensure all ECP2 batch offers are issued within the proposed 15-month period. - One incentive recommended the introduction of an ECP sliding scale incentive for the DSO and TSO set against the baseline timelines for annual batch processing (both on batch opening and batch processing).
Outage Management	- Respondents supported outage management incentive/ - One respondent recommended that a portion of incentive should be applied to remunerating resources necessary to facilitate units return to operation. - One respondent stated that it would beneficial to see a forecast of cost of individual outages published and an incentive placed on the TAO which would reward them for minimising outage related costs.
Imperfections	- Respondents in general supported imperfections incentive. - One respondent highlight concern that EirGrid measures to reduce imperfections charges could result in charges levied on generators being used as a mechanism to offset dispatch balancing costs incurred elsewhere by the TSO. - One respondent suggested improving old SEM incentive.
SML and SF	- One respondent suggested SML should be downside only. - One respondent suggested that SML should be more stretching and SF should be increased to 99%.
Stakeholder Panel	- Respondents supported the continuation of the Stakeholder panel. - A number of respondents recommended the inclusion of a Satisfaction Survey for generator customer.
Strategic Incentives	- Two respondents suggested that this incentive apply to market developments/improvements.
Misc.	- EirGrid and ESB Networks should be incentivised to reduce the standard time for the IA process by 50% over the course of PR5. - A number of respondents suggested a Min. Gen. Incentive along with the dispatch Down Incentive. - Respondent supported a more outcome-focussed process. - One respondent stated that a review of electricity regulation, code and market systems is necessary. - Respondents recommended the inclusion of a Grid Capacity Advisory Council.
Agile Investment Framework	
Agile Investment Framework	- Respondents responded positively with respect to the CRU's proposed Agile Investment Framework. Respondents made the following comments with respect to this framework: ○ Offshore wind should be included within LCT or Capex adjustments.

	○ TSO/TAO should have flexibility to adjust their plans to allow for projects to be brought forward and new reinforcements. ○ Management Boards should be established across regions. ○ CRU and SO must agree to Monitoring Committee structure and the process must be clear and fit for purpose. Decision making powers should remain with the CRU. ○ Membership of Monitoring Committee must encompass full range of customer and generation representatives. ○ An interim review of the Monitoring Committee should be included. ○ A flexibility mechanism to leverage efforts towards prioritisation of flexibility solutions on the transmission system should be considered. ○ Tight timelines need to apply to decisions made under the Agile Investment Framework. ○ Clarity as to the rules around the *ex-post* review should support the operation of the Agile Investment Framework. ○ All parties must be comfortable with the processes and have confidence that the processes will deliver the required outcomes. ○ The right balance should be in place between enabling the SOs to fund new initiatives and an appropriate level of control to protect consumers. ○ The proposed uncertainty mechanisms were broadly supported by respondents. The use of these mechanisms should be communicated quickly to industry. ○ The CRU should engage with the SOs to ensure that the framework is fit for purpose from the outset. ○ There should be an uncertainty mechanism for the system control budget category requested by the DSO. ○ The flexibility mechanism was broadly supported by respondents. ○ Any allowance for flexibility services placed in the flexibility mechanism should be in addition to the DSO's baseline request to deliver flexibility solutions. ○ There should transparent annual reporting as part of the annual review process regarding the flexibility mechanism. ○ Reallocated costs under the flexibility mechanism should be subject to the *ex-post* review rather than treated as non-controllable expenditure.
Cost Incentives and *Ex-Post* Review	
Cost Incentives & *Ex-Post* Review	- The proposed 5-years rolling retention mechanism was broadly supported by respondents. - The onus to demonstrate efficiencies should remain with the network companies. - The continual transition to an output-based approach as well as the flexibility introduced for the companies in the PR5 framework is welcomed. - The level of spend against allowances should remain manageable and challenged if significant variances are identified. - Further details should be provided on the approach taken to strike the right balance of risk between the SOs and consumers. - Respondents raised that it is very important that there is clarity on the ex-post review process.

Monitoring and Reporting

2 Annex: Guidance on Annual Output Reporting

In this Annex, the CRU sets out its guidance to the TSO, TAO and DSO on the requirements for the annual performance reports they will prepare and publish. The guidance covers both format and content.

Purpose

Each year to provide customers, industry participants and other interested parties with a clear, accessible, comprehensive, quantified but non-technical report on performance over the past 12 months. It shall provide information on (i) outcomes experienced by customers, industry participants and other stakeholders, and (ii) the contributions of the TSO, TAO or DSO towards these outcomes.

Format

Each report shall be short in length, and visually appealing. It shall contain no appendices and annexes but may provide links to other relevant material for a reader seeking more detailed information. It shall make effective and proportionate use of tables, charts and diagrams – and supporting commentary – such that a non-technical reader can easily discern:

- Outcomes - experienced by customers, industry participants and other stakeholders;
- Contributing behaviours and activities – by the TSO/TAO/DSO to deliver or influence the reported outcomes; and
- Context on past, target or reasonably expected outcomes, behaviours or activities.

It shall be easy to compare and reconcile to past reports prepared under this framework.

Content

The range of outcomes and contributing behaviours and activities of the TSO/TAO/DSO included in each report shall be comprehensive. It shall include all areas where the activities or behaviours of the TSO/TAO/DSO have a material impact on the outcomes experienced by customers, industry participants or other stakeholders.

The content shall be grouped into logical sections based on types of outcomes. Within each section a range of qualitative and quantitative indicators shall be used to provide a balanced and objective perspective on performance – providing information and insights on costs, quality and volumes. Indicators shall be placed in appropriate context, e.g. relative to the past, relative to targets or reasonably expected outcome and relative to demand for services.

While not all indicators used in the report will have associated financial incentives, it is expected that all KPIs used for determining awards or penalties pursuant to regulatory incentives will be used in some capacity in the performance report.

The choice and grouping of indicators is to be developed by the TSO/TAO/DSO consistent with these guidelines – and where practicable, in consultation with stakeholders. The CRU does, however, expect appropriate coverage of the following areas or topics:

TSO/TAO

- system performance;
- network usage and capabilities – including changes consequent to investment;
- investment planning and delivery;
- network resilience – including in context of severe weather;
- network outages;
- network constraints – curtailment volumes;
- network constraints – curtailment costs;
- network constraints – tools for managing;
- network losses and the financial impact of losses on customers;
- supporting market operation, e.g. demand forecasting;
- managing new connections and facilitating market participation;
- utilising innovation;
- engaging with stakeholders;
- expenditure against PR4 allowances and a breakdown of expenditure;
- financial Key Performance Indicator – for example liquidity ratios;
- safety;
- managing environmental footprint; and
- carbon emissions related to TSO non-energy dispatch decisions.

DSO

- maintaining reliable supplies of electricity – including during storm events;
- managing new demands for connection;
- managing the network, and optimising network investment – including network loading;
- network resilience - including in context of severe weather;
- load index and movement in load index – including the drivers for the movement;

- health index and movement in health index – including the drivers for the movement;
- network losses and the financial impact of losses on customers;
- delivering new connections and facilitating market participation;
- supporting market development, e.g. smart metering, schema releases;
- utilising innovation;
- engaging with stakeholders;
- expenditure against PR4 allowances and a breakdown of expenditure;
- financial Key Performance Indicator – for example liquidity ratios;
- safety; and
- managing environmental footprint.

The network companies shall identify international best practice and compare their performance to the best performing utilities internationally. This will be incorporated in the Regulatory Reporting Pack, submitted by the companies as part of the annual revenue requirement. Where possible, and for all relevant metrics of performance, the network companies shall set out in the annual performance reports a summary of the benchmarking information included in the Regulatory Reporting Pack.

Ongoing improvement

The usefulness of the performance report shall be reviewed annually, including through a structured process of consultation with stakeholders. Improvements, such as new metrics for measuring performance, shall be developed and introduced promptly.

When preparing the reports, the TSO/TAO/DSO shall have regard to additional guidance issued by CRU following the annual approval process.

Timings

The following summarises the high-level steps/timings for the publication of the annual performance reports:

- submission of draft reports to the CRU for comments (early in August);
- draft reports updated and published for consultation (by end of August); and
- final reports submitted to the CRU for approval (no later than the 1st October).

3 Annex: Guidance on Investment Planning and Delivery Annual Reporting

In this Annex the CRU sets out its guidance on the requirements for its annual reporting of investment planning and delivery, that it will prepare and publish.

Purpose

Each year, to provide customers, industry participants and other interested parties with a clear, accessible, comprehensive, quantified but non-technical report on how investment in the transmission system has been managed over the preceding 12 months. It should serve to complement and expand on the associated material in the TSO/TAO annual report on outputs and performance (see Annex 2 above).

Format

Each report shall be short in length, and visually appealing. It shall contain no appendices and annexes but may provide links to other relevant material for a reader seeking more detailed information. It shall make effective and proportionate use of network maps, tables, charts and diagrams – and supporting commentary.

Content

The content shall be sufficient for a non-technical reader to understand:

- the methodology used by the TSO in planning the development of the transmission network, and by the TAO in supporting that development; and
- how that methodology has been applied over the preceding 12 months in respect of:
  - identifying or update the quantified need for network investment at different network locations;
  - determining the range of technologies and/or demand-side solutions for consideration in meeting a particular quantified need;
  - choosing the right solution to deploy – and how analysis of costs, benefits, technical considerations, and other impacts feature in that choice;
  - choosing the routes for new grid infrastructure;
  - securing the necessary planning consents;
  - prioritising and scheduling construction across the portfolio of projects; and
  - construction, energisation and benefits sharing.

The indicators of performance shall be placed in the reports in appropriate context, e.g. relative to the past and relative to targets or reasonably expected outcome. The content shall also be sufficient for a non-technical reader to understand the nature of and reasoning behind changes to needs cases, proposed solutions and delivery timings from one year to the next.

When preparing the reports, the TSO/TAO shall have regard to additional guidance issued by CRU following the annual approval process.

The TSO Balanced Scorecard Framework report, which is to be submitted by the TSO to CRU as part of the annual revenue review, should address/include information on the number of projects eligible for the annual outage plan and the actual projects included. A narrative around why projects are not included should also be contained within. This, as indicated in CRU/20/039, will allow the CRU to monitor the appropriateness of the investment planning and delivery incentive targets.

Timings

The following summarises the high-level steps/timings for the publication of the investment planning and delivery reports:

- submission of draft reports to the CRU for comments (early in August);
- draft reports updated and published for consultation (by end of August); and
- final reports submitted to the CRU for approval (no later than the 1st October).

4 Annex: TSO Innovation Reporting

In this Annex the CRU sets out its guidance for the TSO on the annual process of reporting on innovation.

Objective

The CRU's objective in putting in place a more formal process is to track the use by the TSO of innovation projects to help support and accelerate progress against the strategic objectives. This process will also be a vehicle to consider the case for additional funding for innovation projects, over and above the sums already provided or adequately incentivised for under PR5.

Description

The TSO shall be subject to a reputational incentive in respect of its innovation projects. The core incentive shall be reputational, delivered by lodging with the CRU and publishing a submission each year on its pipeline of innovation projects. The submission shall cover:

- projects being initiated,
- projects that are in progress, and
- projects that have completed–and shall include relevant, proportionate evidence on the scope, cost, rationale for and impacts of each project with either activity or impacts during the reporting year.

Further to relevant, proportionate evidence on the scope, cost, rationale and impact; the report shall also include the future potential of each project, covering when and how the projects being progressed will be incorporated into the business, rolled out to other projects or deployed in the live transmission system; as well as the approach and outcome of the dissemination of the outcomes and learning of innovation for the wider industry.

The TSO may also include in its submission a business case for additional funding for new projects. This includes projects/initiatives that would reduce or mitigate the impact of imperfections costs and have not been included in the annual set of planned measures. The TSO may propose such initiatives due to their clear cos-benefit for consumers.

The business case must include rationale for why the project is innovative, the nature of the potential benefits at stake, and a description of the project will be managed, reported on and evaluated. If the application is accepted by the CRU, then reporting on progress will be folded into the annual innovation reporting process – and commensurate funding will be made available through the tariff-setting process.

The TSO shall lodge its submission by 31 March following the end of the reporting year and after having consulted with stakeholders. The first reporting year shall be 2021.

5 Annex: DSO Innovation Reporting

In this Annex the CRU sets out its guidance for the DSO on the annual process of reporting on its pipeline of innovation projects.

Objective

To put in place a clear and structured reporting framework for innovation for the DSO during PR5 and to give the DSO the opportunity to demonstrate the process to identify, deliver and assess the outcomes of innovation activities.

Requirements

To demonstrate, with evidence, the presence of the following:

- the approach and methods used to identify, develop and specify innovation projects in the reporting year;
- the approach to the management and delivery of innovation projects in the reporting year; and
- the approach to evaluating, communicating and, where relevant, deploying the learnings from completed innovation projects operationally in the reporting year.

Form of reporting and nature of evidence

The DSO should demonstrate the quality of innovation in the reporting year. The report shall be accessible and shall present all relevant pertinent information concisely. It shall take into account:

- The quality of the process to identify innovation in the reporting year, including:
  - Scoping, planning and opportunity identification.
  - Metrics used to identify benefits of innovation for network users and customers (e.g. Cost-Benefit Analysis), including detailed costs assessments where appropriate; as well as defined measures of success established at the outset of projects and used to identify results that would represent successful projects.
  - Collaboration with third parties to identify and validate innovation.
  - Consideration of customers and industry foresight.
  - Demonstration that projects are not Business-as-usual.
  - Risks and uncertainties identified when assessing the possible outcome of innovation projects, including demonstration of robust processes in place for

identifying the milestones at which projects could be re-evaluated based on new information and/or learnings.
    - Project plans and risk mitigation measures.
- Efficiency in project delivery in the reporting year, including:
    - The status of existing innovation projects, including those which commenced in the reporting year.
    - The process the DSO followed to track progress with existing innovation projects, including engagement with project partners and wider stakeholders.
    - The progress with testing and trialling of innovation projects, where appropriate, identifying opportunities to improve delivery and the maximising the benefits of innovation.
- Approach and use of project learnings or outcomes, including:
    - The assessment of the benefits delivered by innovation projects that are sufficiently advanced.
    - The approach and outcome of the dissemination of the outcomes and learnings of innovation into the DSO Business-As-Usual operations or decisions making. The DSO shall include reference to adverse research outcomes/findings in relation to identifying and recording outcomes and to the external dissemination of learnings.
    - The approach and outcome of the dissemination of the outcomes and learning of innovation for the wider industry.
    - Opportunities to extend the innovation project further where additional expected benefits can be identified.

The DSO shall lodge its submission by 31st March following the end of the reporting year and after having consulted with stakeholders. The first reporting year shall be 2021.

6 Annex: Quality of Regulatory Submissions

Given the central role the system operators play in the energy sector it is necessary that the CRU can rely on their expertise and views on regulatory issues facing the sector. Therefore, all regulatory submissions should meet a high standard to ensure the CRU has high quality and reliable information in the areas of the network companies expertise and licenced functions. If the CRU cannot rely upon the information provided by the network companies, or if such submissions require significant verification and analysis, the CRU will require more resources and time to evaluate options and policy considerations when deciding on recommendations from the network companies. This is not in the interests of consumers or industry participants.

The PR5 period will require agile regulatory processes to address the level of change expected over the next five years and in order to progress the various mechanisms in the AIF in a timely manner. Therefore, it is essential that the TSO and DSO ensure that all submissions to the CRU are of high quality and can be relied upon in its decision-making process. In order to achieve this the CRU considers that an audit process should be put in place to provide the necessary assurance and required improvements[36] in the network company's submissions. This process will require the TSO and DSO to have an independent audit carried out to assess the TSO and DSO submissions against a four-point standard of being Clear, Complete, Candid, and Constructive.

This standard does not envisage the TSO or DSO knowingly making false or deliberately misleading statements. The CRU would consider such conduct as an egregious breach of their license obligations potentially requiring compliance action. The CRU has never had cause to take such action in relation to the TSO and DSO and does not anticipate this changing over the PR5 period.

The CRU has set out the four categories below to outline the necessary elements of a high-quality regulatory submission that facilitates the CRU making decisions in the best interests of consumers and the long-term sustainability of the sector.

- **Clear**: The information and requests are clearly and concisely presented in accessible language. The purpose of the document and the main issues for consideration are readily identifiable at the outset. The layout and structure of the document is clearly signposted and flows coherently. The submission clearly differentiates between opinions, views, and conclusions on the one hand and statements of fact on the other. The submission, and its component parts, are not longer than necessary and demonstrably concise.

[36] It is noted that the TSO's response to the CRU's PR5 Draft Determination contained statements that were not verified, lacked necessary context, or were not supported by the available facts. When asked to substantiate a sample of these statements the TSO was unable to do so to the satisfaction of the CRU.

- **Complete**: All relevant information is provided in the submission. All statements are verified, either through explanation in the text where appropriate or, through footnoted references. Any relevant context (including previous regulatory positions, previous positions taken by the licensee, or the views of relevant stakeholders) is discussed and referenced appropriately. The document should be self-contained to the extent that no additional information is required to identify the key issues, context and relevant reference material. Any references should be precise, readily allowing for verification by the reader.

- **Candid**: The submission should set out its case and supporting information in a direct and straight-forward manner. Opposing points of view and alternative approaches should be clearly, and fairly, set out. Any facts or information that could be considered to argue against the conclusions of the licensee should be clearly identified. Any potential inconsistencies between the licensees proposal and legislation, regulatory positions, or the positions of other relevant authorities such as ACER or the European Commission, should be clearly identified. Where a view is supported by reference to another document (such as a regulatory decision) there should be no ambiguity as to whether the position of the referenced document is as presented in the licensee's submission. Any statements or issues in which there is potential for the reader to come away with misleading interpretation of the issues on a straightforward reading of the document should be identified and mitigated. The full implications of the proposal should be clearly and unambiguously set out.

- **Constructive**: The submission should be cognisant of the CRU's wider functions and duties, in particular its duty to protect the consumer interest. The submission should identify options or possible variations in approach that could be explored. In essence the document should be clearly helpful in assisting the CRU to consider a wide range of options, even those that in the licensee's view are not preferable.

Process

The TSO and DSO will separately appoint auditors to conduct an audit of their regulatory submissions to the CRU. Of particular relevance are requests for additional revenue, requests for changes in regulatory policy and responses to CRU consultation papers. The auditor's report shall be included in the Regulatory Reporting Pack. The report should identify the documents reviewed as part of the process. The CRU may request that the auditor present and explain their findings directly to the CRU. The auditor should award an overall score as set out in the table below, set out recommendations for improvement, and comment on the licensee's success in implementing the previous report's recommendations.

Excellent	• Standard has been clearly and demonstrably met in all respects; and • All documents reviewed clearly meet the standard all aspects across in all four categories.
Good	• Standard has been clearly and demonstrably met in all categories; and • All documents reviewed clearly meet the standard in most aspects across all four categories.

Adequate	• Standard has been clearly and demonstrably met in most respects; and • All documents reviewed clearly meet the standard in most aspects across all four categories; and • No issues, or only a very small number of minor issues, identified in the candid category, no issues or only minor issues identified in other three categories.
Unreliable	• Standard has been clearly and demonstrably met in several respects; but • Some ambiguity as whether standard has been met in some aspects within categories; or • Several minor issues identified in relation to the candid category; or • A small number of substantive issues identified in other categories.
Poor	• Standard can be shown not to have been met in at least one category; or • at least one substantive issue identified in the candid category; or • A number of substantive issues identified in other categories.

Costs associated with the audits will be recoverable. The CRU has included additional revenues in the TSOs Opex for the additional reporting requirements.

Distribution Performance Incentives

7 Annex: DSO PR5 unplanned outages/continuity incentives

The table below sets out the PR5 targets, which are based on a review of the DSO's historic performance. The 2021 targets have been set at the average DSO's performance over PR4 for CI and at the average DSO's performance over PR3 and PR4 for CML, with the sequential targets decreasing at a rate of 2.1 per year for both CML and CI.

The PR4 targets were also based on a review of the DSO's historic performance. However, it is noted that the DSO's performance over PR4 has consistently missed the targets. This raised concerns regarding the ability of the DSO to meet the PR5 targets as proposed in the draft determination. After considerations given to the functioning of the scheme, engagement with the DSO and review of responses to the draft determination, the CRU has decided to set sufficiently stretching targets based on an achievable level of performance.

Table 20: Targets for PR5

	PR4 Target				PR5 Targets				
CML	81.5	79.4	77.2	75.1	85	82.9	80.8	78.7	76.6
CI	106.4	104.3	102.2	100.1	119	116.9	114.8	112.7	110.6

8 Annex - DSO Customer Service Incentives

This Annex sets out the PR5 parameters with slight amendments to the ESATRAT component targets, relative to PR4, to ensure consistency with the overall target of 90%. For PR5, the CRU has maintained the PR4 target of 90% for the National Customer Contact Centre performance and require increases of 0.5% each year for the Customer Satisfaction Survey. These targets are consistent with performance over PR4 and therefore should be achievable. An additional metric, speed at which issues are resolved, has been included in the ESATRAT incentive; this will have no weight (and therefore no financial impact) but will have a target that has been set based on DSO's proposals.

Table 21: Customer Satisfaction – incentive components and performance targets (ESATRAT – National Customer Contact Centre)

	Weight	2021	2022	2023	2024	2025
Speed of Telephone Response	25%	89%	89%	89%	89%	89%
Call Abandonment Rate	25%	4%	4%	4%	4%	4%
Mystery Caller survey results	20%	84%	84%	84%	84%	84%
Customer Call-back Survey	15%	89%	89%	89%	89%	89%
First Contact/Call Referral	15%	10%	10%	10%	10%	10%
Time to Resolution from first contact	**0%**	90% (within 5 days[37])	90% (within 5 days)	90% (within 5 days)	90% (within 5 days)	(90% within 5 days)
ESATRAT[38] (performance target)	**100%**	**90%**	**90%**	**90%**	**90%**	**90%**
Reward/Penalty per % point from Target - €m	-	0.833	0.833	0.833	0.833	0.833

Table 22: Overall Customer Satisfaction Survey – performance and targets

	Actual performance 2018-2019		2020 - target	PR5 target performance[39]				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Target	81%	81%	81%	81%	81.5%	82%	82.5%	83%
Performance	78.6%	80.8%	-	-	-	-	-	-
Reward/Penalty per % point from Target)	€0.738m	€0.738m	€0.738m	€0.738m	€0.738m	€0.738m	€0.738m	€0.738m

[37] ESB Networks' objective: to close 90% of complaints/issues within 5 days.
[38] As defined in CER/06/107.
[39] Based on last known performance which is 2019.

9 Annex - DSO Smart Metering Incentive

This Annex sets out the parameters to give effect to the CRU's decision on the DSO's smart metering incentive, which puts in place a financial incentive on the DSO's performance in supporting the delivery of the National Smart Metering Programme.

The incentive scheme is based around three categories i.e. (a) the number of smart meters deployed, (b) the smart meters functionality delivery and (c) customers' satisfaction around smart meters deployment, their awareness of the rollout of smart meters and their trust in ESB Networks regarding progress of the replacement programme. The target milestones and weightings (in % and monetary terms) for each year of PR5 are set out in the table below:

Table 23: Smart Metering PR5 targets

Year	Milestones and definition	Upside (% and €m)	Downside (% and €m)
2021	a. A total number of 0.5 million smart meters will be installed by Q4.	**20%**; €0.24m	**50%**; €2m
	b. Smart meter data repository fully delivered by Q3. This will be subject to application of the grace period to account for factors outside of the DSO's control (i.e. delays in legislative processes).	**50%**; €0.6m	**20%**; €0.8m
	c. Quarterly Customer Survey (Red C) – customer satisfaction with the smart meters replacement process remains at 80% throughout the year.	**30%**; €0.36m	**30%**; €1.2m
2022	a. A total number of 0.5 million smart meters will be installed by Q4.	**20%**; €0.24m	**50%**; €2m
	b. Smart meters enabled to allow remote re-energisation / de-energisation (by end of 2022). Market processes and supporting IT systems updated to support launch of smart prepayment services by Supply Companies (by end of 2022). Harmonised Downloadable File (HDF) available through automated interface (by end of 2022).	**50%**; €0.6m	**20%**; €0.8m
	c. Quarterly Customer Survey (Red C) – customer satisfaction with the smart meter replacement process remains at 80% throughout the year.	**30%**; €0.36m	**30%**; €1.2m
2023	a. A number within the range of 0.45 – 0.5 million smart meters will be installed by Q4. The CRU is conscious that in 2023 the target areas for deployment are more dispersed geographically	**20%**; €0.24m	**50%**; €2m

	areas and therefore, 10% of meters not being delivered has been accounted for in the target.[40]		
	b. Progress development of enduring microgeneration to facilitate delivery of this service in 2024. This will be subject to application of the grace period to account for factors outside of the DSO's control.	**50%**; €0.6m	**20%**; €0.8m
	c. Quarterly Customer Survey (Red C) – customer satisfaction with the smart meter's replacement process remains at 80% throughout the year.	**30%**; €0.36m	**30%**; €1.2m
2024	a. A number within the range of 0.45 – 0.5 million smart meters will be installed by Q4. The CRU is conscious that in 2024 the target areas for deployment are more dispersed geographically areas and therefore, 10% of meters not being delivered has been accounted for in the target.[41]	**20%**; €0.24m	**50%**; €2m
	b. Deliver Phase 3 functionality including Home Area Network (HAN) developed and enabled. 95% of smart meters installed connect to a telecommunications network. 95% of connecting smart meters will have a CTF[42] of "3" or "4"[43].	**50%**; €0.6m	**20%**; €0.8m
	c. Quarterly Customer Survey (Red C) – customer satisfaction with the smart meter's replacement process remains at 80% throughout the year.	**30%**; €0.36m	**30%**; €1.2m
2025	a. All smart meters of the Programme will be installed by Q4.	**20%**; €0.24m	**50%**; €2m
	b. Smart meters functionality fully delivered by Q4.	**50%**; €0.6m	**20%**; €0.8m
	c. Quarterly Customer Survey (Red C) – 85% of domestic customers will believe their smart meter allows them to access the smart functionality this is important to them.	**30%**; €0.36m	**30%**; €1.2m

The key rationale for the structure of this incentive is threefold. First, to ensure that the DSO has strong incentives to deployment of smart meters in line with the NSMP. Second, by putting greater financial weight on the upside of the smart meters functionality delivery, the CRU is focusing the incentive on a challenging and key aspect of the process. Third, by having a third category relating to customer satisfaction, awareness and trust in ESB Networks, the CRU is emphasising the importance of things that will also benefit customers.

[40] For that reason the target goes from 0.45 million of smart meters to 0.5 million.
[41] As previous footnote.
[42] Comms Technically Feasible.
[43] This metric may be subject to adjustments by the CRU as new information on meter connectivity becomes available.

Adjustment mechanism for factors outside the control of the DSO

The DSO may apply for a “grace period” of between one and six months, if for reasons outside the control of the DSO the delivery of (a), (b) and/or (c) have been delayed. If the application and supporting reasoning is accepted (in whole or in part) by the CRU, then the target milestones will be restated by the CRU consistent with its assessment of the application – and the rewards/penalties recalculated accordingly. The rationale for this step is to retain the integrity of the incentive mechanism, even if significantly unexpected events occurs that impact on what it is reasonable to expect the DSO to achieve.

The “grace period” may apply for longer than six months only if the factors outside of the DSO’s control relate to delays in legislative processes.

10 Annex – DSO Balanced Scorecards

This Annex sets out the milestones for the following balanced scorecards:

- DSO outage duration accuracy incentive;
- DSO flexibility incentive; and
- DSO visibility incentive.

Balance Scorecard – Outage Incentive

This balanced scorecard includes a number of measures that would be delivered in a set timeframe. The measures will establish reporting and measurement processes required for the provision of specific estimated outage restoration times. Subject to the outcome of this, sequential improvement targets will be set for the level of provision of estimated restoration times, as set out below.

Table 24: Balance Scorecard – Outage Incentive

Balance Scorecard – Outage Incentive	
Year	**Scorecard Elements**
2021	○ Development and approval of monitoring and recording process. ○ Development and approval of data assurance process. ○ Status update provided in DSO Annual Performance Report.
2022	○ Application of monitoring and recording process. ○ Formal update and approval of monitoring and recording process based 2021 lessons learned. ○ Application of data assurance process. ○ Formal update and approval of data assurance process based on first year's lessons learned. ○ Inclusion of preliminary data in DSO Annual Performance Report. ○ Proposal of preliminary target (for Year 3), based on preliminary data, through the DSO's submission of multiyear plan to CRU in Q3 each year.
2023	○ Delivery against preliminary target. ○ Establish Year 4 target which reduces distance to 85% by 50%.
2024	○ Delivery against Year 4 target. ○ Establish Year 5 target of 85% or adjusted based on previous outturn.

Balance Scorecard – Flexibility Incentive

This balanced scorecard includes a number of milestones that will be delivered in a set timeframe. As stated by the DSO, the objective of the milestones are to reflect the following parameters:

- Introduce tenders for flexible non-wires alternative within ESB Networks system development plan;
- Establish standard products and services to the benefit of all system users; and
- Establish robust reporting and transparency arrangements, to provide confidence to the market as the DSOs' role as neutral market facilitator grows.

Table 25: Balance Scorecard Flexibility DSO Incentive

Balance Scorecard Flexibility Incentive	
Year	**Scorecard Elements**
2021	○ Development of standard products for flexibility, in consultation with all relevant stakeholders. ○ First HV or MV reinforcement scheme being put to tender for a flexible non-wire solution.
2022	○ New flexible connection products to become available. ○ Second and third HV or MV reinforcement schemes being put to tender for a flexible solution.
2023	○ Fourth to seventh HV or MV reinforcement schemes being put to tender for a flexible solution. ○ Establishment of standard market and regulatory reporting on the procurement and dispatch of DSO flexibility, and of TSO flexibility bids validated.
2024	○ Review and update of standard products for flexibility (based on 2021 – 2022 experience and stakeholder consultation). ○ All eligible pipeline HV or MV reinforcement schemes to be tested for a flexible solution, with rolling tenders established.
2025	○ Review and update of standard market and regulatory reporting on the procurement and ○ Dispatch of DSO flexibility, and of TSO flexibility bids validated (based on 2023 – 2024 experience and stakeholder consultation).

- All eligible pipeline HV or MV reinforcement schemes to be tested for a flexible solution, with rolling tenders established.

Balance Scorecard - Visibility Incentive

The incentive will be based on the delivery of project milestones and deliverables relating to:

- Key milestones in developing visibility of the system, including:
  - Deliver LV visibility technical and delivery strategy roadmap; commence sourcing of technical solutions and deliver readiness activities addressing technical technological and practical dependencies – 2021.
  - Capture of 12.5% of LV network – 2022.
  - Capture of 25% of LV network – 2023.
  - Capture of 37.5% of LV network – 2024.
  - Capture of 50% of LV network – 2025.
- Percentage of referencing information gathered or validated;
- Percentage of LV networks included in connectivity model;
- Delivery of systems interfaces; and
- Delivery of beta and production data exchange interfaces or platforms for third party access (for example market participants, communities, or other stakeholders in the energy, sustainability or academic sectors).

Transmission Performance Incentives

11 Annex: TSO Strategic Incentives

In this Annex the CRU sets out its guidance for the TSO on how its eligibility for the annual allowance for progress against strategic objectives shall be determined over the period 2021 to 2025. This incentive metric is consistent with the approach taken in PR4.

Context

The measurement of the TSO's contribution to enabling the transition and managing the consequences efficiently will span a wide range of areas and will change over time. Hence, the CRU has concluded that a narrow range of KPIs, fixed for the period 2021-2025, would not be appropriate. Further, the indicators should focus on outcomes (e.g. constraint costs) as opposed to inputs (e.g. TSO deployment of new processes). Finally, there should be a role for stakeholder to contribute to defining and shaping the indicators over time.

Approach

Low carbon transition, efficiency (PR5 Strategic Objectives)

The CRU recognises the need for a degree of certainty for the TSO over how its performance will be assessed, and potentially rewarded. The TSO, when submitting strategic incentive proposals, should not double count initiatives or measures introduced to achieve other PR5 incentive metrics.

To this end, the CRU is inviting the TSO to submit its proposed indicators under the following three headings:

- Facilitating a Secure Low Carbon Future;
- Increasing Efficiency and Protecting Consumers; and
- Anticipation of Future Investments.

The indicators should focus on the outcomes for customers and/or market participants. The outcomes for customers will primarily relate to costs and service quality. The outcomes for market participants will primarily relate to access to market opportunities and commercial certainty. Where indicators are proposed that are intermediate to these outcomes, then the link between the input and the outcome should be clearly articulated. In all cases the relationship between the metric and the behaviours of the TSO should be clear, or clearly explained. The TSO's submission should include indicators for each year of the PR5 period. This will allow the TSO's proposed indicators, and performance to be considered in the overall context of PR5. The TSO, in its annual submission, may seek to revise, or introduce new, indicators for future years.

Benchmark or target measures should be proposed for each indicator consistent with strong performance relevant to either the timing, cost or quality of the energy transition.

The TSO shall make a submission to the CRU by 31st March each year presenting its evidence of performance against its chosen indicators – plus relevant supporting commentary. The report shall include a summary of feedback from stakeholders, and how any such feedback has been used in defining indicators or setting target or benchmark levels.

The CRU will then determine whether any or all of the allowance for that year should be awarded, based on the reported evidence on performance. The CRU will also have regard to information on the costs of any initiatives the TSO has undertaken in seeking to improve performance under the reported indicators. Finally, the CRU will have regard to the extent to which reported performance has already been remunerated, e.g. through other incentive mechanisms.

12 Annex: TAO KPI Framework

In this Annex the CRU sets out the TAO KPI Framework guidance. This guidance presented below is based on the Information[44] Paper published in December 2019.

The current PR4 framework includes the following metrics:

- Number of PIPs issued;
- Transmission Capex Spend; and
- Project Deliver Process Improvement.

Number of PIPs[45] Issued

The first metric for assessing TAO performance is the number of Project Implementation Plans ('PIP's) issued in a calendar year. The performance is assessed based on the actual percentage of target PIPs issued in a calendar year. These targets are defined by the Transmission System Operator ('TSO') through its role in planning the network. The targets are agreed between TSO and TAO in accordance with the Infrastructure Agreement prior to their finalisation. The PIP provides a summary of the materials to be used and equipment required, the programme and milestones for the project, design review, details of timescales and project review and outage requirements for the project. This is the final agreed document between the TAO and TSO before Project Agreement is awarded. TAO performance is assessed as follows:

- Strong: Greater than 90% of target PIPs issued.
- Acceptable: 80-90% target PIPs issued.
- Below Acceptable: Less than 80% of target PIPs issued.

Customer Project Energisation

The TAO will be assessed on the actual percentage of target customer projects energised in a calendar year. This refers to both generation and demand customers. Performance is assessed as follows:

- Strong: Greater than 90% of target customer projects energised.

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[44] Key Performance Indicators for Assessing TAO Performance Delivery: https://www.cru.ie/wp-content/uploads/2019/12/CRU19150-Key-Performance-Indicators-for-Assessing-TAO-Performance-for-Project-Delivery.pdf

[45] Project Implementation Plans: Provides a summary of the materials to be used and equipment required, the programme and milestones for the project, design review, details of timescales and project review and outage requirements for the project. This is the final agreed document between the TAO and TSO before Project Agreement is awarded.

- Acceptable: 80-90% target customer projects energised.
- Below Acceptable: Less than 80% of target customer projects energised.

Transmission Capex Spend

The TAO will be assessed on the actual percentage of budgeted annual Capex spend delivered in a calendar year. Performance is assessed as follows

- Strong: Greater than 90% of target Capex spend.
- Acceptable: 80-90% target Capex spend.
- Below Acceptable: Less than 80% of target Capex spend.

Project Delivery Process Improvement

This is a qualitative metric which will be based on assessment by an independent auditor. The KPI will be based on the TAO's quality and rigor in its processes for identifying and delivering efficiencies in project delivery. The TAO will prepare the scope of the audit and report the findings of the audit to the CRU. The CRU reserves the right to reject the findings of the audit if deemed that the scope of the audit is not sufficiently aligned with the metrics set out in the KPI framework. Performance is assessed as follows:

- Strong: Demonstration of strong project delivery process improvement performance.
- Acceptable: Demonstration of acceptable project delivery process improvement performance.
- Below Acceptable: Failure to demonstrate project delivery process improvement.

The TAO may seek adjustments to its targets where third-party events or events outside of the TAO's or TSO's control create a measurable and justifiable deviation from the planned forecast performance. Each of the metrics included in the KPI framework will be given equal weighting when considering TAO performance, although the CRU will consider performance on a holistic basis when setting the final score.

If the TAO achieves "strong" performance, they will receive the full incentive, "acceptable" performance will result in the TAO receiving a payment equal to the reasonable cost of the audit to assess performance and "below acceptable" will result in the full penalty.

13 Annex: Outage Management

The CRU's objective in putting in place an 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. It reflects that at times there can be a tension between the least cost outage plan for the TAO, and the least cost outage plan for the system as a whole (and, by extension, customers). The CRU has recently published an Information Paper setting out the mechanism to enable short-notice adjustments to outage plan and is available here. For PR5, the CRU has adjusted the targets for outage days. This reflects the TAO is historical performance where it has stayed below the 5% target since 2012. In fact, the TSO has not failed to outperform the baseline outage days over PR4.

The two components of the incentives are:

- A mechanism to reward the TAO for meeting the 3-weekly outage plans published on the TSO website. This is, in effect, the continuation of the mechanism that has been in place during PR4:
    - a baseline level of outage days consistent with each 3-weekly outage plan;
    - three performance bands relative to this baselined level;
    - if actual outage days are less than or equal the baseline, then the full incentive payment is received;
    - if actual outages days are between the baseline and 5% over the baseline level, then a partial incentive payment is received; and
    - if actual outage days total is more than 5% over the baseline level, then no incentive payment is received, and the full downside penalty is applied.
- A "use-it-or-lose it" allowance to fund, by agreement with the TSO, actions to reduce the duration or timing of planned outages at short-notice:
    - The option for the TSO to request, at short notice, a variation to the 3-weekly outage plan to reduce the duration and/or amend the start date. An incentive payment for the TAO equal to the reasonable costs incurred by the TAO in meeting the request plus an uplift of [25%], for each request accepted and met.

14 Annex: Guidance on Stakeholder Engagement Incentive (TSO and DSO)

In this Annex the CRU sets out the PR5 guidance for the TSO and DSO on the requirements and assessment criteria for submissions under the stakeholder engagement incentive.

Objective

To actively promote cultures within the TSO and DSO that put stakeholders at the centre of what they do, through the design and implementation of high quality, comprehensive and effective channels for stakeholders to understand, respond to and help shape what the TSO and DSO do on behalf of customers, market participants and the wider community.

Requirements

To demonstrate, with evidence, the presence of the following:

- a comprehensive, up-to-date stakeholder engagement strategy, and management systems and processes within the business to enable its delivery;
- a delivered set of channels and initiatives for engaging with stakeholders, consistent with the documented strategy; and
- demonstrable positive impacts on stakeholders, stakeholder groups or the business consequent to the delivered channels and initiatives.

Form of reporting and nature of evidence

The TSO and DSO shall, by the 31st March following the end of the year being reported on, publish for consultation a concise and accessible stakeholder engagement report describing, with evidence, the following:

- what its stakeholder engagement strategy was during the year being reported on; how the strategy relates to the identified needs of stakeholders, and the strategic or operational challenges facing the business; how the strategy is given practical effect within the business – including how stakeholders are identified and categorised, and accountability and management reporting in respect of the strategy works within the business;
- what engagement channels and initiatives were deployed during the year being reported on; how these were tailored to the issue(s) and stakeholders involves; the range and diversity of issues and stakeholders involves; the innovative nature of methods used; and

- what impacts[46] the deployed channels and initiatives had on stakeholders, and the business, during the course of the year being reported on.

The panel, which will be established by the CRU and will undertake the annual assessment of the TSO and DSO performance, will meet at least twice between April and June. At the first meeting, the SOs will give an overview to the panel of their stakeholder engagement reports and how comments received from the consultation process have been addressed. At the end of the process each year, the CRU will draft and publish a close-out report setting out the panel's discussions, conclusions and recommendations for the SOs. The stakeholder engagement incentive applied from 2018 to 2020, with close-out reports being published at the end of each year. The SOs shall have consideration of the recommendations already provided by the panel in previous years in order to improve their stakeholder engagement processes going forward.

Assessment

The CRU shall adopt the following broad weightings in considering the evidence presented by the TSO and DSO:

- **(A) 20%** - quality of stakeholder engagement strategy, and management systems and processes within the business to enable its delivery;
- **(B) 40%** - quality of delivered set of channels and initiatives for engaging with stakeholders, consistent with the documented strategy; and
- **(C) 40%** - quality of demonstrable positive impacts on stakeholders, stakeholder groups or the business consequent to the delivered channels and initiatives.

Incentive payments based on awarded score

The maximum incentive payments shall be €1m per year for the DSO and €0.5m per year for the TSO (both upside only).

The score of the DSO and TSO will be a number out of 10. The SOs must achieve at least a final score of 5.0 (after each category A, B and C is weighted) in order to receive any incentive payment. Therefore, the incentive payment will be €0 for any score below 5.0. For scores equal to[47], or greater than 5.0, the incentive payment will be calculated with the following formula:

46 Where "impacts" should be interpreted broadly to include quantified descriptions of the engagement activities themselves, and consequential impacts on customer, stakeholder or business outcomes or plans.

47 If a score equal to 5.0 is achieved, the SOs will receive 10% of the maximum incentive payment available to them.

$$Incentive\ payment = z + (x - 5) \bullet (\frac{y - z}{5})$$

Where:

x = the panel's final score.
y = maximum incentive payment.
z = 10% of maximum payment.

Agile Investment Framework

15 Annex: TSO Monitoring Committee

The CRU has established two uncertainty mechanisms for the TSO within PR5; the PR5 Monitoring Committee and the PR5 Capex Adjustment Mechanism (covered in the following annex). The detail of the Monitoring Committee is set out below.

Roles

- Chair: Independent Advisor
- Secretariat: EirGrid
- Members:
    - Six members (subject to adjustment by the CRU)
    - Selected by advisor through open and transparent process.
    - Independent with no conflicts of interest in projects being considered or generally.
    - Collectively the members should have a broad range of expertise and experience relevant to the Monitoring Committee's role.

Independent Advisor

- EirGrid to administer recruitment process in consultation with the CRU.
- Must have experience at a senior level with relevant expertise.
- The CRU will approve appointment.
- Advisor will report to the CRU annually or as required. This will cover:
    - Standard of EirGrid engagement (Has it met four-point test: clear, complete, candid and constructive).
    - Timeliness of projects; are projects moving through the process with sufficient speed? Have projects been brought to Committee early to ensure adequate discussion and evaluation?
    - Standard of EirGrid's project management.
    - Standard of EirGrid's cost controls and efficiency.
    - Quality of EirGrid's need, additionality and efficiency assessments and link to PR5 objectives.
    - Operation of Monitoring Committee.

Attendance

- Chair and members.
- EirGrid at the discretion of the Chair.

- EirGrid shall not be in attendance when the Monitoring Committee decides on its recommendations.
- Industry participants, stakeholders, other experts may be invited for specific agenda items at the discretion of the Chair.

Meeting Frequency

- As required; Chair to set the meeting frequency.
- The Chair can call ad hoc meetings at their discretion.
- Committee must meet at least twice a year.

Costs

- All members and Chair are to be paid market rates commensurate with the role, expertise and experience of the individuals.
- Non-member attendees will receive vouched travel costs only.
- EirGrid to recover costs on a pass-through basis.

Terms of Reference

- To be drafted by independent advisor, in consultation with EirGrid.
- The CRU will approve the Terms of Reference.

16 Annex: TSO/TAO Capex Adjustment Process

The mechanism has the following features (with the dates and parameters in parentheses being for illustration). The Capex adjustment mechanism is established to account for changes to the transmission Capex plan. For example, if legislative changes occur within the period and require additional Capex for offshore development (which no offshore provision was provided within the *ex-ante*), the TS/TAO can propose and make changes.

- Either the TSO, TAO or CRU may trigger the process, on or before 31st March in any given year.
- The process may only be triggered if there has been a material change in circumstances (relative to when the Capex allowance was originally set) such that either: (a) the total Capex allowance for the 5-year PR period is likely to be breached by more than [10%] in the next calendar year; or (b) there is a high likelihood that the total Capex allowance will be underspent by more than [20%] by the end of the 5-year PR period.
- The event triggering the process will be either: (a) a submission to CRU by the TSO or TAO setting out in detail the nature of the material change, and its net impact on the level of Capex and Opex over the remainder of the PR period; or (b) a determination by the CRU requesting a submission by the TSO or TAO, and citing the nature of the material change to be costed.
- CRU will consult on the application and may subsequently issue a decision to modify the allowances for Capex and Opex used for the purposes of setting tariffs.

17 Annex: CRU Decision on the Uncertainty Mechanisms

This annex presents further detail of the following uncertainty mechanisms introduced for PR5:

- Large customers: reopener
- New domestic connections: volume driver
- Low carbon technology (LCT):
    1. MV and LV system improvements: reopener
    2. 20kV conversion works: volume driver
- Pay-as-you-go (PAYG) meters: volume driver

Two other mechanisms, i.e. the System Control and LV model, have been introduced for the DSO and are covered within the main body of this Paper.

The type of uncertainty being addressed through the uncertainty mechanism in each case include:

- **Cost uncertainty** can make it difficult to achieve accurate estimates of the network company's' future costs, and the degree of cost uncertainty may vary across different expenditure areas.
- **Timing uncertainty** relates to when the expenditure would need to take place. Accurately forecasting efficient levels of expenditure for projects with highly unpredictable delivery timelines can be challenging.
- **Output uncertainty** relates to the need for, and the quantity and/or quality of, outputs that are delivered by the network company.

Large Customers Uncertainty Mechanism

Table 26: Large Customers Uncertainty Mechanism

DSO Uncertainty Mechanism: Large Customers						
Type of uncertainty being addressed	Cost	✓	Timing	✓	Output	✓
Description	This reopener uncertainty mechanism will involve the DSO's allowances being adjusted if more large customers connect to the distribution network than was assumed in its business plan. The DSO will present the Least Cost Technically Acceptable (LCTA) solution to the problem to the CRU as part of the annual revenue review process (included in the Regulatory Reporting Pack); this will be in anticipation of the new connection being completed. The CRU will assess the 'need' and 'additionality' of the					

	expenditure based on the triggers below during this process and the HV system development Capex allowance will be adjusted accordingly. The DSO shall demonstrate that it explored how flexibility solutions could be utilised to minimise the reinforcement costs. The CRU will assess the efficiency of the outturn HV system development capex against the corresponding adjusted allowance as part of the PR5 *ex-post* review. Expenditure affected by this mechanism will be subject to the PR5 cost incentive.
Triggers	• Is the total HV system development Capex allowance for the PR5 period is likely to be exceeded by more than 10% in the forthcoming calendar year after taking into account remaining HV system development Capex output commitments for the remainder of PR5? The DSO must set out the reasons for exceeding its allowance, which must be outside the control of the DSO (e.g. greater number of large customer connections than was forecast in its PR5 business plan). • Has the DSO demonstrated the impact of the new large customer request on existing plans? For example, does the new large customer request displace other projects in the HV system development Capex programme?
Strengths	The proposed mechanism is clearly defined and can be implemented with reasonable confidence. The mechanism will ensure that the DSO only receives funding for the least cost technically acceptable solution that can be directly attributed to the large customer connection.
Weaknesses	The mechanism may require intervention from the CRU during the price control period to verify that the DSO has proposed the least cost solution. This will be mitigated by only assessing the 'need' and 'additionality' of the expenditure during the price control period and assessing cost efficiency in the *ex-post* review. There is a broader debate to be had as to whether the cost of reinforcement directly attributable to large customers should be recovered from the generality of customers.

New Domestic Connections Uncertainty Mechanism

Table 27: New Domestic Connections Uncertainty Mechanism

DSO Uncertainty Mechanism: New Domestic Connections						
Type of uncertainty being addressed	Cost	✘	Timing	✓	Output	✓
Description	This volume driver uncertainty mechanism will involve the DSO's allowances being adjusted based on the difference between forecast and outturn new domestic connections. The mechanism will use the efficient unit costs associated with the shallow part of a new connection (i.e. excluding reinforcement), as determined by the CRU for PR5 (informed by our cost assessment reports). This will protect customers if outturn new connections are less than expected and will provide the DSO with the additional funding needed if outturn new connections are higher than forecasted. This mechanism will be applied within-period with allowances adjusted through the annual revenue review process.					

	Expenditure affected by this uncertainty mechanism will be subject to the PR5 cost incentive.
Triggers	• Outturn versus forecast volume of new domestic connections.
Strengths	The mechanism will be relatively easy to implement. The DSO has the incentive to outperform the *ex-ante* unit cost that is used within the uncertainty mechanism.
Weaknesses	Reflecting the different unit costs of different connections can add considerable complexity to the mechanism (and may not be feasible with current data). However, if more aggregated unit cost estimates are used (the DSO's proposal suggests two – for scheme and non-scheme domestic connections), the DSO may be exposed to windfall gains or losses. This risk, however, is also present in the *ex-ante* allowance given that the same aggregated unit costs are used.

Low Carbon Technology (LCT) Uncertainty Mechanism – MV and LV system improvements

Table 28: Low Carbon Technology (LCT) Uncertainty Mechanism – MV and LV system improvements

DSO Uncertainty Mechanism: Low Carbon Technology (LCT) Uptake – MV and LV system improvements						
Type of uncertainty being addressed	Cost	✓	Timing	✓	Output	✓
Description	The mechanism will be triggered during PR5, at the annual revenue review process, if the DSO can provide evidence to demonstrate that the conditions (triggers) below have both been met. The CRU will accept the need and additionality of additional LV and MV reinforcement investment as a result of LCT uptake (or other exogenous factors) if both conditions (triggers) are met. The DSO will then be expected to present the incremental LV and/or MV reinforcement investment requirements associated with the least whole-life cost (LCTA) solution to the CRU and the outputs it will deliver ahead of the annual tariff review. The DSO must demonstrate that it explored using flexibility solutions to defer additional reinforcement. The incremental RAB additions identified by the DSO will be included in the annual revenue adjustment process in line with the CRU's approval, providing the conditions/triggers below have been met. The CRU will assess the efficiency of outturn LV and MV system reinforcement expenditure against the corresponding adjusted allowance as part of the PR5 *ex-post* review. The DSO will be able to retain any benefit from delivering the outputs at a lower cost than the allowance under the cost incentive. A technical review / full reopener will be triggered if additional LV and/or MV reinforcement investment is required beyond the scope of the CRU's decision. This will ensure that customers are sufficiently protected and to mitigate bill volatility.					
Triggers	• The mechanism will be triggered where the LV and MV reinforcement allowances are likely to be exceeded by more than 10% in the					

	forthcoming calendar year, after taking into account the remaining LV and MV reinforcement Capex output commitments for the remainder of PR5. • Evidence that there is insufficient residual voltage or thermal headroom at the locations to which the additional funding request applies.
Strengths	The mechanism will provide the DSO with the greater clarity on the conditions under which it would recover the costs associated with incremental reinforcement investment that is attributable to LCT uptake. This will enable the DSO to maintain its investment activity, avoiding potential 'inflation points' caused by the *ex-ante* allowance turning out to be insufficient. The mechanism does not constrain the DSO to select from a specified set of solutions, which should ensure that the least whole-life cost solution is selected. This will incentivise efficiency and protect customers. The mechanism supports the CRU's strategic objectives for PR5.
Weaknesses	The mechanism requires some involvement from the CRU during the price control to assess whether the DSO has provided sufficient evidence to demonstrate that both conditions have been triggered. Additional involvement might be required if a technical review / full reopener is triggered.

Low Carbon Technology (LCT) Uncertainty Mechanism – 20kV conversion works

Table 29: Low Carbon Technology (LCT) Uncertainty Mechanism – 20kV conversion works

DSO Uncertainty Mechanism: Low Carbon Technology (LCT) Uptake – 20kV conversion works						
Type of uncertainty being addressed	Cost	✓	Timing	✓	Output	✓
Description	This volume driver uncertainty mechanism will involve the DSO's allowances being adjusted based on the difference between forecast and outturn 20 kV rural and urban conversion works delivered. Station upgrades and interface transformers are excluded from the mechanism and will be reviewed at the PR5 closeout (*ex-post* review) given the bespoke nature of these works and because no cost challenge has been applied to these components of the 20kV conversion programme. The mechanism uses the efficient unit costs and allowed volumes associated with 20kV urban and 20kV rural programmes as determined by the CRU for PR5 (informed by GHD/CEPA cost assessment reports). This will protect consumers if the volume of 20kV urban and rural conversion works delivered are less than forecast, and will provide the DSO with the additional funding if the need to deliver a greater volume of 20kV urban and rural conversion works than what was allowed in the *ex-ante* allowance has been demonstrated by the DSO. This mechanism will be applied as a true-up at the PR5 closeout (*ex-post* review). Expenditure affected by this uncertainty mechanism will be subject to the PR5 cost incentive.					
Triggers	• Difference between outturn and forecast volume of 20kV urban and rural conversion works in the CRU's allowance. • The need for additional volumes above and beyond those allowed in the PR5 *ex-ante* allowance must be justified by the DSO as part of the PR5 close-out.					

Strengths	The mechanism will allow the DSO to have sufficient funding if greater volumes of work, than what was allowed in the *ex-ante* allowance, are demonstrated by the DSO. Also, it will protect consumers if the volume of 20kV urban and rural conversion works delivered are less than forecasted.
Weaknesses	The mechanism requires some involvement from the CRU during the price control to assess whether the DSO has provided sufficient evidence to demonstrate that both conditions have been triggered.

PAYG Uncertainty Mechanism

Table 30: PAYG Uncertainty Mechanism

DSO Uncertainty Mechanism: Pay as you go (PAYG) meters						
Type of uncertainty being addressed	Cost	✘	Timing	✓	Output	✓
Description	This volume driver uncertainty mechanism will involve the DSO's allowances being adjusted based on the gap between forecast and outturn PAYG meter installations and the *ex-ante* efficient unit cost (€370 per meter). This mechanism will be applied within-period with allowances adjusted through the annual revenue review process (potentially subject to a materiality threshold of volume of PAYG meter installations compared to the *ex-ante* forecast), or it could apply as a true-up at the *ex-post* review. Expenditure affected by this uncertainty mechanism would be subject to the PR5 cost incentive.					
Triggers	• Outturn versus forecast volume of PAYG meter installations, assessed at PR5 closeout.					
Strengths	The mechanism is relatively easy to implement. The DSO has the incentive to outperform the *ex-ante* unit cost that is used within the uncertainty mechanism.					
Weaknesses	The costs covered by the mechanism may be immaterial if the uptake of PAYG meters remains low in PR5.					