

## RIIO-2 Final Determinations - NGET Annex (REVISED)

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Our aim for the RIIO-2 price controls is to ensure energy consumers across GB get better value for money, better quality of service and environmentally sustainable outcomes from their networks.

In 2019, we set out the framework for the price controls in our Sector Specific Methodology Decisions. In December 2019, Transmission and Gas Distribution network companies and the Electricity System Operator (ESO) submitted their business plans to Ofgem setting out proposed expenditure for RIIO-2. We assessed these plans, engaged with a wide range of stakeholders, and published our consultation on Draft Determinations in July 2020.

Based on a review of all the responses to our Draft Determinations, including further evidence received from the companies and wider stakeholders as well as a period of further engagement including Open Hearings, this document, and others published alongside it, set out our Final Determinations for company allowances under the RIIO-2 price control, which will commence on 1 April 2021.

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## 1. Introduction and overall package

### Purpose of this document

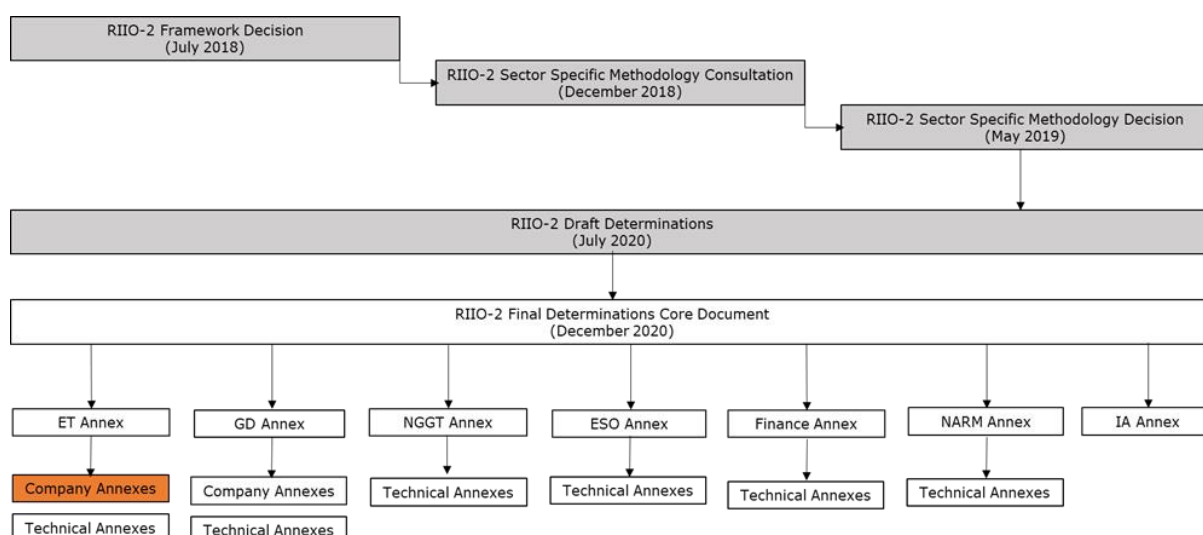
1.1 This document sets out our Final Determinations for the Electricity Transmission (ET) price control (RIIO-ET2) for the areas specific to NGET, focusing on its:

- Baseline cost allowances
- Output package, including Licence Obligations (LOs), Output Delivery Incentives (ODIs),<sup>1</sup> and Price Control Deliverables (PCDs)
- Uncertainty Mechanisms (UMs)
- Network Innovation Allowance (NIA)
- Business Plan Incentive (BPI)

1.2 All figures are in 2018/19 prices except where otherwise stated.

1.3 This document is to be read alongside the RIIO-2 Final Determinations Core Document (Core Document), the RIIO-2 Final Determinations – Electricity Transmission Sector Annex (ET Annex) and the RIIO-2 Final Determinations – NARM Annex (NARM Annex). Figure 1 sets out where you can find information about other areas of our RIIO-2 Final Determinations.

Figure 1: RIIO-2 Final Determinations documents map



<sup>1</sup> ODIs can be reputational (ODI-R) or financial (ODI-F).

## An overview of NGET's RIIO-2 price control

1.4 This section focuses on bringing together the key aspects of NGET's RIIO-2 Final Determinations. We present a summary of NGET's baseline Totex in Table 1. This reflects our view of efficient costs, including ongoing efficiency over RIIO-2. For further details of any values, please refer to Chapter 3.<sup>2</sup>

**Table 1: NGET's submitted versus allowed baseline Totex<sup>3</sup> (£m, 2018/19)**

Cost area	NGET submitted Totex (£m)	Ofgem Draft Determinations allowed Totex (£m)	Ofgem Final Determinations allowed Totex (£m)
Load related capex	1,115.6	891.0	1,462.9
Non-load related capex	2,650.9	744.1	1,765.8
Non-operational capex	376.9	175.4	273.5
Network operating costs	1,174.6	549.0	723.4
Indirect opex	1,509.4	1,062.1	1,288.1
Other costs	263.0	158.0	180.0
Ongoing efficiency	-	-248.0	-316.5
<b>Core Baseline Totex</b>	<b>7,090.3</b>	<b>3,331.6</b>	<b>5,377.2</b>
Initial RPE allowances	N/A	N/A	192.9
Innovation, pass through and other estimated items	N/A	N/A	1197.0
<b>Modelled upfront funding</b>	<b>N/A</b>	<b>N/A</b>	<b>6,767.1</b>

1.5 In addition to the core baseline totex allowance of £5377.2m, we have also made allowances for items such as the initial RPE allowances, the network innovation allowances and the strategic innovation fund. Our financial model has also included estimated allowances for some uncertainty mechanisms, pass through

<sup>2</sup> Where the source document is not stated, we are referring to this document.

<sup>3</sup> Baseline Totex refers to total controllable costs (this excludes BPI, RPEs, pass-through costs and includes ongoing efficiency).

costs and other revenue items. This results in a total modelled upfront funding of £6767.1m.

1.6 We have decided to set NGET’s RIIO-2 Totex Incentive Mechanism (TIM) rate at 33%. Further details on the TIM can be found in Chapter 10 in the Core Document.

1.7 Table 2 sets out the package of outputs that will apply to NGET during RIIO-2 – further details are contained within Chapter 2. For further details of our decisions on the bespoke proposals submitted in NGET’s Business Plan, see Appendix 2.

**Table 2: RIIO-2 outputs package for NGET**

<b>Output name</b>	<b>Output type</b>	<b>Applicable to</b>	<b>Further detail</b>
<b>Meeting the needs of consumers and network users</b>			
Energy Not Supplied	ODI-F	ET sector	ET Annex, Chapter 2
Timely Connections	ODI-F	ET sector	ET Annex, Chapter 2
SO:TO Optimisation	ODI-F	ET sector	ET Annex, Chapter 2
Quality of Connections Survey	ODI-F	ET sector	ET Annex, Chapter 2
New Infrastructure Stakeholder Engagement Survey	ODI-R	ET sector	ET Annex, Chapter 2
Network Innovation Allowance	UIOLI	ET, GT, GD sectors	Core Document, Chapter 8
<b>Maintaining a safe and resilient network</b>			
Network Asset Risk Metric (NARM)	PCD and ODI-F	ET, GT, GD sectors	NARM Annex
Cyber Resilience OT	PCD and UIOLI	ET, GT, GD sectors	Core Document, Chapter 7
Cyber Resilience IT	PCD	ET, GT, GD sectors	Core Document, Chapter 7
Physical Security	PCD	ET, GT, GD sectors	Chapter 2
Network Access Policy (NAP)	LO	ET sector	ET Annex, Chapter 2
Large Project Delivery (LPD)	PCD and ODI-F	ET sector	ET Annex, Chapter 2
Pre-Construction Funding	PCD	ET Sector	ET Annex, Chapter 4
Incremental Wider Works	PCD	ET Sector	Chapters 2 and 3
Atypical Shared Infrastructure Schemes	PCD	ET Sector	Chapters 2 and 3
Generation Connection Schemes	PCD	ET Sector	Chapters 2 and 4
Demand Connection Schemes	PCD	ET Sector	Chapters 2 and 4
Resilience and Operability	PCD	ET Sector	Chapters 2 and 3
Substation Auxiliary Interventions	UIOLI	NGET	Chapters 2 and 3

Output name	Output type	Applicable to	Further detail
Towers and Foundations	PCD	NGET	Chapters 2 and 3
Instrument Transformers	PCD	NGET	Chapters 2 and 3
Bay Replacements	PCD	NGET	Chapters 2 and 3
Protection and Control	PCD	NGET	Chapters 2 and 3
Overhead Line Replacements	PCD	NGET	Chapters 2 and 3
<b>Delivering an environmentally sustainable network</b>			
Environmental Action Plan and annual environmental report	ODI-R and LO	ET, GT, GD sectors	ET Annex, Chapter 2
Net Zero & Re-opener Development Fund	UIOLI	ET, GT, GD sectors	Core Document, Chapter 8
Environmental Scorecard	ODI-F	ET sector	ET Annex, Chapter 2
Insulation and Interruption Gas (IIG) leakage incentive	ODI-F	ET sector	ET Annex, Chapter 2
Visual amenity in designated areas provision	PCD	ET sector	ET Annex, Chapter 2
Net Zero Carbon Construction	UIOLI	NGET only	Chapter 2
SF6 Asset Intervention	PCD	NGET only	Chapter 2
Operational Transport Carbon Reduction	PCD	NGET only	Chapter 2

1.8 We set out the UMs that will apply to NGET during RIIO-2 price control period in Table 3. For further detail of our decision on the UMs for NGET, see Chapter 4.

**Table 3: RIIO-2 Uncertainty Mechanisms package for NGET**

UM name	UM type	Applicable to	Further detail
Bad Debt	Pass-through	ET, GT, GD sectors	Finance Annex
Business Rates	Pass-through	ET, GT, GD sectors	Finance Annex
Ofgem Licence Fee	Pass-through	ET, GT, GD sectors	Finance Annex
Pensions (pension scheme established deficits)	Re-opener	ET, GT, GD sectors	Finance Annex
Tax Review	Re-opener	ET, GT, GD sectors	Finance Annex
Cost of debt indexation	Indexation	ET, GT, GD sectors	Finance Annex
Cost of equity indexation	Indexation	ET, GT, GD sectors	Finance Annex
Inflation Indexation of RAV and Allowed Return	Indexation	ET, GT, GD sectors	Finance Annex
Real Price Effects	Indexation	ET, GT, GD sectors	Core Document, Chapter 5
Cyber Resilience OT	Re-opener	ET, GT, GD sectors	Core Document, Chapter 7
Cyber Resilience IT	Re-opener	ET, GT, GD sectors	Core Document, Chapter 7

UM name	UM type	Applicable to	Further detail
Non-operational IT and Telecoms Capex	Re-opener	ET, GT, GD sectors	Core Document, Chapter 7
Physical Security (PSUP)	Re-opener	ET, GT, GD sectors	Core Document, Chapter 7
Coordinated Adjustment Mechanism	Re-opener	ET, GT, GD sectors	Core Document, Chapter 8
Net Zero	Re-opener	ET, GT, GD sectors	Core Document, Chapter 8
Generation and Demand Connections	Volume driver	ET sector	ET Annex, Chapter 4
Large Onshore Transmission Investments (LOTI)	Re-opener	ET sector	ET Annex, Chapter 4
Pre-Construction Funding	Re-opener	ET sector	ET Annex, Chapter 4
Medium Sized Investment Projects (MSIP)	Re-opener	ET sector	ET Annex, Chapter 4
Access Reform	Re-opener	ET Sector	ET Annex, Chapter 4
Visual amenity in designated areas	Re-opener	ET sector	ET Annex, Chapter 2
Opex escalator	Volume driver	ET sector	ET Annex, Chapter 4
Incremental Wider Works	Volume driver	NGET only	Chapter 4
Tyne Crossing	Re-opener	NGET only	Chapter 4
Bengeworth Road GSP	Re-opener	NGET only	Chapter 4
Substation Civil Proactive Investment Works	Re-opener	NGET only	Chapter 4
Towers and Foundations	Re-opener	NGET only	Chapter 4
Optel Fibre Wrap	Re-opener	NGET only	Chapter 4

1.9 We have decided to set £49.3m for NGET’s RIIO-2 NIA, conditional on the implementation of an improved reporting framework. For further detail of our decision on the NIA for NGET, see Chapter 5.

1.10 Table 4 summarises the outcome of RIIO-2 BPI performance for NGET each of the four stages of the incentive. For further detail of our decision on the BPI for NGET, see Chapter 6 in this document and Chapter 10 in the Core Document.

**Table 4: RIIO-2 BPI performance for NGET**

BPI stage	Final Determination
Stage 1 - Minimum requirements	Fail. -£26.9m Penalty
Stage 2 – CVP reward	Not eligible
Stage 3 – Penalty	-£37.3m
Stage 4 – Reward	Not eligible
Total	£64.1.0m Penalty



1.11 Table 5 summarises the financing arrangements that we have decided to apply to NGET. Please refer to the Finance Annex for more detail on these areas.

**Table 5: RIIO-2 financing arrangements for NGET<sup>4</sup>**

<b>Finance parameter</b>	<b>NGET rate</b>	<b>Source</b>
Notional gearing	55%	Finance Annex
Cost of Equity	4.25%	
Expected outperformance	0.22%	
Allowed return on equity	4.02%	
Allowed return on debt	1.82%	
Allowed return on capital	2.81%	

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<sup>4</sup> We present here a forecast average of RIIO-2 allowed returns. Final allowances for debt and equity from 2022/2023 onwards will reflect changes in market observations. Totals may not add due to rounding. Please see Finance Annex for further detail.

## 2. Setting outputs

### Introduction

2.1 This Chapter sets out our decisions for each output area that will apply to NGET and lists out all use-it-or-lose-it (UIOLI) allowances specific to NGET. It is structured under the headings of the RIIO-2 outcomes:

- meet the needs of consumers and network users
- maintain a safe and resilient network
- deliver an environmentally sustainable network.

2.2 This Chapter does not repeat the rationale for any changes from Draft to Final Determinations that are already set out either in the Core Document, the ET Annex or in Chapter 3 of this document. Table 2 above sets out where further detail on our decisions can be found.

### Meet the needs of consumers and network users

2.3 This section sets out our decisions for each of NGET’s outputs related to delivering a high-quality and reliable service to all network users and consumers, including those in vulnerable situations, in RIIO-ET2.

#### Energy Not Supplied (ENS) ODI-F

**Purpose:** To encourage the ETOs to improve network reliability in an efficient way by managing short-term operational risk.

**Benefits:** Improving the reliability of electricity supply and reducing the negative impacts of disruption on consumers and network users.

Output Parameter	Final Determination	Draft Determination
ODI Type	Financial	Same as FD
Incentive Type	Reward/Penalty	Same as FD
Performance Measure	The volume of ENS each year. Establish an industry working group in RIIO-ET2 to include embedded generation	Same as FD

Output Parameter	Final Determination	Draft Determination
	in the calculation of the ENS performance measure for RIIO-ET3.	
Performance Target	NGET: 147MWh	Same as FD
Baseline Setting Methodology	50% weighting on average ENS performance during RIIO-ET1 (2013-2019) 25% weighting on average ENS performance during TPCR4 (2007-2012) 25% weighting on average ENS performance during TPCR3 (2000-2006)	Same as FD
Incentive value	The incentive rate is set to the Value of Lost Load (VoLL) in 2018/19 prices (£21,000/MWh). The financial reward or penalty is calculated by multiplying the difference between actual ENS and the performance target, by VoLL and applying the TIM sharing factor. We will consider updating the VoLL if there is new evidence during RIIO-ET2 that its value has changed materially.	Same as FD
Financial Collar on Penalties	1.9% of ex-ante base revenue	3% of ex-ante base revenue
Reporting method	Annual RRP reporting	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 4.2	N/A

### Timely Connections ODI-F

**Purpose:** To encourage the efficient timely delivery of connection offers to applicants (via the ESO) for new connections to the Transmission Network.

**Benefits:** Higher quality of service to connection customers, improved stakeholder engagement between connection customers and network companies, and streamlined new connections.

Output parameter	Final Determination	Draft Determination
ODI type	Financial	Same as FD
Incentive type	Penalty only	Same as FD
Performance measure	Performance will be measured annually by the number of offers which are timely (made within three months, minus 13-15 working days) <sup>5</sup> as a percentage of the total number of offers	Same as FD

<sup>5</sup> See Standard Licence Condition D4A (Obligations in relation to offers for connection etc), and Part 2, Para 4.8.1 Section D of the System Operator – Transmission Owner Code (STC).

Output parameter	Final Determination	Draft Determination
Performance target	100%	Same as FD
Incentive value	The penalty is calculated by dividing the total number of untimely offers, by the total number of offers, multiplied by 0.5% ex-ante base revenue	Same as FD
Cap	N/A	Same as FD
Collar	0.5% of ex-ante base revenue	Same as FD
Reporting method	Annual RRP reporting	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 4.4	N/A

### SO:TO optimisation ODI-F

**Purpose:** A two-year trial incentive to encourage the ETOs to provide solutions to the ESO to help reduce constraint costs according to the STCP11-4 procedures.

**Benefits:** A reduction in constraint costs.

Output parameter	Final Determination	Draft Determination
ODI type	Financial	We consulted on rejecting three bespoke proposals from each of the ETOs and a joint ETO proposal that related to constraint cost mitigation in our Draft Determinations.
Incentive type	Reward only during the trial period of year 1 and 2 of RIIO-2. Following the trial, the performance of this ODI-F will be assessed through a report provided jointly by the TOs and another report provided separately by the ESO. <sup>6</sup> The details of this performance report will be provided in the relevant governance document, which we will aim to consult on prior to April 2021. The incentive could be extended to the remaining years of RIIO-2 subject to the review of the trial.	
Performance measure	The ex-ante forecast constraint savings provided through the solutions delivered by the ETO, as determined by the ESO through the usual STCP11-4 processes. <sup>7</sup>	
Performance target	N/A	
Incentive value	10% of the forecast constraint cost savings from all solutions provided in that regulatory year.	
Cap (annual)	£5.0m	
Collar	N/A	
Reporting method	Annual RRP ETOs will provide a joint report on how this ODI-F has been utilised during the trial period. The format of this	

<sup>6</sup> Chapter 8 of the ESO annex sets out our decision for the ESO's role within this trial ODI.

<sup>7</sup> STCP11-4 can be found on the ESO's website: <https://www.nationalgrideso.com/document/141111/download>

Output parameter	Final Determination	Draft Determination
	report will be provided in the relevant governance document. The ESO will report separately on their assessment of the benefit delivered through this ODI-F.	
Applied to	All ETOs	
Licence condition	Special Condition 4.7	

### Quality of connections survey ODI-F

**Purpose:** To incentivise companies to improve the quality of service delivered to connections customers.

**Benefits:** Improving the quality of service delivered for current and future connections customers, thereby enabling the transition to a low carbon economy.

Output parameter	Final Determination	Draft Determination
ODI type	Financial	Same as FD
Incentive type	Reward only in year 1 Reward and penalty in years 2-5	We did not consult on these aspects of the policy in DDs. In DD we consulted on switching off the incentive whilst we pilot the survey for baseline development purposes.
Performance measure	Measuring the satisfaction score from a scale of 1-10	
Performance target	7.7/10 with a reward score cap of 9/10 and a penalty score collar of 6.4/10	
Incentive value	Reward: 0.19% of ex-ante base revenue for each score point for year 1 0.38% of ex-ante base revenue for each score point for years 2-5  Penalty: 0.38% of ex-ante base revenue for each score point for years 2-5	
Cap	0.25% of ex-ante base revenue for year 1 0.5% of ex-ante base revenue for years 2-5	
Collar	N/A for year 1 0.5% of ex-ante base revenue for years 2-5	
Incentive metrics review period	We will review the performance target, cap, collar, and incentive value in period	
Reporting method	Annual RRP	
Customer scope	The ETOs will survey their customers at common milestones, as set out in DD	Same as FD

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Survey provider and assurance	The ETOs can use their own survey provider. The User Groups will provide assurance on the customers captured and questions asked.	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 4.5	N/A

### **New infrastructure stakeholder engagement survey ODI-R**

**Purpose:** To encourage the ETOs to survey stakeholders impacted by new infrastructure projects on their stakeholder engagement experience.

**Benefits:** Tailored engagement that better meets the needs of local stakeholders impacted by transmission works.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
ODI type	Reputational	Same as FD
Measurement	Survey of stakeholders affected by new transmission projects on stakeholder engagement process	
Reporting method	Reporting via the company’s websites, where appropriate	
Applied to	All ETOs	
Licence condition	No	

## **Maintain a safe and resilient network**

2.4 This section sets out our decisions on each of NGET’s outputs related to delivering a safe and resilient network that is efficient and responsive to change in RIIIO-ET2.

### **Cyber Resilience OT and IT**

2.5 Cyber resilience IT and OT outputs are not discussed in this document in the interests of national security. A separate confidential Cyber Resilience Annex has been provided to NGET.

### **Network Access Policy (NAP) LO**

**Purpose:** To require ETOs to have in place a policy to support engagement between themselves and the ESO around outage planning.

**Benefits:** Enhanced outage planning coordination and communication between the respective ETOs and the ESO.

Output parameter	Final Determination	Draft Determination
NAP	Pursuant to paragraph 2J.13 of Special Condition 2J - Network Access Policy (SpC 2J) of the RIIO-1 licence, we have decided to approve the final version of the consolidated NAP which was submitted to us in May 2020 following some changes to the version of the NAP as submitted to us by the ETOs as part of their business plans. <sup>8</sup>	Same as FD
Reporting requirements for RIIO-2	ETOs should publish the KPIs on their respective websites in a way that is accessible to users. These should be published within two months of the end of each Regulatory year The KPIs should be accompanied by text explaining what they stand for, and year-on-year changes, where applicable The NAP working group will govern the processes and procedures to populate the KPIs to ensure transparency, alignment, and comparability between the ETOs' respective KPIs	In DDs, we proposed to work with the network companies to agree the format of the reporting and publication of the KPIs ahead of our decision in Final Determinations
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 9.10	2J

### Large Project Delivery (LPD) ODI-F

**Purpose:** To incentivise the timely delivery of large transmission projects.

**Benefits:** Minimising consumer detriment from projects being delivered late.

Output parameter	Final Determination	Draft Determination
ODI type	Financial	Same as FD
Incentive type	LPD is a combination of an ODI-F and a PCD. To remove financial benefit from delay based on either of the following: <ul style="list-style-type: none"> <li>• Re-profiling mechanism</li> <li>• Milestone-based approach</li> </ul> To ensure that consumer harm caused by delay is minimised: <ul style="list-style-type: none"> <li>• Project Delay Charge</li> </ul>	Same as FD

<sup>8</sup> The majority of the changes since December 2019 were made in order to add clarity and to simplify the language of the document following engagement with and feedback from the TOs' respective stakeholders.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Performance measure	Performance will be assessed against the delivery dates for large (£100m+) projects, set out in licences on a project-by-project basis	Same as FD
Performance target	Delivery of large (£100m+) projects by the delivery dates stated for them in the licence	Same as FD
Incentive value	To be determined on a project-by-project basis	Same as FD
Cap	N/A	N/A
Collar	To be determined on a project-by-project basis	Same as FD
Reporting method	Annual RRP reporting on general progress and a specific independent report to confirm delivery of the output	Same as FD
Applied to	All ET, GT, and GD companies	Same as FD
Licence condition	No – Where appropriate we will modify the licence during the RIIO-ET2 period when we decide to apply an LPD mechanism.	N/A

### Physical Security PCD

**Purpose:** To ensure NGET delivers physical security upgrades at sites designated Critical National Infrastructure (CNI).

**Benefits:** Allowances are returned to consumers in the event changes to the CNI list mean NGET is not required to deliver the outputs it has received baseline funding for.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Type	Evaluative	Same as FD
Output	PSUP upgrades at specified number of sites.	Same as FD
Delivery date	End of RIIO-ET2	Same as FD
Totex baseline allowances	£[redacted]m	Same as FD
Re-opener	Yes – See Chapter 7 in the Core Document	Same as FD
Reporting method	PCD report Annual RRP reporting.	Same as FD
Adjustment mechanism	Evaluative review of completion report for each deliverable.	Same as FD
Companies applied to	NGET only	Same as FD
Licence condition	Special Condition 3.4	n/a



**Pre-Construction Funding (PCF) PCD**

**Purpose:** To ensure that allowances can be adjusted downwards if there is no longer a need for the ETO to develop one or more of these large transmission projects.

**Benefits:** Allows timely development of important strategic projects whilst protecting consumers from providing PCF for speculative projects.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Type	Evaluative	Same as FD
Output	<p>Delivery of planning consent and Final Needs Case approval for the following projects:</p> <ul style="list-style-type: none"> <li>• E2DC: Torness - Hawthorn Pit; Eastern subsea HVDC link ([redacted])</li> <li>• E4D3: Peterhead - Drax; Eastern subsea HVDC link ([redacted])</li> <li>• E4L5: Peterhead - South Humber; Eastern subsea HVDC link ([redacted])</li> <li>• CGNC: Creyke Beck - South Humber; new 400 kV double circuit ([redacted])</li> <li>• GWNC: South Humber - South Lincolnshire; new 400 kV double circuit ([redacted])</li> <li>• TKRE: Tilbury - Grain and Tilbury - Kingsnorth upgrade ([redacted])</li> <li>• TLNO: Torness - north east England; AC onshore reinforcement ([redacted])</li> <li>• OPN2: Osbaldwick - Poppleton; new 400 kV double circuit and relevant 275 kV upgrades ([redacted])</li> <li>• SCD1: South London - south coast; new 400 kV transmission route ([redacted])</li> <li>• Norwich Main - Bramford ([redacted])</li> <li>• Harker upgrade works ([redacted])</li> </ul>	Only E2DC and E4D3 were included.
Delivery date	End of RIIO-ET2	Same as FD
Totex baseline allowances	£425.7m	N/A
Re-opener	Yes – for new PCF PCDs, or where expected PCF costs are likely to be at least double those provided in baseline allowances.	Same as FD
Reporting method	PCD report Annual RRP reporting	Same as FD
Adjustment mechanism	Ex post review for partial/non-delivery, with fixed percentages assigned to the varying degrees of delivery status. See ET Annex for details.	Fixed percentage proposal was not included in DDs
Companies applied to	All ETOs	Same as FD

Output parameter	Final Determination	Draft Determination
Licence obligation	Special Condition 3.15	n/a

### Incremental Wider Works PCD

**Purpose:** To adjust allowances should the defined deliverables for the Incremental Wider Works projects (IWW) are not delivered in full.

**Benefits:** Protects consumers from paying for works that are not delivered.

Output parameter	Final Determination	Draft Determination
Type	Evaluative	Same as FDs
Output	<p>Burwell main 400kV substation (NOA code: BMM2)                      Bolney and Ninfield 400kV substations (NOA code: BNRC)                      Creyke Beck to Keady route (NOA code: CBEU)                      Elstree to Sundon circuit (NOA code: SER1)                      Hinkley to Bridgewater route (NOA code: HBUP)                      Thornton 400kV substation (NOA code: THS1)                      North east region (NOA code: NEMS)                      Keady – West Burton 2 circuit (NOA code: KWHW)                      Bolney, Lovedean and Fleet 400kV substations (NOA code: SEEU)                      Bramford to Braintree to Rayleigh main circuit 2 (NOA code: BRRE)                      Rayleigh to Tilbury circuit 2 (NOA code: RTRE)                      Turn-in of West Boldon to Hartlepool at Hawthorn pit (NOA code: WHT1)                      Modify the existing circuit that runs from Pelham to Sundon, turning it in to connect at Wymondley Substation. (NOA Code: WYT1)                      Power control device along Blyth to Tynemouth to Blyth to South Shields (NOA Code: NEP1)                      Reconductor 13.75km of Norton to Osbaldwick number 1 400kV circuit (NOA Code: NOR2)                      Power control device along North Tilbury (NOA Code: NTP1)                      Reconductor remainder of Coryton South to Tilbury circuit (NOA Code: CTRE)                      Reconductor of the double circuit that runs from Norwich to Bramford with a higher-rated conductor (NOA Code: NBRE)                      Power control device along Blyth to Tynemouth and Blyth to South Shields (NOA Code: NEPC)                      225MVar Mechanically Switched Capacitor (MSC) at Pelham (NOA Code: PEM1)</p>	All NOA "Proceed" projects from NOA4 and NOA5 under £100m

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
	225MVAr Mechanically Switched Capacitor (MSC) at Pelham (NOA Code: PEM2) 2 x 225MVAr Mechanically Switched Capacitor (MSC) at Rye House (NOA Code: RHM1 & RHM 2) Elstree to Sundon 2 circuit turn-in and reconductoring (NOA Code: SER2) Drax to Thornton 2 circuit thermal uprating and equipment upgrade (hotwiring) (NOA Code: TDH2)	
Delivery date	31st March 2026	Same as FDs
Totex baseline allowances	£332.85m	£522.3m
Re-opener	IWW volume driver and MSIP re-opener. See Chapter 4.	MSIP is same as FD. IWW is new at FDs.
Reporting method	RRP	Same as FD
Adjustment mechanism	Evaluative review of completion report for each deliverable.	Same as FD
Companies applied to	NGET	Same as FDs
Licence condition	Special Condition 3.9	N/A

### Generation Connection Schemes

**Purpose:** To adjust allowances should the defined deliverables for these Generation Connection schemes, not covered by the volume driver, not be delivered in full.

**Benefits:** Protects consumers from paying for works that are not delivered.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Type	Evaluative	Same as FDs
Output	NGT20089 – The project will connect >3000MW of generation in two stages.	We consulted on PCD proposals in table 38 of the NGET annex in our Draft Determinations.
Delivery date	Specified in the licence	Same as FDs
Totex baseline allowances	Confidential – will be finalised in Licence	Same as FDs

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Re-opener	No specific Reopener	Same as FDs
Reporting method	RRP	Same as FDs
Adjustment mechanism	Evaluative review of completion report for each deliverable.	Same as FDs
Companies applied to	NGET	Same as FDs
Licence condition	Special Condition 3.21	N/A

### **Demand Connection Schemes**

**Purpose:** To adjust allowances should the defined deliverables for these Demand Connection Schemes, not covered by the volume driver, not be delivered in full.

**Benefits:** Protects consumers from paying for works that are not delivered.

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Type	Evaluative	Same as FDs
Output	No PCDs	We consulted on PCD proposals in table 39 of the NGET annex in our Draft Determinations
Delivery date		Same as FDs
Totex baseline allowances	Confidential – will be finalised in Licence	Same as FDs
Re-opener	No specific reopener	Same as FDs
Reporting method	RRP	Same as FDs
Adjustment mechanism	Evaluative review of completion report for each deliverable.	Same as FDs
Companies applied to	NGET	Same as FDs
Licence condition	Special Condition 3.20	N/A

### **Substation Auxiliary Interventions UIOLI**

**Purpose:** To ensure any unused funding for replacing NGET’s Standby Diesel Generators and LVAC Boards is returned to the consumer.

**Benefits:** Protects consumers from overpaying for works which are costed inaccurately or for works which are not delivered.

Output parameter	Final Determination	Draft Determination
Type	UIOLI	We proposed to reject all works which were listed in a 5-10 year replacement windows as we had limited confidence that all works proposed by NGET would be required.
Output	Standby Diesel Generator and LVAC board replacement.	
Delivery date	30th March 2026	
Totex baseline allowances	£31m	
Re-opener	No	
Reporting method	RRP	
Adjustment mechanism	UIOLI	
Companies applied to	NGET	
Licence condition	Special condition 3.28	

### Instrument Transformers PCD

**Purpose:** To ensure allowances are adjusted down if NGET does not deliver in full the replacement of instrument transformers based on the following drivers: PCB-filled, Dissolved Gas Analysis (DGA) condition, SF6 leakage and asset family issues.

**Benefits:** Protects consumers from paying for works which are not delivered.

Output parameter	Final Determination	Draft Determination
Type	Mechanistic	We proposed to reject NGET's request for assets listed in a 5-10 year replacement window. We note that NGET had an error in its submission regarding PCB filled assets.
Output	A specific list of assets to be replaced based on drivers including PCB filled, DGA condition, and SF6 leakage. A volume of assets to be replaced for asset family issues.	
Delivery date	31st March 2026	
Totex baseline allowances	£39.57m	
Re-opener	No	
Reporting method	RRP	
Adjustment mechanism	At the end of the T2 period will review NGET IT delivery. If there is any under-delivery we will undertake following: <ul style="list-style-type: none"> <li>For defined assets on the specific replacement list, a deduction based on the individual unit type and voltage will be made, based on volume not delivered and the associated unit cost.</li> </ul>	

Output parameter	Final Determination	Draft Determination
	<ul style="list-style-type: none"> <li>For family-based instrument transformers, we will use an average unit cost.</li> <li>Any delivered units will be subject to TIM adjustments.</li> <li>There is no upward adjustment factor.</li> </ul>	
Companies applied to	NGET	
Licence condition	Special Condition 3.24	

### Switchgear Other (Bays) PCD

**Purpose:** To ensure allowances are adjusted down if NGET does not deliver in full the intervention of switchgear other (Bay) assets.

**Benefits:** Protects consumers from paying for works which are not delivered.

Output parameter	Final Determination	Draft Determination
Type	Mechanistic	No PCD proposed
Output	[redacted] bay assets including: Refurbishment of Disconnectors and Earth Switches at 400kV, 275kV and 132kV; Replacement of 132kV Disconnectors and earth switches; Replacement of surge arrestors at different voltages.	
Delivery date	31st March 2026	
Totex baseline allowances	£59.89m	
Re-opener	No	
Reporting method	RRP	
Adjustment mechanism	<p>At the end of the T2 period we will review the delivery of all Switchgear Other (Bay) assets. If there is any under-delivery we will undertake following:</p> <ul style="list-style-type: none"> <li>Allowance minus volumes not delivered. This will be broken into 5 categories, with the deduction based on volume not delivered in each category and the associated unit cost.</li> <li>The categories are based on close/common costs to minimize reporting issues.</li> <li>There is no upward adjustment factor.</li> </ul>	

Output parameter	Final Determination	Draft Determination
Companies applied to	NGET	
Licence obligation	Special Condition 3.25	

### Protection and Control PCD

**Purpose:** To ensure allowances are adjusted down if NGET does not deliver in full certain Protection and Control works.

**Benefits:** Protects consumers from paying for works which are not delivered.

Output parameter	Final Determination	Draft Determination
Type	Mechanistic	No PCD proposed
Output	A defined number and intervention types for Protection and Control replacement and refurbishment	
Delivery date	31st March 2026	
Totex baseline allowances	£337.95m	
Re-opener	No	
Reporting method	PCD report plus RRP	
Adjustment mechanism	<p>At the end of the T2 period we will review NGET's P&amp;C interventions. If there is any under delivery, we will undertake following:</p> <ul style="list-style-type: none"> <li>• NGET have 25 individual asset categories and associated interventions. The PCD will reference the individual asset type and associated intervention with a volume and associated unit cost. Please note, there are no specific named assets within the PCD.</li> <li>• We have desegregated the refurbishment and replacement activities to ensure that there are no windfall gains from alterations to delivery. We note that if NGET find they are required to deliver a replacement, the refurbishment scope will have been exceeded, therefore no funding recovery would take place in that circumstance.</li> <li>• Where a volume is not delivered as planned, the PCD will result in the recovery of the funding associated with those works based on the volume</li> </ul>	

Output parameter	Final Determination	Draft Determination
	not delivered and the associated unit cost. <ul style="list-style-type: none"> <li>There is no upward adjustment factor.</li> </ul>	
Companies applied to	NGET	
Licence obligation	Special Condition 3.26	

### Overhead Lines Conductor Replacement PCD

**Purpose:** To ensure allowances are adjusted down if NGET does not deliver in full the replacement of [redacted]km of Aluminium Steel Core Reinforced (ACSR) Core Greased Conductors and [redacted]km of Aluminium Composite Core Conductor (ACCC).

**Benefits:** Protects consumers from paying for works which are not delivered.

Output parameter	Final Determination	Draft Determination
Type	Mechanistic	No PCD proposed
Output	Replacement of [redacted]km of ASCR Core Greased Conductor, [redacted]km of ACCC	
Delivery date	28th Feb 2026	
Totex baseline allowances	£372m	
Re-opener	No	
Reporting method	RRP and PCD Report	
Adjustment mechanism	At the end of the T2 period we will review NGETs delivery of Conductor replacement. If there is any under-delivery we will undertake following: <ul style="list-style-type: none"> <li>For under delivery of either types of conductor this will be deducted from NGET at the cost assessed unit rate for conductor replacement which has been approved by our cost assessment.</li> <li>There is no upward adjustment factor.</li> </ul>	
Companies applied to	NGET	
Licence obligation	Special Condition 3.27	



## Deliver an environmentally sustainable network

2.6 This section sets out our decisions for each of NGET’s outputs related to enabling the transition towards a smart, flexible, low cost and low carbon energy system for all consumers and network users in RIIO-ET2.

### Environmental Action Plan (EAP) and annual environmental report (AER)

**Purpose:** To ensure that the ETOs take responsibility for the environmental impacts arising from their networks and are more transparent in what they are doing to mitigate these.

**Benefits:** These mechanisms will support cross-sector consistency and greater environmental ambition from the companies.

#### *ODI-R on business carbon footprint (BCF) reduction target*

Output parameter	Final Determinations	Draft Determinations
ODI type	To set a common reputational incentive for NGET on their respective BCF reduction targets	Same as FD
Measurement	NGET's BCF comprising scope 1 and 2 emissions excluding electricity losses (based on GHG Protocol Corporate Standard) measured in tonnes of carbon dioxide equivalent emissions (tCO2e)	BCF reduction targets proposed by licensees in their EAPs
Performance target	NGET's BCF reduction target for the end of RIIO-2 (interpolated from each licensee’s science-based. <sup>9</sup> target validated by the SBTi)	Same as FD
Reporting method	Annual RRP reporting and the AER	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	N/A	N/A

<sup>9</sup> For more information on the Science Based Target Initiative: <https://sciencebasedtargets.org/about-us#/who-we-are>

*NGET's EAP commitments*<sup>10</sup>

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
EAP commitments	We are accepting all NGET's EAP commitments (that are not also a bespoke LO, PCD, ODI or UM) for: <ul style="list-style-type: none"> <li>• BCF reduction and related initiatives</li> <li>• Sustainable resource use, recycling and reducing waste</li> <li>• Reducing pollution to the local environment</li> <li>• Enhancing biodiversity and natural capital</li> </ul>	Same as FD
Measurement	Milestones and metrics as specified in the licensee's EAP.11	Same as FD
Performance target	Targets as specified by the licensee in its EAP	Same as FD
Reporting method	AER	Same as FD
Applied to	All ET sector companies	Same as FD
Licence condition	N/A	N/A

*AER Licence Obligation*

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Licence obligation	New requirement for the licensee to report in its AER on its progress against its EAP commitments, relevant ODIs, PCDs, UMs and to provide an update on the environmental impact of its network.	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 9.1	Same as FD

**Environmental Scorecard ODI-F**

**Purpose:** To incentivise NGET to outperform the RIIO-2 targets set out in its EAP.

**Benefits:** NGET will further reduce carbon emissions, improve the local environment, and reduce resource use for the benefit of existing and future consumers.

<sup>10</sup> 'EAP commitments' is the term we have given to the initiatives that the ETOs included in their respective EAPs to improve their environmental performance that were not otherwise specified as one of the components in the RIIO-2 output framework described in Chapter 4 of the FD Core Document, i.e. licence obligations, price control deliverables or output delivery incentives. EAP commitments will have a formal status in the reporting guidance that we are developing for the AER.

<sup>11</sup> NGET's EAP, <https://www.nationalgrid.com/uk/electricity-transmission/document/131996/download>

Final Determination

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
ODI type	Financial	Same as FD
Incentive type	Reward and penalty	Same as FD
Performance measure	Percentage change in the following impact areas: <ul style="list-style-type: none"> <li>• Business mileage emissions</li> <li>• Office and operational waste recycling</li> <li>• Office waste reduction</li> <li>• Office water use reduction</li> <li>• Environmental value of non-operational land</li> <li>• Biodiversity net gain on new network projects</li> </ul>	Additional measure for operational transport emissions
Performance target	Annual reward and penalty thresholds are set out in Appendix 1 for impact areas a) to f).	Same as FD
Incentive value	Incentive is calculated by comparing actual percentage change in impact areas to annual performance reward/penalty thresholds. If actual percentage change is above or below relevant threshold, NGET will receive a reward or a penalty. There is no reward or penalty if the actual percentage change is between the first penalty threshold and the first reward threshold. Incentive rates are based on the economic value of percentage change in each impact area calculated at the threshold (see Appendix 1 for information on economic values used to set incentives). TIM is applied to overall payment.	We consulted on two options for calibrating incentive rates: <ul style="list-style-type: none"> <li>a) Economic value of impact</li> <li>b) Cost plus approach</li> </ul>
Cap	Circa £4.0m p.a. (before TIM)	Same as FD
Collar	Circa -£4.0m p.a. (before TIM)	Same as FD
Reporting method	Annual RRP reporting and AER	Same as FD
Applied to	All ETOs	We proposed that the ODI-F would only apply to NGET – see ET Annex Chapter 2 for further information.
Licence condition	Special condition 4.6	N/A

Final determination decision rationale and summary of consultation responses

- 2.7 We have decided to implement our DD proposal on an Environmental Scorecard ODI-F, with some modifications to the proposal in NGET’s BP.
- 2.8 We received responses on the ODI-F and our proposed modifications from two network companies, a user group, an advisor to government on the natural

- environment, and a consumer group. All five stakeholders agreed that the ODI-F should be in the interests of consumers if it encourages NGET to deliver beyond the commitments in their EAP. However, three stakeholders noted that it is important that incentives are proportionate to the outcomes achieved and do not double up on other potential policy interventions and the benefits of lower operational costs.
- 2.9 Four stakeholders also supported our proposal to re-calibrate incentives for each impact area, with a preference for setting these as the value of the environmental benefit rather than on an abatement cost plus margin approach. This is because the former would ensure rewards reflect the benefits of NGET's actions and are more aligned with stakeholders' priorities.
- 2.10 NGET preferred its proposal for a single incentive, covering all scorecard areas, because they consider it reflects their stakeholders' preferences, provides a stronger focus, and avoids having to calculate separate incentives for each impact area. NGET also highlighted that if we decide to adopt an individual incentive rate for each impact area that it would be unnecessary to weight the areas of waste recycling, waste reduction, and water use, as we proposed, because the incentive rate would reflect the value of benefit/disbenefit.
- 2.11 Three stakeholders also supported our DD proposal to re-state the measure of alternative fuel/electric vehicle conversion of the operational fleet to a measure on reducing operational fleet emissions. This is because the latter is a better indicator of environmental impact and would also equalise incentives across the different ways of reducing fleet emissions.
- 2.12 Having considered responses on the ODI-F, we were minded to adopt a measure of operational fleet emissions reduction in the ODI-F rather than a measure of conversion to alternative fuel vehicles. In our follow up engagement with NGET on the information needed to make this change, NGET said that there would be a small risk to applying a financial incentive to fleet emissions because a small proportion of these are outside of its control, i.e. personal use of vehicles by employees. They wanted to retain the measure on the conversion of fleet to alternative fuel/electric vehicles.
- 2.13 However, we do not think it is appropriate to incentivise an 'input' in the environmental scorecard. As highlighted by stakeholders, we think there is greater

merit in setting an incentive to promote different ways of reducing fleet emissions. We also consider there could be issues of overlapping policy interventions, particularly with respect to the uptake of electric vehicles. Therefore, we have decided not to include this impact area in NGET's Environmental Scorecard ODI-F. As a result, the ODI-F will cover only six categories instead of the seven that we consulted on in DD.

2.14 We have also decided to adopt an individual incentive rate for each impact area as set out in Appendix 1. The incentive rates for the first five areas listed in the Environmental Scorecard ODI-F table are based on an estimate of the economic value of the change in the impact area. This is our preferred option because the rates reflect the value of the environmental benefit and incentivise different ways of achieving the environmental benefit. The incentive rate for the sixth impact area, biodiversity net gain on new projects, will be based on the replacement cost plus a 10% margin. We consider that this is a pragmatic option because of the significant challenges of monetising biodiversity gain, which would include its non-use value, as well as its direct use value. [12](#)

2.15 We have decided not to apply any weighting to the waste and water impact areas that we highlighted in DD. We agree with NGET that this is unnecessary because individual incentive rate based on an estimate of the economic value of the environmental benefit will eliminate the concern about excessive rewards.

### **Insulation and interruption gas (IIG) leakage ODI-F**

**Purpose:** To incentivise a reduction in leakage of SF6 and other IIGs from assets on the transmission network, and to support the transition to low greenhouse gas alternative IIGs.

**Benefits:** Reduction in the volume of harmful leakage of greenhouse gas emissions from GB's Electricity Transmission network.

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<sup>12</sup> Non-use value is the value that is not associated with human use, either direct or indirect, of the environment, its resources or services. Direct use value includes the ways in which biodiversity is used or consumed by humans eg food provision or carbon sequestration, as well as the way it contributes to well-being of human through recreation, aesthetic appreciation.

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Final Determination

Output parameter	Decision	Draft Determination
ODI type	Financial	Same as FD. Decided at SSMD.
Incentive type	Reward and penalty	Same as FD. Decided at SSMD.
Performance measure	IIG emissions leakage below the annual target are rewarded, with a penalty applied for emissions leakage above the target.	Same as FD. Decided at SSMD.
Performance target	<ul style="list-style-type: none"> <li>The baseline tCO<sub>2</sub>e target for year 1 of RIIO-ET2 will be calculated from multiplying NGET's IIG inventory at the end of RIIO-ET1 by the IIG Baseline Leakage Rate which has a value of 1.18% (the average leakage rate from 2013-20 with a 10% improvement factor) and by the tCO<sub>2</sub>e conversion factor.</li> <li>Baseline tCO<sub>2</sub>e targets for years 2 and 5 of RIIO-ET2 will be the year 1 baseline tCO<sub>2</sub>e target adjusted for the forecast abatement of interventions approved through the Defined SF6 Asset Interventions funded in baseline, the MSIP or Net Zero reopeners, asset disposals and justified IIG asset additions.</li> </ul>	We proposed to apply a 15% improvement factor to the average leakage rate from 2013-20 that is used to set the baseline tCO <sub>2</sub> e target for year 1. See Chapter 2 of ET Annex.
Incentive value	<ul style="list-style-type: none"> <li>Reward/penalty calculated by multiplying the value of CO<sub>2</sub> equivalent (using the Non-Traded Carbon price), for every ton over or below the target.</li> <li>TIM is applied to the calculated annual incentive.</li> </ul>	Same as FD
Cap	N/A – Incentive value is based on the central estimate of the Non-Traded Carbon Price.	N/A
Collar	N/A	N/A
Reporting method	Annual RRP reporting	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 4.3	N/A

**Visual amenity in designated areas**

**Purpose:** To fund mitigation projects that reduce the visual amenity impacts of existing infrastructure in National Parks, Areas of Outstanding Natural Beauty and National Scenic Areas.

**Benefits:** To restore the quality of visual amenity in National Parks, Areas of Outstanding Natural Beauty and National Scenic Areas for the enjoyment of current and future consumers.

Final Determination

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Any time during the price control	Same as FD
Re-opener materiality threshold	Projects that reduce the impacts of existing transmission infrastructure on the visual amenity of National Parks, Areas of Outstanding Natural Beauty and National Scenic Areas	Same as FD
Authority triggered re-opener?	No	Same as FD
Additional requirements	Total expenditure cap of £465m in 2018-19 prices for all TOs' RIIO-ET2 mitigation projects. Expenditure cap includes £7.5m UIOLI allowance per TO for projects that utilise landscaping and environmental enhancement to mitigate visual impacts of existing infrastructure.	Same as FD
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 3.10	N/A

**Net Zero & Re-opener Development UIOLI**

**Purpose:** To enable network companies to fund early design and pre-construction work. It also allows GD and GT to undertake small Net Zero facilitation projects.

**Benefits:** Ensures that network companies are equipped to deal with the Net Zero challenge, and can act quickly to changing demands on the energy system and support quicker project delivery.

Parameter	Final Determination	Draft Determination
Type	Mechanistic	This UIOLI allowance was not proposed in our Draft Determinations.
Output	No specific outputs set – A use-it-or-lose-it (UIOLI) allowance that should be spent in accordance with the Net Zero and Re-opener Development Fund governance document.	
Delivery date	31 Mar 2026	

Parameter	Final Determination	Draft Determination
Totex baseline allowances. <sup>13</sup>	£16m	
Re-opener	No	
Reporting method	Annual RRP reporting, alongside reporting requirements for individual projects set out in the forthcoming Governance Document	
Adjustment mechanism	Formula defined in the licence	
Companies applied to	All ET, GT and GD companies	
Licence obligation	Special Condition 5.4	

### Net Zero Carbon Construction UIOLI

**Purpose:** To fund net zero carbon emissions on capital construction projects and claw back any unused funding.

**Benefits:** To meet stakeholder expectations to achieve net zero capital carbon and ensure consumers only pay for actually offset emissions.

#### Final Determination

Output parameter	Decision	Draft Determination
Output	Offset residual emissions to achieve Net Zero carbon emissions on capital projects in RIIO-ET2 Year 5	Same as FD
Delivery date	31st March 2026	Same as FD
Totex baseline allowances	£2.5m	Same as FD
Re-opener	No	Same as FD
Reporting method	Annual RRP reporting	Same as FD
Adjustment mechanism	UIOLI	Same as FD
Companies applied to	NGET	Same as FD
Licence condition	Special Condition 3.17	N/A

#### Final Determination rationale and Draft Determination responses

2.16 We have decided to set a £2.5m UIOLI allowance for NGET to offset carbon emissions on capital construction projects in order to achieve net zero emissions in Year 5 of RIIO-ET2.

<sup>13</sup> Figures have been rounded down



- 2.17 We received two responses to our Draft Determination proposals, from NGET and a consumer group. NGET supported our Draft Determination and clarified that the allowance was only for construction projects in Year 5 of the price control, while the consumer group broadly supported the proposal provided it has stakeholder support and efficiently achieves its aim. We are satisfied that achieving net zero emissions on construction projects meets NGET’s stakeholders’ expectations. We will assess whether NGET has achieved this goal efficiently as part of RIIO-ET2 close out.
- 2.18 In our Draft Determination, we proposed attaching this allowance to a PCD. Following further consideration and discussion at a working group, we no longer consider this appropriate as it would be inconsistent with our treatment of other UIOLI allowances, which do not have associated PCDs. We have instead decided set a UIOLI allowance without a PCD for this activity, and UIOLI mechanism whereby any unused allowance is returned to consumers remains the same.

### **SF6 Asset Intervention PCD and re-opener**

**Purpose:** To hold NGET to account for the funding of a large-scale intervention programme for badly leaking assets containing SF6. The programme aims to reduce the direct network emissions of SF6 over RIIO-2.

**Benefits:** To enable the reduction of the volume of harmful leakage of greenhouse gas emissions from NGET's network, and to facilitate progress towards its long-term commitment of Net Zero emissions.

#### Final Determination

<b>Output parameter</b>	<b>Decision</b>	<b>Draft Determination</b>
Type	Evaluative PCD and Re-opener	Evaluative PCD
Output	Delivery of site-specific interventions on assets containing SF6, set out in Table 6.	We consulted on setting a PCD based on works to achieve a 33% reduction in annual SF6 emissions by the
Delivery date	Site-specific delivery dates, set out in Table 6	
Totex baseline allowances	£87.14m for site-specific works set out in Table 6	
Reporting method	PCD report & annual RRP	

<b>Output parameter</b>	<b>Decision</b>	<b>Draft Determination</b>
Adjustment mechanism	PCD: an ex-post review to determine outputs delivered, with deductions applied for site specific interventions not delivered.  Re-opener: Authority and ETO triggered adjustment mechanisms	end of RIIO-2, subject to NGET providing a well-justified SF6 asset intervention programme plan ahead of September 2020.
Re-opener window	January 2022, 2023 and 2024	N/A
Re-opener materiality threshold	0.5% of average annual ex-ante base revenue	N/A
Authority triggered re-opener?	Both Authority and NGET	N/A
Additional requirements	Re-opener can only be triggered where there has been a material change in circumstances in the site-specific outputs, including NGET seeking to use alternative IIGs (not SF6), to retro-fill or replace assets.	N/A
Companies applied to	NGET	Same as FD
Licence condition	Special Condition 3.28	N/A

**Table 6: Site-Specific Asset Interventions**

<b>Site</b>	<b>Output</b>	<b>Delivery Year</b>
Osboldwick	Gas Insulated Busbar (GIB) Refurbishment	2022
Eaton Socon	Targeted Refurbishment	2024
Eggborough	Targeted Refurbishment	2023
Rassau	Gas Insulated Switchgear (GIS)/GIB Refurbishment/Resealing	2023
Dinorwig	Targeted Repair	2022
Northfleet East	GIS/GIB Refurbishment	2025
Lackenby	GIB Refurbishment	2024
Littlebrook	GIB Refurbishment	2024
Sizewell	Targeted repair in T2 (replace in T3)	2026
Norton	GIB Refurbishment	2025

**Final Determinations rationale and Draft Determination responses**

2.19 We received two responses in this area. One consumer body supported the bespoke measure, provided it is not administratively costly, had sufficient stakeholder support and measurable environmental benefits. We also received a response from NGET, outlining its asset intervention plan for the PCD and funding

request of £657.19m<sup>14</sup>. This would allow an abatement of approximately 16,000kg of SF6 by 2026, to allow NGET to achieve a 33% reduction in emissions compared to the 2018/19 baseline, and to address an expected increase in network emissions during the RIIO-ET2 period.

- 2.20 The asset intervention plan and associated evidence provided by NGET does not sufficiently demonstrate well-justified and cost-efficient plans for the full 33% emission reduction target. However, we consider NGET has demonstrated the challenge of addressing the harmful emissions from ageing SF6 assets on its network, and the need for intervention, in order to make significant progress toward its SBT during RIIO-ET2. We have therefore decided to provide baseline funding of £87m (excluding indirect opex and with a 5% efficiency challenge to NGET's requested costs) for interventions at 10 sites as set out in Table 6, which are in imminent need of intervention. We will track the emissions abatement for these sites against expected levels of abatement when considering potential PCD adjustments. We will also seek to ensure that funded sites and their expected levels of abatement are considered under the IIG leakage incentive, to reduce the risk of overlap.
- 2.21 We have also decided to approve funding of £2.74m for palliative works, funded as Network Operating Costs (see Chapter 3). We are satisfied that NGET demonstrated in its asset intervention plan, that funding at these sites at this level will be efficient.
- 2.22 We have not approved NGET's full request to fund 'flexible interventions' under the PCD. We recognise the urgency to continue the works to reduce SF6 leakage, however, in our view, NGET has not demonstrated the most efficient approach to both short- and long-term SF6 leakage abatement. Although leak abatement efforts have improved, it is not guaranteed that the leaks will not return in future. NGET needs to develop an asset intervention plan that focuses on achieving the long-term goal of reducing the inventory of SF6 on its network. This does not exclude asset interventions to abate significant leaks, but it does require NGET to provide a more assured long-term investment.
- 2.23 Although we have provided baseline funding to allow imminent work of environmental importance to go ahead, there remains some uncertainty in the

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<sup>14</sup> This included asset interventions at a number of fixed and palliative sites and flexible interventions.

costs and outputs. Therefore, we have decided to introduce a re-opener, which follows the default parameters for re-openers set out in the Core Document, to adjust the baseline funding and deliverables for this area of work in the event of material changes in circumstances.

2.24 To facilitate further network investment required to abate harmful SF6 emissions we have added SF6 abatement as a potential trigger under the MSIP reopener (see Chapter 4 of the ET Annex). This re-opener will also be available to SPT and SHET. We expect the ETOs to have investigated and include in any submission under the re-opener, analysis of the following:

- Modelling of short- and long-term leakage rates for SF6 assets
- Scenario analysis to identify candidates which would benefit from SF6 repair/refurbishment works
- Scenario analysis to identify candidates which would benefit from SF6 replacement works
- Analysis to identify candidate assets for retro-fill with an SF6 alternative. These will inform:
  - A short-term (RIIO-ET2) strategy and associated cost
  - A long-term multi-regulatory period strategy and associated cost.

2.25 The Net Zero re-opener outlines several specific triggers which are defined as a Net Zero Development. This could potentially include the successful trial of new technologies, such as those using alternative-SF6 IIGs, or other technological advances, which do not fit under the MSIP reopener. If Ofgem considers a relevant Net Zero Development is likely to occur, we may request submissions from TOs in this area.

### **Reducing carbon emissions from operational transport PCD**

**Purpose:** To hold NGET to account to deliver the volume of Electric Vehicles (EVs) and charging infrastructure it has been funded for during RIIO-ET2.

**Benefits:** Reduced carbon emissions from operational transport.

Final Determination

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Type	Evaluative	Same as FD
Output	Purchase 499 EVs Install 1430 standard charge points Install 40 direct current charge points	Same as FD
Delivery date	31st March 2026	Same as FD
Totex baseline allowances	£22.61m	Same as FD
Re-opener	No	Same as FD
Reporting method	PCD report Annual RRP reporting	Same as FD
Adjustment mechanism	Ex post review to determine delivery status	Same as FD
Companies applied to	NGET	Same as FD
Licence condition	Special Condition 3.15	N/A

Final Determinations rationale and Draft Determination responses

- 2.26 We received four responses on our Draft Determinations on EVs and charging infrastructure, most of which were supportive of our proposal to set a PCD for these costs. A consumer group sought clarification that the needs case had been fully justified, and another response suggested opening the provision of charging infrastructure up to competition.
- 2.27 We have set a £22.835m PCD for these costs, and NGET will be required to proceed with the scope of the PCD as set out in Draft Determinations.
- 2.28 In response to the points raised, we are satisfied that the needs case for all charging points has been justified and consider it appropriate that NGET installs the charging infrastructure itself given the nascent nature of the industry and to NGET’s immediate operational requirements.

### 3. Setting baseline allowances

#### Introduction

- 3.1 This chapter sets out our decision on baseline Totex allowances for the different cost areas within NGET's BP submission. We have set baseline Totex allowances for NGET only where we are satisfied of the need for and certainty of the proposed work, and where there is sufficient certainty of the efficient cost of the work.
- 3.2 Table 7 below sets out the RIIO-ET2 Totex allowances for NGET, grouped by the main cost categories within the business plan data templates (BPDT).

**Table 7: NGET Totex components**

Totex category <sup>15</sup>	NGET proposed baseline (£m)	Ofgem DD baseline (£m)	Ofgem FD baseline (£m)
Load related capex	1115.6	891.0 <sup>16</sup>	1462.9 <sup>17</sup>
Non-load related capex	2650.9	744.1 <sup>18</sup>	1765.8 <sup>19</sup>
Non-op capex	376.9	175.4	273.5
Network operating costs	1174.6	549.0	723.4
Indirect costs	1509.4	1062.1	1288.1
Other Costs	263.0	158.0	180.0
Ongoing efficiency	-	-248.0	-316.5
Total	7090.3	3331.6	5377.2

- 3.3 Of this baseline allowance, we have linked over 55% to outputs with mechanisms such as price control deliverables (PCDs), volume drivers or use-it-or-lose-it

<sup>15</sup> Note reference to the company's forecast costs for projects within load and non-load related capex sections include Indirect opex costs related to the project, where the companies have provided these as part of gross costs. All Ofgem capex allowances for these projects are stated excluding Indirect opex costs, which are allowed separately as part of Indirect opex allowances.

<sup>16</sup> As published in Draft Determinations, but this overstated pre-construction allowances by £75m and the NGT200184 scheme allowance by £24.8m.

<sup>17</sup> This includes items not originally included in NGET proposed baseline or in Draft Determinations, such as an additional £367m for NOA5 projects. It also includes a **provisional** £87.4m positive adjustment for a shortfall in allowances for load-related capex work that straddles RIIO-1 and RIIO-2, which is subject to true-up at RIIO-1 close-out.

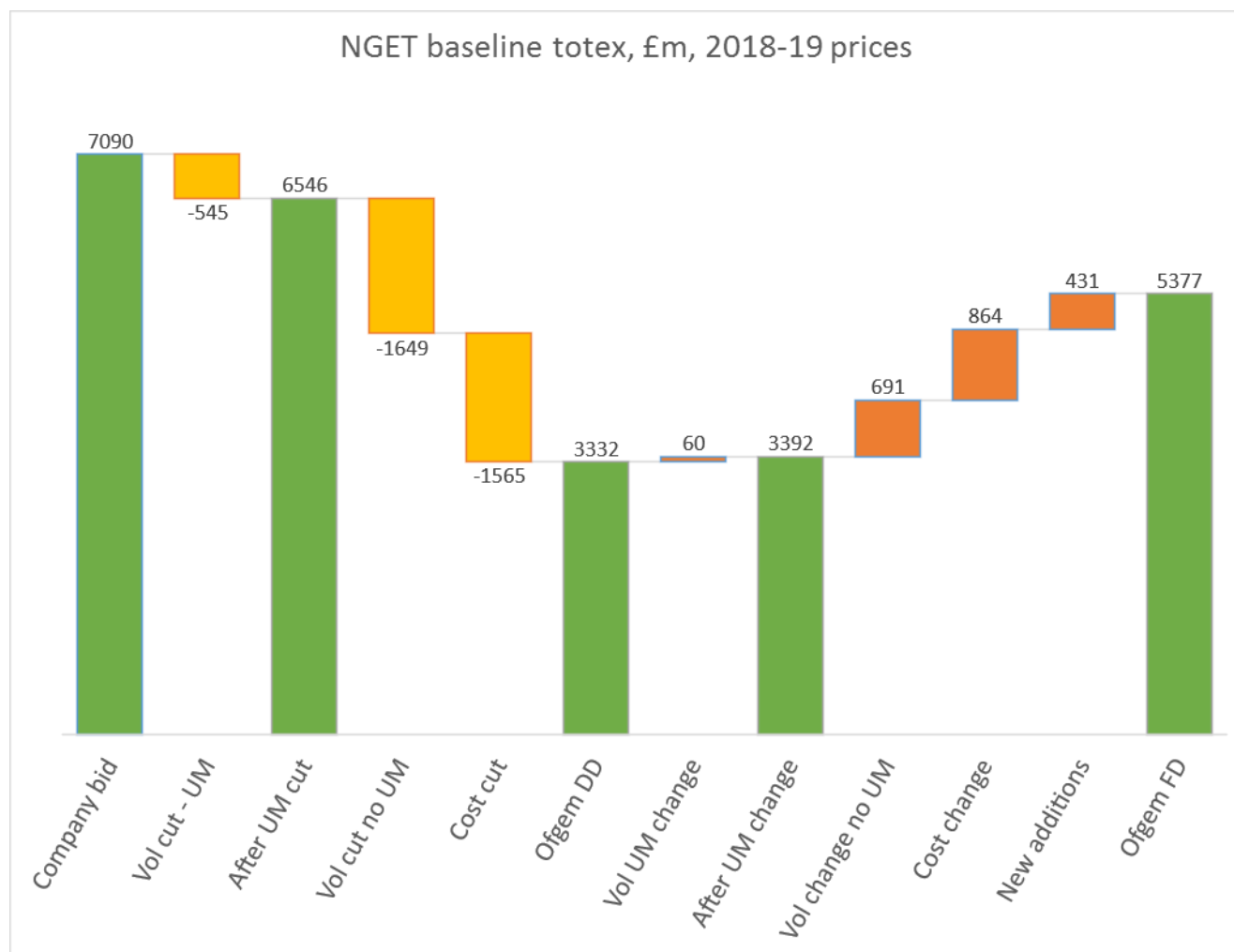
<sup>18</sup> As published in Draft Determinations, but this understated allowances for completion of RIIO-ET1 schemes by ~£90m and circuit breaker allowances by ~£25m.

<sup>19</sup> This includes items not originally included in NGET proposed baseline or in Draft Determinations, such as an additional £87m for SF6 works. It also includes a £165.8m negative adjustment for excess allowance in RIIO-1 for non-load related capex work which straddles RIIO-1 and RIIO-2.

(UIOLI) to reduce allowances for non-delivery. We have also set a number of uncertainty mechanisms to assess further potential expenditure during RIIO-ET2.

3.4 Figure 2 shows how we have made adjustments to NGET’s requested baseline funding from the time of initial business plan submission to Final Determinations.

**Figure 2: NGET baseline Totex**



- 3.5 Of the total baseline Totex allowance that is subject to the BPI and TIM mechanisms, we have decided that £2921.9m is of high confidence and £2714.8m of lower confidence<sup>20</sup>. This results in a sharing factor for the TIM of 33%.
- 3.6 Where we have decided that where lower-confidence costs removed by us are poorly justified, these costs are subject to a BPI Stage 3 penalty, which totals £37.3m across their plan.
- 3.7 The following sections set out our decisions on NGET’s allowances and details any differences from the allowances requested by NGET.

## Capital Expenditure (Capex)

- 3.8 We have reviewed NGET’s submitted capital expenditure programme along the main cost categories of load related (LR) capex, non-load related (NLR) capex and non-operational capex.

### Final Determination

<b>Capex category</b>	<b>NGET proposed baseline (£m)</b>	<b>Work Volume Reductions (£m)</b>	<b>Cost Reductions (£m)</b>	<b>Work Volume Reductions subject to UMs (£m)</b>	<b>Ofgem Baseline allowances (£m)</b>
Load related capex	1115.6 <sup>21</sup>	78.8	5.5	0	1462.9
Non-load related capex	2650.9	647.8	237.3	0	1765.8
Non-operational capex	376.9	0	30.8	72.6	273.5

<sup>20</sup> Note, certain allowances for example, those covered by cross-period funding mechanisms or adjustments like Ongoing Efficiency are not subject to the BPI and TIM mechanisms.

<sup>21</sup> NGET’s made additional request of £431.6m (taking total proposed baseline to £1547.2m) following Draft Determinations



## **Load related capex**

### Final Determination rationale and Draft Determination responses

#### *Assessment of the need for works*

- 3.9 In our Draft Determinations, we proposed to approve most work volumes for LR capex projects with outputs in the RIIO-ET2 period. The exceptions to this were Wider Works projects whose approval status had been changed by the updated NOA process and some elements of protection and control coordination. NGET submitted requests for additional LR wider works projects following the publication of the updated NOA report in early 2020. We have reviewed these and have decided to allow the submitted volumes in full. These will have associated PCDs so that if the need for them changes following further NOA revisions, NGET will only be remunerated for the efficient costs it has incurred up to that point.
- 3.10 In addition, at Draft Determinations we discussed the means by which further wider works projects that arise during the RIIO-ET2 period will be reviewed and remunerated. We have decided that allowances will be derived through the use of unit cost allowances for incremental capacity, though with a number of safeguards to protect consumers or NGET from undue windfall gains or losses. See Chapter 4 for further details.
- 3.11 Our policy on generation and demand connections remains unchanged from that proposed in Draft Determinations – these will be subject to a revenue driver mechanism unless deemed as outliers as set out in Chapter 4.
- 3.12 There are a number of residual elements of the LR capex Draft Determination that we have considered further following engagement with NGET, as set out below.
- 3.13 Protection and control coordination – we proposed in Draft Determinations to provide funding for a study on the future work required, and that any identified works could be considered under the MSIP reopener. NGET disagreed with the proposed removal of all funding for future works that would have been informed by the study. We have considered this response but believe there to be still too much uncertainty, not just in the works that may result from the study works, but also in the potential cross-over between these works and other areas of NGET’s submission, such as opex and NLRE Protection and Control works. We have

therefore decided to implement the approach proposed in Draft Determinations, but have updated the value of the associated allowance from the £[redacted]m proposed in Draft Determinations to £[redacted]m.<sup>22</sup>.

- 3.14 Wide area monitoring – in Draft Determinations, we proposed to approve these works in full and to attach a PCD. NGET considered the nature of the proposed PCD was too restrictive in that it identified specific sites to be addressed. We agree that a mechanistic PCD is not required due to the mandated nature of the works and the delivery timescales to complete the roll-out.
- 3.15 Site separation – we proposed to allow the requested funding in full and to attach a PCD. However, NGET asked for greater flexibility in the associated PCD. Following further consideration, we have decided to approve funding in full for the sites identified without a PCD.
- 3.16 Harker Site Replacement (LOTI) - NGET originally requested a range of LR schemes at Harker which we proposed in Draft Determinations to approve. However, subsequent additional information from NGET has highlighted a full site replacement may instead be required. There was not enough time between receipt of this information and Final Determinations to enable us come to a final view on the scope, timing and costs in order for baseline funding to be provided. As a result, we have decided that the new proposals for Harker may be submitted through the LOTI process. There are existing connection agreements in place with connection dates in 2022 and 2023; we will ensure that the LOTI process operates to a timetable that enables these connection dates to be met.
- 3.17 Easements – at Draft Determinations, we proposed £14.9m funding due to a lack of evidence to justify the full amount of NGET’s request. Following consideration of new evidence and justification submitted by NGET, we have decided to allow the requested amount in full, with an ex-post true-up of incurred expenditure at RIIO-ET2 close-out. Easement expenditure will not be subject to the TIM.
- 3.18 Pre-Construction Funding for LOTI projects – at Draft Determinations, we proposed £[redacted]m funding for pre-construction related to two potential LOTI projects because of the four projects NGET proposed in its business plan, the two

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<sup>22</sup> Our decision contains an updated value for the costs of conducting detailed studies and analysing the results. The current value (£5.37m) replaces the previous estimate used in Draft Determinations (£4.72m).

others had received NOA 'Stop' signals by the time of our Draft Determinations. After Draft Determinations, NGET submitted request for pre-construction associated with new projects that had been given a "Proceed" signal by the ESO in its 2020 Network Options Assessment. Our Final Determination in this area includes £425.5m of Pre-Construction Funding PCD allowances for all NGET projects that received a 'Proceed' signal in the 2020 NOA. Our overall approach to Pre-Construction Funding is set out in the ET Annex.

- 3.19 Net Zero & Re-opener Development UIOLI – we have decided to provide NGET with a UIOLI allowance of £16m for the development work that may be required in relation to potential MSIP or Net Zero re-opener projects. More detail on this UIOLI can be found in the Core Document.

#### *Cost efficiency assessment*

- 3.20 Our proposed approach at Draft Determinations was to apply our view of efficient asset unit costs derived from benchmarking across the ETOs to determine allowances for projects that have had their needs case accepted. NGET questioned the validity of most of these unit costs, highlighting differences in the way the data had been compiled by the different ETOs, which they claimed undermined the basis of the cost assessment process. Whereas the other ETOs followed our guidance and broke costs down by civil, risk and contingency, and other costs, NGET grouped a large portion of such costs into their asset costs due to their historical method of cost reporting. In light of the different approach adopted by NGET for allocating costs to the disaggregated elements of projects, the more granular approach is no longer viable. Accordingly, as set out in the ET Annex, we have had to revise our approach to cost assessment of NGET's LR (and NLR) capex programme for Final Determinations.
- 3.21 NGET also took a different approach to the Scottish ETOs in respect of the reporting of risk and contingency in their submitted costs. It contended that its costing process only applies project-specific risk estimates for projects that have reached the "Develop and Sanction" stage in their project costing cycle (the fourth stage of a six-stage cycle). Only a small subset of their submission had reached this stage.
- 3.22 We have applied our approach to risk and contingency to those schemes where risk and contingency costs has been identified and reported. We consider that

where asset costs are based on RIIO-ET1 outturns, they will include any crystallised risk and contingency. As a result, we have removed any submitted asset risk costs from these schemes. This has resulted in a £2.4m reduction from NGET's submission. However, there is a general lack of transparency about any inbuilt risk and contingency in NGET's cost forecast beyond these schemes.

- 3.23 In its BP submission, NGET included a reduction of ~2% across its LR programme<sup>23</sup> to reflect its view of where submitted costs had not met the average asset cost suggested by the external benchmarking it commissioned. The cost reduction from the comparative benchmarking of the Scottish ETOs resulted in reductions of up to 2% on their asset costs, despite having commissioned similar independent benchmarking ahead of their BP submissions. However, we also note that in comparison with the NGET costs, which were based on outturn costs, the Scottish ETO costs were largely based on factory gate costs and therefore we would expect these to be subject to less reduction than NGET's.
- 3.24 Additionally, we reduced the risk and contingency in the Scottish ETO submissions by between 0.5 – 1.5% of allowed LRE and NLRE capex. Again, they were able to provide detailed breakdowns of the scope and scale of assumptions underpinning their submissions, so this would seem to provide a minimum level for benchmarking any reduction of NGET's submissions.
- 3.25 We conducted a qualitative assessment of the NGET gross costs as presented through the EJPs. Our view was that in comparison with the Scottish ETO civils costs, NGET's were neither as well developed nor as strongly justified. For the few instances where we were able to make a comparison of similar work between NGET and the Scottish ETOs, we found that NGET's submitted costs were consistently higher.
- 3.26 Our experience of reviewing NGET's historical project submissions would suggest that our view of efficient levels are 8-15% lower than their originally proposed level.
- 3.27 Our inability to apply a mechanistic approach to gauge the efficient costs in NGET's BP submission means we think it's appropriate to apply our regulatory

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<sup>23</sup> On the same basis, NGET proposed ~0.5% reduction across its NLRE submission

judgement on the cost efficiency<sup>24</sup> across their submission. Considering the lack of benchmarking, our inability to scrutinise inbuilt risk and contingency, the lower degree of cost transparency and justification of non-asset costs, and our historical experience of assessing NGET's cost submissions, we have decided to impose a 5% reduction across all lower-confidence elements of the LRE cost submission.

- 3.28 We expect the above-mentioned inconsistencies in cost reporting between the ETOs to be resolved during the RIIO-ET2 period, such that a more compatible and granular set of data can be used to inform RIIO-ET3 allowances.

*High and Lower Confidence proportion of costs in baseline Totex allowance*

- 3.29 Applying the methodology as set out in the Core Document, we have decided that of the £1063.1m baseline allowance for LR capex that is subject to the BPI and TIM mechanisms, all are lower confidence costs.

*BPI Stages 3 and 4*

- 3.30 We considered the information submitted by NGET in our assessment of confidence in its submitted costs for the purpose of the TIM and BPI mechanisms.
- 3.31 Following the publication of our DDs, NGET submitted additional information to support its proposed unit costs, which were used to inform our view of allowances. We reviewed this additional information but did not consider that there was sufficient independent cost information to support the full extent of the unit costs proposed in any asset category. We have therefore classified all LR capex asset costs as lower confidence.
- 3.32 We have also decided to classify as lower confidence non asset costs such as those relating to civil works, preconstruction, and 'other' cost categories within the BPDT submitted by NGET. This is because we have not been able to independently set an efficient cost for these elements, nor did NGET provide sufficient independent cost information for any of these costs to support a high confidence classification.

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<sup>24</sup> This is essentially a "catch-up" efficiency to reflect the inefficiency of current costs. We also apply an ongoing efficiency across Totex to represent the expected future efficiency gains we expect from an efficient operator across the T2 period.

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- 3.33 Of the £1063.1m of NGET's submitted LR capex costs that are subject to the BPI and TIM mechanisms, we have decided to classify all costs as lower confidence. We have made a 5% overall reduction in LR capex submitted costs, but this reflects a broad view of current efficient cost (i.e. excluding ongoing efficiency) in this area and the reduction has not been subject to a BPI Stage 3 Penalty.
- 3.34 As set out in the Core Document, NGET's failure of the BPI stage 1 means that it does not have the opportunity to benefit from stage 4 rewards under the LR capex cost category.

*Provisional RIIO-ET1/RIIO-ET2 crossover funding*

- 3.35 For generation connection projects that cross over RIIO-ET1 and RIIO-ET2, RIIO-ET1 volume drivers will provide funding if those projects complete by the end of the 2nd year of RIIO-ET2. For those that are completed after year 3, the RIIO-ET2 part of the efficient costs are included in the RIIO-ET2 baseline allowance and they will be subject to the RIIO-ET2 volume driver for delivery. For the RIIO-ET1 part, our Draft Determinations position was to address the funding true-up in RIIO-ET1 closeout when all relevant information is available. After Draft Determinations, NGET identified the likely impact of this true-up to be a shortfall of £87.4m in RIIO-ET1 funding.
- 3.36 Noting our position on a similar but opposite (i.e. an excess instead of shortfall of funding in RIIO-ET1) item in the NLR capex category which we have proposed to adjustment in RIIO-ET2 allowance, we consider there is merit in providing a combined forward view of the overall impact on NGET's allowances. We also note that, unlike the NLR item, the LR capex amount can only be ascertained at the time of RIIO-ET1 closeout. We have therefore decided to add a provisional amount of £87.4m to the RIIO-ET2 baseline allowance, subject to a true-up at RIIO-ET1 closeout.

*Summary of LR capex approved projects*

- 3.37 The ET Annex identifies the differing treatments of LR capex projects depending on their start/end years and the type of work. Appendix 1 lists:
- The RIIO-ET1/T2 crossover projects that have allowances through the RIIO-ET2 settlement, but which will need to be trued up with the allowances from the RIIO-ET1 volume driver mechanism

- Those RIIO-ET2 baseline projects that fall under the RIIO-ET2 volume driver mechanism
- The PCDs and UIOLI associated with approved LR projects during the RIIO-ET2 period
- The RIIO-ET2/T3 projects that will be trued-up as part of the RIIO-2 closeout or the setting of RIIO-ET3 process.

### **Non-load related capex**

#### Final Determination rationale and Draft Determination responses

##### *Assessment of the need for works*

- 3.38 At Draft Determinations, we proposed significant cuts to the work volumes in NGET's NLRE submission due to insufficient engineering justification. In response to our Draft Determinations, NGET provided a range of additional information in support of their Business Plan submission, which included further explanation of their use of portfolio-based submissions.
- 3.39 NGET have provided a more comprehensive presentation of needs cases and greater disaggregation of costing. This has addressed many of our concerns in respect of scheme maturity and has allowed us to approve additional work volumes.
- 3.40 The additional information and disaggregation of costs provided by NGET has not changed our view that the majority of NGET's scheme development works are immature. As a result, we have categorised these as poorly justified lower confidence for the purposes of the TIM and BPI mechanisms.
- 3.41 Since Draft Determinations, NGET has provided a wider range of investment drivers which has shown that aspects of the NGET plan had poorly presented but genuine justification for inclusion.
- 3.42 While we accept some aspects of NGET's principle of managing an ageing portfolio of assets, we expect works to address a "bow-wave" of common condition/failure modes to be managed on the basis of the most relevant condition information. Our principal objective is to protect the interests of existing and future consumers, therefore where investment ahead of need to manage future resourcing concerns has been clearly demonstrated and evidenced, including additional funding for the

replacement of assets which may be defined currently as low or medium risk, we have approved these requests.

- 3.43 We note the details pertaining to long -term risk management provided in NGET's submission and in bilateral meetings with us. We will take these details into account in assessing NGET's performance against the required outputs in our RIIO-1 closeout review. This will include NGET's decision-making on asset life extension in some categories, and increased risks in others.
- 3.44 Our decisions on each of the areas of NGET's NLR capex plan and the rationale for them are set out below.
- 3.45 Super Grid Transformers (SGTs) – in Draft Determinations, we proposed to reduce NGET's planned SGTs from [redacted] to [redacted] and to reject the rest as we viewed it uneconomic and inefficient to replace healthy assets. NGET provided significant additional asset health and project data to support their request. This included highlighting assets which had rapidly degraded from their originally reported position. We note that NGET's pessimistic assumption of risk increases are generally driven by asset family issues, which we note are difficult for us to assess. However, we accept and approve the additional 8 units highlighted by NGET as high-risk assets which warrant replacement. We have also decided to approve 3 Static Compensator Transformers, which NGET evidenced as high risk.
- 3.46 Overhead Lines (OHL) Conductor Replacement - We proposed in Draft Determinations to reduce NGET's planned replacement of OHL conductors from [redacted]km to [redacted]km and to reject the rest as, in our view, there was limited evidence to suggest the need for their replacement during RIIO-ET2. In response to our Draft Determinations, NGET provided a significant level of additional data. This included a description of a known failure mechanism for a particular conductor type, descriptions of long-term management and delivery of large asset portfolios, and a statement that there was a [redacted]km minimum replacement requirement to mitigate these risks and to maintain network security and reliability. The vast majority of the [redacted]km minimum level was formed of conductors of the type affected by the described failure mechanism. While we recognise the failure mode, we note that the samples that identified the early by-products of the failure mechanism were several years old, and no evidence was provided that demonstrated that the conductors were approaching end of life.



With this in mind, and in recognition of the need to maintain an acceptable age profile for the portfolio of OHL conductors, we have decided to accept the needs case for the replacement of [redacted]km of OHL conductors. In our review we have decided to approve the project works which are interactive with Scottish Power Transmissions investment plan. Given the high associated costs and limited evidence of actual condition, we have applied a PCD to all OHL conductor works to protect consumers against under-delivery in the RIIO-T2 period.

- 3.47 OHL Fittings – Our Draft Determination proposal was to reduce NGET’s planned OHL fittings replacement works from [redacted]km to [redacted]km and to reject the rest as there was limited evidence to suggest the need for their replacement during RIIO-ET2. Since then, NGET provided additional fittings condition and cost data. However, this evidence has not adequately addressed our concerns about the need for replacement, and so we have decided to implement our Draft Determinations proposal.
- 3.48 Circuit Breakers (CBs) - NGET requested funding for the replacement of [redacted] CBs and the completion of a range of RIIO-ET1 projects. In Draft Determinations, we proposed to approve [redacted] CB replacements where there was a clear asset health driver, and to reject 26 which were reported as healthy. Since then, NGET provided a significant level of additional information on the need for intervention on those 26 CBs. These assets do not appear to be as low risk as presented by NGET’s current risk scoring and we expect the health risk reporting to be updated ahead of RIIO-ET1 close-out for these assets. On the basis that all units are in reality high risk and the proposed intervention is appropriate for the risk, we have decided to approve all [redacted]units that NGET requested.
- 3.49 Shunt Reactors – In Draft Determinations, we proposed to approve NGET’s requested funding for intervention on [redacted] shunt reactors but to reject its request in respect of RIIO-ET3 Shunt Reactor development works. We have considered NGET’s response but consider the evidence provided is insufficient to change our view; therefore, we have decided to implement our Draft Determinations proposal.
- 3.50 Cables (Lead Cables) - NGET requested funding for [redacted]km of Lead cable replacement (Sheffield Ring), which we proposed in Draft Determinations to reject based on the cables being reported as healthy in both RRP and in NGET’s

December 2019 business plan. NGET have provided a significant level of additional detail which clearly demonstrates the cables are higher risk than previously reported. Given this new information on the condition and risks associated with the cables, we have decided to approve this investment. We are concerned as to why these cables were not replaced during RIIO-ET1, which we will consider together with the reporting of cable health as part of wider RIIO-ET1 closeout works.

- 3.51 Instrument Transformers - NGET requested funding to replace [redacted] Instrument Transformers. Our review of the supporting evidence suggested that using NGET's own scoring system, a range of these assets would not require replacement. As a result, in Draft Determinations we proposed to approve [redacted] replacements. Since then, NGET provided a significant level of additional information, including the correction of a number of errors in their original submission. Correcting for these errors, we have decided to approve the replacement of all instrument transformers that NGET suspects contain polychlorinated biphenyls (PCBs). We have also approved all Dissolved Gas Analysis driven ITs and all CTs leaking SF6. Where there is still ambiguity in NGET's data, specifically in relation the Family driven ITs, we have decided to approve 20% of NGETs request for assets which are classified as a 5-10 year replacement priority (indicating replacement most likely required in T3) based on the data provided. We have decided not to approve NGETs request for 75 IT replacements on an emergency basis as we believe this can be managed via our existing approved volume of family ITs. Overall, we have decided to approve the replacement of [redacted] units and have included a PCD to adjust funding if the proposed volume of work does not materialise.
- 3.52 Switchgear Other (Bays) - NGET requested funding for interventions on [redacted] bay assets. In Draft Determinations, we proposed to approve [redacted] bay intervention works based on estimated unit rate costs and the number of bay assets (6) associated with CB interventions. Since then, NGET provided additional information for their bay assets, including relevant detail about their Anticipated Asset Life, informed, in part, by site-based surveys and extrapolation of condition information. In addition, NGET noted that the minimum amount of interventions required in order to maintain network reliability and security was [redacted]. While the additional information provided by the site surveys carried out between July and September 2020 is informative, we note that it only represents a small

sample of the requested bay assets. Having reviewed the available evidence, we have decided to accept NGET's proposed minimum level of interventions but, due to the limited and immature nature of the NGET asset data provided, we have attached a PCD to protect against under-delivery in RIIO-ET2.

- 3.53 Protection and Control (P&C)– NGET proposed a volume of [redacted] interventions on P&C assets. Our Draft Determination position was to approve only the assets which had been labelled as having "performance" issues, which resulted in an approved volume of [redacted] interventions. Subsequently, in bilateral meetings with NGET's specialists, we received a significant level of information which had not been presented before then. NGET also reduced their minimum request from [redacted] assets to [redacted]. NGET's specialists highlighted the investment needs case dealing with common mode failures, P&C obsolescence and support arrangements. This commentary provided valuable justification, not provided in writing, for NGET's minimum requirement, and as result, we have decided to approve the request of [redacted] asset interventions in full. However, because of the significant increase in workload relative to RIIO-ET1 we have concerns over the deliverability of this programme of work, and as a result, will use a PCD, which will adjust allowances in line with actual volumes delivered.
- 3.54 Substation Auxiliary Systems - NGET requested funding for a range of works on substation auxiliary systems. This included Battery Replacement, Diesel Generator Replacement, LVAC Board Replacement and Minor capex works on both Generators and LVAC boards. In Draft Determinations, we proposed to accept half of NGET's request and to reject the remainder due to limited condition data to justify the need for intervention. Since then, NGET provided a significant amount of additional supporting data for Diesel Generator and LVAC boards. This has addressed some of our concerns around potential obsolescence issues. NGET also provided additional information highlighting that much of the needs case is based on obsolescence rather than as-found condition. We accept the need to replace ageing substation auxiliary systems and have decided to approve these works in full. However, due to limited condition-based evidence and limited consistency in costing of Substation Auxiliary Systems, we have decided to fund these under a UIOLI arrangement.
- 3.55 Towers and Foundations - NGET requested funding to undertake 3 workstreams: Tower Painting, Tower Steel Works interventions and Tower Foundations. In Draft

Determinations, we proposed to set an allowance based on RIIO-ET1 outturn expenditure due to insufficient supporting evidence. Since then, NGET provided a significant amount of additional detail, including correcting errors and clarifying the asset data used to support the investment proposal. As a result, we have decided to allow in full the requested funding for Tower Painting. However, for Foundations and Steelwork, we note that for both volumes of work and costs there is a heavy reliance on surveys which have not been completed. This creates a risk of funding work that may not be required. For this reason, we have decided to provide baseline funding of 30% of the requested amount to allow survey works and immediate interventions to continue, and have created a re-opener to facilitate additional funding for Foundations and Steelwork once the surveys are complete. We expect NGET to undertake comprehensive survey works and have detailed condition works to support any re-opener request.

- 3.56 Through Wall and Floor Bushings - NGET requested £14.4m for its Through Wall and Bushing Programme. In Draft Determinations, we proposed to allow funding of £10.44m on the basis that the asset condition data provided did not support the level of intervention proposed. NGET did not provide any additional data for this area, so we have decided to implement our Draft Determination position for Final Determinations.
- 3.57 Tyne Crossing - NGET requested £[redacted]m to underground the OHL crossing the River Tyne. At Draft Determinations, we proposed removing the requested amount from baseline funding and instead, proposed to include this in the MSIP re-opener, which could be triggered once the investment driver, the scope and the costing concerns that we had could be addressed. In response, NGET provided additional information to explain that this scheme was required to meet their licence obligations. No additional information was presented to address our concerns on costs or scope certainty. We have therefore decided to implement our Draft Determinations position and invite NGET to resubmit proposals through a bespoke re-opener when our remaining concerns can be addressed.
- 3.58 Condition Monitoring - NGET requested £22.1m for condition monitoring. While we accept the need for condition monitoring, NGET provided limited evidence on where these would be deployed and how they would be used. We therefore proposed in Draft Determinations to approve £14m. In response, NGET provided a significantly greater level of information on the intended use and application of

condition monitoring. This included providing information on the application and use of future collected data. In light of this additional information, we have decided to allow the full request of £18.65m (direct costs).

- 3.59 SF6 asset interventions - NGET did not make a baseline request for SF6 interventions in their December 2019 submission (outside of CBs and Instrument Transformers). After Draft Determinations, NGET requested £657m for SF6 abatement works split into two categories: Defined Interventions and Flexible Interventions. For the defined works, we see relevant needs cases for intervention. We do, however, note that the long-term strategy for SF6 abatement is not clear. As such, we have decided to part-fund the defined projects by allowing £91.7m baseline funding (subject to further cost assessment), with an attached PCD and re-opener. For the remaining defined interventions and the flexible interventions, funding can be sought via the MSIP re-opener. Detail of the relevant PCD and re-openers is set out in Chapter 2. We expect NGET to have clear and well-articulated long-term plan to reduce not only SF6 leakage from its assets, but its SF6 inventory as well.
- 3.60 Dinorwig-Pentir - NGET requested £[redacted]m to replace the Dinorwig-Pentir cable and substation. Given the reported status of the cables as healthy and limited cost information presented, we proposed in Draft Determinations that these works could be submitted through the LOTI re-opener. In response, NGET provided additional information supporting the needs case for these works. This included additional costing information as well as a number of tender returns which were received by NGET. We note that the Dinorwig-Pentir cables are in poor health and recognise intervention is likely required. We also note the customer and ESO support for this project highlighted in consultation responses. We are, however, concerned that the reporting of the cable health is still inconsistent with the information presented in RIIO-ET1 and as such, we intend to look at this as part of RIIO-ET1 closeout. In our view, the cost information presented is still immature and given recent NGET tender returns which differ in value significantly from NGET's submitted costs via BPDTs, we are concerned that costs could change significantly. We have therefore decided to use the LOTI re-opener to review the relevant costs when there is greater certainty. On this basis of our decision and funding position, we do not believe an eligibility assessment is needed for this project under the LOTI process. We have decided to allow £[redacted]m (before

cost assessment review) baseline funding to allow NGET to proceed, based on our understanding of NGET's commitment profile.

- 3.61 London Power Tunnels Phase 2 - NGET requested £649.9m to replace a number of cable routes in London with underground tunnels, which we proposed in Draft Determinations to approve in full. NGET made no changes or additional updates to its request in respect of this project. Therefore, our decision is to implement our Draft Determination.
- 3.62 Cables (Non-Lead) – NGET requested £36.25m to replace [redacted]km of non-lead cable during RIIO-ET2. Due to a significant proportion of these cables being in a replacement window of 5-10 years, in Draft Determinations we proposed to approve only [redacted]km of non-lead cable replacement. In response, NGET provided additional detail and corrected an error in its reporting, which reduced their request to [redacted]km. It also presented additional information on the needs case for intervention. Following review of this information, we have decided to approve in full their request to replace [redacted]km of these cables.
- 3.63 Blackstart: - NGET requested £22.2m in the original business plan submission. In our draft determination considerations, we did not see justification for approval of T2 funding and rejected the entire ask. We also felt that the cost and scope development of the interventions proposed was weak. In response to our draft determinations NGET provided additional information in support of their ask. We have reviewed this information, but we still see no reasonable justification for the level of allowance or clarity on the scope of works requested. We have included a bespoke section in the MSIP reopener to allow for NGET to develop and justify their Blackstart works ahead of any Engineering Standard changes and invite NGET to utilise this mechanism when the scope, costing and timings are clearer.
- 3.64 Bengeworth Road GSP - Bengeworth Road was an additional but complementary element of the London Power Tunnels Phase 2 project. Our Draft Determination position was to approve the £25m baseline funding requested. In response, NGET provided additional information on the driver for these works. NGET also provided additional data on a significant increase in costs since its December 2019 business plan. This increase was for two reasons: an error in NGET's December 2019 BPDT submission, and an increase due to NGET having undertaken further survey and tender works. As a result of these issues, we reviewed the engineering

optioneering behind this proposal. Following engagement with NGET and UKPN, the DNO who had driven this work, we have significant concerns over the level of initial development and lack of consideration of other potentially less costly interventions. As a result, we are unable to provide a view on this project at this time and have therefore created a specific Authority triggered re-opener to consider the need for and costs of this project when there is greater certainty.

### Conclusions on NLR Capex

3.65 Across NGET’s NLR capex submission, there were common themes around the lack of development on the scope, timings and costs of proposed schemes, and a lack of evidence to justify need for the requested funding. Whilst this position did improve between Draft and Final Determinations, our concerns have not fully abated. As a result, we have included various mechanisms across the NLR capex portfolio to protect against the risk of under-delivery, while allowing NGET the scope to deliver works that are needed to ensure network reliability and/or to manage long-term delivery risk, amongst another things. The table below is a high-level summary of the asset category, the work volumes requested and approved, and the relevant control mechanism, where applicable.

**Table 8.<sup>25</sup>: Engineering Volume and Controls**

<b>Asset Category</b>	<b>Volume Requested (If applicable)</b>	<b>Volume Approved (If applicable)</b>	<b>Control (if applicable)</b>	<b>UM (if applicable)</b>
Super Grid Transformers	[redacted]	[redacted]	NARM	N/A
OHLs Conductor	[redacted]	[redacted]	PCD	N/A
OHLs Fittings	[redacted]	[redacted]	NARM	N/A
Circuit Breakers (CBs)	[redacted]	[redacted]	NARM	N/A
Switchgear Other (Bays)	[redacted]	[redacted]	PCD	N/A
Reactors	[redacted]	[redacted]	NARM	N/A
Cables (Lead Cables)	[redacted]	[redacted]	NARM	N/A
Instrument Transformers	[redacted]	[redacted]	PCD	N/A

<sup>25</sup> Please note, due to difficulties analysis between Dec 2019 BPDT and Dec 2020 BPDT some volumes may not align completely

<b>Asset Category</b>	<b>Volume Requested (If applicable)</b>	<b>Volume Approved (If applicable)</b>	<b>Control (if applicable)</b>	<b>UM (if applicable)</b>
Cables (Non-Lead)	[redacted]	[redacted]	N/A	N/A
Dinorwig-Pentir	[redacted]	[redacted]	N/A	Reopener (LOTI)
London Power Tunnels	[redacted]	All	NARM (Ringfenced)	N/A
Bengeworth Rd GSP	[redacted]	Pending	N/A	Reopener (Bespoke)
Protection & Control	[redacted]	[redacted]	PCD	N/A
Substation Aux Systems	[redacted]	Various	UIOLI Fund	N/A
Towers and Foundations	[redacted]	Various	N/A	Reopener (Bespoke)
Spares	[redacted]	All	N/A	N/A
Blackstart	[redacted]	None	N/A	Reopener (MSIP)
Through Wall and Floor Bushings (TWFB)	[redacted]	[redacted]	N/A	N/A
Tyne Crossing	[redacted]	Pending	N/A	Reopener (Bespoke)
Condition Monitoring	[redacted]	All	N/A	N/A
SF6	[redacted]	Various interventions	PCD	Reopener (Bespoke/Net Zero)

### *Cost efficiency assessment*

3.66 As noted in the LR capex section, we have had to use our regulatory judgement in forming our view of the appropriate level of efficient costs of NGET's LR and NLR capex submission. This has resulted in a 5% reduction on all of the lower confidence costs within the submission; we have accepted the high confidence costs (£546m of LPT2 costs) without this reduction.

### *High and Lower Confidence proportion of costs in baseline Totex allowance*

3.67 Applying the methodology as set out in the Core Document, we have decided that of the baseline allowance for NLR capex that is subject to the BPI and TIM mechanisms, £1442m is lower confidence and £850m is high confidence.



*Cost confidence and BPI Stages 3 and 4*

- 3.68 The costs related to the London Power Tunnels and Hinkley projects were supported by sufficiently independent cost information and so we have decided to classify them as high-confidence costs.
- 3.69 In respect of risk and contingency costs, in Draft Determinations we considered these to be lower confidence. All three ETOs disagreed with this classification in response to DDs, arguing that these costs should be classified as high confidence as Ofgem was using an independent cost assessment method to calculate an efficient risk and contingency allowance. We have agreed with this rationale and decided that these costs should be classified as high confidence.
- 3.70 As regards the remainder of the NLR capex costs, we reviewed the additional information provided by NGET to support its proposed costs, but considered that there was insufficient independent cost information to support the full extent of the unit costs proposed in any asset category. We have therefore classified all other NLR asset costs as lower confidence. Similar to LR capex, no independent cost information was provided to support NGET's NLR non-asset costs; therefore we have also classified these costs as lower confidence, other than risk and contingency costs which are classified as high confidence. Our lower confidence assessment is also based on concerns about the robustness of the needs-cases and deliverability of the proposed works.
- 3.71 Of the £2632m of NGET's submitted NLR capex costs that are subject to the BPI and TIM mechanisms, we have decided to classify £1780m as lower confidence and £852 as high confidence costs. £338m of these lower confidence costs have been assessed as poorly justified and disallowed, resulting in a BPI Stage 3 penalty of £33.8m. NGET is not eligible for any Stage 4 rewards due to its failure of BPI stage 1.

*RIIO-ET1/RIIO-ET2 crossover funding*

- 3.72 At Draft Determinations, we proposed to make a negative adjustment to NGET's RIIO-ET2 NLRE allowance to reflect the unused RIIO-ET1 allowances that had been provided specifically for the purposes of funding NLR capex projects that would not deliver outputs until RIIO-ET2. The reason for this proposal was so that consumers would not have to pay twice for works that would be delivered in RIIO-ET2. The amount of adjustment proposed in Draft Determinations was based on

the information available at the time. It was stated as £556m, which was a transcription error and should have been stated as £513m.

3.73 NGET objected strongly to our proposal, considering that this would effectively be a re-opening of the RIIO-ET1 price control. Notwithstanding this disagreement on the principle of our proposal, after further engagement with us, NGET has clarified that:

- Of the £513m, £347m is already returned to consumers as part of the voluntary deferral in 2017;<sup>26</sup>; and
- It had incurred £87.4m in RIIO-ET1 for connection projects that will not deliver outputs until year 3 of RIIO-ET2, for which there is no formal mechanism in the licence to recover these costs.

3.74 We disagree that an adjustment to reflect excess or a shortfall in RIIO-ET1 funding for works that crossover from RIIO-ET1 and T2 would amount to a re-opening the RIIO-ET1 price control. We have decided to adopt the Draft Determinations approach of making adjustment for excess funding in RIIO-ET1 for NLR capex. After confirming the amount already part of the mid-period hand-back as set out in point a) of the previous paragraph, we have decided to update the adjustment amount to a negative £165.8m. Regarding point b) in the previous paragraph, we have decided to take a provisional adjustment as set out in the LR capex section above.

#### *Summary of approved NLR capex projects*

3.75 The ET Annex identifies the different treatments of NLR capex projects depending on their start/end years and the type of work. Appendix 1 to this document lists the RIIO-T1/T2 NLRE crossover projects and the RIIO-ET2/ET3 projects that will be trued-up as part of the RIIO-ET2 closeout or the setting of RIIO-ET3 process. The PCDs associated with approved RIIO-ET2 NLR projects are listed in Chapter 2.

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<sup>26</sup> Please see the decision document published here:  
[https://www.ofgem.gov.uk/system/files/docs/2017/08/decision\\_to\\_modify\\_pcfms\\_for\\_london\\_medium\\_pressure\\_refund\\_and\\_national\\_grid\\_voluntary\\_allowance\\_deferral.pdf](https://www.ofgem.gov.uk/system/files/docs/2017/08/decision_to_modify_pcfms_for_london_medium_pressure_refund_and_national_grid_voluntary_allowance_deferral.pdf)

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**Non-operational capex**

3.76 Non-operational capex relates to assets not directly connected to the network, but which support the general functioning of the business. These costs can be broken into the following four categories: Property; Small tools, equipment, plant and machinery (STEPM); Vehicles and Transport and, Information Technology and Telecoms (IT&T).

<b>Non-Op Capex category</b>	<b>NGET proposed baseline (£m)</b>	<b>Work Volume Reductions (£m)</b>	<b>Cost Reductions (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem FD Baseline Allowances (£m)</b>
Property	10.0				10.0
IT&T	337.0		26.1	72.6	238.3
STEPM	9.3		4.8		4.5
Vehicles & Transport	20.6				20.6
Total	376.9	-	30.8	72.6	273.5

Final Determination rationale and Draft Determination responses

3.77 With regards to Property costs, no responses to Draft Determinations disagreed with our proposal. Therefore, we have decided to implement our Draft Determination proposal to allow £10m for these costs.

3.78 With regards to IT&T costs, we proposed a baseline allowance of £143.6m for projects with sufficient maturity, and a re-opener for the remaining works. NGET disagreed with our evaluation of its costs in this area, considering that the maturity assessment set an unreasonable expectation of how far its proposed investments need to have progressed through the governance process. NGET also challenged the level of efficiency cuts on projects proposed for ex-ante allowance.

3.79 We have actively engaged with NGET to address the lack of detail and cost certainty within its IT&T investment portfolio. Following consideration of additional evidence from NGET, we have decided to provide baseline allowances for an additional number of IT projects that we had proposed to be subject to a re-opener. After applying our view of efficient cost, this takes our Final Determination view of baseline funding for IT&T to £238.3m. The remaining IT investment projects will be subject to a re-opener given their potential needs cases but project immaturity and the lack of detail available at this stage.

3.80 Consistent with our view at Draft Determinations, we have decided to reduce NGET's STEPM request of £9.3m to £4.5m, which is in line with historic run-rates.

3.81 On Vehicles and Transport costs, NGET disagreed with the methodology used to calculate its proposed non-Electric Vehicle (EV) allowance. We accept that the type of vehicles<sup>27</sup> being replaced with EVs should not have been included in our historical trend model, and so we have recalculated the allowance with this vehicle type excluded. This resulted in an increase for this category of £3.3m to £20.6m.

*High and Lower Confidence proportion in baseline Totex allowance.*

3.82 Applying the methodology as set out in the Core Document, we have decided that of the proposed baseline allowance for Non-operational capex that is subject to the BPI and TIM mechanisms, £273.4m is high confidence with no lower confidence costs.

*BPI Stages 3 and 4*

3.83 We have seen an uplift in the NGET non-operational capex allowance from our position in Draft Determinations due to increased allowances for IT&T, due to the improvement in the evidence provided following our DD in support of NGET's original submission. This resulted in an increase to high confidence costs in this cost category.

3.84 Of the £304.3m of NGET's submitted Non-operational capex costs that are subject to the BPI and TIM mechanisms, we have decided to classify all of them as high confidence. As our independent benchmark for the high confidence costs was more efficient than NGET's proposed costs, even if NGET had been eligible, there would have been no stage 4 reward on NGET's Non-operational capex costs.

## **Operational Expenditure (Opex)**

3.85 Operating expenditure comprises network operating costs and indirect operational expenditure.

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<sup>27</sup> Short Wheel Base vans

<b>Opex category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Network Operating Costs	1174.6	81.7	37.2	332.3	723.4
Indirect Costs	1509.3	58.1	163.1	0	1288.1

### **Network Operating Costs (NOC)**

#### Rationale for Final Determination and Draft Determination responses

3.86 Our overall assessment approach to NGET's Network Operating Costs is unchanged from the approach taken for Draft Determinations. However, we have refined it by:

- fully splitting the direct opex costs from the capex costs and assessing each of these separately
- using revised cost and volumes data as discussed below.

#### *Data revision*

3.87 Our assessment for Draft Determinations was based on cost figures proposed by NGET in its BPDT comprising both direct opex and capex costs. NGET had embedded a 1.1% ongoing efficiency in the direct opex figures.

3.88 NGET stated that applying our proposed ongoing efficiency challenge on top of its own embedded efficiency would be duplication and would result in a disproportionate reduction to its allowances.

3.89 We have considered this position and have decided to remove NGET's embedded 1.1% efficiency and retain our ongoing efficiency challenge. NGET has also moved £2.8m of SF6 repair costs from the repair and maintenance capex in network operating costs into the non-load related capex.

3.90 Since Draft Determinations were published, NGET has requested additional funding of £3.3m for SF6 palliative works. We have decided to approve this funding because we agree with the need for the proposed works and the costs. We have included it under the repairs and maintenance sub-category in our Final Determination baseline allowances.

- 3.91 NGET also informed us of mismatches between its direct opex costs and volumes data in its BPDT that were principally the result of retrospective modifications to RIIO-ET1 data to match it to the RIIO-ET2 BPDT.
- 3.92 These mismatches affected the allocation of costs and volumes across asset categories but did not affect the overall business plan total. We have accepted the revised data for the affected sub-categories and have used this data in our assessment for Final Determinations.
- 3.93 Our decisions on each of the cost sub-categories are given below.

#### *Faults*

- 3.94 Following no responses in this area, we have decided to implement our Draft Determinations proposals to provide NGET's requested funding.

#### *Inspections*

- 3.95 Following no responses in this area, we have decided to implement our Draft Determinations proposals to provide NGET's requested funding in full.

#### *Repairs and Maintenance*

- 3.96 For NGET's Civils works we proposed to approve 30% of its baseline request for £60.7m and to provide re-opener for any additional costs.
- 3.97 During discussions after the Draft Determinations, NGET informed us that there are some potentially significant volumes of poor condition civil works. In extreme cases, these may result in derating substation fault capacity. This is a significant concern as it suggests that in many instances, replacement may be required rather than repair. We have therefore decided to provide a bespoke Substation Civil Investment Works re-opener to consider additional funding when NGET has collected the levels of condition data required to establish a robust needs case for any further investment.

#### *Vegetation Management*

- 3.98 We have decided to implement our Draft Determinations proposals to provide NGET's requested funding in full as no further information was received after Draft Determinations.

*Operational Protection measures and IT capex*

- 3.99 In their December submission, NGET requested funding to continue to develop a low-risk operational telecoms infrastructure, including the replacement of [redacted] of fibre wrap and telecoms equipment at [redacted] sites. At Draft Determinations, we did not consider that NGET had made the case for completing all this work during RIIO-2, and we proposed baseline funding for the final two years of RIIO-2 to enable NGET this work to begin. In response to our Draft Determination, NGET provided revised submissions on its operational telecom (Optel) schemes – the fibre wrap replacement scheme, and five other Optel refresh schemes.
- 3.100 For fibre wrap replacement, NGET significantly revised its proposal and is now proposing the replacement of existing fibre wrap with metallic Self-Supporting Optic Fibre (SSOF) to be delivered during the final two years of RIIO-ET2. We note that NGET will need to develop and prove the technical solution and delivery capability before starting using this novel SSOF solution. NGET has further sought to gather and analyse condition data on the fibre wrap to better inform the need and prioritisation of asset replacement.
- 3.101 We have reviewed the new proposal for the fibre wrap replacement scheme and have decided to allow the requested £2.5m in baseline funding to cover asset condition analysis and solution development, and to provide a re-opener with a window in 2023 to consider fund the delivery of the replacement works.
- 3.102 For the five other Optel refresh schemes, we have considered the post-Draft Determination submissions from NGET and fully accept the needs case for three of these. These include the High Bandwidth Overlay refresh scheme, which will help provide larger data bandwidth in their telecoms network needed to maintain compliance with cyber security legislation, and the schemes to improve the performance of communications links and physical security. We have accepted the funding request for these in full. For the remaining two, the Optel network refresh and control telephony refresh schemes, whilst we accept the need for these, we still have concerns over the deliverability and need to complete all of the proposed works during RIIO-ET2 given the expected lifecycle of these assets. However, having considered the post-Draft Determination submissions from NGET on synergies between the different schemes, cyber security related drivers and end of manufacturer’s support, we have decided to allow a further £34m in addition to

that proposed in Draft Determinations on these two schemes, allowing a larger proportion of these works to be completed during RIIO-ET2. This, in our view, represents the proportion of the proposed works we consider justified and deliverable in RIIO-ET2.

3.103 [redacted]

#### *Legal and Safety*

3.104 NGET requested £59.8m funding for the delivery of Extreme Weather protection at 100 sites. In Draft Determinations, we proposed to allow £24.6m for this work, which reflected the limited justification for the level of work proposed. In response, NGET provided additional data which clarified the levels of survey work and corresponding development which had been undertaken. The Additional information submission by NGET highlighted that less survey and development work had been undertaken than expected. Given the limited development work, we have decided to allow baseline funding of £15.2m for the works which have been surveyed to date and to allow NGET to request additional funding via the MSIP re-opener.

#### *High and Lower Confidence proportion in baseline Totex allowance*

3.105 Applying the methodology as set out in the Core Document, we have decided that of the proposed baseline allowance for Network Operating Costs that is subject to the BPI and TIM mechanisms, £510.4m is high confidence and £209.7m is lower confidence costs.

#### *BPI stages 3 and 4*

3.106 In our draft determination, we proposed that the combined disallowance against flood mitigation schemes (extreme weather) in the legal and safety, operational protection measure and IT capex, and repairs and maintenance was poorly justified and would be subject to a BPI stage 3 penalty.

3.107 In response to Draft Determinations, NGET provided additional information in support of its submission which we have reviewed and updated our assessment approach as described in the rationale section above.

3.108 Of NGET's NOCs submission that was subject to the BPI and TIM mechanisms, £520.6m has been classified as high confidence, and £244.4m as lower



confidence. Of these lower confidence costs, we disallowed £34.7m as poorly justified costs. Accordingly, we have decided that these will attract a £3.5m penalty under the BPI stage 3 mechanism.

3.109 As our independent benchmark for the high confidence costs was more efficient than NGET's proposed costs, there would have been no stage 4 reward on NGET's NOCs, even if it were eligible.

### **Indirect Costs**

3.110 Indirect Opex consists of both Business Support Costs (BSC) and Closely Associated Indirect (CAI) costs. BSC are incurred supporting companies' general business activities, while CAI costs are those incurred in supporting operational activities.

#### Final Determination rationale and Draft Determination responses

3.111 We proposed in Draft Determinations to reduce NGET's baseline funding request of £1509.3m for BSC and CAI to £1062.1m based on our assessment of efficient costs using econometric benchmarking. We also proposed to include an opex escalator to provide additional opex allowances where additional capex is allowed through certain UMs. The level of the CAI element of the escalator was based on the same coefficient used in our CAI model.

3.112 Our response to the concerns in respect of our modelling that were common to all of the ETOs is set out in the ET Annex. We discuss those raised specifically by NGET in the following paragraphs.

3.113 NGET expressed concerns about the suitability of econometric modelling for setting allowances; in its view, since the small sample size leads to an outcome with a large uncertainty range. NGET suggested that allowances should instead be set based on RIIO-ET1 levels of indirect costs, with indexation over time for inflation, RPEs, ongoing productivity and changes in capex due to changing workload requirements.

3.114 They also considered that any such econometric modelling would not be able to factor in allowances for costs incurred due to unique network characteristics.

3.115 Our view on the points raised by NGET is as follows:

- Our position remains that the use of econometric regression modelling for deriving indirect opex allowances is appropriate, notwithstanding the relatively small sample size. We have considered a wide range of models with alternative cost drivers to gauge the reliability of the outcomes of our model. We found that the results from these alternatives place the companies in largely the same relative positions as our model does. This would suggest that using NGET's proposed method of using RIIO-ET1 run rates would continue to propagate produce inefficient allowances for RIIO-ET2
- However, we recognise that additional evidence in support of NGET's costs should be considered when setting final allowances. We have actively engaged with NGET to discuss the available quantitative and qualitative evidence in support of their submission requests.

3.116 Following engagement with stakeholders, we have decided to assess some cost sub-categories outside of the econometric modelling process and instead to conduct a bottom-up review of costs. This is because Operational training, Wayleaves and costs arising from Environmental Action Plans are more bespoke to each company and so lend themselves to a more tailored assessment.

3.117 We have also considered the qualitative evidence presented by NGET on its relative network complexity and on the range of stakeholders and DNO interactions they have to undertake. Taking this into account, and by using a range of model results to calibrate our decision, we have decided to allow an additional £39m above our baseline modelled allowance for CAI costs.

3.118 Our decision therefore is to allow £1288.1m of baseline funding for NGET's indirect opex. We have also decided to implement our Draft Determination proposal for an opex escalator (as set out in Chapter 4) to reflect changes in capex through UMs. Further detail on the implementation of the escalator is given in the ET Annex.

3.119 We have set out in the ESO Annex Chapter 8 our current position on the ESO's use of shared IT services. We intend to work closely with the ESO and National Grid to ensure that any such investments are "future-proofed" against credible future scenarios and do not become a barrier to any future IT autonomy for the ESO, and to understand any impact of this on Business Plans

*High and Lower Confidence proportion in baseline Totex allowance*

3.120 Applying the methodology as set out in the Core Document, we have decided that £1288.1m of the proposed baseline allowance for Indirect Opex that is subject to the BPI and TIM mechanisms, is high confidence with no lower confidence costs.

*BPI Stages 3 and 4*

3.121 Since our Draft Determination position, increases to NGET's capex allowance, the workload driver in our CAI model, and a separate assessment of a number of Indirect cost categories, the details of which are set out in the sections above, have seen an increase to the CAI allowances for our FD resulting in an increase to high confidence costs.

3.122 Of the £1509.4m of NGET's submitted Indirect Opex costs that are subject to the BPI and TIM mechanisms, we have decided to classify all of them as high confidence. As our independent benchmark was more efficient than NGET's submission for high confidence costs, there would have been no Stage 4 reward on NGET's Indirect Opex costs, even if it were eligible for one.

## **Other costs**

3.123 The "other costs" category comprises cyber resilience costs, physical security costs and other administrative costs.

3.124 We are not publishing information on cyber costs due to the associated security issues. NGET will receive a report on its submission from Ofgem's cyber-security team.

### **Physical security**

3.125 NGET owns assets and sites that are designated as Critical National Infrastructure (CNI). The Secretary of State has initiated the Physical Security Upgrade Programme (PSUP), a BEIS-led national programme to enhance physical security at CNI sites.

3.126 [redacted]

## Final Determination

[redacted]

## Final Determination rationale and Draft Determination responses

3.127 [redacted]

3.128 [redacted]

## **Ongoing efficiency and Real Price Effects (RPEs)**

3.129 As detailed in the Core document, we have implemented ongoing efficiency at a rate of 1.15% (compounded annually) for capex and 1.25% (compounded) for opex. Please note that this has been applied to the allowances after application of the company's capitalisation policies.

3.130 The rate for deriving the estimated future view for RPE allowance, by year, is given in the table below.

**Table 9: Rates applied for estimating future RPE allowances**

<b>Year</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Rate	2.09%	2.97%	3.75%	4.05%	5.26%

## 4. Adjusting baseline allowances for uncertainty

### Introduction

- 4.1 This chapter sets out our decisions on each Uncertainty Mechanism (UM) that will apply to NGET during RIIO-ET2 price control period.
- 4.2 Where a UM is common to all sectors or the ET sector, we do not repeat in this chapter the rationale for any changes from Draft to Final Determinations, as this is already set out in either the Core Document or the ET Annex.
- 4.3 Where a UM is directly related to our baseline Totex assessment, relevant details can be found in Chapter 3.

### ET UMs

#### Generation Connections volume driver / Demand Connections volume driver

**Purpose:** To ensure that TOs are funded through an automatic mechanism for load-related capital expenditure required to connect new generators and new demand customers seeking connection to the transmission system.

**Benefits:** Enabling ETOs to provide connections in a timely manner and consumer payment reflecting efficient costs for actual connections delivered.

Parameter	Final Determination	Draft Determination
Type	Volume driver	
Volume metrics	<p>The following volume metrics are all measured relative to the defined baseline levels for each company:</p> <ul style="list-style-type: none"> <li>the number of generation or demand connection projects</li> <li>the incremental Connection Entry Capacity (in Scotland) / Transmission Entry Capacity (in England and Wales) for generation connected to the network or the system capacity associated with connection of multiple new generation connections as specified in relevant agreement between the ETO and the ESO pursuant to the STC</li> <li>the incremental <b>increase in the offtake capacity at grid exit points</b> associated with</li> </ul>	Form and values of volume driver based on regression analysis at the time.

Parameter	Final Determination	Draft Determination																
	<p>connection of multiple new demand connections as specified in relevant agreement between the ETO and the ESO pursuant to the STC</p> <ul style="list-style-type: none"> <li>• length of new build OHL</li> <li>• length of reconductoring OHL</li> <li>• length of new underground cables each shorter than 1km; and</li> <li>• length of new underground cables each equal to or longer than 1km.</li> </ul>																	
Delivery date	<p>The connections volume driver will apply to works anticipated to deliver within the RIIO-ET2 period and in year 1 and year 2 of RIIO-3 (no later than 31st March 2028), except for:</p> <ul style="list-style-type: none"> <li>• projects that NGET starts in RIIO-1 and deliver in year 1 and year 2 of RIIO-2 are funded via the existing respective RIIO-1 volume drivers;</li> <li>• projects whose expected costs are beyond the defined tolerance range (see detail below) will be considered under the MSIP re-opener.</li> </ul>																	
Totex baseline allowances	<p>Generation: £159.31 million (LE Entry) and £24.56 million (LE Entry - sole use) Demand: £55.94 million (LE Exit) and £40.41 million (LE Exit - sole use)</p>																	
Baseline outputs profile	<p>See table 10 and table 11. The profiles reflect RIIO-ET2 originated projects. Outputs associated with the delivery of RIIO-ET1/T2 crossover projects that are funded via the RIIO-1 volume driver have been excluded from the profiles in tables 1 and 2.</p>																	
Unit rates	<table border="1"> <thead> <tr> <th>Volume Metric (Unit)</th> <th>Unit Rate</th> </tr> </thead> <tbody> <tr> <td>Number of connection projects (#)</td> <td>£3.8m per project</td> </tr> <tr> <td>Generation capacity (MW or MVA)</td> <td>£[redacted] per MW or MVA</td> </tr> <tr> <td>Demand capacity (MW or MVA)</td> <td>£[redacted] per MW or MVA</td> </tr> <tr> <td>New Build OHL(km)</td> <td>Outside volume driver (See further detail below)</td> </tr> <tr> <td>Reconductoring OHL (km)</td> <td>£[redacted] per km</td> </tr> <tr> <td>Underground Cable &lt;1km (km)</td> <td>£[redacted] per km</td> </tr> <tr> <td>Underground Cable = or &gt;1km (km)</td> <td>£[redacted] per km</td> </tr> </tbody> </table>	Volume Metric (Unit)	Unit Rate	Number of connection projects (#)	£3.8m per project	Generation capacity (MW or MVA)	£[redacted] per MW or MVA	Demand capacity (MW or MVA)	£[redacted] per MW or MVA	New Build OHL(km)	Outside volume driver (See further detail below)	Reconductoring OHL (km)	£[redacted] per km	Underground Cable <1km (km)	£[redacted] per km	Underground Cable = or >1km (km)	£[redacted] per km	
	Volume Metric (Unit)	Unit Rate																
	Number of connection projects (#)	£3.8m per project																
	Generation capacity (MW or MVA)	£[redacted] per MW or MVA																
	Demand capacity (MW or MVA)	£[redacted] per MW or MVA																
	New Build OHL(km)	Outside volume driver (See further detail below)																
	Reconductoring OHL (km)	£[redacted] per km																
	Underground Cable <1km (km)	£[redacted] per km																
Underground Cable = or >1km (km)	£[redacted] per km																	

Parameter	Final Determination	Draft Determination
Reporting method	Annual reporting on outturn and updated forecast costs will be facilitated through the RRP.	
Adjustment mechanism	Adjustment to allowance (up or down) is the sum of: the changes (higher or lower) from the baseline outputs profile for all the seven output metrics multiplied by the relevant unit rates as set out above.  Allowances will be profiled through this mechanism to ensure adequate funding is provided to TOs. For this we have assumed an average project lifespan of 4 years for connections with costs spread in the following profile: 16.0%/31.5%/31.5%/21.0%.	
Additional requirements	An upper and lower tolerance range will be set based on the standard error resulting from our regression analysis multiplied by a factor of 1.5. Projects whose expected costs are beyond this range will be funded through MSIP. For NGET this provides a range between plus and minus £11.84m around the allowance calculated by the volume driver.	Indicated for finalisation at FD
Applied to	All ETOs with company-specific values	No change
Licence condition	Special condition 3.18	n/a

4.4 The volume drivers will adjust the funding up or down from the baseline allowance if any of the output metrics deviate from the baseline level as set out below.

**Table 10: Baseline Generation Connections**

	Relevant Year					
	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
MW or MVA	50	50	3,097	2,499	3,200	8,895
OHL reconductoring (km)	0	0	0	4.6	0	4.6
OHL new build (km)	See further detail below.					
No. connections	1	1	6	7	5	20
Cable new build <1km (km)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cable new build =/> 1km (km)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

**Table 11: Baseline Demand Connections**

	Relevant Year					
	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
MW or MVA	0	0	720	480	0	1,200
OHL reconductoring (km)	0	0	0	0	0	0
OHL new build (km)	See further detail below					
No. connections	0	0	2	1	0	3
Cable new build <1km (km)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cable new build =/> 1km (km)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

#### *Connection projects with new build OHL elements*

4.5 There was insufficient data available to establish a statistically robust coefficient that could be used as the basis of a unit rate to fund the construction and delivery of new OHL build solutions for NGET. Therefore, in the event that a prospective connection project comprised of a new build OHL element materialises during RIIO-ET2, it will qualify for submission via the MSIP re-opener or the LOTI re-opener (if it is likely to cost £100m or more). We have decided to attach a PCD to a generation connection project that requires the construction and delivery of new build OHL during the RIIO-ET2 period.

#### **Large Onshore Transmission Investments (LOTI) re-opener**

**Purpose:** To ensure that TOs are funded to undertake necessary large investments on the transmission network.

**Benefits:** Allows Ofgem to scrutinise, on behalf of consumers, large transmission investments at the point at which needs case and efficient costs can be scrutinised more effectively.



UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Any time during the price control	Same as FD
Re-opener materiality threshold	ET projects expected to cost £100m or more that are in whole or in part load-related or related to a shared-use or sole-use generator connection project.	Same as FD
Authority triggered re-opener?	No	Same as FD
Additional requirements	<p>There is a four-stage assessment process that ETOs must followed to secure LOTI funding, unless otherwise directed by Ofgem in accordance with the relevant licence provisions. In summary:</p> <ul style="list-style-type: none"> <li>• Eligibility to apply – a short notification to Ofgem signaling an intent to use the LOTI process.</li> <li>• Initial Needs Case – an early assessment of the need for the project and its initial optioneering.</li> <li>• Final Needs Case – final confirmation that the project is required.</li> <li>• Project Assessment – detailed assessment of project costs to determine allowance - costs to be set out in licence.</li> </ul>	Broadly the same as FD, though timings of stages have been condensed slightly, further to consideration of DD responses.
Applied to	All ETOs	Same as FD
Licence condition	Special Condition 3.13	N/A

### Pre-Construction Funding (PCF) re-opener

**Purpose:** To provide flexibility in the event that further PCF is required during the price control period.

**Benefits:** Allows timely development of important strategic projects whilst protecting consumers from providing PCF for speculative projects.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Alongside an Initial Needs Case for a LOTI project	At the end of the price control period

UM parameter	Final Determination	Draft Determination
Re-opener materiality threshold	There is no materiality threshold for the value of PCF requested, but the re-opener can only be used to request PCF for LOTI projects.	Same as FD
Authority triggered re-opener?	No	Same as FD
Additional requirements	Generally, we would only expect the PCF re-opener to be used for projects which did not receive baseline PCF PCDs (these are set out in company annexes). However, where PCF costs are expected to be more than double the amount provided for in the baseline PCD allowance, submissions for additional allowances can be submitted. The definition of PCF is "the funding required to develop a LOTI project to the point that consents are obtained and the project is ready to begin construction."	PCF re-opener to be used for projects which did not receive baseline PCF PCDs.  The definition of PCF was "the funding required to develop a LOTI project to the point that consents are obtained."
Applied to	All ETOs	Same as FD
Licence condition	Special condition 3.15	N/A

### Medium Sized Investment Projects (MSIP) re-opener

**Purpose:** To ensure that ETOs are able to undertake necessary investments in the transmission network, funding for which has not been provided in RIIO baseline allowances.

**Benefits:** Allows Ofgem to scrutinise, on behalf of consumers, the need for and cost of projects with more unusual characteristics.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Each year of the price control between January 25th and January 31st.	January 2024 only
Re-opener materiality threshold	One or more project(s) expected to cost less than £100m each, which cumulatively exceed 0.5% of average annual ex-ante base revenue when allowances are set.	Various thresholds, specific to each area.
Authority triggered re-opener?	No	Same as FD
Additional requirements	Most areas covered by MSIP are driven by circumstances outside of the control of the ETOs, so submissions in respect of each area	Same as FD

UM parameter	Final Determination	Draft Determination
	will be required to meet certain criteria in order to be eligible for consideration under the MSIP re-opener. These criteria are set out in Table 12.	
Applied to	All ETOs, with some exceptions set out in Table 12 below.	Some areas have been added or removed since DDs. See Table 12.
Licence condition	Special condition 3.14	N/A

Table 12: Areas covered by the MSIP re-opener

Area	Criteria for assessment under MSIP	ETO
Atypical connection projects	Minimum and maximum intervals to determine instances of material deviation between the predicted allowance generated by the application of the volume driver unit rates to the total forecast cost of each project. For NGET the upper and lower thresholds are based on 1.5 times the standard error of the full dataset used in the regression analysis: +/- £12m (std error £7.9m x 1.5).	All
NOA 'Proceed' Projects	Only projects that that cannot be funded by the IWW volume driver as set out.	All
ESO-driven requirements	Written request by the ESO for additional investment in relation to system operability and constraint management requirements.	All
Harmonic Filtering Equipment	Requests from ETO customers to aggregate and deliver harmonic filtering requirements, or following ESO/TO system studies showing a potential breach of planning limits.	All
Protection Equipment	Protection changes required to address system issues following ESO/ETO system studies and includes Operational Load Management Schemes, subject to the receipt of an STC planning request, and dynamic line rating equipment.	All
Energy Data Taskforce recommendations	Recommendations regarding specific outputs required to meet principles developed via industry working groups (including SCADA).	All
Projects to maintain SQSS compliance	ETO demonstration of the need to modify the network to meet SQSS compliance for security and system operability.	All
Black Start	A new Black Start Standard, currently under review by BEIS.	All
Flooding	Updated ETR138 guidance on flooding, and/or a direction from BEIS to protect sites from flooding.	All
SF6 Asset Intervention	Where ETOs can demonstrate efficient costs and asset intervention at sites containing SF6, through a well-justified intervention plan. Consideration should be given to retro-fill and SF6 alternative gasses. We would expect only one submission in this area per ETO during the RIIO-ET2 period.	All
NGET Resilience	For Blackstart and Flooding upon completion of surveys for both the needs case and costs of the original December 2019 RIIO-T2	NGET

Area	Criteria for assessment under MSIP	ETO
	proposals. We would expect only one submission in this area during RIIO-ET2.	

### Access Reform re-opener

**Purpose:** A mechanism to reduce Totex allowances if changes to industry codes arising from our Access and forward-looking charges Significant Code Review (SCR) leads to a reduction in network costs.

**Benefits:** This re-opener would ensure that consumers receive the benefits of changes to transmission use of system charges and access rights through lower charges in a timely manner.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	We sought views in the DD Core Document on how the Access review may manifest in its interaction with elements of the price control.
Re-opener window	Any time during the price control	
Re-opener materiality threshold	0.5% of average annual ex-ante base revenue	
Authority triggered re-opener?	Exclusively Authority-triggered	
Additional requirements	Adjustments to baseline allowances and unit rates for volume drivers, would be triggered if there is a demonstrable likelihood of reduction in costs as a result of industry code changes to implement the outcome of our access and forward-looking charges SCR.	
Applied to	All ETOs	
Licence condition	Special Condition 3.16	N/A

## Cross-sectoral UMs

### Net Zero re-opener

**Purpose:** To introduce an increased level of adaptability into the RIIO-ET2 price control by providing a means to amend the price control in response to changes connected to the meeting of the Net Zero targets, which have an effect on the costs and outputs of network licensees.

**Benefits:** To allow for necessary amendments within the RIIO-2 period, as opposed to waiting until the settlement of the subsequent price control.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	At any time in RIIO-2	Same as FD
Re-opener materiality threshold	0.5% of average annual ex-ante base revenue	1% of average annual ex-ante base revenue
Authority triggered re-opener?	Yes	Same as FD
Additional requirements	N/A	Same as FD
Applied to	All ET, GD, and GT companies	Same as FD
Licence condition	Special Condition 3.6	Same as FD

### Coordinated Adjustment Mechanism (CAM) re-opener

**Purpose:** To enable a licensee to submit an application to reallocate responsibility and associated revenue for an activity to or from another licensee’s price control (only where the other licensee is in agreement, and there are demonstrable benefits to the consumer).

**Benefits:** Delivers greater benefits for consumers by allowing more efficient solutions to be taken up elsewhere in the system as they are identified, rather than tied to the initial allocation.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Annual	Open question
Re-opener materiality threshold	No threshold	Same as FD
Authority triggered re-opener?	No	Same as FD
Additional requirements	An application must have the agreement of all licensees involved in the potential transfer. The proposed new solution must demonstrate greater benefits for the consumer than the original solution.	Same as FD
Applied to	All ET, GD, and GT companies.	Same as FD
Licence condition	Special Condition 3.7	N/A

## Opex Escalator

**Purpose:** To ensure NGET is funded through an automatic mechanism for varying operational costs associated with capital investments delivered through UMs.

**Benefit:** Provides NGET with opex allowances when capex allowances are funded through the relevant UM and ensures that those opex allowances are consistent with those set for baseline allowances.

UM Parameters	Final Determination		Draft Determination
Type	Volume driver		Same as FD
Volume Metrics	<ul style="list-style-type: none"> <li>• The RAV addition measured in £m arising from the new asset of specific load related UMs at the point of energisation :                             <ul style="list-style-type: none"> <li>○ Connection/demand volume driver</li> <li>○ MSIP re-opener</li> <li>○ LOTI re-opener</li> <li>○ Incremental Wider Works volume driver</li> <li>○ Tyne Crossing re-opener</li> <li>○ Bengeworth Road GSP re-opener</li> </ul> </li> <li>• The capex addition measured in % of the baseline Capex allowance from specific UMs:                             <ul style="list-style-type: none"> <li>○ Connection/demand volume driver</li> <li>○ MSIP re-opener</li> <li>○ LOTI re-opener</li> <li>○ Visual amenity in designated areas provision</li> <li>○ Incremental Wider Works volume driver</li> <li>○ Tyne Crossing re-opener</li> <li>○ Bengeworth Road GSP re-opener</li> <li>○ Substation Civil Investment Works re-opener</li> <li>○ Towers and Foundations re-opener</li> <li>○ Optel Fibre Wrap re-opener</li> </ul> </li> </ul>		Same as FD
Unit rates	Volume Metric (Unit)	Unit Rate	Indicated values to be set in FD
	RAV addition (£m)	0.5% per year from the year of energisation	
	Capex addition (% of baseline Capex allowance £3606.0m)	0.734% of baseline CAI	

UM Parameters	Final Determination	Draft Determination
	allowance (£829.7m) per 1% of capex addition	
Reporting Method	Annual RRP	Same as FD
Adjustment mechanism	Adjustment to opex allowance is the RAV addition and Capex addition multiplied by the relevant unit rates.	Same as FD
Applied to	All ETOs with company-specific values	Same as FD
Licence condition	Applied to all relevant capex Uncertainty Mechanism conditions	N/A

### IT Non-operational Capex Reopener

**Purpose:** To provide allowed expenditure to network companies to implement efficient IT enhancements in support of the business systems and networks.

**Benefits:** Ensures network companies are able to achieve their IT strategy and meet the aspiration of digitalising the energy sector.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	<ul style="list-style-type: none"> <li>Between 1 April 2021 and 8 April 2021; and</li> <li>between 25 January 2023 and 31 January 2023.</li> </ul>	Same as FD
Re-opener materiality threshold	No materiality threshold	Same as FD
Authority triggered re-opener?	Yes	Same as FD
Additional requirements	<p>The licensee must submit to the Authority a Non-operational capex IT Plan setting out:</p> <p>(a) details of any proposed activities that the licensee considers would be capable of improving its Non-operational capex IT</p> <p>(b) how the adjustment requested would improve its Non-operational capex IT</p> <p>(c) the basis of the calculations for the adjustment requested to allowances</p> <p>(d) provide detailed supporting evidence, as is reasonable in the circumstances, which must include:</p> <ul style="list-style-type: none"> <li>improvement plans</li> <li>a prioritisation programme</li> <li>market and industry cost comparison</li> </ul>	Same as FD

UM parameter	Final Determination	Draft Determination
	<ul style="list-style-type: none"> <li>anticipated business benefits derived from any risk reduction as a result of the proposed activities.</li> </ul> <p>Further guidance on the application process and content can be found in the IT&amp;T Non-operational capex reopener guidance</p>	
Applied to	All ET, GT, and GD companies	Same as FD
Licence condition	Special Condition 3.7	N/A

### Cyber Resilience Operational Technology (OT) and Cyber Resilience Information Technology (IT)

**Purpose:** To reduce risk, improve cyber resilience and response outcomes on the networks and comply with relevant regulations.

**Benefits:** Ensure network companies are managing risks posed to the security of the network and information systems, and preventing and minimising the impact of incidents on these essential services to ensure a safe and resilient network.

#### Cyber Resilience OT

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Two re-opener application windows for all network companies available at the beginning of the price control (2021), and midperiod (2023).	Same as FD
Re-opener materiality threshold	No materiality threshold and no aggregation.	Same as FD
Authority triggered re-opener?	Yes	Same as FD
Additional requirements	All licensees required to submit application at first re-opener window. Allowances will be provided on a UIOLI basis.	Same as FD
Applied to	All ET, GT, and GD companies	Same as FD
Licence condition	Special Condition 3.2	N/A



Cyber Resilience IT

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	Same as FD
Re-opener window	Two re-opener application windows for all network companies available at the beginning of the price control (2021), and midperiod (2023).	Same as FD
Re-opener materiality threshold	No materiality threshold and no aggregation.	Same as FD
Authority triggered re-opener?	Yes	Same as FD
Additional requirements	All licensees required to submit application at first re-opener window. Allowance subject to ongoing monitoring as part of outcome based PCDs.	Same as FD
Applied to	All ET, GT, and GD companies	Same as FD
Licence condition	Special Condition 3.3	N/A

## NGET-specific UMs

### Incremental Wider Works (IWW) volume driver

**Purpose:** To ensure that NGET is funded through an automatic mechanism to undertake required incremental wider works investments.

**Benefits:** Enables NGET to respond quickly to changes in system requirements while also driving a balance between efficiency and innovation incentives and mitigating windfall gains or losses.

#### Final Determination

Output parameter	Final Determination	Draft Determination
Type	Volume driver	We proposed to use the MSIP re-opener instead of a volume driver.
Volume metrics	<p>For projects not containing works on overhead lines or underground cables – “non-route projects”:</p> <ul style="list-style-type: none"> <li>“capacity increase” in MW which is the increased capacity on one of the defined boundaries (as set out in Table 12 below) as assessed when the relevant project was submitted to the NOA process which resulted in a “proceed” signal.</li> </ul> <p>For projects containing works on overhead lines or underground cables – “route projects”:</p>	

Output parameter	Final Determination	Draft Determination								
	<ul style="list-style-type: none"> <li>“composite capacity length” in MWkm which is the capacity increase on the relevant defined boundary multiplied by the pre-set boundary length (as set out in Table 12 below)</li> <li>“route length” in km which is the circuit length of reinforcement on overhead line, and the circuit length of reinforcement on underground cable multiplied by a cable length factor (as set out in Table 13 below).</li> </ul>									
Delivery date	The IWW volume driver will apply to works anticipated to deliver within the RIIO-2 period and in year 1 and year 2 of RIIO-3 (no later than 31st March 2028).									
Totex baseline allowances	N/A									
Baseline output profile	N/A									
Unit rates	<table border="1"> <thead> <tr> <th data-bbox="405 958 852 987">Volume Metric (Unit)</th> <th data-bbox="857 958 1134 987">Unit Rate</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 994 852 1028">Capacity increase (MW)</td> <td data-bbox="857 994 1134 1028">3.7397 £m/ln(MW)</td> </tr> <tr> <td data-bbox="405 1034 852 1068">Route length (km)</td> <td data-bbox="857 1034 1134 1068">0.4102 £m/km</td> </tr> <tr> <td data-bbox="405 1075 852 1140">Composite capacity length (MWkm)</td> <td data-bbox="857 1075 1134 1140">0.7284 £m/ln(MWkm)</td> </tr> </tbody> </table>	Volume Metric (Unit)	Unit Rate	Capacity increase (MW)	3.7397 £m/ln(MW)	Route length (km)	0.4102 £m/km	Composite capacity length (MWkm)	0.7284 £m/ln(MWkm)	
	Volume Metric (Unit)	Unit Rate								
	Capacity increase (MW)	3.7397 £m/ln(MW)								
	Route length (km)	0.4102 £m/km								
Composite capacity length (MWkm)	0.7284 £m/ln(MWkm)									
Reporting method	Annual reporting on outturn and updated forecast costs will be facilitated through the RRP.									
Adjustment mechanism	<p>For “non-route projects”, the adjustment to allowance is the unit rate for capacity increase multiplied by the natural logarithm of the capacity increase delivered.</p> <p>For “route projects”, the adjustment to allowance is the sum of: the unit rate for route length multiplied by the relevant route length, plus the unit rate for composite capacity length multiplied by the natural logarithm of the composite capacity length delivered.</p> <p>The differences between outturn costs and the allowances calculated by the IWW volume driver will be scaled by an “IWW delivery adjustment factor” equal to 50% before being subject to TIM.</p> <p>Allowances will be profiled through this mechanism to ensure adequate funding is provided to TOs. For this we have assumed an average project lifespan of 4 years with costs spread in the following profile: 16%/26%/37%/21%.</p>									
Additional requirements	N/A									

<b>Output parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
Companies applied to	NGET	
Licence obligation	Special Condition 3.31	

**Table 12: Defined boundaries and boundary length**

<b>Boundary name</b>	<b>Boundary length (km)</b>
B6	38.92
B6E	38.92
B6F	38.92
B6I	38.92
B6SPT	38.92
B7	100.66
B7a	72.82
B7aEF	72.82
B7aI	72.82
B7aRev	72.82
B8	39.32
B9	72.24
B10	68.75
B11	66.2
B12	53.93
B12a	91.15
B13	56.25
B14	35.57
B14e	35.57
B15	35.26
B16	87.62
B17	43.11
EC1	45.22
EC3	46.4
EC5	50.2
EC6	43.17
LE1	39.9
NW1	35.24
NW2	64.86
NW3	79.83
NW4	42.15
SC1	20.62
SC1Rev	20.62

<b>Boundary name</b>	<b>Boundary length (km)</b>
SC2	47.68
SC2Rev	47.68
SC3	37.15
SW1	102.34

**Table 13: Cable length factors**

<b>Type of underground cable</b>	<b>Cable length factor</b>
Single circuit 132kV	[redacted]
Single circuit 400kV	[redacted]
Single circuit 275kV	[redacted]
Double circuit 132kV	[redacted]
Double circuit 400kV	[redacted]
Double circuit 275kV	[redacted]

Final Determination rationale and Draft Determinations responses

- 4.6 At Draft Determinations we proposed to reject NGET’s proposal of using a volume driver for IWW projects, and instead proposed to use a re-opener to assess funding for new projects above those accepted in baseline, and to use PCDs to hold NGET to account for delivery. Our key concern with the volume driver at the time was the high degree of uncertainty in the relationship between efficient costs and outputs, largely resulting from a wide range of potential engineering solutions to deliver incremental boundary capacity.
- 4.7 Feedback from NGET and other stakeholders indicated that the use of a re-opener and PCDs would be too inflexible to deal with potentially large volumes of work during RIIO-2 and may impact on achieving Net Zero targets in the longer term.
- 4.8 In order to address Ofgem’s concerns, NGET has presented further analysis and modifications to its proposal as follows:
- limiting the scope of the volume driver – link the baseline projects to the PCD mechanism and only apply the volume driver to additional, non-baseline projects
  - excluding windfall impact of changing external circumstances – measure boundary capacity output as when the project was submitted to the NOA process which resulted in a “proceed” recommendation

- avoiding over reward on multiple boundaries – measure outputs on only one leading boundary
- limiting undue windfall gains or losses from uncertainty – separate projects according to whether they contain “route” work, i.e. on overhead lines and/or underground cables; use the natural logarithm of relevant outputs; and, scale any underspend or overspend by an IWW delivery adjustment factor of 50% before being subject to TIM.

4.9 We have carefully considered the above and are of the view that these modifications address our concerns as set out at Draft Determinations and help to reach a reasonable balance between timely funding and limiting any windfall gains or losses. We have therefore decided to implement such a volume driver in RIIO-ET2 for NGET.

4.10 The volume driver will apply to projects delivering outputs on defined boundaries by the end of the second year of RIIO-ET3. For all other IWW projects starting within RIIO-ET2 and:

- Delivering outputs on new boundaries, funding will be considered via MSIP
- Delivering outputs more than two years after the start of RIIO-3, funding will be considered via the MSIP re-opener or as part of the setting of RIIO-ET3.

### **Tyne Crossing Project re-opener**

Purpose: To allow Ofgem to provide NGET with funding for works to remove the Tyne Crossing and replace it with a suitable alternative.

Benefits: Ensure that the Tyne Crossing works can progress once the design and costing has been approved by Ofgem.

<b>UM parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
UM type	Re-opener	We did not consult on this re-opener at Draft Determinations and proposed
Re-opener window	Any time during the price control period	
Re-opener materiality threshold	No	
Authority triggered re-opener?	No	
Additional requirements	No	

UM parameter	Final Determination	Draft Determination
Applied to	NGET	MSIP be used instead.
Licence condition	Special Condition 3.35	

### Substation Civil Works re-opener

**Purpose:** To allow NGET to seek funding for a range civil works in their substations.

**Benefits:** Ensures an appropriate level of funding is provided following receipt of sufficient levels of asset data from NGET.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	No proposed re-opener in this area.
Re-opener window	May 2022 onwards	
Re-opener materiality threshold	No	
Authority triggered re-opener?	No	
Additional requirements	NGET will have to perform condition assessments across a range of assets to ensure that funding approved is required.	
Applied to	NGET	
Licence condition	Special Condition 3.33	

### Bengeworth Road GSP Project re-opener

**Purpose:** To allow Ofgem to provide NGET with funding for works at Bengeworth Road following confirmation of need.

**Benefits:** Ensure that the Bengeworth Road works can progress once the needs case and technical design is approved by Ofgem.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	We did not consult on this re-opener at Draft Determinations. We approved
Re-opener window	Any time during the price control period	
Re-opener materiality threshold	0.5% of average annual ex-ante base revenue	
Authority triggered re-opener?	Authority trigger only	

UM parameter	Final Determination	Draft Determination
Additional requirements	NGET and UKPN will need to continue to engage with Ofgem during early 2021 to confirm the need for, and technical design of, the works required at Bengeworth Road.	£25.4m in baseline funding.
Applied to	NGET	
Licence condition	Special Condition 3.36	

### Towers and Foundations re-opener

**Purpose:** To allow NGET to seek funding for a range of steel and foundation works on Overhead Line routes.

**Benefits:** Ensures an appropriate level of funding is provided following receipt of sufficient levels of asset data from NGET.

UM parameter	Final Determination	Draft Determination
UM type	Re-opener	No proposed re-opener in this area.
Re-opener window	April 2022 onwards	
Re-opener materiality threshold	No	
Authority triggered re-opener?	No	
Additional requirements	NGET will have to perform condition assessments across a range of assets to ensure that we have a clear picture of the network towers and foundations before any submission.	
Applied to	NGET	
Licence condition	Special Condition 3.34	

### Optel Fibre Wrap re-opener

**Purpose:** For NGET to present and seek funding for carrying out the replacement of Optel fibre wrap based on a well-developed new solution and condition assessment information.

**Benefits:** Ensures an appropriate level of funding based on the outputs of condition assessments and solution development funded through a preliminary baseline allowance.

<b>UM parameter</b>	<b>Final Determination</b>	<b>Draft Determination</b>
UM type	Re-opener	No proposed re-opener in this area.
Re-opener window	April 2023	
Re-opener materiality threshold	No materiality threshold	
Authority triggered re-opener?	No	
Additional requirements	Supporting evidence to be provided by NGET.	
Applied to	NGET	
Licence condition	Special Condition 3.32	



## 5. Innovation

5.1 This chapter sets out our Final Determination on NGET's Network Innovation Allowance (NIA) for the RIIO-ET2 price control period. Chapter 8 of the Core Document also details our Final Determination on the RIIO-2 NIA framework and on the Strategic Innovation Fund.

### Network Innovation Allowance

**Purpose:** To fund innovation relating to the energy system transition and/or support for consumers in vulnerable situations.

**Benefits:** The NIA will enable companies to take forward innovation projects that have the potential to address consumer vulnerability and/or deliver longer-term financial and environmental benefits for consumers, which they would not otherwise undertake within the price control.

#### Final Determination

<b>Network Innovation Allowance</b>	<b>NGET proposed NIA (£m)</b>	<b>Ofgem Draft Determination (£m)</b>	<b>Ofgem Final Determination (£m)</b>
Level of NIA funding	75.6	49.3, conditional on an improved industry-led reporting framework.	49.3

#### Final Determination rationale and Draft Determination responses

5.2 We have decided that all network companies and the ESO will be able to access NIA funding during RIIO-2, as they have satisfactorily evidenced that an improved industry-led reporting framework will be in place for the start of RIIO-2 (see Chapter 8 of the Core Document).

5.3 We have decided to award NGET £49.3m of NIA funding. This was the amount that we proposed in our Draft Determination and which was supported by the three respondents who directly commented on NGET's NIA.

5.4 Citizens Advice and an academic both supported our assessment and the level of NIA funding we proposed to award NGET. NGET expressed comfort with the

proposed level of NIA funding, but sought clarification about the RIIO-2 NIA framework and what funds could be recovered via it. These issues are addressed in Chapter 8 of the Core Document and full details of the RIIO-2 NIA framework will be set out and consulted upon in the RIIO-2 NIA governance in due course.

- 5.5 Both the academic and NGET also noted the interlinkage to NGET's CVP proposal on the Deeside innovation centre and questioned whether NIA funds could continue to support the centre. As noted in Chapter 2, we have decided to reject this CVP but note that there may be scope for new innovation projects at the centre to be supported via RIIO-2 NIA funding providing they satisfy the RIIO-2 NIA governance.

## 6. Totex Incentive Mechanism (TIM) and Business Plan Incentive (BPI)

6.1 This chapter sets out our Final Determination for NGET on the TIM, and the BPI and the rationale underpinning it. It also sets out key responses from the Draft Determinations consultation and our views, where appropriate. Further details of our decisions on the BPI at a cross-sectoral level and the rationale underpinning them can be found in Chapter 10 of the Core Document.

**Table 14: Summary of decisions for NGET's BPI**

<b>BPI stage</b>	<b>Final Determination</b>
Stage 1 - Minimum requirements	Fail. -£26.9m penalty
Stage 2 – CVP reward	Not eligible due to Stage 1 failure. <sup>28</sup>
Stage 3 – Low cost confidence penalty	-£37.3m
Stage 4 – High cost confidence reward	Not eligible due to Stage 1 failure. <sup>29</sup>
<b>Total</b>	<b>-£64.15m Penalty</b>

### Totex Incentive Mechanism

6.2 The TIM is designed to encourage network companies to improve efficiency in delivery and ensures that the benefits of these efficiencies are shared with consumers. It also provides some protection to companies from overspends as the costs of overspends are also shared with consumers.

#### Final Determination

**Table 15: RIIO-2 TIM incentive rate for NGET**

<b>Licensee</b>	<b>Draft Determination</b>		<b>Final Determination</b>
	NGET	39.2%	33%

6.3 The main driver for the change in our Final Determination from our Draft Determination position is the increased allowance of costs and volumes of work which were rejected in our Draft Determination, and for which NGET provided

<sup>28</sup> See Appendix 2 for value before eligibility exclusion.

<sup>29</sup> £0m before eligibility exclusion

further justification information following our Draft Determination. These costs are marked as lower confidence which results in a higher proportion of lower confidence costs in Totex when compared to our Draft Determination. Other updates on our cost confidence relating to NGET's plan and our allowances are explained in Chapter 3 of this document.

## Stage 1 – Minimum requirements

### Final Determination

6.4 Our decision is that NGET has not met the Business Plan minimum requirements set out in our Business Plan Guidance (BPG) and therefore failed Stage 1 of the BPI. Our rationale for this is set out in the sections below.

### Our Draft Determination view

6.5 Our Draft Determination position was that NGET had not met the Minimum Requirements set out in paragraphs 3.10, 3.12, 3.14 and 3.21 of the Business Plan Guidance (BPG)<sup>30</sup>. These failings were widespread and covered NGET's cost submission, EJPs and CBAs.

6.6 In our Draft Determination, we set out detailed reasons for our provisional assessment of NGET's submission relating to three of the most material cost areas – Protection and Control, OHL Conductors and Fittings, and Circuit Breakers and Bays. Our detailed explanation was set out in Appendix 4 of NGET Company Annex Draft Determination. We have provided a summary below of our Draft Determination assessment against these requirements:

- paragraph 3.10 of the BPG – This Minimum Requirement said that *"we expect companies to explain their costs/workload forecasts, particularly where these diverge from historical trends."* For c.£1bn of its proposed asset health led interventions, NGET proposed methodologies without the background calculations, or sufficient explanation of why the forecast volume of intervention varies from historical volumes and cost
- paragraph 3.12 of the BPG – The BPG stated that *"Business Plans must clearly set out the key drivers of expenditure for the RIIO-2 period - for example..."*

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<sup>30</sup>[https://www.ofgem.gov.uk/system/files/docs/2019/10/riio-2\\_business\\_plans\\_guidance\\_october\\_2019.pdf](https://www.ofgem.gov.uk/system/files/docs/2019/10/riio-2_business_plans_guidance_october_2019.pdf)

*conditions of assets/utilisation.*" Evidence supporting the asset health condition inputs was not provided. No reports on repairs, asset age information, duty information, visual inspection reports or photographs of individual assets were submitted. This required Ofgem and our consultants, Atkins, to sample the interventions proposed and to request all contributory information used to justify their inclusion

- paragraph 3.14 of the BPG – This paragraph of the BPG set out a number of additional requirements for information to support cost forecasts. NGET did not provide a clear rationale behind, or the assumptions used to assess, the volume of work that it proposes to undertake, which in turn makes it difficult for us robustly to assess its costs. Secondly, for non-lead assets where categories of expenditure are more uncertain and more difficult to forecast using historical/independent benchmarks, NGET did not consider mechanisms that mitigate risk associated with uncertainty, and/or other evidence to justify its submitted costs
- paragraph 3.21 of the BPG – The BPG stated that Cost Benefit Analyses (CBAs) Engineering Justification Papers (EJPs) should *"demonstrate evidence of structured options development, including consideration of whole system options and non-network options, where applicable, against a baseline scenario which involves the minimum level of intervention that would be required to remain compliant with all applicable regulation"*. NGET did not determine the minimum level of intervention required to remain compliant with legislation and did not consider a reasonable range of credible investment decisions. Due to the lack of detailed justification for asset health interventions, NGET's submission was not open to *"scrutiny and challenge"*, nor was it *"transparent about assumptions, inputs and rationale for decisions, calculations and results"*

### **Final Determination rationale and Draft Determination responses**

- 6.7 We have decided to implement our Draft Determination position that NGET's BP did not meet the minimum requirements (including those identified above), and therefore failed Stage 1 of the BPI.
- 6.8 NGET responded to Draft Determinations on the detailed assessment points that we had made in relation to the three most material cost areas, i.e. Protection and Control, OHL Conductors and Fittings, and Circuit Breakers and Bays. The key

responses are considered below. NGET's broader response points regarding the BPI framework and the interactions between Stages 1 and 3 are considered in Chapter 10 of the Core Document.

### *Protection and Control*

- 6.9 In our Draft Determinations, we said that NGET had failed to provide information that could explain the significant increase in intervention volumes and unit costs in NGET's business plan compared to RIIO-1. We said that NGET had not undertaken an assessment of alternative options before deciding on its preferred solutions, and it had not been transparent about its assumptions.
- 6.10 In its response, NGET said that a lack of explanation for the increase in intervention volumes and costs should not be seen as a Stage 1 matter (i.e. failure against minimum requirements), but rather as a Stage 3 matter (i.e. poor justification for forecast costs). It argued that Ofgem has therefore '*misapplied*' its BPI framework.
- 6.11 NGET said that, in any case, it had provided sufficient information to support its cost forecasts, including a consideration of alternative options, and that it had set out the assumptions underpinning its forecasts. NGET specifically referred to one page of its business plan EJP for Protection and Control.
- 6.12 Finally, it said that given the large number of assets operated by NGET, it is not reasonable for Ofgem to require NGET to provide actual condition data to support its forecasts.
- 6.13 We disagree with NGET's response that this was a stage 3 rather than a stage 1 matter. The minimum requirements set out in our BPG are clear.
- 6.14 For instance, paragraph 3.10 of the BPG says: "*in proposing costs for operating and developing their networks, we expect companies to explain their costs/workload forecasts, particularly where these diverge from historical trends*" (*emphasis added*). The BPG clearly stated the '*explanatory*' aspect of the minimum requirement, and it should have been clear to a well-informed licensee such as NGET that, where there has been a divergence from historical trends, the minimum requirement is to explain those costs/workload forecasts. It is our view that NGET's business plan did not contain information that could be reasonably

construed as an explanation of the costs and work volumes. For a cost category with forecast costs in RIIO-2 of £497 million, the EJP contains a few lines about asset age, asset lives and obsolescence as an explanation for the significant increase in work volumes. This was not sufficient.

- 6.15 Paragraph 3.12 of the BPG required that "*Business Plans must clearly set out the key drivers of expenditure for the RIIO-2 period - for example, growth in demand, conditions of assets/utilisation, legislative requirements, and any other relevant drivers.*" In response to DDs, NGET said that it did set out the key driver of expenditure: "*obsolescence rather than deteriorating condition or performance*". However, as is the case with divergence from historical trends above, the explanation provided is cursory and does not meet the minimum requirement in our view. The drivers which were presented by NGET in the December submission were, in general, unquantified and not listed to a specific asset, or asset class.
- 6.16 As an efficient operator of a large transmission network, we would expect NGET to monitor and maintain a record of the condition of assets across its network. To do so is necessary to ensure that its customers are protected. For P&C and all other asset categories, it is our view that NGET would develop an asset health plan for expenditure of £497 million without consideration of the actual condition and performance of the assets that it proposes to replace as part of that plan.
- 6.17 Paragraph 3.13 of the BPG requires NGET to develop and assess options for intervention, including 'do nothing' and 'deferral' options. NGET said that it had considered different options as set out in its EJP. We do not consider that NGET's options assessment as set out in its EJP meets the minimum requirement as it does not set out the associated scope for works and costing for those options. The requirement to develop and assess options was a requirement to undertake a meaningful comparison of feasible and credible options. NGET's options assessment involved four options; we noted that these were generic options, supported by limited data on the need for these works and deliverability, and therefore insufficient to enable us to evaluate the benefits or risks to the consumer. This reinforces our view that the minimum requirement for option development was not met in the December submission.

*OHL Conductors and Fittings*

6.18 In relation to OHL Conductors and Fittings, we said in our Draft Determinations that NGET had failed to provide information that could explain the significant increase in intervention volumes and unit costs in NGET's business plan compared to RIIO-1 as required by paragraph 3.10 of the BPG. We said that NGET had failed to explain the drivers of the increase in expenditure, and that it had not explained the basis for its assumed levels of asset degradation during the RIIO-2 period. We also said that NGET had not undertaken an assessment of alternative credible options before deciding on its preferred solutions as required by paragraphs 3.13 and 3.21 of the BPG.

6.19 NGET's response in this area made very similar points to that made in relation to Protection and Control costs as follows:

- The lack of explanation for the increase in intervention volumes and costs should not be seen as a Stage 1 matter (i.e. failure against minimum requirements), but rather as a Stage 3 matter (i.e. poor justification for forecast costs). They argued that Ofgem has therefore '*misapplied*' its BPI framework.
- NGET said that, in any case, it had provided sufficient information to support its cost forecasts, and it had included a consideration of alternative options in its plan and had set out the assumptions underpinning its forecasts.
- Given the large number of assets operated by NGET, it said that it is not reasonable for Ofgem to require NGET to provide actual condition data to support its forecasts.

6.20 As set out in the section on Protection and Control, we do not agree that we have misapplied the BPI framework. We consider that the minimum requirement was set out in the BPG and that the information provided by NGET does not meet the minimum requirement.

6.21 We do not accept NGET's suggestion that it had met the minimum requirement to consider options. In its response, NGET said "*Ofgem's position that NGET did not consider "all credible options" is inconsistent with the Stage 1 Minimum Requirements, which only requires "consideration of options". In particular, Ofgem's assertion that NGET should have included one specific additional option is not a material grounds for deeming the Minimum Requirements not to be met.*"



*The Minimum Requirement under BPI stage 1 is not a test of the credibility or exhaustiveness of options considered. This constitutes a quality appraisal commensurate with a BPI Stage 3 assessment."*

- 6.22 We do not agree with NGET's argument. The minimum requirement to consider options, on a fair and reasonable interpretation, includes the requirement that at least some of the alternative options considered would be credible – without which the exercise would be rendered meaningless and not fit for purpose. The "one specific additional option" that NGET refers to was mentioned by us as an example of a credible option that NGET could have considered as part of its options assessment but did not.
- 6.23 We have explained in the section on Protection and Control our reasons for expecting NGET to provide asset condition data as part of its stage 1 business plan submission. Those reasons apply to this minimum requirement.

#### *Circuit Breakers and Bays*

- 6.24 In relation to Circuit Breakers and Bays, we said in our Draft Determinations that NGET had failed to provide information that could explain the significant increase in intervention volumes and unit costs in NGET's business plan compared to RIIO-1. We said that NGET had failed to explain the drivers of the increase in expenditure, and that it had not carried out an assessment of alternative credible options before deciding on its preferred solutions.
- 6.25 NGET's response in this area made very similar points to that made in relation to the previous two cost areas, and we do not repeat the points to address NGET's response in the previous section as they apply equally here.
- 6.26 Paragraph 3.14 of the BPG says that Business Plans must provide "*evidence of the efficiency of their costs, for example as compared to historical benchmarks and/or benchmarking with national and international comparators*". NGET argue that the minimum requirements "*do not require NGET to provide justification for increase in costs in T2 compared to T1. Ofgem has misapplied its BPI framework.*"
- 6.27 We disagree with NGET. There is a clear requirement to provide evidence of cost efficiency, which could include comparisons with historical costs and/or

benchmarking with national and international comparators. We said in our Draft Determinations that NGET had not provided that evidence in relation to bay costs.

- 6.28 We agree that NGET had provided some benchmarking information in relation to Circuit Breaker and Bay equipment. Our concern with the benchmarking provided was that it was not fit for purpose as NGET used 'flat' unit rates (e.g. the same cost for all asset types), and it did not separately show the amounts added for Risk and Contingency costs, and it therefore failed to provide evidence of the efficiency of its costs. The use of flat unit rates does not allow us to establish the scope used for the benchmarking against the NGET scope, which does not include the site specific and risk factors included. Our position is that this is not a credible benchmarking exercise and therefore fails to meet the minimum requirement.
- 6.29 In relation NGET's options assessment, we said in our Draft Determinations that NGET had not carried out a credible options assessment due to the lack of consideration of a meaningful baseline scenario as required by the minimum requirement. NGET said that Ofgem's position amounts to a "*quality appraisal which should be carried out under Stage 3 of the BPI and so Ofgem has misapplied its BPI framework*". NGET pointed to the options assessment that it had described in its EJP, and said that that assessment is sufficient to meet the minimum requirement. However, for similar reasons as set out above, we consider that the options assessment should meet a minimum standard before it can be considered to have met the minimum requirement – which involves the consideration of a meaningful baseline scenario. We maintain our view that NGET had not done this.
- 6.30 In relation to the baseline option considered by NGET, it said that it was not practical to model the scenario of minimum intervention as required by the BPG minimum requirements, and that it had taken a proportionate approach. Again, we disagree that the minimum requirement in this area is disproportionate or impractical. The forecast expenditure by NGET in this category was £264m, and we think the analysis undertaken by NGET to support its optioneering was lacking to the extent that it constitutes a failure of minimum requirements.

#### *Views of the Independent Challenge Group*

- 6.31 Prior to Final Business Plan submission, The Independent Challenge Group report into NGET's draft and final business plans had also raised a number of concerns

about the lack of information on these areas in NGET's plan which NGET had time to consider ahead of finalising its Business Plan. For instance:

- On the overall asset health category, the report says *"Overall, NGET have provided more limited evidence than we would have expected to justify an estimated additional £1.5bn in asset health expenditure above current levels."*
- On its proposed intervention volumes, the report says *"The engineering justifications and need cases are very generic. We do not think there is acceptable evidence for the volumes of intervention, and little evidence from actual asset condition."*
- On its options assessment, the report says *"The option assessments are high level. We do not think that all options have been fully considered and that there is an appropriate balance between risk and value for money e.g. lower cost refurbishment has not been fully considered"*.
- On the content of EJPs, the report said *"NGET's CBAs and EJPs in the final Plan are in many cases generic, with some seeking to justify large sums of expenditure for major work programmes in one lump, rather than being at a project-level and site specific. We found the EJPs more useful than the CBAs, which conveyed little additional useful information, and appeared to be quite limited in detail. A number of variables (for example transformer losses) that we would have expected to see modelled, were left blank. The EJPs and CBAs taken together as a suite are also quite hard for the reader to navigate, in part because figures do not always seem to align between different sources. Following our request in October, the naming of assets for intervention in some of the December EJPs is an improvement, but we would like to have seen specific EJPs and CBAs for what are individually significant expenditure proposals, and recommend that Ofgem reviews these when they are made available. There was evidence that NGET had considered options as part of their CBA process, for example between refurbishment or replacement, or between intervening in the RIIO-2 period or waiting until a future period, but again these are on the whole presented as generic assessments. Overall, the final EJPs were disappointing and without asset specific justifications, we found it difficult to gain confidence over the cost certainty in the proposals."*

6.32 Overall, we believe that the Independent Challenge Group report provides additional independent corroboration to our position that NGET's plan contained

significant and material gaps and omissions in relation to the stage 1 minimum requirements.

*Views of independent engineering consultants*

- 6.33 We commissioned Atkins to support our review of NGET's engineering submissions. Atkins provided a report which we published alongside our DDs.
- 6.34 Atkins reviewed 29 Investment Decision Packs (IDPs) submitted by NGET, covering forecast expenditure of over £4.7 billion. Of these, Atkins gave a 'RED' rating (representing the highest risk to consumers) to 13 IDPs, which together covered £2.2 billion of costs.
- 6.35 On the quality of information provided by NGET in its IDPs, the report highlights a number of gaps and omissions in information provided, and concludes that "*overall, the papers were lacking in detail requiring a significant number of SQs*". Further details of gaps identified are set out in the Atkins report.

*Conclusions*

- 6.36 As set out in the examples above and in the Core Document, we believe that NGET's plan had multiple failings against our BPG minimum requirements. These were not isolated errors, but systemic failings in relation to the minimum required content of the plans. The lack of detail and justification shown in its Business Plan for high value expenditure areas, in particular where this involved significant increases over RIIO-ET1 expenditure, has undermined our confidence in NGET's Business Plan. These failings also had a material impact on our ability to assess its Business Plan in a timely and robust manner. Significant resource needed to be dedicated to resolving the multiple issues in NGET's plan, including through supplementary questions and significant bilateral engagement to try to obtain information including the minimum required.
- 6.37 In its consultation response, NGET has sought to portray its failings as being related to the *quality* of its costs justification rather than gaps or omissions amounting to a failure to meet minimum requirements. We disagree with this position. We have reached the view that there has been a failure of minimum requirements only in circumstances where the minimum required information or analysis is lacking. That is a different question from the analysis at Stage 3, ie whether the information or analysis provided (taking into account all information,

including that received after initial BP submission date in response to SQs or otherwise) justifies the requested amount of the low confidence cost or not.

6.38 We do not consider that NGET's response to Draft Determinations provides sufficient reasoning to change our Draft Determination position that NGET has not met the minimum requirements and, therefore, it is our Final Determination decision that NGET has failed Stage 1 of the BPI.

6.39 For the avoidance of doubt, we have not attempted to set out an exhaustive list of all the different ways in which NGET's plan fails to meet the minimum requirements across all cost areas. Our aim was to highlight some prominent failings in the more material areas of NGET's plan.

### **Impact of the BPI Stage 1 failings on our assessment**

6.40 Given that we could not scrutinise or challenge the justifications for asset health interventions in NGET's December Business Plan, to enable us to carry out our assessment beyond stage 1, we requested the missing information from NGET via our SQ process. Overall, we raised over 425 SQs, and over 240 of these were engineering questions which focused predominantly on the justification necessary to support NGET's proposed interventions.

6.41 After discussions with NGET during our review process for Draft Determinations, we received a further submission in September 2020 which was significantly more detailed. We note that this was after our 7-month assessment window and publication of our Draft Determinations. This had a significant impact on our ability to assess and form a consultation position as it was all information that should have been provided in December 2019. NGET was already aware of the shortcomings of its Plan in some areas, further to the Independent Challenge Group Report, as set out above.

6.42 Despite the compressed timescales, we carried out a review of the additional information submitted in September, post DDs, and this has significantly changed the position with regards to NGET's allowances. We note that there was limited 'new' data in this submission and that the majority of this information could have been presented in the December plan, had NGET chosen to do so.

## Stage 2 – Consumer Value Propositions

6.43 NGET has failed Stage 1 minimum requirements and is therefore not eligible to receive rewards under Stage 2 of the BPI. For details of our Final Determination on NGET’s CVP proposals see Appendix 2.

## Stage 3 - Low cost confidence penalty

6.44 We have decided that NGET will incur a £37.3m penalty following our BPI Stage 3 assessment. Table 16 sets out our decisions across all cost categories.

**Table 16: Summary of decisions for stage 3 disallowance penalty.**

<b>Cost category</b>	<b>Poorly justified lower confidence cost disallowance (£m)</b>	<b>BPI stage 3 penalty (£m)</b>
Load Related Capex	0	0
Non-Load Related capex	337.9	33.8
Indirect opex	0	0
Non-Operational capex	0	0
Network Operating Costs	34.7	3.5

### Final Determination rationale and Draft Determination responses

6.45 In our DDs, we consulted on our provisional assessment that NGET would receive a penalty of £179.6m under BPI Stage 3.

6.46 Following DDs, we have considered responses including the further justification provided by NGET and taken it into account to approve an increased allowance of costs and volumes of work which we had proposed to reject in our Draft Determinations. Further details of these changes and our rationale for making them are set out in Chapter 3 of this document.

6.47 NGET’s Stage 3 penalty has reduced to £38.3m at FDs as a result of these changes.

## Stage 4 – High cost confidence reward

6.48 NGET has failed Stage 1 Minimum Requirements and is therefore not eligible to receive rewards under Stage 4 of the BPI.

## Appendices

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## Appendix 1 : Additional Information

**Table A1.1: Environmental Scorecard ODI-F annual reward and penalty thresholds**

Percentage change	Year	Penalty thresholds		EAP commitment	Reward thresholds	
a) Reduction in business mileage emissions  Baseline: 2019/20 emissions	2021/22	-0	-1	-2	-3	-4
	2022/23	-2	-3	-4	-5	-6
	2023/24	-4	-5	-6	-7	-8
	2024/25	-5	-6	-8	-10	-12
	2025/26	-6	-8	-10	-12	-14
b) Office and operational waste recycling rate	2021/22	40	44	48	52	56
	2022/23	42	46	50	54	58
	2023/24	45	49	53	57	61
	2024/25	49	53	57	61	65
	2025/26	50	55	60	65	70
c) Office waste by weight  Baseline: 2019/20 waste in tonnes	2021/22	0	-1	-2	-3	-4
	2022/23	-2	-3	-4	-5	-6
	2023/24	-3	-5	-6	-7	-9
	2024/25	-4	-6	-8	-10	-12
	2025/26	-10	-15	-20	-25	-30
d) Office water use  Baseline: 2019/20 water in cubic metres	2021/22	0	-1	-2	-3	-4
	2022/23	-2	-3	-4	-5	-6
	2023/24	-3	-5	-6	-7	-9
	2024/25	-4	-6	-8	-10	-12
	2025/26	-10	-15	-20	-25	-30
e) Environmental value of non-operational land  Baseline: 2019/20 natural capital valuation	2021/22	0.2	0.6	1	1.4	1.8
	2022/23	1.45	1.85	2.25	2.65	3.05
	2023/24	1.45	1.85	2.25	2.65	3.05
	2024/25	1.45	1.85	2.25	2.65	3.05
	2025/26	1.45	1.85	2.25	2.65	3.05
f) Environmental net gain on projects affecting the local environment:  Baseline target: 10%	All years in RIIO-T2	Single penalty threshold		Single reward threshold		
		5		15		



**Table A1.2: Environmental Scorecard incentive values**

<b>Impact area</b>	<b>Values used to calibrate incentive rate</b>
a) Reduction in business mileage emissions	Non-traded value of carbon, HMT Green Book Supplementary Guidance. <sup>31</sup> Nitrogen Oxide (NOx) air quality damage cost, DEFRA Air Quality Damage Guidance Cost Appraisal. <sup>32</sup> Particulate Matter air quality damage cost, DEFRA Air Quality Damage Guidance Cost Appraisal
b) Operational and office waste recycling	Non-traded value of carbon, HMT Green Book Supplementary Guidance Government Landfill tax, HRMC. <sup>33</sup>
c) Reduction in waste created at NGET offices	As above
d) Reduction in water use for main offices	Non-traded value of carbon, HMT Green Book Supplementary Guidance
e) Increase in environmental value of non-operational land	Estimates of natural capital value using National Grid's Natural Capital Valuation tool. <sup>34</sup>
f) Environmental net gain on all construction projects	Based on replacement cost plus 10% margin

**Table A1.3: Network Operating Costs allowances against NGET submission**

<b>Network Operating Costs Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work/Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Faults	1.0	0.0	0.0	0.0	1.0
Inspections	96.7	0.0	0.0	0.0	96.7
Repairs and Maintenance	422.3	13.0	16.8	1.4	391.1
Vegetation Management	30.3	0.0	0.0	0.0	30.3
Operational Protection	186.9	84.9	0.0	34.6	67.4

<sup>31</sup> Valuation of energy use and GHG emissions appraisal:

<https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal>

<sup>32</sup> Air quality appraisal - damage cost guidance: <https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance>

<sup>33</sup> Environmental taxes, reliefs and schemes for businesses: <https://www.gov.uk/green-taxes-and-reliefs/landfill-tax>

<sup>34</sup> For more information on NGET's Natural Capital Valuation tool: <https://www.nationalgrid.com/uk/electricity-transmission/caring-natural-environment>

<b>Network Operating Costs Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work/Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Measures and IT Capex					
Legal and Safety	247.9	0.0	17.1	93.9	136.9
Total	985.1 <sup>35</sup>	97.9	33.9	129.9	723.4

Table A1.4: Non-operational Capex allowances against NGET submission

<b>Non-Op Capex category</b>	<b>NGET proposed baseline (£m)</b>	<b>Work Volume Reductions (£m)</b>	<b>Cost Reductions (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem FD Baseline Allowances (£m)</b>
Property	10.0	0.0	0.0	0.0	10.0
IT&T	337.0	0.0	26.1	72.6	238.3
STEPM	9.3	0.0	4.8	0.0	4.5
Vehicles & Transport	20.6	0.0	0.0	0.0	20.6
Total	376.9	0.0	30.8	72.6	273.5

Table A1.5: Business Support Costs allowances against NGET submission

<b>BSC Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Information Technology & Telecoms (IT&T)	98.0	0.0	0.0	0.0	98.0
Property management	68.2	0.0	0.0	0.0	68.2
Audit, finance, and regulation	97.4	0.0	0.0	0.0	97.4
HR and non-operational training	29.8	0.0	0.0	0.0	29.8

<sup>35</sup> £985.1m is £1174.6m less £202.4m of Visual Amenity, plus £15.6m of embedded efficiency, less £2.8m of SF6 Repair costs moved from NOCs to NLR Capex.

<b>BSC Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Insurance	75.3	0.0	0.0	0.0	75.3
Procurement	34.5	0.0	0.0	0.0	34.5
CEO and group management	55.2	0.0	0.0	0.0	55.2
Total	458.4	0.0	0.0	0.0	458.4

**Table A1.6: Closely associated indirect costs allowances against NGET submission**

<b>CAI Cost Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Operational IT & Telecoms	87.3	0.0	0.0	0.0	87.3
Project management	487.8	30.7	97.7	0.0	359.4
Network design and engineering	64.1	4.4	7.6	0.0	52.0
System mapping	0.0	0.0	0.0	0.0	0.0
Engineering management and clerical support	222.5	14.5	38.3	0.0	169.7
Network policy (including R&D)	12.8	0.8	2.2	0.0	9.7
Health, safety, and environment (HSE)	7.6	0.6	0.4	0.0	6.6
Operational training	61.5	0.0	0.0	0.0	61.5

<b>CAI Cost Category</b>	<b>NGET Proposed Baseline (£m)</b>	<b>Work Volume Reduction (£m)</b>	<b>Cost Reduction (£m)</b>	<b>Work Volume Reductions subject to UM (£m)</b>	<b>Ofgem Baseline Allowance (£m)</b>
Store and logistics	8.2	0.6	0.9	0.0	6.7
Vehicles and transport	17.6	1.2	2.0	0.0	14.4
Market facilitation	0.1	0.0	0.0	0.0	0.1
Network planning	81.4	5.3	13.9	0.0	62.2
Total	1050.9	58.1	163.1	0.0	829.7

Table A1.7: LRE schemes started in RIIO-ET1 crossing into RIIO-ET2

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGT2002	15.76	13.24
NGT2005	0.08	0.07
NGT20011	14.92	12.53
NGT20012	52.93	44.46
NGT20022	1.31	1.10
NGT20026	16.36	13.74
NGT20032	5.46	4.59
NGT20043	0.70	0.59
NGT20048	1.05	0.89
NGT20057	12.05	10.12
NGT20061	11.16	9.37
NGT20063	0.29	0.25
NGT20071	19.46	16.35
NGT20085	20.95	17.60
NGT20089	1.83	1.54
NGT20091	26.09	22.17
NGT200101	12.70	10.66
NGT200104	0.04	0.03
NGT200115	2.71	2.28
NGT200117	14.03	11.79

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGT200119	19.34	16.25
NGT200123	7.48	6.28
NGT200125	4.39	3.69
NGT200130	2.64	2.22
NGT200132	1.23	1.03
NGT200134	2.40	2.01
NGT200138	2.40	2.02
NGT200152	0.53	0.45
NGT200158	2.80	2.35
NGT200166	2.64	2.22
NGT200168	0.75	0.63
NGT200182	11.93	10.02
NGT200186	3.85	3.23
NGT200188	29.71	24.95
NGT200192	0.47	0.39
NGT200196	4.08	3.42
NGT200201	2.01	1.70
NGT200204	0.88	0.74
NGT200213	5.26	4.42
NGT200223	5.24	4.40
NGT200224	10.51	8.83
NGT200226	5.66	4.75
NGT200231	3.71	3.12
NGT200235	19.26	16.18
NGT200267	5.61	4.71
NGT200269	27.78	23.34
NGT200283	506.59	425.53

Table A1.8: RIIO-ET2 schemes under the Generation/demand volume drivers

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGT20026	16.36	13.74
NGT20041	2.05	1.72
NGT20046	0.65	0.54
NGT20048	1.05	0.89

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGT20050	63.52	53.36
NGT20052	1.17	0.98
NGT20054	1.02	0.85
NGT20071	19.46	16.35
NGT20073	10.19	8.56
NGT20097	14.39	12.09
NGT200112	30.59	25.70
NGT200114	7.81	6.56
NGT200117	14.03	11.79
NGT200119	19.34	16.25
NGT200126	3.20	2.69
NGT200128	1.00	0.84
NGT200130	2.64	2.22
NGT200132	1.23	1.03
NGT200134	2.40	2.01
NGT200136	0.60	0.50
NGT200138	2.40	2.02
NGT200140	0.77	0.65
NGT200142	2.28	1.92
NGT200144	0.66	0.56
NGT200146	2.68	2.25
NGT200148	0.89	0.75
NGT200154	0.12	0.10
NGT200156	0.03	0.03
NGT200158	2.80	2.35
NGT200160	1.40	1.18
NGT200162	3.70	3.11
NGT200164	1.30	1.09
NGT200170	0.16	0.13
NGT200172	0.03	0.03
NGT200182	11.93	10.02
NGT200196	4.08	3.42
NGT200217	8.05	6.77
NGT200219	10.19	8.56

Table A1.9: NLRE schemes starting in RIIO-ET1 and crossing into RIIO-ET2

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT204	5.11	4.29
NGNLT206	126.48	106.24
NGNLT207	3.68	3.09
NGNLT208	5.85	4.91
NGNLT2018	1.41	1.29
NGNLT2021	37.73	31.69
NGNLT2025	55.61	46.72
NGNLT2032	5.60	4.71
NGNLT2035	4.44	3.73
NGNLT2036	4.84	4.07
NGNLT2040	8.86	7.44
NGNLT2041	11.01	9.25
NGNLT2042	28.05	23.68
NGNLT2044	23.85	20.46
NGNLT2045	5.49	4.61
NGNLT2046	4.78	4.01
NGNLT2056	3.43	2.88
NGNLT2058	1.89	1.59
NGNLT2060	23.07	19.38
NGNLT2062	0.87	0.73
NGNLT2064	71.14	59.76
NGNLT2071	6.25	5.25
NGNLT2072	23.55	19.78
NGNLT2079	5.31	4.46
NGNLT2081	5.06	4.25
NGNLT2084	5.64	4.74
NGNLT2086	0.06	0.05
NGNLT2088	4.09	3.43
NGNLT2090	4.39	3.68
NGNLT2096	3.29	2.76
NGNLT2098	4.98	4.19
NGNLT20100	2.39	2.01
NGNLT20101	4.14	3.47
NGNLT20102	2.98	2.50

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT20103	3.56	2.99
NGNLT20104	2.38	2.00
NGNLT20107	5.40	4.53
NGNLT20108	1.01	0.85
NGNLT20109	1.71	1.44
NGNLT20112	0.66	0.55
NGNLT20117	3.18	2.67
NGNLT20134	3.93	3.30
NGNLT20135	4.59	3.85
NGNLT20141	0.06	0.05
NGNLT20142	2.04	1.71
NGNLT20144	1.99	1.67
NGNLT20153	10.61	8.91
NGNLT20155	11.24	9.44
NGNLT20165	10.95	9.20
NGNLT20166	5.66	4.75
NGNLT20168	3.81	3.20
NGNLT20176	2.64	2.22
NGNLT20178	3.88	3.26
NGNLT20187	6.49	5.45
NGNLT20188	4.72	3.96
NGNLT20199	0.83	0.70
NGNLT20205	0.39	0.33
NGNLT20206	1.10	0.93
NGNLT20213	1.08	0.90
NGNLT20226	1.25	1.05
NGNLT20236	18.16	15.25
NGNLT20237	18.32	15.39
NGNLT20247	8.78	7.37
NGNLT20248	7.38	6.20
NGNLT20254	10.80	9.07
NGNLT20255	36.32	30.51
NGNLT20257	21.16	17.77
NGNLT20263	3.12	2.62
NGNLT20272	1.65	1.38
NGNLT20273	5.19	4.36



<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT20274	0.34	0.28
NGNLT20277	10.14	8.52
NGNLT20278	7.78	6.54
NGNLT20284	3.81	3.20
NGNLT20297	4.59	3.85
NGNLT20298	4.59	3.85
NGNLT20299	4.59	3.85
NGNLT20302	5.56	4.67
NGNLT20304	6.74	5.66
NGNLT20323	0.04	0.03
NGNLT20324	0.05	0.04
NGNLT20325	0.05	0.04
NGNLT20326	2.98	2.50
NGNLT20327	0.02	0.02
NGNLT20328	0.45	0.37
NGNLT20329	1.84	1.55
NGNLT20330	3.24	2.72
NGNLT20331	2.92	2.45
NGNLT20332	3.44	2.89
NGNLT20338	3.05	2.56
NGNLT20339	1.15	0.97
NGNLT20340	1.70	1.43
NGNLT20341	0.85	0.72
NGNLT20343	1.50	1.26
NGNLT20344	0.16	0.13
NGNLT20346	1.98	1.66
NGNLT20347	1.25	1.05
NGNLT20348	1.51	1.27
NGNLT20354	0.30	0.25
NGNLT20376	0.46	0.39
NGNLT20377	2.25	1.89
NGNLT20378	5.22	4.38
NGNLT20379	0.02	0.14
NGNLT20380	0.06	0.05
NGNLT20381	0.46	0.39
NGNLT2074	7.22	6.06

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT20303	5.56	4.67
NGNLT20342	0.48	0.40

**Table A1.10: LRE projects starting in RIIO-ET2 crossing in to RIIO-ET3**

<b>Scheme reference</b>	<b>NGET request (incl. indirect opex), £m</b>	<b>Ofgem allowance (excl. indirect opex), £m</b>
NGT20024	3.28	2.75
NGT20050	63.52	53.36
NGT20070	1.30	1.09
NGT200144	0.66	0.56
NGT200148	0.89	0.75
NGT200156	0.03	0.03
NGT200170	0.16	0.13
NGT200172	0.03	0.03
NGT200217	8.05	6.77
NGT200219	10.19	8.56
NGT200240	2.61	2.19
NGT200241	0.26	0.22
NGT200244	0.01	0.01
NGT200249	1.46	1.23
NGT200250	0.39	0.33
NGT200252	0.13	0.11
NGT200253	0.13	0.11
NGT200258	0.19	0.16
NGT200259	6.34	5.32
NGT200260	2.68	2.25
NGT200261	3.94	3.31
NGT200275	0.44	0.37
NGT200279	5.86	4.93

**Table A1.11: NLRE projects starting in RIIO-ET2 crossing in to RIIO-ET3**

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT201	3.49	2.93

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT2019	0.01	0.01
NGNLT20149	4.45	3.74
NGNLT20161	19.33	16.24
NGNLT20162	0.06	0.05
NGNLT20163	0.49	0.41
NGNLT20164	0.84	0.70
NGNLT20171	7.26	6.10
NGNLT20172	0.24	0.20
NGNLT20173	0.05	0.04
NGNLT20174	0.74	0.62
NGNLT20184	6.07	5.10
NGNLT20185	1.58	1.32
NGNLT20186	1.01	0.85
NGNLT20192	0.14	0.12
NGNLT20193	0.06	0.05
NGNLT20196	7.88	6.62
NGNLT20197	0.34	0.28
NGNLT20198	0.80	0.67
NGNLT20202	0.34	0.29
NGNLT20203	0.06	0.05
NGNLT20204	0.03	0.03
NGNLT20209	0.91	0.76
NGNLT20210	0.06	0.05
NGNLT20211	0.03	0.02
NGNLT20216	1.61	1.35
NGNLT20217	0.31	0.26
NGNLT20218	0.14	0.11
NGNLT20240	17.78	14.93
NGNLT20241	0.98	0.82
NGNLT20256	45.65	38.34
NGNLT20268	1.48	1.24
NGNLT20276	5.78	4.86
NGNLT20281	2.30	1.93
NGNLT20282	2.30	1.93
NGNLT20288	3.88	3.26
NGNLT20289	0.06	0.05

<b>Scheme reference</b>	<b>NGET RIIO-ET2 request (incl. indirect opex), £m</b>	<b>Ofgem RIIO-ET2 allowance (excl. indirect opex), £m</b>
NGNLT20320	4.99	4.19
NGNLT20321	4.45	3.74
NGNLT20322	4.45	3.74
NGNLT20335	0.01	0.01
NGNLT20352	0.37	0.31
NGNLT20359	0.07	0.06
NGNLT20360	0.08	0.06
NGNLT20362	1.90	1.60
NGNLT20363	0.01	0.01
NGNLT20364	0.51	0.43
NGNLT20371	0.29	0.25
NGNLT20372	0.14	0.12
NGNLT20375	4.85	4.07
NGNLT20389	0.08	0.06
NGNLT20390	0.04	0.03
NGNLT20391	0.29	0.24
NGNLT20392	0.15	0.13
NGNLT20393	0.07	0.06
NGNLT20395	0.51	0.43
NGNLT20396	0.14	0.12

## Appendix 2 : Summary of decisions – bespoke outputs

Table A2.1: NGET’s bespoke ODI proposals

ODI name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
<p><b>Environmental Scorecard:</b> NGET proposed an ODI-F to reward/penalise its performance in seven environmental areas compared to an annual target improvement in each area.</p>	<p><b>Accept:</b> We proposed to accept the bespoke ODI-F subject to three modifications relating to the scope and weighting, the target measure for one impact area related to operational fleet, and re-calibrating the incentive rate to reflect the economic value of the environmental benefit delivered in each impact area.</p>	<p>We received five responses from stakeholders who supported the approval of the ODI-F and our proposed modifications.</p>	<p><b>Accept:</b> We have decided to accept the ODI-F for six of the seven areas consulted on in DD. We have also decided to re-calibrate the incentive rate for each impact area. Further information on our decision can be found in Chapter 2 of this document.</p>
<p><b>Accelerating low carbon connections:</b> NGET proposed an ODI-F to incentivise it to deliver shorter connection lead times to get new generation onto the network more quickly.</p>	<p><b>Reject:</b> We proposed to reject this ODI-F as we thought that it would be difficult to set a meaningful and challenging baseline and to differentiate the effect of an ETO's genuine effort to accelerate connection from the effect of additional contingency</p>	<p>We received 9 responses to NGETQ3. Two responses agreed with our view that it would be difficult to establish meaningful baselines that could be independently verified. One stakeholder agreed that the QCS should drive the TOs to manage their connections processes to meet their customer needs. Seven stakeholders disagreed with our proposal to reject this ODI-F. These stakeholders shared views that this ODI-F does have value and would help to</p>	<p><b>Reject:</b> We remain of the view that it would be difficult to assign a meaningful baseline for this incentive. We do not agree with NGET or the other stakeholder who believe that the ESO, the UGs or the customer itself will have sufficient information to confirm that</p>

ODI name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
	<p>built into the original date. We did not think that the ESO or the User Groups (UG) have the tools to mitigate against these risks. Lastly, we thought that the Quality of Connections survey (QCS) should drive performance improvements for connections customers.</p>	<p>enable the achievement of Net Zero targets. We note that some companies questioned whether the baseline being too difficult to measure is a valid reason not to progress with this incentive and the majority of responses requested that we reconsider our position. Some stakeholders suggested that gaming of this incentive could be resolved through confirming genuine acceleration through agreement from connecting customer or through a third party, such as the ESO.</p> <p>NGET disagreed with our proposal to reject this ODI-F and proposed solutions to address our concerns around baseline setting. These include:</p> <ul style="list-style-type: none"> <li>• Restricting the ODI to connections where there are existing contracts in place now and there is no scope for NGET to lengthen the lead time of connection dates in response to this incentive</li> <li>• Further information on how NGET have calculated their baseline lead time for a new connection so that it can be challenged by the customer and/or by an independent body, such as the ESO</li> <li>• New evidence on what activities NGET will carry out to shorten the lead time and explain why these go beyond existing standard practice.</li> </ul> <p>NGET noted that this incentive will encourage risk taking, which they are less likely to take under standard commercial arrangements. It also notes</p>	<p>the original connection date had not been inflated. We also do not consider that the suggestions provided by NGET will safeguard against this risk.</p> <p>Generally, we remain of the view that it is a core activity of ETO operations to deliver timely connection dates. We therefore disagree with NGET that the incentive could be limited to existing connections.</p> <p>Overall, we think that the QCS is a better mechanism for incentivising the ETOs to manage the connections process effectively and to meet their customers’ needs, including delivering low carbon connections early, where appropriate, and enabling Net Zero targets.</p> <p>For all of these reasons, we do not think that it is appropriate to introduce an ODI-F in this space.</p>

ODI name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
		<p>that the QCS is not sufficiently targeted to encourage the risk taking required.                      Lastly, following Ofgem's feedback, NGET removed the aspect of the proposal which would reward it if the customer delays the connection date which will ensure that ODI payments are only received where there are actual greenhouse gas emissions saved.</p>	
<p><b>RIIO-T2 System Outage Management Proposals to Reduce Constraint Costs:</b> This was a joint ODI-F proposed by the ETOs and ESO for a four-staged approach to implementing an 'on demand service' which will provide flexibility to the ESO.</p>	<p><b>Reject:</b> We considered that there was insufficient evidence that an incentive is required to encourage the use of STCP 11.4. We encouraged the ETOs to resolve the barriers that exist in the procedures that they have identified.</p>	<p>We received 12 responses to this proposal. The majority of the responses disagreed with our proposal and flagged the need for an incentive in this space.</p> <p>Please refer to Chapter 2 in the ET Annex to review a summary of responses to this area.</p>	<p><b>Accept:</b> We have decided to set a common ODI-F to encourage the ETOs to deliver solutions under existing STCP 11-4. We will trial this ODI-F for a period of two years.</p> <p>Please refer to Chapter 2 of the ET Annex for further details, including our rationale for this decision.</p>

**Table A2.2: NGET's bespoke PCD proposals**

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p><b>Network reinforcements:</b> NGET proposed to innovate and invest in the network reinforcements indicated by the ESO's Network Options Assessment (NOA) process, increasing boundary</p>	<p><b>Accept:</b> We proposed to accept this proposal, but to increase the project-specific works contained within the PCD. This would include all the NOA projects approved by the ESO.</p>	<p>NGET and various interested stakeholders agreed that our PCD approach for baseline projects was acceptable.</p> <p>However, a concern was raised about our proposal to reject NGET's volume driver and UCA. This was</p>	<p><b>Accept:</b> We have decided to accept NGET's additions to their baseline and propose using PCDs, as in DD, for all baseline projects.</p> <p>Our concerns around the relationship between cost and allowance with NGET UCA is consistent with our position at</p>

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p>capability to facilitate a changing energy market and to keep costs down. This PCD had a value of £507.1m</p>	<p>We also proposed to reject NGET's volume driver with a unit cost allowance (UCA) for new projects due to the limited relationship between costs and allowances at a project level. Instead we proposed that new network reinforcement projects would be put through the MSIP re-opener.</p>	<p>because they thought the MSIP reopener would add unnecessary regulatory burden to the efforts towards achieving Net Zero.</p>	<p>DD. However, we have decided to accept NGET's UCA proposal with a Delivery Adjustment Factor (DAF) of 50% in addition to the TIM. The use of the DAF will mitigate a number of the risks associated with the poor relationship between cost and allowance at a project specific level.</p>
<p><b>Maintaining security of supply as the energy system changes:</b> NGET proposed to invest £31.1m in protection and control coordination studies, changes to settings, and replacement of relays where required to maintain security of supply and identify future requirements as fault currents decrease.</p>	<p><b>Accept:</b> While we proposed to specify a PCD for this category of investment, we rejected a proportion of the requested funding. This was on the basis that, in our view, the work scope is uncertain. We proposed instead to fund the system studies required to ascertain the correct scope of works, however, proposed to reject the settings review and update as our view was that this is part of business-as-usual (BAU).</p>	<p>NGET provided additional data to support their request.</p>	<p><b>Reject:</b> Based on our decision to continue with the proposed deduction, in line with our DD position (see Chapter 3), we consider that it would be disproportionate to maintain the PCD for the studies alone.</p> <p>As the study work is a prerequisite for the reopener, we see no need to define the PCD on this basis.</p>
<p><b>Facilitating the closure of conventional generation:</b> NGET proposed to invest £134.7m (including indirect costs) to facilitate closure of conventional generation and</p>	<p><b>Accept:</b> We proposed to accept this as we considered that the needs case for these works had been made out and the cost breakdown of works had been well defined, giving</p>	<p>NGET provided additional cost breakdown information and provided example PCD methodologies, which averaged costs per site.</p>	<p><b>Accepted (with amendments):</b> We have decided to reject the PCD based on our confidence and acceptance around the need case for these works, and the breakdown and estimations of site costs. We do not believe that a PCD</p>



PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
to secure easements to maintain grid access.	us confidence around the costs presented. However, we were concerned that there is a significant risk that some works may be deferred from RIIO-T2, and therefore proposed a PCD covering the proposed sites to manage this risk.		will provide any meaningful benefits to the consumer.
<b>Reducing carbon emissions from operational transport:</b> NGET proposed to purchase and maintain 60% of their fleet as low-carbon vehicles, including installing and maintaining substation charging for them. PCD value £47.5m	<b>Accept:</b> We proposed to accept a PCD for £26.74m for 499 Electric Vehicles (EVs) and the installation of EV charging infrastructure at 234 sites.	We received four responses, all of which were supportive of our DD position. The RIIO-2 Challenge Group questioned whether NGET installing the charging infrastructure could crowd out competition, and a consumer group sought supported our Draft Determination provided the needs case was justified for all charging points.	<b>Accept:</b> We have decided to implement the PCD as proposed at DDs. We consider it appropriate that NGET installs charging infrastructure for its own fleet in accordance with its own operational requirements and we are satisfied that the needs case for the proposed investment is justified and proportionate to current and future fleet requirements.
<b>SF6 asset intervention (Non-load related (NLR)):</b> NGET proposed a UM to fund a large-scale programme of intervention works on network assets containing and leaking SF6 with an estimated cost of between £190m and £350m.	<b>Accept:</b> We proposed to reject the bespoke proposal for a UM, instead proposing to set a PCD with baseline funding for an SF6 asset intervention plan.	We received two responses, both of which were generally supportive of our proposals.  NGET also submitted its final PCD asset intervention plan requesting ex-ante funding of £657.19m, spread across 3 components.	<b>Accept (amended):</b> We have decided to allow ex-ante funding of £107m, with the opportunity for NGET to apply for further funding through two reopener mechanisms.  Further detail on our decisions can be found in Chapter 2 this document.
<b>Facilitating competition:</b> NGET proposed to deliver	<b>Accept:</b> We proposed to accept an amended PCD for	NGET and another stakeholder argued that the Pre-Construction	<b>Accept:</b> We have decided to accept this PCD, including the for the additional

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
pre consents for projects which may be applicable for Ofgem's late competition model. PCD value £181.5m	£74.6m and committed to work with NGET to set defined outputs for Final Determinations.	Funding (PCF) we proposed for NGET in our Draft Determinations would be insufficient to allow them to develop the projects that they needed to during RIIO-2. Responses particularly focused on the negative impact this could have on achieving Net Zero.	projects outlined in the most recent NOA, which was published after NGET's December 2019 Business Plan submission. See the ET Annex for details on how our PCF PCDs will operate and in Chapter 2 of this document for a project-by-project breakdown of NGET's PCF projects.
<b>Optimising with the Distribution Network Operators (DNOs):</b> NGET proposed a £30.7m PCD to optimise reactive control with DNOs by identifying whole system opportunities and investing in five reactor units.	<b>Accept:</b> We proposed to accept this PCD, noting that the needs case for these works had been well explained and cost the breakdown of works had been well defined. However, we considered that there is a risk that some works may be deferred from RIIO-T2 and therefore proposed a PCD to manage this risk across the named sites. Our cost assessment proposed to remove £5.5m from NGET's baseline funding request.	NGET provided responses to these works, specifically highlighting where changes were required due to ESO-driven works.	<b>Accept (amended):</b> We do not believe a PCD will provide the consumer any additional protection against the risk that some works may be deferred. The ESO provides the rationale for all investment related to these works and we expect these to be delivered. New works will be funded via MSIP.
<b>Optimising with the ESO:</b> NGET proposed an allowance of £48.026m (capex) and £2.325m (opex), for the installation and operation of new system monitoring equipment.	<b>Accept:</b> We proposed to accept this as NGET presented a well-justified needs case for this proposal. However, we had concerns over the limited cost analysis and flat spend programme provided, which limited our ability to determine	NGET provided additional information to support the development of a PCD based on the flat unit rates on a site basis.	<b>Accept (amended):</b> As these works are a licence condition we do not see a PCD bringing any greater a level of consumer benefit.

PCD name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
	<p>the efficiency of the proposal as we were unable fully to ascertain the scope of the proposed interventions. We therefore considered that a PCD was required to manage this capex risk. Our cost assessment proposed to remove £7.7m from the requested baseline funding. We proposed to allow the opex costs of £2.325m.</p>		
<p><b>Net-zero capital carbon:</b> NGET proposed a £2.5m PCD for offsetting the emissions it cannot eliminate technically or cost effectively.</p>	<p><b>Accept:</b> We proposed to allow UIOLI funding of £2.5m attached to a PCD.</p>	<p>We received responses on this from a consumer group and NGET, both of whom supported a UIOLI mechanism for this cost area.</p>	<p><b>Accept:</b> We have decided to allow UIOLI funding of £2.5m mechanism. However, we do not consider it necessary to attach this funding to a PCD. See Chapter 2 of this document for details.</p>
<p><b>Black Start capability:</b> NGET proposed, in addition to baseline funding, further funding of £22.2m for proposed changes driven by new or updated industry codes and guidance which had not been published at the time of submission of its Business Plan.</p>	<p><b>Reject:</b> We proposed to reject this PCD because the proposal was not detailed or evidenced to a sufficient level to enable our review or approval. We instead proposed that all Black Start works, including the requested baseline funding that we also proposed to reject, can be assessed through the MSIP re-opener.</p>	<p>NGET acknowledged that the new standard has not been published and uncertainty remains on the scale of government mandated requirements under a new standard. NGET welcomed Black Start works being included within the MSIP re-opener mechanism but raised concerns on the thresholds and the timing of the re-opener.</p>	<p><b>Reject:</b> We have decided to reject this proposal. The justification and evidence in support of it remains insufficient. For this reason, we also do not consider a PCD would be in consumers’ interests.</p> <p>We have decided to include this in the MSIP reopener to enable NGET to seek funding for this, which will need to be supported by a more comprehensive and robust plan, when there is greater certainty. Further details on the MSIP reopener is in the ET Annex.</p>

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p><b>Protection from extreme weather:</b> NGET proposed a baseline of £59.8m to undertake works to protect substations and routes from flood risk Updates to the new ETR 138 standard will be resolved via a reopener.</p>	<p><b>Reject:</b> We proposed to reject this. In our view, the scope of works within the proposal was not sufficiently developed to allow us to determine if the proposals within the requested PCD are reasonable. For substation sites, c.70% of the named sites had no scope consideration; for overhead routes, the scope described has significant overlap with other baseline requests and we could not ascertain the boundaries between the proposals.</p>	<p>NGET provided additional information to support their request. We note that the information provided highlighted that less survey and development work had been completed than we had expected.</p>	<p><b>Accept (amended):</b> We will not use a PCD for these works. We have reduced our DD funding proposal on the basis that NGETs justification for additional expenditure was not based on as surveyed information. Therefore, if we elected to utilise a PCD it may not be of benefit to consumers.</p> <p>We have decided to include this in MSIP reopener to enable NGET to seek funding for this, which will need to be supported by a more comprehensive and robust plan, when there is greater certainty. Further details on the MSIP reopener is in the ET Annex.</p>
<p><b>A resilient operational telecommunication infrastructure:</b> NGET proposed a £241m PCD to continue to develop a low-risk operational telecoms infrastructure. This includes the replacement of [redacted] of Fibre Wrap and Telecoms equipment at 274 sites.</p>	<p><b>Reject:</b> We did not fully accept the need case for Optel Refresh works due to concerns over the deliverability of the proposal and NGET having not fully explained the interaction or dependency on condition related reliability issues that it states exist. While we agreed that an Optel Refresh will ultimately be required, we did not accept that NGET made the case for this to be completed during RIIO-2. As such, we proposed baseline funding for only the final two</p>	<p>NGET provided a significantly increased level of justification for the requested funding, which included more targeted justification for the timing of works.</p>	<p><b>Accept (with amendments):</b> While NGET did provide additional justification, we were unable to define clear volumes for two major sections of the proposal (Fibre Wrap Replacement and Telecoms replacement). For this reason, we have decided to reject NGET's proposal of a PCD but to include a bespoke reopener which will enable NGET to seek funding for Fibre Wrap replacement, which will need to be supported by a more comprehensive and robust plan, when there is greater certainty.</p>

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
	years of RIIO-2 to enable NGET to begin this work.		
<p><b>Substation equipment (NLR):</b> NGET proposed a methodology to monetise the network risk of some non-lead substation assets categories, and to reduce the risk on those non-lead assets in RIIO-T2.</p>	<p><b>Reject:</b> We proposed to reject this as, in our view, the underlying level of data NGET held was not sufficient to enable monetised risk to be fully considered.</p>	<p>NGET provided additional data to support its NLR capex request.</p>	<p><b>Reject:</b> While NGET's additional data has resulted in an increase in our overall funding position (as discussed in Chapter 3), we do not consider that NGET has sufficient data to operate as monetised risk system for non-lead assets in RIIO-T2.</p> <p>This may be a development for future regulatory periods.</p>
<p><b>Protection and Control (NLR):</b> NGET proposed a methodology to monetise the network risk of Protection and Control assets and to reducing the risk on those assets in RIIO-T2.</p>	<p><b>Reject:</b> We proposed to reject this as, in our view, the work scope is uncertain. We proposed to fund the system studies required to ascertain the correct scope of works.</p>	<p>NGET provided additional data to support its NLR capex request.</p>	<p><b>Reject:</b> While NGET's additional data has resulted in an increase in our NLR funding position (as discussed in Chapter 3), we do not consider that NGET has sufficient data to operate as monetised risk system for non-lead assets in RIIO-T2.</p> <p>This may be a development for future regulatory periods.</p>
<p><b>Overhead line (OHL) Foundation replacement (NLR):</b> NGET proposed a £53m PCD to replace a number of foundations in high risk areas.</p>	<p><b>Reject:</b> We proposed to reject this due to concerns around the lack of data driving the interventions.</p>	<p>NGET provided additional data in support of its steelwork replacement and foundation replacement requests.</p>	<p><b>Reject:</b> We have decided to reject NGET's PCD proposals. We have approved 30% of the baseline funding for Steelworks and Foundations to allow NGET to undertake both interventions and surveys to lead up to a reopener.</p>
<p><b>OHL steelwork refurbishment (NLR):</b> NGET proposed a £92m PCD</p>	<p><b>Reject:</b> We proposed to reject this as we had significant concerns around the</p>	<p>We note that in both categories (steelwork &amp; foundations) the level of data to support the proposed interventions as proposed by NGET was insufficient.</p>	<p>We have approved 30% of the request funding for these works in baseline for</p>

PCD name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
to refurbish the equivalent of [redacted] of steelwork.	classification of tower steel work grade 4. In addition, we believed that the recovery of grade 4 steel in combination with the new Tower Paint used by NGET could lead to a significant unjustified outperformance.		T2, we expect NGET to submit a reopener to clarify their position.

**Table A2.3: NGET's CVP proposals**

NGET is not eligible to receive rewards under the BPI stage 2. For completeness, this has been assessed and our Final Determination and rationale is set out below.

CVP name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<b>Caring for the natural environment:</b> Increasing the natural capital value of all of its non-operational land by 10% during RIIO-2, delivering £14.67m benefit.	<b>Accept consumer value but no reward*:</b> We proposed to accept this on the basis that caring for the natural environment goes beyond BAU and provides demonstrable consumer benefit. However, due to our proposal that NGET failed Stage 1 of the BPI, it would not be eligible to receive a CVP reward.	We received 4 consultation responses from an environmental stakeholder, a consumer group, the Enhanced Engagement group and NGET, all of whom were supportive of our DD position.	<b>Accept consumer value but no reward*:</b> Due to failing BPI stage 1, NGET is not eligible to receive any reward from CVPs at stage 2. We are, however, confident that this output will still be delivered as NGET is already incentivised in this area through the environmental incentive ODI-F and therefore consumers will not incur any detriment from our decision to exclude NGET from CVP rewards.

<b>CVP name and description</b>	<b>Ofgem's Draft Determination summary</b>	<b>Consultation response summary</b>	<b>Ofgem's Final Determination</b>
<p><b>Tougher Energy Not Supplied (ENS) target:</b> Committing to a ENS target that is 45% lower than its RIIO-T1 target at no additional cost to consumers, delivering £2.68m benefit through fewer loss of supply events, benefitting consumers, in particular vulnerable consumers who may be worse affected by a power cut.</p>	<p><b>Reject:</b> We proposed to reject this because it was not clear how NGET's proposed CVP went beyond BAU. We set out that NGET's actual performance in RIIO-1 and the step-change in its ENS management should be reflected in target-setting, which should lead to a significantly more challenging RIIO-T2 target when compared to RIIO-1.</p>	<p>NGET considers that this CVP should be accepted because it represents an increase in service level compared to the existing level and will be delivered at the same or existing cost to consumers. NGET argue that an ENS target that is 20% lower than the RIIO-T1 target is more reflective of a BAU approach.</p>	<p><b>Reject:</b> We have decided to reject this CVP. We consider that the increase in service level that NGET proposed is not enough to qualify for a CVP when compared to the actual service level consumers have had over RIIO-T1. On average, NGET has outperformed its RIIO-T1 ENS target by 88%. All else being equal, it is difficult to see how embedding less than half of the improvement into the target for RIIO-2 could reasonably be considered BAU.</p>
<p><b>Developing alternatives to SF6:</b> Undertaking an innovation programme and activities to develop SF6 alternatives, delivering £13.1m benefit, through lower carbon emissions.</p>	<p><b>Reject:</b> We proposed to reject this proposal due to a lack of specific deliverables and cost breakdown. We also considered there to be other more appropriate routes for innovation funding, such as the Network Innovation Allowance (NIA). There is also potential overlap with the proposed PCD for NGET's SF6 asset intervention programme, discussed above.</p>	<p>NGET asked for this to be reconsidered, unless agreement with Ofgem can be reached on a PCD for SF6 asset intervention.</p>	<p><b>Reject:</b> We have decided to reject this CVP. The concerns we set out in Draft Determinations remain.</p>
<p><b>Optimisation of harmonic filtering:</b> Changing the approach to</p>	<p><b>Reject:</b> We supported the principle of within-period funding and consider there is merit in taking a more coordinated</p>	<p>NGET considered that the CVP should be accepted and provided more evidence in support of their proposal.</p>	<p><b>Reject:</b> We acknowledge the additional evidence provided by NGET and we maintain our position that there should be a mechanism for in period funding to</p>

CVP name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p>harmonic filtering<sup>36</sup> so that NGET carry it out rather than customers, delivering £18.82m benefit through lower bills.</p>	<p>approach to harmonic filtering. However, we were not convinced that this was beyond BAU good practice. We requested further analysis and robust evidence to indicate the frequency of an ETO-led approach over the RIIO-T2 period, the probability of the approach being used and the level of benefit that can be realised relative to a customer-led approach. We also sought views on the wider administrative process to be undertaken to facilitate the implementation of the proposed solution. Specifically, further detail on the nature, scope and timing of necessary code changes to be implemented (including change to the Grid Code and Transmission Network Use of System charging methodology).</p>		<p>facilitate a coordinated approach to the installation of harmonic filtering where there is clear justification for doing so. We do not believe that a CVP is the appropriate vessel for this funding route. We propose utilisation of the MSIP mechanism to access funding when the nature, scope and timing of necessary code changes to be implemented (including change to the Grid Code and Transmission Network Use of System charging methodology) are better understood and articulated.</p>
<p><b>Supporting local urban communities:</b> Proposing a new, innovative scheme to improve assets in urban areas, delivering</p>	<p><b>Reject:</b> This assumes additional consumer value beyond the proposed £50m Urban Improvement Provision UM, however, it was not clear on what</p>	<p>NGET considers that we should accept the proposal because:</p> <ul style="list-style-type: none"> <li>The RIIO-2 Challenge Group (CG) thought the proposal has merit</li> </ul>	<p><b>Reject:</b> We have decided to reject this CVP - the aims/objectives of the proposed scheme are poorly specified and the consumer benefit of the projects that would be taken forward is unknown.</p>

<sup>36</sup> Harmonics are distortions in power systems, which can damage equipment. There are set limits to permissible harmonic distortion, requiring filtering equipment. Currently, customer connections must provide harmonic filtering.



CVP name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p>£22.58m benefit, most directly to those living in the urban areas, which would include vulnerable consumers.</p>	<p>NGET intends to spend this money, therefore it was not possible to quantify the consumer value of this proposal. We did not agree with the justification for an assumed 50% additional social benefit more than cost for any money spent on supporting local urban communities as there was no reliable data to support it. We also proposed to reject the bespoke UM to which this CVP relates.</p>	<ul style="list-style-type: none"> <li>• It goes beyond BAU because stakeholders wanted urban consumers to benefit as do rural consumers from the Visual Impact Provision</li> <li>• Due to the clawback provisions, consumers cannot lose if the benefits do not materialise.</li> </ul>	<p>Therefore, we consider that the proposal is too speculative and does not justify a £50m allowance in RIIO-T2, even with the option of a potential claw back.</p>
<p><b>Deeside innovation centre:</b> Expanding and opening up Deeside innovation centre to allow cross-sector research and trials of technologies to allow whole-system innovations to be applied more quickly, delivering £26.13m benefit, through lower bills and lower carbon emissions.</p>	<p><b>Reject:</b> We expect innovation which was funded in RIIO-1 to be rolled out as BAU in RIIO-2. As the centre opened in RIIO-1 with the intention for the facility to be used by wider industry, NGET has not demonstrated that this proposal goes beyond BAU. We did not agree with the assumption the innovation trials will be successful and result in carbon savings.</p>	<p>NGET stated that this CVP should be accepted because the Deeside innovation centre is unique and their proposal to open it up to third parties is innovative. It also stated that clawback provisions for CVPs mean that money would be refunded to consumers if benefits do not arise from innovation trials. In response to innovation questions, NGET also requested clarity on whether</p>	<p><b>Reject:</b> We have decided to reject this CVP. We do not think additional funding for the operation of the Deeside innovation centre should be provided at this time, beyond funding provided by the RIIO-1 Network Innovation Competition project (OSEAIT) which funded the development of the centre.<sup>37</sup> For the reasons set out in the Draft Determination, we do not believe the proposal goes beyond BAU expectations of NGET. In addition, the benefits of the centre are uncertain considering that the OSEAIT project is</p>

<sup>37</sup> The development of the Deeside innovation centre was funded via the Offgrid Substation Environment for the Acceleration of Innovative Technologies (OSEAIT) Network Innovation Competition project in 2015. Fuller details on the project are available in its amended Project Direction published in December 2018; <https://www.ofgem.gov.uk/publications-and-updates/network-innovation-competition-amended-project-direction-oseait>

<b>CVP name and description</b>	<b>Ofgem’s Draft Determination summary</b>	<b>Consultation response summary</b>	<b>Ofgem’s Final Determination</b>
		<p>funding for the facility could be provided via the RIIO-2 NIA.</p> <p>A response from an academic also expressed disappointment at the rejection of this CVP, noting it may result in lost benefits from funds previously invested in innovation.</p>	<p>experiencing delays and is not yet complete.</p> <p>We do, however, note that individual innovation projects carried out at the centre in the future may be eligible for NIA funding during RIIO-2.</p>
<p><b>Whole system approach to low-voltage substation rebuilds:</b> Saving consumers money by finding alternative whole-system solutions for managing faults at Grid Supply Points (GSPs), delivering £9.48m benefit, through lower bills.</p>	<p><b>Reject:</b> NGET provided insufficient justification that these alternative solutions go beyond BAU. We considered in this instance that the basic optioneering for these works should include interfacing with DNOs to optimise their networks to reduce fault current through alternative running arrangements.</p>	<p>NGET provided additional information to support their original position.</p>	<p><b>Reject:</b> We have decided to reject this CVP as these works are BAU and we expect NGET to coordinate and manage their network interfaces in an economic and efficient manner.</p>
<p><b>SO:TO optimisation:</b> Proposing an approach to offer flexible options to the ESO to enable it to reduce constraint and whole-system costs for consumers, delivering £84.88m benefit, through lower bills.</p>	<p><b>Reject:</b> There are multiple existing tools in place to ensure sufficient engagement and collaboration between the ESO and NGET. We considered that this CVP could create a create inefficiencies between the collaboration of the ETOs and ESO. We also did not think that</p>	<p>We received a number of responses that disagreed with our position. They noted that incentives like this are required to encourage the ETOs to prioritise a way to enable local generators to remain operating. One respondent supported our proposal to reject this CVP, as</p>	<p><b>Reject:</b> We have decided to reject this CVP. We have decided to accept a common ODI-F with similar elements that will apply to all ETOs. Accordingly, there is no need for this bespoke proposal. For further information please refer to “RIIO-T2 System Outage Management Proposals to Reduce Constraint Costs (ODI-F)” in the ODI table above.</p>

CVP name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
	we have the tools to measure the impact of the delivery of this CVP.	they are concerned that these proposals could risk delays to short-term projects. One respondent notes that there is a need to have incentives to investigate and propose NOA reinforcements that deliver congestion relief.	
<b>Whole-system alternatives to reactor investments:</b> Finding alternative whole-system solutions to reactor investments to address reactive power issues, delivering £16.62m benefit, through lower bills.	<b>Reject:</b> Insufficient justification was provided to suggest that these alternatives go beyond BAU. We noted that these works will be heavily influenced in future by the ESO’s actions in potential Pathfinder Projects for Reactive Control. We proposed to approve all of the reactor works NGET proposed in its Business Plan.	NGET provided additional data to support its position.	<b>Reject:</b> We have decided to reject this CVP as these works are considered BAU. NGET at present work with the ESO to establish and support the ESOs requirements for reactive control on their network.

**Table 3: NGET’s bespoke UM proposals**

UM name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
<b>Boundary capability:</b> NGET proposed a volume driver mechanism to address the uncertainty around the future boundary capability projects below £100m whose needs	<b>Reject:</b> We proposed instead to use PCDs for any non-delivery of projects accepted in baseline and the MSIP re-opener to provide funding for future projects.	NGET were supportive of a PCD approach for baseline projects identified through the NOA process but disagreed with the proposed funding approach for non-baseline boundary capability	<b>Accept (amended):</b> Further constructive engagement with NGET has led to revisions in the approach to manage the uncertainty associated with future investment changes driven by the ESO’s annual NOA

UM name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
case may emerge during RIIO-ET2.		projects within the RIIO-T2 period. For further detail on NGET's response please see Chapter 4 of this document.	process. For further information on our decision please see Chapter 4 of this document.
<b>Facilitate competition (pre-consents):</b> NGET proposed a volume driver to adjust its allowances for the delivery of planning consents for contestable projects.	<b>Reject:</b> We set out that we did not consider that a volume driver approach is appropriate for these types of costs, given the volatility with which the 'need' for the projects can change. We considered that the policy intent of this proposal is covered by our proposed common Pre-Construction Funding (PCF) UM.	Responses in this area mostly focussed on our overall approach to uncertain PCF expenditure, rather than discussing the specifics of our DD position on NGET's proposed approach. These responses are summarised in the ET Annex.	<b>Reject:</b> We do not consider there are robust enough benchmarks against which a volume driver for PCF could be established. Our approach to uncertain PCF, set out in Chapter 4 of the ET Annex, strikes a better balance between protecting consumers and enabling investment.
<b>Generation and demand connections:</b> NGET proposed a volume driver mechanism for costs associated with generation and demand connections.	<b>Accept:</b> We proposed to accept this UM with adjustments to form a common volume driver design for all three ETOs using a consistent approach in the level of disaggregation applied to the volume driver, but providing rates for different activities specific to each company to reflect the different connections and network challenges that each ETO has.	Three respondents disagreed with our position. They thought that the proposed mechanisms are poorly designed, would provide inadequate funding, and likely delay projects that are critical to the achievement of Net Zero.	<b>Accept (amended):</b> We remain of the view that a common form of volume driver with company-specific parameters is appropriate. However, following further engagement with the companies we have made several amendments to the common volume driver design for all ETOs. Please see ET Sector Annex, Chapter 4 for further information.
<b>System operability (voltage):</b> NGET proposed an up/down re-opener to manage uncertainty in the provision of	<b>Accept as common UM:</b> We proposed to include this under the MSIP re-opener, common to all ETOs.	Respondents broadly agreed with our proposal to include this in the MSIP re-opener, though raised concerns with the materiality	<b>Accept as common UM:</b> We have included this area in the MSIP re-opener, common to all ETOs. See Chapter 4 of the ET Annex for details.

UM name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
voltage support on the transmission network as requested/delayed/cancelled by the ESO.		thresholds for and timing of, that re-opener. These are addressed in Chapter 4 of the ET Annex.	
<b>Harmonic filtering:</b> NGET proposed a UM to allow the coordination of harmonic design and the building of cheaper harmonic filters following engagement and agreement with customers.	<b>Accept as common UM:</b> We proposed to include this under the MSIP re-opener, common to all ETOs.	Respondents broadly agreed with our proposal to include this in the MSIP re-opener, though raised concerns with the materiality thresholds for, and timing of, that re-opener. These are addressed in Chapter 4 of the ET Annex.	<b>Accept as common UM:</b> We have included this area in the MSIP re-opener, common to all ETOs. See Chapter 4 of the ET Annex for details.
<b>System operability (other ESO requirements):</b> NGET proposed a UM to cover a situation where an ESO Whole System assessment indicated that a transmission solution would be best for consumers.	<b>Accept as common UM:</b> We proposed to include this under the MSIP re-opener, common to all ETOs.	Respondents broadly agreed with our proposal to include this in the MSIP re-opener, though raised concerns with the materiality thresholds for, and timing of, that re-opener. These are addressed in Chapter 4 of the ET Annex.	<b>Accept as common UM:</b> We have included this area in the MSIP re-opener, common to all ETOs. See Chapter 4 of the ET Annex for details.
<b>Extreme weather:</b> NGET proposed a UM to manage additional requirements for site protection that may arise from changes to ETR138. <sup>38</sup> within the RIIO-T2 period.	<b>Accept as common UM:</b> We proposed to include this under the MSIP re-opener, common to all ETOs.	Respondents broadly agreed with our proposal to include this in the MSIP re-opener, though raised concerns with the materiality thresholds for, and timing of, that re-opener. These are addressed in Chapter 4 of the ET Annex.	<b>Accept as common UM:</b> We have included this area in the MSIP re-opener, common to all ETOs. See Chapter 4 of the ET Annex for details.
<b>Black Start:</b> NGET proposed a UM to manage changes to site requirements that may occur in period due to the review of	<b>Accept as common UM:</b> We proposed to include this under the MSIP re-opener, common to all ETOs.	Respondents broadly agreed with our proposal to include this in the MSIP re-opener, though raised concerns with the materiality	<b>Accept as common UM:</b> We have included this area in the MSIP re-opener, common to all ETOs. See Chapter 4 of the ET Annex for details.

<sup>38</sup>Engineering Technical Report (ETR) 138 Resilience to Flooding of Grid and Primary Substations is industry guidance published by the Energy Networks Association

UM name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
Black Start standards currently underway by BEIS.		thresholds for, and timing of, that re-opener. These are addressed in Chapter 4 of the ET Annex.	
<b>Low voltage substation rebuilds (embedded generation):</b> NGET proposed a volume driver to provide funding for the extent of low voltage rebuilding (substations or individual assets) required due to changes in the level of embedded generation connecting to the network identified after a whole system assessment (and recommendation that a transmission solution is required).	<b>Reject:</b> NGET did not demonstrate that the requirement to maintain fault clearance capacity is clearly beyond BAU. Further information was requested from all ETOs on the wider implications of the fault level issue.	NGET disagreed with our DD position and argued that the UM should be accepted.	<b>Reject:</b> We acknowledge NGET's response, but our position has not changed. We do not believe there is sufficient evidence yet to class these proposed investments as anything other than Business as Usual. We also acknowledge that this may change as the price control progresses, and so while we have rejected the bespoke UM mechanism, we have made provision for funding to be requested through the MSIP reopener mechanism should the requirements and justification for these investments being beyond Business as Usual become clearer.
<b>Protection and control:</b> To manage the implications of changes in inertia on protection systems, NGET proposed to undertake a comprehensive investigation of device performance to allow for mitigations to be defined. Based on the results of the study, NGET proposed a mechanism to fund the potential replacement of relay	<b>Reject:</b> We considered relay monitoring and setting changes to form part of a rolling programme of works expected to be performed at regular intervals as part of BAU. There was insufficient justification that these proposals go beyond BAU and available funding routes. We proposed baseline funding for further study works.	NGET disagreed with our DD position. It argued that adjustments to settings on control devices, particularly the southwest region of England & Wales, is required to ensure continued effective operation across all times of year in the RIIO-T2 period. NGET recommended re-instatement of £5m to facilitate this work in	<b>Reject:</b> We have decided to reject the proposal for additional funding for the reasons that we set out in the DDs. Based on the information provided, we are unable to confirm the scale of the relay setting changes required and the timescale of changes required to address the anticipated change in fault levels associated with future increases in renewable connections.

UM name and description	Ofgem’s Draft Determination summary	Consultation response summary	Ofgem’s Final Determination
settings at an initial estimated cost of £90m.		addition to the baseline funding for the study.	<p>The funding provided will allow NGET to perform “system wide” protection coordination studies and analysis of the consequences of fault level change.</p> <p>We have retained this area in the MSIP re-opener to provide a potential funding route for further relay settings changes.</p>
<b>Ensuring a resilient electricity network:</b> NGET proposed a UM to cover works to enhance the overall levels of resilience in the network that are the result of engagement with its stakeholders or of additional threats that could arise in RIIO-2.	<b>Reject:</b> NGET did not provide sufficient justification that the proposed enhancements to the overall levels of resilience were over and above work that would be classified as BAU.	NGET disagreed with our DD position and provided commentary in support of their proposal.	<b>Reject:</b> We acknowledge the response from NGET but maintain our position that this is little more than a catch all bucket for currently undefined projects. This is not in the spirit of the bespoke mechanism. We would expect the give and take of BAU activities to managed within the TOTEX allowance and Sharing Factor provisions within the agreed settlement.
<b>SF6 asset intervention:</b> NGET proposed a UM to cover the costs of a large-scale programme of intervention works on network assets containing and leaking SF6.	<b>Reject:</b> We proposed to set a PCD instead subject to NGET submitting a well-justified and costed asset intervention programme plan.	We received no specific responses on this bespoke proposal. Responses linked to the PCD proposal are covered in the table 2 of this appendix.	<b>Reject:</b> We are introducing a PCD in this area instead of the requested UM. Further detail on this can be found in Chapter 2 of the NGET Annex.

UM name and description	Ofgem's Draft Determination summary	Consultation response summary	Ofgem's Final Determination
<p><b>Urban improvement provision:</b> NGET proposed a £50m allowance over RIIO-2 for projects that improve transmission assets (e.g. reduce visual impact) or public spaces in the top 30 per cent most deprived urban areas.</p>	<p><b>Reject:</b> We proposed to reject this proposal because NGET had not provided sufficient evidence of need, or that it would be in the interests of consumers, particularly given the cost of the proposed allowance.</p>	<p>Only NGET responded to our consultation position. It noted that the proposal had come from an external stakeholder group and had been supported by an external focus group. NGET was unable to provide evidence of benefit at this stage as the social and economical benefits of each project taken forward under the provision would need to be judged by a panel of NGET's stakeholders.</p>	<p><b>Reject:</b> We have decided to reject this proposal, for the reasons set out in DDs. At a time when there are strong policy drivers for significant additional network investment to facilitate the UK's Net Zero objective, we consider that NGET's justification for a £50m allowance in RIIO-T2 is insufficient.</p>
<p><b>Net zero:</b> NGET proposed a re-opener to account for changes during RIIO-2 related to the UK's Net Zero ambitions.</p>	<p><b>Reject:</b> We did not consider it necessary to have company-specific re-openers related to the UK's Net Zero ambitions. This was because we proposed to introduce a system-wide net zero re-opener in the price controls spanning the gas and electricity sectors so that these can respond flexibly to changing technological and policy developments in the path to Net Zero.</p>	<p>NGET did not respond specifically to the consultation position to reject the company-specific reopener. It did respond on our proposed approach to a system wider Net Zero re-opener discussed in the DD Core Document.</p> <p>For further information, please refer to Chapter 8 of the Core Document.</p>	<p><b>Reject:</b> We have decided to implement a system-wide Net Zero reopener so that the networks can respond to changing technological and policy developments on the path to Net Zero.</p> <p>For further information, please refer to Chapter 8 of the Core Document.</p>
<p><b>Innovation plan:</b> NGET proposed a re-opener in 2022 to, if necessary, change its innovation plan to respond to the fast-changing nature of</p>	<p><b>Accept as common UM:</b> We proposed to provide NGET with NIA funding and access to the Strategic Innovation Fund. These would enable NGET to</p>	<p>There were no direct responses to our Draft Determination position on this bespoke UM proposal.</p>	<p><b>Accept as common UM:</b> We have decided to provide NGET with NIA funding and access to the Strategic Innovation Fund. This provides NGET flexibility to respond to innovation</p>



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decarbonisation and to the changing needs of its stakeholders.	respond flexibly to energy system transition innovation challenges during the course of the RIIO-2 price control.		challenges as they arise, and potentially secure additional innovation funding, and therefore no bespoke UM is required. Please see Chapter 5 of this document and also Chapter 8 of the Core Document.
<b>Real price effects (RPEs) for plant, materials and equipment:</b> NGET proposed the use of ex-ante RPEs to reflect its view of the impact of inflation (beyond CPI) on the main cost drivers within its business.	<b>Reject:</b> We proposed to reject NGET's proposals and instead to apply our view of appropriate RPEs, but as decided in the SSMD, these will not be on an ex-ante basis but will be trued-up through the annual iteration process.	NGET broadly agreed with Ofgem's proposals for RPE allowances. However, it still considered a fixed ex-ante approach more appropriate for labour.	<b>Reject:</b> We have decided to reject this proposal, for the reasons set out in DDs. Further detail on this can be found in Chapter 5 of the Core document.