

Consultation



Making a positive difference
for energy consumers

RIIO-ED2 Distribution System Operation Incentive metrics consultation

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We are consulting on our proposals for the three outturn performance metrics that were considered as part of the Distribution System Operation (DSO) incentive in our RIIO-ED2 Final Determinations. We welcome responses from electricity Distribution Network Operators (DNOs) as well as their stakeholders with an interest in DSO activities. We would also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We normally publish the non-confidential responses we receive alongside a decision on next steps on our website at [ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations). If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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1. Introduction

Section summary

This section sets out an introduction to the consultation, including a list of related publication documents and offers guidance on how to respond to this consultation.

What are we consulting on?

- 1.1 This consultation relates to the Distribution System Operation (DSO) incentive, a new output delivery incentive mechanism that has been introduced as part of RIIO-ED2.
- 1.2 As described in our RIIO-ED2 Final Determinations, the DSO incentive was to be made up of three evaluation criteria – a stakeholder survey, a performance panel assessment and three outturn performance metrics.¹ We are now informally consulting on our proposals for the outturn performance metrics that were considered as part of the DSO incentive.
- 1.3 We decided not to implement targets for the three outturn performance metrics in Year 1 of RIIO-ED2. Instead, we stated that we would require DNOs to gather performance data on the metrics with the aim to set targets from Year 2 onwards.
- 1.4 After comprehensive working group discussions and analysis over the course of the past six months, we are proposing not to turn on the outturn performance metrics during the RIIO-ED2 price control. Even though we think metrics can have clear value, a combination of data quality concerns, notably a lack of historical data, persistent issues with the methodologies themselves and the risk of perverse incentives mean we do not think we can set appropriate performance targets at this point in time.
- 1.5 Our proposed alternative approach is for DNOs to report on performance in these areas which will allow us to collect data to better inform target setting in the future.
- 1.6 We also propose to reassign the value of the incentive that was to be allocated to the metrics to the DSO performance panel assessment. This will allow the DNOs to include the data in the evaluation of their performance as a DSO.

¹ [RIIO-ED2 Final Determinations | Ofgem](#)

- 1.7 For the avoidance of doubt, our proposal is not reflective of a lack of engagement from DNOs. All DNOs have worked collaboratively with us to establish effective metrics with the aim to incentivise desirable behaviours.
- 1.8 We have published this consultation as an opportunity for you to provide us with your views on our proposals. We will gather DSO stakeholder views through this informal consultation process, seeking feedback on the proposals and any further considerations. This will be followed by a statutory consultation process on any licence modifications that we consider necessary to implement our decision.

Related publications

- 1.9 The key publications related to this consultation are:
- RIIO-ED2 Final Determinations – Core Methodology Document, Chapter 4, Regulating Distribution System Operation functions: [RIIO-ED2 Final Determinations | Ofgem](#)
 - Electricity Distribution Licence – Special Condition 4.8 (Distribution System Operation output delivery incentive): [Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem](#)
 - RIIO-ED2 DSO Incentive Governance Document: [Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem](#) (located in “Subsidiary Documents – 17 February 2023 publication of Associated Documents and relevant issue logs.zip”)

Consultation stages

- 1.10 This policy consultation is open until 15 March 2024. We will then consider responses that will inform our final decision. If we decide that changes to the electricity distribution licence are needed to implement our decision, we will aim to publish a statutory consultation on any relevant licence modifications in Spring 2024, with our decision on these expected in Summer 2024.

Figure 1 – Consultation stages

Stage 1	Stage 2	Stage 3	Stage 4
Consultation open	Consultation closes (awaiting decision). Deadline for responses	Responses reviewed and published	Consultation decision
16/02/2024	15/03/2024	Spring 2024	Summer 2024

How to respond

- 1.11 We want to hear from anyone interested in this consultation. Please send your response to the email address on this document's front page on or before 15 March 2024.
- 1.12 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.
- 1.13 We will publish non-confidential responses on our website www.ofgem.gov.uk/consultations.

Your response, data and confidentiality

- 1.14 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.
- 1.15 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.
- 1.16 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 1.
- 1.17 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

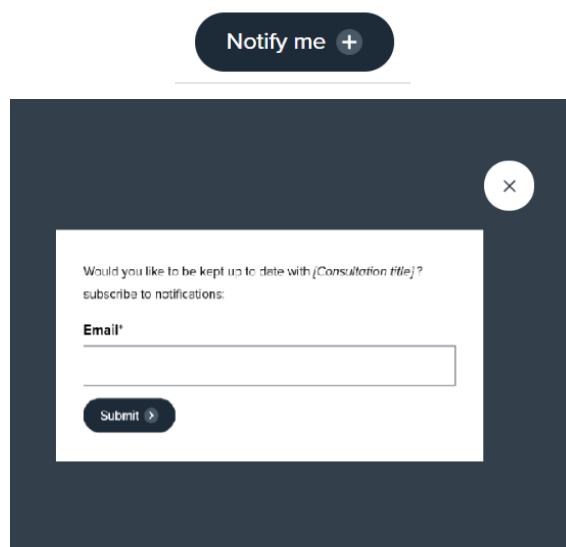
General feedback

- 1.18 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:
1. Do you have any comments about the overall process of this consultation?
 2. Do you have any comments about its tone and content?
 3. Was it easy to read and understand? Or could it have been better written?
 4. Were its conclusions balanced?
 5. Did it make reasoned recommendations for improvement?
 6. Any further comments?
- 1.19 Please send any general feedback comments to stakeholders@ofgem.gov.uk.

How to track the progress of the consultation

- 1.20 You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. [Ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations)

Figure 2 – Tracking progress of consultation



The image shows a dark blue button labeled 'Notify me' with a plus icon. Below it is a dark blue modal box with a white close button in the top right corner. Inside the modal, the text reads: 'Would you like to be kept up to date with [Consultation title]? subscribe to notifications:'. Below this is a text input field labeled 'Email*'. At the bottom of the modal is a dark blue button labeled 'Submit' with a right-pointing arrow.

- 1.21 Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:
- Upcoming** > **Open** > **Closed** (awaiting decision) > **Closed** (with decision)

2. Background

Section summary

This section sets the background to the RIIO-ED2 price control, describes the development of the DSO incentive, and provides an overview of the outturn performance metrics.

The RIIO-ED2 Price Control

- 2.1 We set price controls for the companies that operate Great Britain's gas and electricity networks. Price controls are needed as these networks are natural monopolies and therefore there is no realistic way of introducing competition across the whole sector. Price controls set the amount of money (allowed revenue) that can be earned by network operators. The revenues have to be set at a level which covers network operators' costs and allows them to earn a reasonable return.
- 2.2 We use the RIIO framework to set price controls for the network companies.² This provides network operators revenue and incentives to deliver their outputs efficiently and drive innovation.
- 2.3 The RIIO-ED2 price control is aimed at electricity distribution networks operators (DNOs) and will run between April 2023 and March 2028. It affects the allowances and returns of the 14 distribution network licence regions in GB. The 14 regions are owned by 6 different companies.

The Distribution System Operation (DSO) incentive

- 2.4 DSO was first introduced via an Ofgem position paper in 2019.³ DSO is not one activity, but a set of functions and services that need to happen to run a smart electricity distribution network. DSO roles include functions that DNOs have delivered historically, functions that will need to be enhanced, and functions that are entirely new. DNOs had been already taking on several DSO functions over RIIO-ED1 but there was a lack of consistency in how different DNOs were carrying out these activities.

² RIIO stands for Revenue = Incentives + Innovation + Outputs.

³ [position paper on distribution system operation.pdf \(ofgem.gov.uk\)](#)

- 2.5 In support of our objective for DNOs to support a smarter, more flexible energy system, we implemented a new financial DSO incentive as part of our RIIO-ED2 Final Determinations. The DSO incentive drives licensees to more efficiently develop and use their network, taking into account flexible and smart alternatives to network reinforcement and ultimately reduce customer bills, based on DNOs' delivery of their DSO activities. Three DSO roles and five DSO activities were identified in the Final Determinations as set out in Table 1 below:

Table 1: DSO roles and activities

Role	Activity
Role 1: Planning and network development	1.1. Plan efficiently in the context of uncertainty, taking account of whole system outcomes, and promote planning data availability.
Role 2: Network operation	2.1. Promote operational network visibility and data availability
	2.2. Facilitate efficient dispatch of distribution flexibility services.
Role 3: Market development	3.1. Provide accurate, user-friendly and comprehensive market information.
	3.2. Embed simple, fair and transparent rules and processes for procuring distribution flexibility services.

- 2.6 A hybrid approach was developed for the DSO incentive to balance mechanistic and evaluative approaches. The three criteria, respective incentive weightings, and objectives are:
- **DSO Stakeholder Satisfaction Survey**, to drive distribution network companies to become more responsive to their stakeholders' needs and improve service levels (criteria weighting: 40%);
 - **DSO Performance Panel assessment**, to help to reduce the information asymmetry between distribution network companies and Ofgem, brings in additional expert views, and provides industry with a platform to hold distribution network companies to account (criteria weighting: 40%); and
 - **Outturn Performance Metrics**, to facilitate comparison between licence areas and performance tracking over time against a set of key outcomes (criteria weighting: 20%).

Outturn performance metrics

- 2.7 Following our review of the DNOs' RIIO-ED2 Business Plans, approximately 100 different outturn performance metrics were shortlisted as a means of evaluating a DNO's progress in delivering its DSO strategy and associated outcomes. We also considered views expressed by stakeholders such as the RIIO-ED2 Challenge Group, DNOs' Customer Engagement Groups and responses to the Call for Evidence on the Business Plans.
- 2.8 Our RIIO-ED2 Final Determinations then confirmed that we would seek to implement the following three outturn performance metrics:
- **Flexibility reinforcement deferral (FDt)**, to drive DNOs to use flexibility to address network constraints when it is the most economic solution.
 - **Secondary network visibility (NVt)**, to promote visibility and accuracy of utilisation of Pole Mounted Transformers (PMTs) and Ground Mounted Transformers (GMTs).
 - **Curtailement efficiency (CEt)**, to incentivise DNOs to limit curtailment of users on Curtaileable Connections resulting from actions taken to restrict the conditions of a connection (import and / or export capacity) in response to a constraint on the distribution system.
- 2.9 We also decided to implement four pieces of regularly reported evidence (RRE):
- RRE1 – flexible connections
 - RRE2 – primary network forecasting accuracy
 - RRE3 – transformer utilisation
 - RRE4 – network options assessment outcomes
- 2.10 If implemented, licensees would be required to submit their annual outturn data for each Outturn Performance Metric performance in their Regulatory Reporting Pack (RRP). Initial reporting requirements for the Outturn Performance Metrics were set out in the RIIO-ED2 Regulatory Instructions and Guidance (RIGs).⁴ These requirements are subject to change depending on the outcome of the target setting process which arises from this consultation.

⁴ [Direction issuing the regulatory instructions and guidance \(RIGs\) for RIIO-ED2 | Ofgem](#)

- 2.11 For our RIIO-ED2 Final Determinations, we decided not to implement targets for the outturn performance metrics in Year 1 of the price control, such that performance against them is not subject to any financial incentive in that first year. Instead, we said that we would work with the DNOs to gather performance data on the metrics before applying financial rewards or penalties for performance in Year 2 onwards (subject to targets being set).⁵

Working groups

- 2.12 In June 2023, we published a letter addressed to the DNOs which detailed a Request for Information (RFI1) to help inform the target setting for the outturn performance metrics.⁶
- 2.13 We received six responses to the target setting letter from the DNOs. Following a review of the data it became apparent that DNOs had taken different approaches to calculating the data to inform the performance metric targets. This limited our ability to compare licensee performance confidently and develop a consistent approach to target setting.
- 2.14 We held six working groups between August 2023 and January 2024 with representatives from each DNO to try and align approaches. We issued a second request for information (RFI2) using these common approaches, with DNOs submitting a second set of data to us on 1 December 2023.
- 2.15 Following detailed analysis of the RFI2 data and six months of extensive discussion, we are proposing not to activate the outturn performance metrics during the RIIO-ED2 price control. Despite recognising the value in establishing a robust set of performance metrics, we do not have sufficient confidence in setting realistic targets against these three metrics due to data quality concerns and ongoing methodological issues.
- 2.16 The outcomes from both RFIs are discussed in the subsequent chapter.

⁵ [RIIO-ED2 DSO Incentive Governance Document Consultation | Ofgem](#)

⁶ [Open letter for DSO Incentive metric target setting | Ofgem](#)

3. DSO Outturn Performance Metrics

Section summary

This section describes the outcomes of the two RFI processes for the DSO outturn performance metrics.

Flexibility reinforcement deferral (FDt)

Name of the metric	
Purpose	The FDt metric will drive licensees to use flexibility services to address network constraints when it is the most economic and efficient solution.
Benefits	Flexibility services will help to defer or avoid new network capacity, can be deployed more quickly than reinforcement interventions and can help bring competition to the energy sector.

Background

- 3.1 The DSO incentive framework is intended to evaluate performance against the baseline expectations that were set out in our RIIO-ED2 Business Plan Guidance.⁷ These baseline expectations are made up of three DSO roles and five DSO activities, as described in Table 1. One of the DSO roles is to develop the market for Distribution Flexibility Services and coordinate this with the GB System Operator's procurement of flexibility services.
- 3.2 Flexibility services are crucial in helping to manage the pace of the net zero transition. They offer a proactive and cost effective approach to managing network constraints and optimising the utilisation of existing infrastructure, thereby deferring or avoiding the need for costly network capacity upgrades. Flexibility services can be deployed more quickly than reinforcement interventions, providing a short-term solution where DNOs need to act quickly or manage uncertainty. Distribution Flexibility Services are described in Standard Licence Condition 31E as "Distribution Non-frequency Ancillary Services and Distribution Constraint management," and examples include demand response, energy storage and Distributed Energy Resources (DERs).⁸

⁷ RIIO-ED2 Business Plan Guidance Appendix 4, [RIIO-ED2 Business Plan Guidance | Ofgem](#)

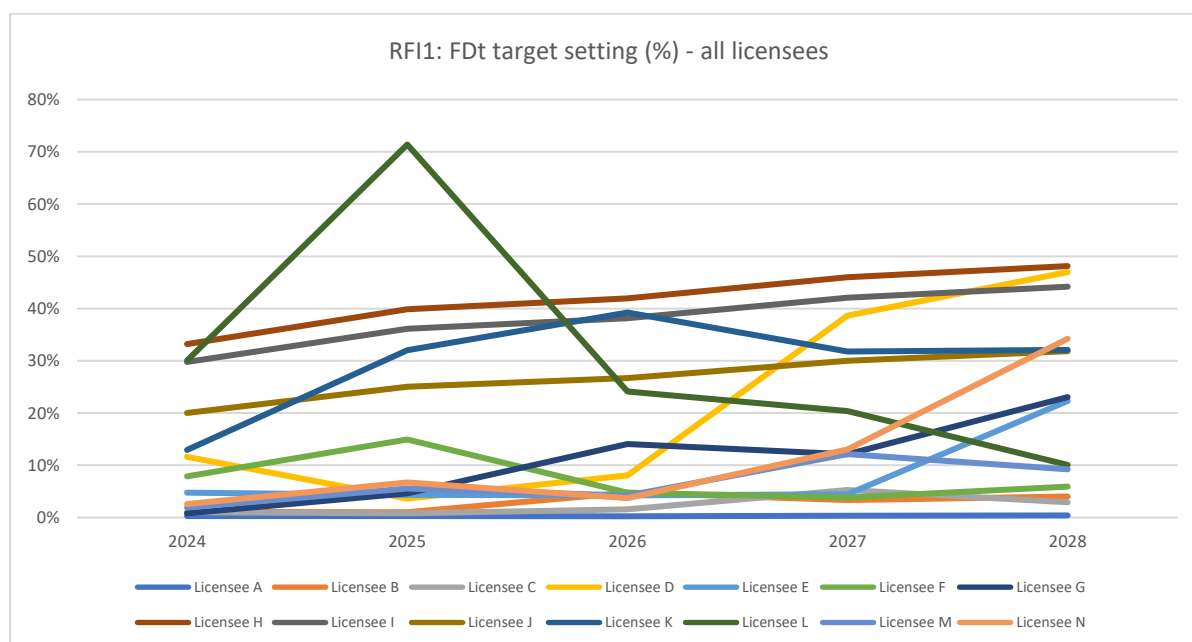
⁸ [Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem](#)

- 3.3 The Flexibility Reinforcement Deferral (FDt) outturn performance metric, as described in our RIIO-ED2 Final Determinations, aims to drive licensees to develop and use their network more efficiently by using flexibility services to address network constraints and defer reinforcement when it is an economic and efficient solution.
- 3.4 In all instances, DNOs should select the intervention(s) that represents the most efficient and economical solution to consumers. Network companies must assess flexible alternatives against a range of factors including customer needs, technical needs, whole life costs and environmental impacts whilst maintaining public safety and network security.

RFI1 results

- 3.5 Following RFI1, we reviewed the data and points raised by DNOs, with the aim of setting appropriate targets from Year 2 of RIIO-ED2.
- 3.6 Analysis of the information highlighted the following issues with the FDt metric:
- As shown in Figure 3, performance for FDt ranged from 0.3% to 71.4% with varied forecasted gradient trends for the 2024-2028 RIIO-ED2 period;
 - The diverse profiles had significant variation with some licensees exhibiting increasing trends, others decreasing, and some showing unintuitive patterns; and
 - Due to the differences in trends being considered, it proved difficult to identify a definitive positive outcome from the data provided.

Figure 3 – RFI1: FdT target setting (%) – all licensees



3.7 Variations in the FdT profiles were expected given the geographical disparities in the availability of flexibility services and known licensee variations in existing DSO activity. However, the supporting DNO commentaries showed inconsistencies in interpretations within the FdT methodology. This was reflected in the datasets received which had an array of trends and performance patterns. This posed challenges in setting targets as we were unable to make direct comparisons due to different interpretations used by the DNOs.

Working group process updates

3.8 Following discussion of the methodologies and assumptions, an updated FdT methodology was produced by the working group. The methodology enables an overall score to be produced of the percentage of expected counterfactual reinforcement deferred by flexibility services as a percentage of the overall expected conventional network reinforcement. The FdT overall score is calculated using the following formula:

$$\text{Flexibility Reinforcement Deferral (FdT)} = \frac{\frac{FP}{FT \cdot HY} \cdot CE_y}{R_y} \cdot 100\%$$

where:

- FP is the historical capacity of procured flexibility services;
- FT is the historical capacity of tendered flexibility services;

- Hy is the number of RIIO-ED1 years that flexibility services have been tendered and procured;
- CEy is the forecast increment, in year y of RIIO-ED2, of the aggregated capacity exceeded at primary network level (ie, bulk supply point and primary substations); and
- Ry is the reinforcement net impact capacity released purely by conventional reinforcement within year y of RIIO-ED2.

3.9 This means that by exceeding the FDT actual score percentage during RIIO-ED2, DNOs would be going beyond their RIIO-ED1 historical performance and procuring cost-efficient flexibility services that defers more conventional network reinforcement.

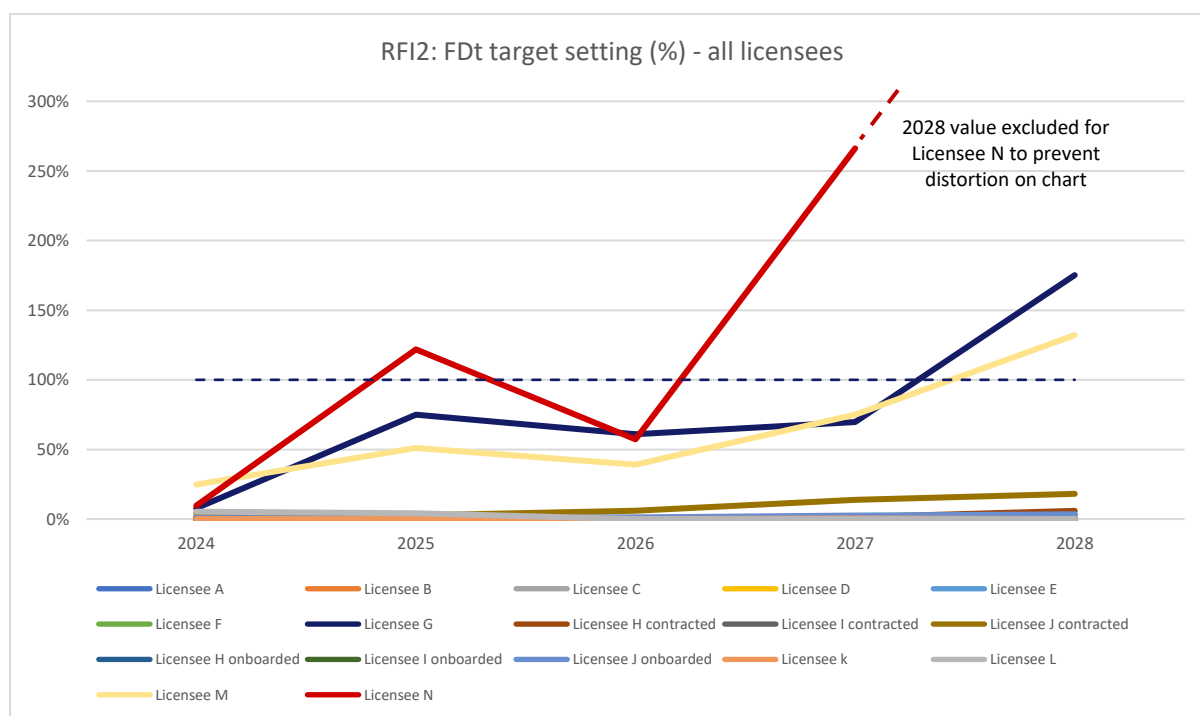
RFI2 results

3.10 Our analysis of RFI2 results revealed a number of inconsistencies and anomalies remained which raised concerns about the accuracy of the data provided and the integrity of the overall data set. In light of this, further adjustments were made to ensure we had a comparable data set to produce Figure 4.

3.11 The substantive issues with the RFI2 data set which meant we could not support turning on this incentive were:

- Very large discrepancies between DNO reported data (ie, the FDT actual score ranges from 0.01% to >100%);
- Performance significantly greater than 100% for three licensees;
- 0% performance score from four licensees making it challenging to establish targets for companies with zero historical data; and
- Persistence inconsistencies observed within certain aspects of the methodology.

Figure 4 - RF12: Fd target setting (%) – all licensees



- 3.12 Figure 4 presents profiles of licensees utilising both contracted and onboarded flexibility.⁹ We have incorporated all submitted data sets, recognising that onboarded flexibility may not be available to every licensee, thereby revealing additional inconsistencies in reporting.
- 3.13 A number of forecasts indicated some growth in deferred reinforcement over the period but the profiles do still vary in terms of their trends. In our view using only half of the data set doesn't provide the necessary context and insights to set realistic and meaningful targets.
- 3.14 We also looked at the profiles using the weighted average assessment across RIIO-ED2. This uses the agreed formula to calculate a weighted average assessment across all RIIO-ED2 years instead of per year forecasts. This approach reduces the overall score for the higher profiles depicted in Figure 4 but the overall issues and concerns with the metric remain the same.
- 3.15 In conclusion, our current view is that there are a number of challenges that impact the feasibility of progressing the metric in its current form. With four licensees having no historical flexibility services data and three showing an output significantly greater than 100%, having only half the intended sample size

⁹ "Onboarded" flexibility being where a licensee has started to make payments to a flexibility provider.

compromises the foundation for robust analysis. In addition, the presence of regional variances in flexibility availability introduces complexities rendering it unfeasible to establish targets for these licensees.

Secondary Forecasting (SFt)¹⁰

Name of the metric	
Purpose	To promote visibility and accuracy of utilisation of assets on secondary distribution networks to give confidence that DSOs have a sufficient understanding of their secondary networks in order to plan interventions that are necessary and efficient.
Benefits	By assessing the accuracy that DSOs forecast the number of secondary transformers in utilisation bands within the population fed by individual primary substations, SFt allows judgement of how effectively the licensee is forecasting the number and location of load related interventions required.

Background

- 3.16 Visibility of network demand, generation and power flows is essential for DNOs to plan and operate the network, ensuring they meet the evolving needs of customers during the transition to net zero. Network visibility helps network operators make more targeted and coordinated intervention decisions, enables smart solutions that depend on data and enhances DNOs' support to the use and growth of flexibility markets. Typically, network operators have robust visibility of their high voltage (HV) and extra high voltage (EHV) networks, facilitated by extensive monitoring at these voltage levels. However, visibility into the low voltage (LV) network is notably restricted due to historical factors where such monitoring has been limited.
- 3.17 The distribution network stands at the forefront of the evolving energy system. Many of these changes will significantly impact the LV network, where networks currently have limited visibility. It is imperative for DNOs to enhance their network visibility in RIIO-ED2. This can be achieved through increasing LV network monitoring and using smart meter data to supplement forecasting and network modelling.
- 3.18 The original Secondary Network Visibility (NVt) outturn performance metric aimed to annually assess the average difference between year ahead forecasting and

¹⁰ This metric was originally described as Secondary Network visibility (NVt) in our RIIO-ED2 Final Determinations but subsequently changed to better reflect the intent of the metric.

outturn utilisation across each individual secondary substation in order to incentivise licensees to hold accurate predictions of future network utilisation.

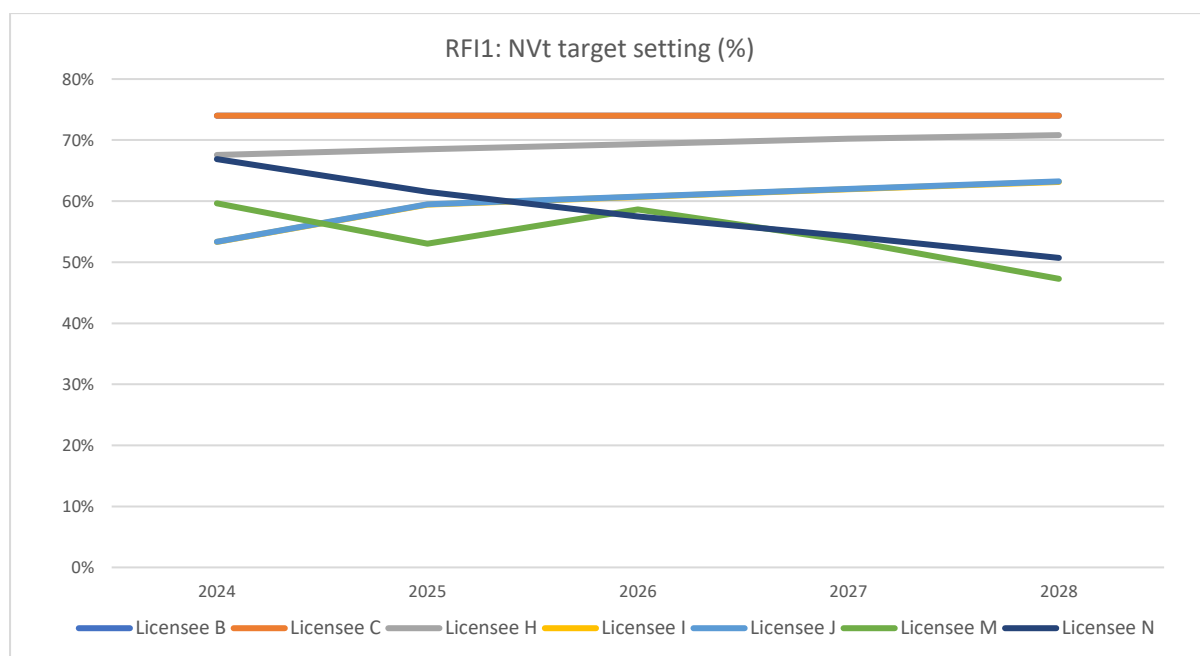
RFI1 results

3.19 Following the initial RFI in June 2023, we conducted a detailed analysis of the data responses for the NVt metric and a thorough review of the queries raised by the DNOs, with the aim to set appropriate targets from Year 2 of RIIO-ED2.

3.20 Analysis of the information received from DNOs highlighted the following issues with the NVt metric that required a resolution in order to effectively set targets:

- Only 7 licensees provided a complete data set for the NVt outturn performance score (ie, ranging from 53% to 74% as shown in Figure 5) meaning we couldn't realistically establish targets for half of the population;
- While a rising trend in this metric indicated enhanced performance in visibility, the differences in forecasted gradients for the 2024-2028 ED2 period imply disparities in how companies derived their figures; and
- The supporting DNO commentaries indicated there were concerns with the NVt methodology being sensitive to annual variations in utilisation and externalities.

Figure 5 – RFI1: NVt target setting (%)



Working group process updates

- 3.21 Concerns were raised by some DNOs that their ability to forecast utilisation on the secondary network at a granular level was hugely affected by factors outside of their control. For example, the granularity of the metric meant that forecasting accuracy is very dependent on, and sensitive to, the rate of low carbon technology (LCT) uptake such as electric vehicles (EVs) and heat pumps, for which there are still significant uncertainties. Variations of just one EV can be very impactful on forecasts. To put this into perspective, one EV corresponds to a difference in the calculated accuracy of 1% and 28% for one DNO, depending on the transformer rating and utilisation. As it stands, over half of the DNOs did not think this metric was fit for purpose due to this embedded error. These challenges were evidenced in the lack of responses shown in Figure 5.
- 3.22 An updated Secondary Forecasting (SFt) methodology was established with the working group. The aim of SFt is to drive licensees to improve forecasting of secondary transformer utilisation to ensure that network interventions are well informed to deliver a safe and economically efficient network. The evolution of the SFt methodology intended to reduce the effects of the variations to ensure the metric was less sensitive to factors outside of the DNOs control and tried to achieve this by assessing the accuracy of the forecast number of secondary transformers in utilisation bands within the population fed by their individual primary substation.
- 3.23 By assessing the accuracy that DSOs forecast the number of secondary transformers in utilisation bands within the population fed by individual primary substations, SFt allowed judgement of how effectively the licensee is forecasting the number and location of load related interventions required.

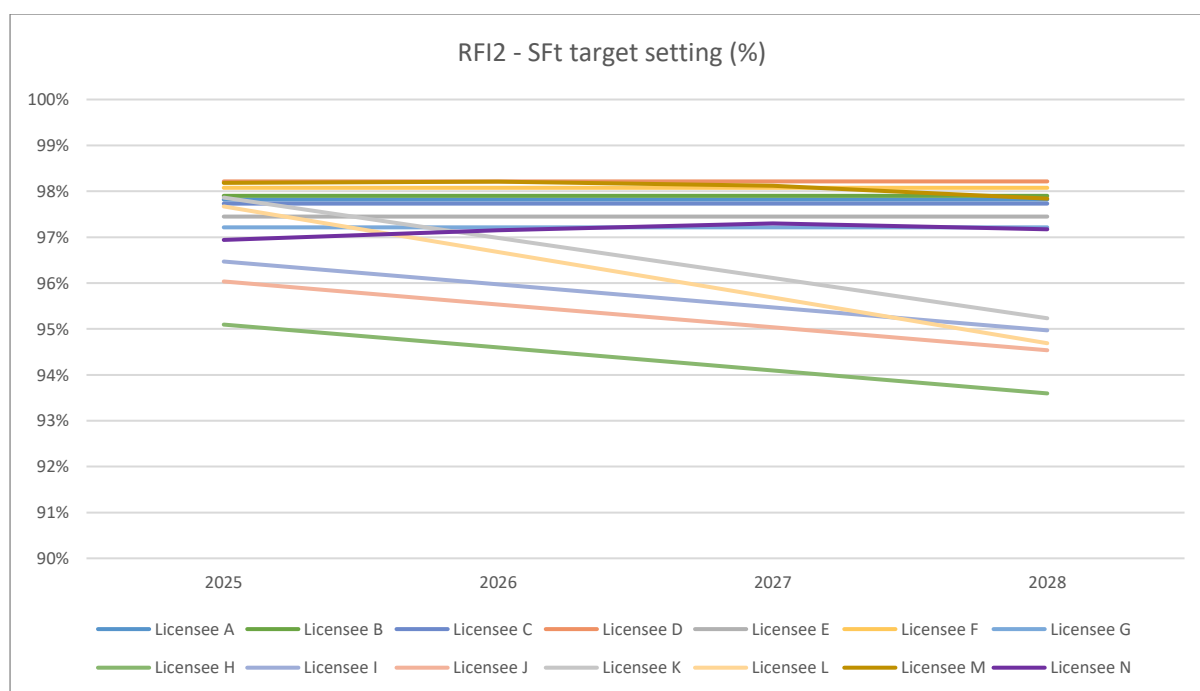
RFI2 results

- 3.24 The data completeness for SFt significantly improved between RFI1 and RFI2. For instance, only seven licensees submitted a full data set for the first submission whereas all 14 licensees did so for the second submission.
- 3.25 However, the current methodology revealed the following additional concerns with the information provided:
- All licensees represented in Figure 6 show a starting position above 95%, with several profiles rising to over 98%. The very high figures could be interpreted as the effectiveness of the licensee's forecasting capabilities,

however, it seems that the observed figures were tied to the specific approach used.

- Five licensees showed a declining trend in secondary forecasting. Considering that many DNOs are investing in the installation of substation monitoring during RIIO-ED2, we would expect to observe a gradual improvement in secondary forecasting over the period.
- Setting a common target based on the average (ie, 96.98%) performance means 11 licensees would start ahead of the target, potentially resulting in a reward for their current performance (rather than exceeding it).
- We also explored the possibility of establishing a common target using the 90th percentile which narrows the number of licensees starting ahead of the target to just 2. However, the adjustment raises the target to over 98% which consequently diminishes the scope for improvement.

Figure 6 – RF12: Sft target setting (%)



3.26 The data submitted in response to RF12 therefore raises doubts over the effectiveness of the metric in its present form and for its intended purpose. Additionally, there is apprehension regarding the possibility of licensees earning rewards for minimal effort rather than genuine excellent performance. This prompts further scrutiny regarding the potential for improvement given the already elevated starting position. Feedback from several DNOs also suggests

that there are significant concerns with the metric. One such concern is that it could result in a volatile incentive by assessing utilisation in individual years in isolation, potentially leading to unintended consequences.

- 3.27 Our view therefore is that, even though this metric has evolved to manage the concerns with earlier versions, it is not appropriate to implement as an incentive in its current form.

Curtailment efficiency (CEt)

Name of the metric	
Purpose	To limit Curtailment of users on Curtailable Connections resulting from actions taken by the licensee to restrict the conditions of a connection (import and/or export capacity) in response to a constraint on the Distribution System.
Benefits	The use of curtailable connections can result in faster connection times for distribution network customers, through avoided or deferred network reinforcement, and reduce initial network costs. CEt aims to improve licensee behaviours related to the use of curtailable connections to manage network constraints, improving network access for curtailable customers.

Background

- 3.28 The aim of the DSO incentive is to drive DNOs to develop and use their network more efficiently, considering flexible alternatives to network reinforcement. The main flexibility alternatives available to DNOs are Distribution Flexibility Services (as discussed in the previous FDt section) and Curtailable Connections (commonly discussed alongside “non-firm access agreements” and “Flexible Connections”).
- 3.29 As per the RIIO-ED2 Regulatory Instructions and Guidance (RIGs), a Curtailable Connection means “a connection whereby the Required Capacity can be reduced by the licensee”.¹¹ Curtailable Connections are typically used by network operators to avoid or defer network reinforcement, enabling faster connection times for customers and potential reduced overall costs. By agreeing to a Curtailable Connection, users agree that their connection may be curtailed (ie, any action taken by the licensee to restrict the flow of electricity at the Connection Point) at times by the DNO.

¹¹ [Direction issuing the regulatory instructions and guidance \(RIGs\) for RIIO-ED2 | Ofgem](#)

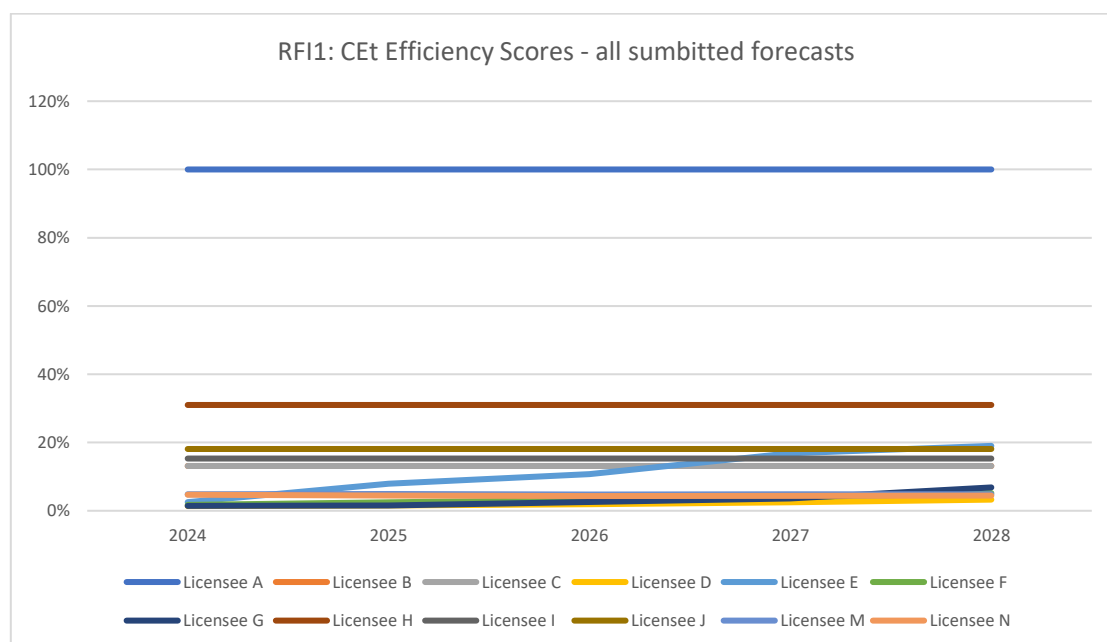
- 3.30 New governance surrounding Curtailable Connection agreements and respective user rights was implemented in April 2023 as part of the Access SCR direction.¹² As per the RIIO-ED2 Final Determinations, the Curtailment Efficiency outturn performance metric (CEt) considered the definition of curtailment, and the methodology for calculating it, to be consistent with that decision.
- 3.31 CEt is designed to improve licensee use of Curtailable Connections by limiting the amount of curtailment such users experience. To keep the scope of CEt to DNO controlled curtailment, licensees would be asked to report all curtailment, except where the restriction is caused by:
- An Interruption to the customer's supply;
 - Curtailment as a result of constraints on the transmission network; and/or
 - Curtailment as a result of reinforcement works to facilitate the transition to an unconstrained connection for the customer.

RFI1 results

- 3.32 Although some variation in DNO forecasted performance was expected (due to varying DSO maturity and topological / geographic differences), the data returned in RFI1 indicated different assumptions and methodologies had been used when interpreting the CEt methodology and forecasting. This risk was also raised by some DNOs as a concern in their supporting commentaries.
- As shown in Figure 7, forecasted curtailment efficiency start and end points ranged significantly (from 1.37% to 100% and 3.26% to 100% respectively), with further variation in gradient.
 - Differences in the types of connection and curtailment included, as well as other variations in forecasting considerations (ie, Technical Limits).

¹² [Access SCR - Final Decision \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/access-scr-final-decision)

Figure 7 – RFI1: CEt efficiency scores – all submitted forecasts



3.33 In addition to different methodological interpretations, other key issues with the reported data were:

- Uncertainty projecting the number of Curtailable Connections predicted to come onto the network in the full RIIO-ED2 period.
- Uncertainty projecting the import / export curtailment levels Curtailable Connections would experience in the full RIIO-ED2 period.

Working group process updates

3.34 To overcome differences in interpretation of the methodology, different types of Curtailable Connection and curtailment were broken down to produce a more prescriptive methodology and reporting template. Greater transparency into the different curtailment drivers across distribution was also seen as a benefit of these reporting changes.

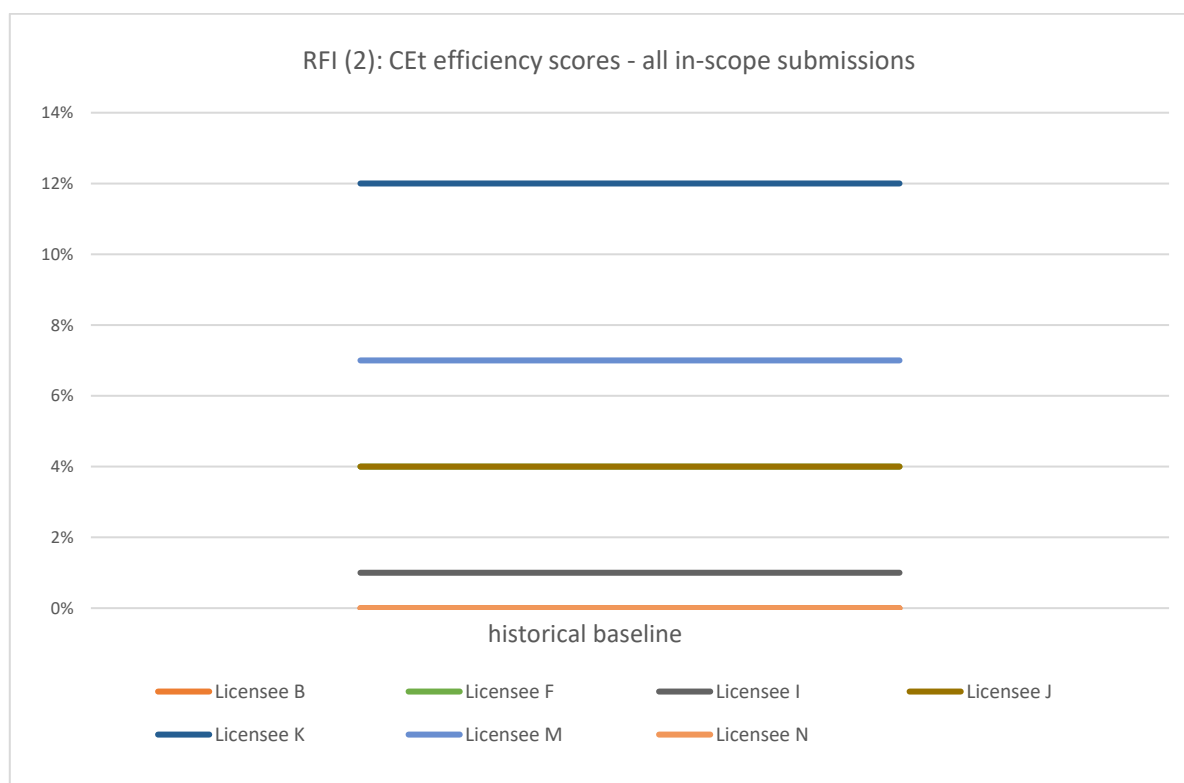
3.35 In an attempt to overcome forecasting uncertainty, a key change to CEt methodology was to move from only using projected data to a combination of historical and forecast data. Due to varying maturity of DSO activity, the historical ask was limited to curtailment from Curtailable Connections between 1 April 2021 to 1 October 2023. This data would be used to determine a baseline Curtailment Efficiency score for each licensee from which a target could be set. The forecasting ask was limited to just one year of forecasting data to give a current view of the pipeline for the 2024/25 regulatory year.

- 3.36 Although forecasting was reduced, we were aware from RFI1 that significant growth in Curtailable Connections was expected by some DNOs over RIIO-ED2. DNOs demonstrated that changes in Curtailable Connection number / capacity could impact network constraint and so determine the levels of curtailment users experience. Given the uncertainty in projecting long-term curtailable capacity, this adds further challenge to setting robust targets and could risk CEt unintentionally encouraging DNOs to minimise curtailable capacity growth to better metric performance. As a result, a mechanistic approach to target setting was developed through a Target Adjuster mechanism.
- 3.37 The proposed Target Adjuster would work by updating targets at a standard industry adjustment factor as licensee Curtailable Connection MW capacity increases / decreases on an annual basis. To make the adjustment factor relative to the RIIO-ED2 network conditions, we determined the data used to inform its calculation should only be from after Access SCR implementation (ie, April 2023 onwards).

RFI2 results

- 3.38 The second RFI was largely successful in aligning interpretation of CEt methodology, with no major outliers in terms of connections included. Similarly, comparison of the aggregated curtailment efficiency scores (see Figure 8) from the historic baseline against the forecasted scores from RFI1 also indicates improved methodological alignment. However, several issues continue to limit confidence in target setting.

Figure 8 – RFI2: CEt efficiency scores – all in scope submissions



3.39 Our major concern with the second RFI’s dataset is the overall lack of data available to inform target setting. Only seven out of 14 licensees were able to provide a baseline dataset. While, of those seven licensees with a baseline dataset, many have a small amount of Curtailable Connections / MW capacity in scope. Our current view is that CEt should have bespoke licensee targets, to reflect the varied needs case for Curtailable Connections across each network. At present however, we do not think it possible to set robust targets given the lack of data. The reasons for a limited baseline dataset varied, but can be summarised as:

- The majority of existing Curtailable Connections and/or curtailment is related to excluded causes (ie, Transmission constraints);
- A lack of historic constraint on some networks limiting need for in scope connection types; and
- A lack of legacy system compatibility and/or other data quality issues meaning historic curtailment details couldn’t be provided as required.

3.40 A change to the definition of Curtailable Connection for the purposes of CEt also impacted the number of in scope connections. This change was made to prevent

more traditional connections, who could technically fit into the Curtailable Connection definition, distorting performance figures – as was the case for one DNO in the first RFI. For all other DNOs the impact of the definition change was small numerically. However, given the initial low connection numbers of some licensees, the impact on CEt functionality was more than predicted.

- 3.41 One of our design considerations was whether to implement a threshold, either in terms of the number of Curtailable Connections or the MW capacity, before a licensee is eligible for a reward. Without this, licensees could be rewarded for performance related to just a handful of connections, limiting the overall value for money the metric is delivering. A low number of connections could also risk externalities or other uncontrollable factors having a more prominent role in determining outcomes versus genuine DNO performance. If a threshold were to be implemented, it would reduce the number of licensees with a baseline figure even further. For example, a threshold of 10 eligible connections would mean just 2 out of 14 licensees have a baseline going into Year 2 of RIIO-ED2, and 6 out of 14 going into Year 3.
- 3.42 As with target setting, the development of the Target Adjuster is also limited by a lack of data. Only 8 out of 14 licensees from 3 DNOs were able to provide data to inform the industry rate calculation. Of those 8 licensees, 52% of the data came from one licensee, with 4 of the other licensees combined just 13.5%. Although all data received did demonstrate a positive trend between curtailable capacity and curtailment, the significance varied greatly. As such, the “industry rate” determined by the mechanism was not conclusive or a balanced view of the network.
- 3.43 Overall, although improvements were made to CEt methodology and reporting, setting targets for CEt is made more difficult by challenges in providing both forecasted and historic datasets. Following RFI2, our view is that the value of turning on CEt for Year 2 of RIIO-ED2 is limited. Only a small selection of licensees has significant numbers of in scope Curtailable Connections, while confidence in setting targets is hampered by a lack of available data to determine what good performance looks like. Furthermore, the development of a Target Adjuster (or equivalent mechanism) to overcome issues related to the uncertain impact of growing curtailable capacity also requires improved data which is not available at this time.

4. Our proposed way forward

Section summary

This section describes our proposed way forward for each of the three DSO outturn performance metrics.

Questions

- Q1. Do you agree with our recommendation not to switch on the FDt outturn performance metric during RIIO-ED2? Please explain why.
- Q2. Do you agree with our recommendation not to switch on the SFt outturn performance metric during RIIO-ED2? Please explain why.
- Q3. Do you agree with our recommendation not to switch on the CEt outturn performance metric during RIIO-ED2? Please explain why.
- Q4. Do you agree with our alternative approach to continue with the metrics as a reporting requirement? Please explain why.
- Q5. Do you agree with our alternative approach to reassign the 20% value of the incentive to the performance panel assessment? Please explain why.

Recommendation

- 4.1 We have carefully considered the data returned in RFI1 and RFI2, feedback from DNOs in the working groups, and the issues we have discussed in Chapter 3. We have also taken into account the considerations for when we will use financial incentives as described in the RIIO Handbook.¹³

¹³ [Handbook for implementing the RIIO model \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/handbook-for-implementing-the-riio-model)

Table 2: RIIO Handbook description of when we will use financial incentives

RIIO Handbook	FDt	SFt	CEt
1) Is there clarity on the primary outputs to be delivered?	✓	~	~
2) Is there confidence in the data used to measure performance?	X	X	X
3) Do we consider delivery of the primary outputs to be important?	✓	✓	✓
4) There are not already incentives in place on the network company through other schemes or obligations?	✓	✓	✓

4.2 Even though we maintain that metrics can have clear value, our main concern across all three metrics is the data available at this time. As discussed throughout Chapter 3, specifically: data quality concerns, a lack of historical data, persistent issues with the methodologies and lack of standardised approaches to the data reporting to Ofgem means we lack sufficient evidential basis to set performance targets at this time. In our view, the metrics fail against this criterion in all three cases.

4.3 In addition, we still have concerns about the clarity of the outputs delivered by SFt and CEt. This is due to the ongoing concerns with SFt methodology and the overarching difficulty in precisely defining the criteria for what constitutes a “good” outcome for CEt.

4.4 Therefore, our proposal is to **not switch on the metrics during RIIO-ED2**. Furthermore, we do not think that a delayed implementation to later in RIIO-ED2 is sufficient to overcome concerns in performance data sets. The broad range of concerns and time needed to build a sufficiently robust evidence base, develop targets, and make the necessary licence changes to implement such a proposal would mean that any metrics would only be in place the final year of RIIO-ED2 at best.

Alternative approach

4.5 Our alternative proposal is to **work with the DNOs to develop robust reporting requirements** that allow us to build the evidence base to enable financially incentivise performance in these areas in RIIO-ED3.

- 4.6 We are also minded to allow DNOs who are able to report robust data with clear methodological approaches to **use this data in the DSO Performance Panel assessment.**
- 4.7 In terms of the performance panel, we would look to adapt the evaluation criteria in RIIO-ED2 Year 2 to include more specific references to aspects of the metrics not already included in the evaluation criteria. For FDt there exists a certain degree of overlap in the criteria for developing flexibility markets, however it is our assessment that additional efforts will be necessary for Sft and CEt. There may also be a need for changes to the format of the panel (eg, extending the time given to each assessment).
- 4.8 From Year 2 to 5 of RIIO-ED2 the metrics were worth 20% of the DSO Incentive. We considered a number of options including:
- Reallocating the 20% between the survey and panel (as per Year 1);
 - Reallocating the 20% completely to the stakeholder survey or performance panel;
 - Not reallocating the 20% to either the survey or panel (this would reduce the value of the overall incentive); and
 - Reallocating the 20% to another incentive (eg, vulnerability).
- 4.9 Given our expectation of their expert ability to judge DNO performance in delivery of DSO function and crossover between assessment criteria, our proposal is to **reassign the full 20% to the performance panel.** We are keen to maintain the overall value of the DSO incentive and do not consider there is sufficient overlap with other incentives to justify reallocating elsewhere.
- 4.10 The following factors were also considered in determining our recommendation for the alternative approach:
- Crossover of the metric objectives with the rest of the DSO incentive (ie, DSO Performance Panel assessment, DSO Stakeholder Satisfaction Survey and RREs);
 - Whether similar data was being captured elsewhere (eg, the reporting requirement under SLC31E where licensees must report annually on the flexibility they intend to procure and that has been procured); and

- The original reasons for the metric choices, such as transparency, standardisation, and other stakeholder concerns raised in their development.

Summary of our minded to position

4.11 In summary, our minded to position is as follows:

- Not to switch on the metrics during RIIO-ED2 due to the broad range of concerns with all three metrics;
- Continue with the metrics as a reporting requirement with inclusion in the performance panel assessment; and
- Reassign the 20% value of the incentive to the performance panel assessment given the greater crossover and convergence.

Appendix 1 – privacy notice on consultations

Delete this box when producing your document.

Instructions: Please edit the content of the generic privacy notice provided below to take account of the specifics of your consultation.

Contact the Data Protection Officer dpo@ofgem.gov.uk if you are unsure about any of the information to be provided to those responding to your consultation.

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, “Ofgem”). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest (ie, a consultation).

4. With whom we will be sharing your personal data

No personal data will be shared with any organisations outside Ofgem.

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for twelve months after the consultation has closed.

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas

8. Your personal data will not be used for any automated decision making

9. Your personal data will be stored in a secure government IT system

10. More information For more information on how Ofgem processes your data, click on the link to our "[ofgem privacy promise](#)".