Decision

RIIO-ED2 Final Determinations ENWL Annex

Publication date:	30 November 2022
Contact:	RIIO-ED2 Team
Team:	Onshore Networks - Price Control Setting
Telephone:	020 7901 7000
Email:	RIIOED2@ofgem.gov.uk

The next electricity distribution price control (RIIO-ED2) will cover the five-year period to 31 March 2028. In December 2021 the Distribution Network Operators (DNOs) submitted their business plans to Ofgem setting out proposed expenditure for RIIO-ED2. We assessed these plans and published our consultation on Draft Determinations in June 2022.

This document and others published alongside it, set out our Final Determinations for companies under the RIIO-ED2 price control, which will commence on 1 April 2023.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

This publication is available at www.ofgem.gov.uk. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

1. Introduction

Purpose of this document

1.1 This document sets out our Final Determinations for the Electricity Distribution (ED) price control (RIIO-ED2) for the areas that are specific to ENWL.

1.2 The RIIO-ED2 price control will cover the five-year period from 1 April 2023 to 31 March 2028. All figures are in 2020/21 prices except where otherwise stated.

1.3 The purpose of this document is to focus on those elements of our Final Determinations for the price control settlement which are specific to ENWL, including:

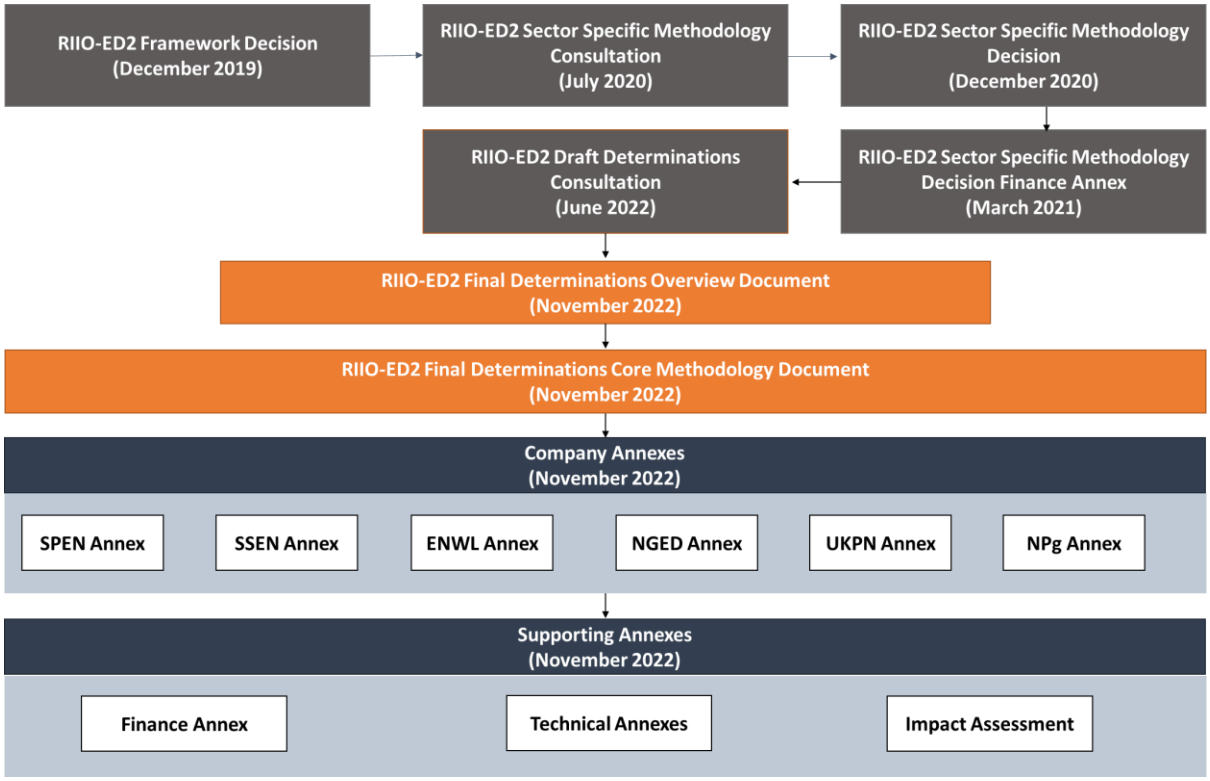
- assessment of the business plan incentive (BPI), including consumer value propositions (CVPs)
- ex ante cost allowances
- parameters for common outputs
- bespoke Output Delivery Incentives (ODIs)[1]
- bespoke Price Control Deliverables (PCDs)
- bespoke Uncertainty Mechanisms (UMs)
- Network Innovation Allowance (NIA) funding.

1.4 This document is intended to be read alongside the RIIO-ED2 Final Determinations Core Methodology Document and RIIO-ED2 Final Determinations Overview Document.

1.5 Figure 1 sets out where you can find information about other areas of our RIIO-ED2 Final Determinations.

[1] In this document, we refer to 'ODI-F' which is a financial incentive and 'ODI-R' which is a reputational incentive.

Figure 1 Navigating the RIIO-ED2 Final Determinations documents



What are the company specific elements of ENWL's Final Determinations?

1.6 This section provides a high-level summary of the elements of our Final Determinations which are specific to ENWL.

1.7 Table 1 summarises our assessment of ENWL across the four stages of the BPI and where you can find additional information about our decision for each stage.

Table 1 Summary of ENWL BPI performance

BPI Stage	Final Determination	Further Detail
Stage 1 minimum requirements	Pass	Overview Document for approach to assessment and rationale
Stage 2 Consumer Value Propositions	No reward	Chapter 2 of this document
Stage 3 Penalty	No penalty	Chapter 3 of this document
Stage 4 Reward	No reward	Chapter 3 of this document

1.8 The cost confidence assessment we have undertaken as part of this process results in a Totex Incentive Mechanism (TIM) incentive rate for

ENWL of 49.4%. For further details on the TIM, see Chapter 9 in the Overview Document.

1.9 We present a summary of our ex ante Totex allowances for ENWL in Table 2. This reflects our view of efficient costs including ongoing efficiency over RIIO-ED2. For further details, please refer to Chapter 7 of the Core Methodology Document.

Table 2: ENWL RIIO-ED2 submitted Totex versus allowed Totex (£m, 2020/21 prices)[2]

Cost activity	RIIO-ED2 submitted	DD (Net Before NPCA[3])	FD (Net Before NPCA)	FD incl Access SCR (Net After NPCA)	Difference to submitted (on a Net Before NPCA basis)
Load related capex	234	252	207	227	-11.7%
Non-load related capex	600	519	539	539	-10.2%
Non-operating capex	93	76	81	81	-12.6%
Network operating costs	303	259	275	275	-9.1%
Closely Associated Indirects	404	327	387	334	-4.2%
Business Support Costs	256	208	233	212	-9.2%
Total	1,890	1,640	1,722	1,668	-8.9%

1.10 The common outputs that we are implementing for all DNOs in RIIO-ED2 are set out in Table 3 with further details provided in the Core Methodology Document. Table 3 also sets out the bespoke outputs that we are applying to ENWL in RIIO-ED2 (further details are contained within Chapter 2).

[2] Note that these costs do not include RPEs or post-modelling adjustments for reversing of ongoing efficiency for Worst Served Customers and Visual Amenity, adding Cyber resilience OT allowances and the Shetland Link RAV transfer, and deducting related party margins, disposals, and other controllable opex.
[3] NPCA stands for Non-Price Control Allocations.

Table 3 Summary of common and bespoke outputs applicable to ENWL

Output name	**Output Type**	**Further detail**
Common Outputs		
Annual Environmental Report	ODI-R	Chapter 3, Core Methodology Document
DSO	ODI-F	Chapter 4, Core Methodology Document
Digitalisation Licence Obligation	LO	Chapter 4, Core Methodology Document
Technology Business Management (TBM) taxonomy for classifying digital/IT spend	ODI-R	Chapter 4, Core Methodology Document
Collaborative project with networks to develop a new regulatory reporting methodology	ODI-R	Chapter 4, Core Methodology Document
Smart Optimisation Output	LO	Chapter 4, Core Methodology Document
Customer Satisfaction Survey	ODI-F	Chapter 5, Core Methodology Document
Complaints Metric	ODI-F	Chapter 5, Core Methodology Document
Time to Connect	ODI-F	Chapter 5, Core Methodology Document
Guaranteed standards of performance - Connections	Statutory instrument	Chapter 5, Core Methodology Document
Major Connections Incentive	ODI-F	Chapter 5, Core Methodology Document
Treating domestic customers fairly	LO	Chapter 5, Core Methodology Document
Consumer Vulnerability Incentive	ODI-F	Chapter 5, Core Methodology Document
Annual Vulnerability Report	ODI-R	Chapter 5, Core Methodology Document
Interruptions Incentive Scheme	ODI-F	Chapter 6, Core Methodology Document
Guaranteed standards of performance - Reliability	Statutory Instrument	Chapter 6, Core Methodology Document

Network Asset Risk Metric	PCD, ODI-F	Chapter 6, Core Methodology Document
Cyber Resilience Information Technology	PCD	Chapter 6, Core Methodology Document and Confidential DNO Annexes
Cyber Resilience Operational Technology	PCD	Chapter 6, Core Methodology Document and Confidential DNO Annexes
Bespoke ENWL Outputs		
Borrowdale Transformers	ODI-R	Chapter 2, ENWL Company Annex
Dig, Fix and Go	ODI-F	Chapter 2, ENWL Company Annex
LineSIGHT	PCD	Chapter 2, ENWL Company Annex
Smart Street	PCD	Chapter 2, ENWL Company Annex

1.11 The common UMs that we have decided to put in place for all DNOs in RIIO-ED2 are set out in Table 4 with further details set out in the Overview or in the Core Methodology Document. Bespoke UMs specific to ENWL are also set out in Table 4, with further details in Chapter 4.

Table 4 Summary of common and bespoke UMs applicable to ENWL

UM Name	**UM Type**	**Further detail**	**Proposed in DDs**
Common UMs			
Cost of Debt	Indexation	Finance Annex, Chapter 2	Yes
Cost of Equity	Indexation	Finance Annex, Chapter 3	Yes
Inflation indexation of RAV and allowed return	Indexation	Finance Annex, Chapter 9	Yes
Real Price Effects	Indexation	Annex 2, Chapter 4 of SSMD	Yes

Bad debt/valid bad debt claims by IDNOs	Pass-through	Finance Annex, Chapter 10	No
Business/Prescribed Rates	Pass-through	Annex 2, Chapter 8 of SSMD	Yes
Ofgem Licence Fee	Pass-through	Annex 2, Chapter 8 of SSMD	Yes
Pension Deficit Repair Mechanism	Pass-through	Annex 2, Chapter 8 of SSMD and Finance Annex, Chapter 10	Yes
Ring Fence Costs	Pass-through	Annex 2, Chapter 8 of SSMD	Yes
Severe Weather 1-in-20	Pass-through	Core Methodology Document, Chapter 7	Yes
Smart Meter Communication Costs	Pass-through	Core Methodology Document, Chapter 7	Yes
Smart Meter Information Technology Costs	Pass-through	Core Methodology Document, Chapter 7	Yes
Supplier of Last Resort	Pass-through	Finance Annex, Chapter 10	No
Transmission Connection Point Charges	Pass-through	Annex 2, Chapter 8 of SSMD and Core Methodology Document, Chapter 7	Yes
Cyber Resilience OT	UIOLI	Core Methodology Document, Chapter 6	Yes
Visual Amenity	UIOLI	Core Methodology Document, Chapter 3	Yes

Worst Served Customers	UIOLI	Core Methodology Document, Chapter 6	Yes
LRE - Low Voltage (LV) Services	Volume driver	Core Methodology Document, Chapter 3	Yes
LRE - Secondary Reinforcement	Volume driver	Core Methodology Document, Chapter 3	Yes
Polychlorinated Biphenyls (PCB)	Volume driver	Core Methodology Document, Chapter 3	Yes
Indirect Scaler	Volume Driver	Overview Document, Chapter 6	No
Coordinated Adjustment Mechanism	Re-opener	Overview, Chapter 5 of SSMD	Yes
Cyber Resilience IT	Re-opener	Core Methodology Document, Chapter 6	Yes
Cyber Resilience OT	Re-opener	Core Methodology Document, Chapter 6	Yes
Digitalisation	Re-opener	Core Methodology Document, Chapter 4	Yes
DSO	Re-opener	Core Methodology Document, Chapter 4	Yes
Electricity System Restoration	Re-opener	Core Methodology Document, Chapter 6	Yes

Environmental	Re-opener	Core Methodology Document, Chapter 3	Yes
High Value Projects	Re-opener	Overview Document, Chapter 6	Yes
LRE	Re-opener	Core Methodology Document, Chapter 3	Yes
Net Zero	Re-opener	Core Methodology Document, Chapter 3	Yes
Physical Security	Re-opener	Core Methodology Document, Chapter 6	Yes
Rail Electrification	Re-opener	Core Methodology Document, Chapter 7	Yes
Storm Arwen	Re-opener	Overview Document, Chapter 6	Yes
Streetwork Costs	Re-opener	Core Methodology Document, Chapter 7	Yes
Tax Review	Re-opener	Finance Annex, Chapter 7	Yes
Wayleaves and Diversions	Re-opener	Overview Document, Chapter 6	No
Bespoke UMs			
West Coast of Cumbria[4]	Re-opener	ENWL Company Annex, Chapter 4	Yes

[4] Referred to as Moorside in our Draft Determinations.

1.12 Table 5 sets out our NIA allowances for ENWL (further details can be found in Chapter 5). Our general approach to the NIA is set out in Chapter 3 of our Core Methodology Document.

Table 5 Summary of NIA applicable to ENWL

ENWL NIA
£8.4m, to be reviewed by 2025

1.13 Table 6 summarises the financing arrangements that we are applying to ENWL. Please refer to Chapter 4 of our Finance Annex for more detail on these areas.

Table 6 Summary of financing arrangements applicable to ENWL

Finance parameter	**ENWL Rate**	**Source**
Notional gearing	60%	See Table 14 in Finance Annex
Cost of equity allowance	5.23%	
Cost of debt allowance	3.07%	
WACC allowance (vanilla)	3.93%	

2. Setting outputs

Introduction

2.1 In this chapter we provide our decisions on:

- The ENWL specific parameters for common outputs, detailed in our Core Methodology Document, which we propose to apply to all DNOs.
- The bespoke outputs and CVPs proposed in ENWL's Business Plan.

Common outputs

2.2 The ENWL specific parameters for the common outputs which we have determined for all DNOs in RIIO-ED2 are set out in the tables below. Further details on these outputs and our decisions are set out in the Core Methodology Document of these Final Determinations.

Interruptions Incentive Scheme (IIS)

2.3 Tables 7 and 8 summarise ENWL's unplanned Customer Interruptions (CI) and Customer Minutes Lost (CML) targets. The targets are based on information we have at the time of the FD publication. The final numbers will be set out in SpC 4.4 of the licence.

2.4 The unplanned targets are calculated under a common methodology that uses each DNO's own historical performance to determine their targets, which means they are bespoke for each DNO. This methodology ensures the DNOs are incentivised to improve their performance (or avoid it deteriorating) but recognises that there are factors that will affect each DNO's current performance and the cost and impact of any changes.

2.5 Tables 9 and 10 summarise ENWL's planned CI and CML targets.

2.6 Please refer to Chapter 6 of the Core Methodology Document for further details.

2.7 Please refer to Appendix 7 of the Finance Annex for the incentive values, including the IIS revenue cap and collar values for ENWL.

Table 7: IIS - unplanned CI targets

Network	2023/24	2024/25	2025/26	2026/27	2027/28
ENWL	30.0	29.8	29.7	29.5	29.4

Table 8: IIS – unplanned CML targets

Network	2023/24	2024/25	2025/26	2026/27	2027/28
ENWL	25.7	25.2	24.7	24.2	23.7

Table 9: IIS - planned CI target

Network	2023/24
ENWL	1.19

Table 10: IIS - planned CML target

Network	2023/24
ENWL	2.64

Network Asset Risk Metric (NARM) PCD and ODI-F

2.8 Table 11 summarises ENWL's Network Asset Risk Metric (NARM) baseline network risk output for RIIO-ED2. Please refer to Chapter 6 of the Core Methodology Document for further details.

Table 11: NARM PCD and ODI-F – Baseline Network Risk Outputs (£R, 2020/21 prices)

Network	Baseline Network Risk Output
ENWL	416,645,265

Consumer Vulnerability Incentive

2.9 Table 12, Table 13 and Table 14 summarise ENWL's vulnerability incentive targets for PSR Reach, the value of fuel poverty services delivered and the value of low carbon support services delivered. Financial targets are set out in net present value (NPV). Please refer to Chapter 5 of the Core Methodology Document for further details.

Table 12: Consumer Vulnerability Incentive (ODI-F): PSR Reach target

	Year 2 target	Year 5 target
ENWL bespoke target	60%	60%

Table 13: Consumer Vulnerability Incentive (ODI-F): the value of fuel poverty services delivered (NPV, £m)

	Year 2 target	Year 5 target
ENWL bespoke target	£7.62m	£26.02m

Table 14: Consumer Vulnerability Incentive (ODI-F): the value of low carbon transition services delivered (NPV, £m)

	Year 2 target	Year 5 target

ENWL bespoke target	-£0.4m	-£0.49m

Major Connections Incentive

2.10 Table 15 shows ENWL's maximum penalty exposure for the Major Connections Incentive which is a penalty-only ODI-F. Please refer to Chapter 5 of the Core Methodology Document for further details.

Table 15: Major Connections Incentive - maximum penalty exposure

Network	**RIIO-ED2 penalty exposure in base revenue[5]**
ENWL	0.1%

Bespoke outputs

2.11 For RIIO-ED2, we invited DNOs to propose additional bespoke outputs as part of their Business Plans reflecting the needs of, and feedback from, their stakeholders and consumers.

2.12 We said that companies were required to support their bespoke proposals with robust justification. In our Business Plan Guidance (BPG), we asked for this justification to ensure that the potential consumer benefits put forward under bespoke proposals were significant enough to merit introducing any additional cost and/or regulatory complexity associated with them.

2.13 Having considered all responses to our Draft Determinations proposals, our decision for each bespoke proposal strikes an appropriate balance between these trade-offs. You can find the background and our assessment approach in our RIIO-ED2 Draft Determinations Overview Document.

2.14 ENWL submitted eight bespoke outputs. They include one ODI-R, one ODI-F, four PCDs and two CVPs. We provide a summary of each bespoke proposal below, with the full details of each bespoke output put forward by ENWL found in its Business Plan submission. We set out our assessment of each output and detail which of them we have decided to accept and apply to ENWL in RIIO-ED2.

Bespoke Output Delivery Incentives

2.15 The table below summarises the bespoke ODI proposals that ENWL submitted as part of its Business Plan and outlines our Final Determinations position.

[5] The penalty is calculated by applying approximately a 0.1% penalty rate per Relevant Market Segment (RMS), within the scope of the incentive, up to a maximum exposure of 0.9% base revenue. Please see Appendix 7 of the Finance Annex for this penalty rate to be translated to RoRE.

ODI name and description	Consultation response summary	Final Determination	Draft Determination
Borrowdale Transformers (ODI-R): to measure the number of Borrowdale transformers replaced each year over the course of RIIO-ED2 and ED3.	Respondents (ENWL, ENWL's CEG, the RIIO-ED2 Challenge Group (CG)and one local council) were all supportive of our proposal to measure ENWL's progress in replacing the Borrowdale Transformers, with an ODI-R. ENWL was supportive of our proposal to measure progress against the target within their annual regulatory reporting pack.	Accept output, and subject cost to benchmarking. We have decided to accept this bespoke ODI-R and the proposed annual performance targets that ENWL set out in its Engineering Justification Paper. We will measure ENWL's progress against its annual targets, through the Regulatory Reporting Pack (RRP). While we consider there is value in delivering the output, we reject its bespoke nature. We consider the associated costs to be BAU, and as such the costs associated with this proposal have remained in ENWL's submitted costs to be subject to benchmarking.	Same as FDs
Dig, Fix and Go (ODI-F): Operational and investment changes to increase the restoration speed following emergency streetworks.	Respondents (ENWL and ENWL's CEG) were supportive of our proposal to accept the ODI-F. ENWL disagreed with our proposed incentive rate.	Accept output: We have accepted Dig, Fix and Go as a bespoke ODI-F. No costs were submitted against this output specifically for us to assess.	Same as FDs

Borrowdale Transformers

Purpose	A reputational incentive to ensure the timely replacement of the Borrowdale Transformers.
Benefits	To ensure a safe and reliable network.

Background

2.16 ENWL identified 223 transformers within the Lake District National Park that are unlikely to be fully protected in accordance with Electricity Safety, Quality and Continuity Regulations (ESQCR). ENWL proposes to replace these transformers over the course of RIIO-ED2 and RIIO-ED3 to reduce the safety and failure risk associated with these assets.

Final Determination

Output parameter	Final Determination	Draft Determination
Overall decision	Accept output	Same as FD
ODI type	ODI-R	Same as FD
Measurement	Number of Borrowdale transformers replaced in each year of RIIO-ED2.	Same as FD
Performance target	See Table 16	Same as FD
Reporting method	Annual reporting in RRP	Same as FD
Licence obligation	N/A	Same as FD

Table 16: Performance targets for ENWL's Borrowdale Transformers ODI-R

2023/24	2024/25	2025/26	2026/27	2027/28	Total
16	23	24	24	25	112

Final Determination rationale and Draft Determination responses

2.17 We have decided to accept this bespoke ODI-R and to accept the proposed performance targets. We received four consultation responses which all supported the introduction of this ODI-R.

2.18 ENWL proposed to deliver 112 transformer replacements in RIIO-ED2, replacing 16 assets in the first year of RIIO-ED2 with the rest of the assets replaced over the remaining years. We recognise that replacement of these assets comes with specific delivery risks due to the nature of their location but think that these targets are achievable.

Dig, Fix and Go

Purpose	A financial incentive to decrease the time taken to restore roads and surrounds following emergency streetworks.
Benefits	Average restoration time will decrease from 5.1 to 3 days, reducing the length of time that customers face inconvenience from emergency streetworks.

Background

2.19 ENWL proposed a bespoke financial incentive to reduce the restoration time associated with unplanned interruptions from 5.1 to 3 days. ENWL will achieve this through a range of operational and investment changes, including applying innovative solutions.

Final Determination

Output parameter	Final Determination	Draft Determination
Overall decision	Accept output	Same as FDs
ODI type	ODI-F	Same as FDs
Target	Maintain a lower average restoration speed of 3 days with a penalty range of 7.2 days (ie +/- 2.1 days compared to current average of 5.1)	Same as FDs
Incentive value	Symmetric incentive cap and collar of +/- 0.2% RoRE.	Same as FDs
Incentive rate	£0.98m per average day above or below the current average per annum.	Same as FDs
Reporting method	To be reported through the RRP.	Same as FDs
Licence obligation	SpC 4.9	N/A

2.20

Final Determination rationale and Draft Determination responses

2.21 We have decided to accept ENWL's Dig, Fix and Go bespoke ODI-F in line with the parameters we proposed at Draft Determinations.

2.22 We received two responses which both supported our proposal to accept ENWL's bespoke proposal. ENWL did however express concerns with our proposed incentive rate stating a preference of +/-1% of totex. ENWL said

that the impact of unplanned interruptions on consumers was greater than planned interruptions and this should be reflected in a higher incentive rate being applied to Dig, Fix and Go than UKPN's bespoke Collaborative Streetworks ODI. While ENWL agreed the types of benefit are similar, they disagree that the scale of the benefits are the same as UKPN's proposal. This is driven by, but not limited to, the types of work and volume of the activity to be undertaken.

2.23 ENWL did not state that a reduced reward or penalty would prevent them from being able to deliver the benefits expected by this proposal. We have also not seen compelling evidence that the benefits are sufficiently different to justify an incentive range that is double what we proposed for UKPN's Collaborative Streetworks ODI (ie, 0.2% RoRE). Increasing rewards or penalties to +/-0.4% RoRE for Dig, Fix and Go would also place the same or greater value (in RoRE terms) on this incentive in all but one of our common incentives. We do not think this would reflect the relative importance of meeting the needs of customers in those other key areas.

Bespoke Price Control Deliverables

2.24 The table below summarises the bespoke PCD proposals for ENWL and outlines our Final Determinations position.

PCD Name and description	Consultation response summary	Final Determination	Draft Determination
Smart Street: Voltage management technology that alters output voltage at distribution transformers to reduce consumer energy consumption.	ENWL's CEG and one other stakeholder supported the decision in light of the consumer benefits, particularly at a time of high energy costs. The RIIO-ED2 CG suggested we address uncertainty on the project through a re-opener.	Accept output and technically assessed costs: We have decided to attach a PCD to this proposal for installation of the Smart Street voltage management technology at 1,000 On-Load Tap Changers (OLTCs).	Same as FD. Previously we referenced 1,000 sites as approved for Smart Street. We have decided to change this to OLTCs to provide a more precise measurement of output.
Borrowdale transformers PCD: Replacing 223 transformers over the course of ED2 and ED3 to	Please see the Bespoke ODI section above for a summary of our consultation responses.	Reject output and subject cost to benchmarking. We reject the treatment of this	Same as FD

reduce the safety and failure risk associated with these assets.		proposal as a PCD as it does not meet the materiality threshold set out in in our SSMD. Instead, we have established this output as an ODI-R. Please see the paragraphs 2.17 and 2.18 above for a summary of our FD position on the ODI-R and treatment of associated costs.	
LineSIGHT PCD: New technology developed by ENWL to enable remote detection of damaged equipment earlier than through visual inspection. This will help to pinpoint the location of faults, enabling more efficient despatch of repair crews.	ENWL disagreed and submitted additional evidence to support its view that LineSIGHT was a new and innovative technology for overhead line safety improvement and should not be treated as BAU.	Accept output and technically assessed costs: In light of further evidence, we have accepted LineSIGHT as a bespoke PCD. Please see below for further detail.	Updated at FD: we had proposed to reject treating this proposal as a bespoke output.
Vulnerable customer network improvements: Undertaking a programme of investments on high voltage feeders to reduce the future likelihood of a loss of supply for groups of customers with known high vulnerability fed from poorly performing parts of the network.	ENWL disagreed, stating strong customer and stakeholder support and regulatory precedent in RIIO-ED1 with a similar targeted programme.	Reject outright: We consider that there is insufficient justification for the use of a PCD and consider there to be considerable overlap with the interventions applied by all DNOs under the Interruptions Incentive Scheme. All DNOs' QoS costs have been disallowed (see Core Methodology Document Chapter 6), including those associated with this proposal. Please see	Same as FD

		below for further detail.	

Smart Street

Purpose	Voltage management technology that alters output voltage at distribution transformers.
Benefits	Reductions in energy consumption for consumers that could reduce customer bills, alongside wider system benefits including reductions in carbon emissions, reinforcement and technical losses.

Background

2.25 Smart Street utilises the technique of Conservation Voltage Reduction (CVR) to optimise voltage levels at the distribution level. In RIIO-ED1, Smart Street received Innovation Roll-Out Mechanism (IRM) funding to deploy the technology at 180 substations.

Final Determination

Output Parameter	**Final Determination**	**Draft Determination**
Type of PCD	Mechanistic	Same as FD
Outputs	1000 OLTCs for Smart Street purposes	1000 sites
Delivery date	End of RIIO-ED2	Same as FD
Totex allowances	£78m[6]	Same as FD
Re-opener	No	Same as FD
Reporting mechanism	RRPs	Same as FD
Licence area	ENWL	Same as FD
Licence condition	SpC. 3.12	N/ A

Final Determination rationale and Draft Determination responses

2.26 We have decided to accept Smart Street as a mechanistic PCD. This will enable Ofgem to claw back costs where ENWL deploys less than the 1000 OTLCs proposed for the purposes of Smart Street. We are not, however, proposing a reward for the accompanying Smart Street CVP submitted alongside this PCD (see the section "Consumer Value Propositions" in this chapter for more information).

[6] Figures are gross costs and do not include efficiency challenge.

2.27 Where distribution networks have not previously conducted active voltage regulation, Smart Street allows ENWL to optimise voltage supply to customers through a technique known as CVR. This technique can improve the efficiency of the network and customer appliances, leading to an overall decrease in electricity consumption. ENWL modelled the direct benefits of this to be £39.11 annually per customer connected to Smart Street.

2.28 We have concerns that the modelled benefits may be overstated. This was a concern shared by a consumer body and the RIIO-ED2 CG. Specifically, we are concerned that Smart Street's ability to reduce energy consumption may deteriorate over the lifetime of the project as domestic consumption profiles change due to the expected uptake in Low Carbon Technologies (LCTs) and electric vehicles (EV). We consider these to be long-term uncertainties and that the suggestion of a re-opener put forward by one stakeholder would not be able to resolve these concerns within the RIIO-ED2 period. Notwithstanding these uncertainties, we consider that if we were to factor in downside sensitivities to Smart Street's ability to reduce energy consumption over time, the considerable consumer benefits modelled would still result in a positive NPV and benefits case for consumers. We do not consider that these uncertainties would outweigh the benefits of Smart Street so as to result in a negative outcome for consumers.

2.29 We believe further evidence provided through projects like Smart Street will also improve our understanding of the future role of such voltage control technologies in a net zero system. For this reason, we will set out requirements in the Regulatory Instructions and Guidance (RIGs) for ENWL to report annually on its deployment of Smart Street and a summary of the MWHr reductions achieved, alongside the cost savings to customers as a result.

LineSIGHT

Purpose	New technology developed by ENWL to enable remote detection of damaged overhead line equipment earlier than through visual inspection.
Benefits	This will help to pinpoint the location of faults, enabling more efficient despatch of repair crews.

Background

2.30 LineSIGHT is a high voltage overhead line safety management system using impedance-based and Time Domain Reflectometry (TDR) technologies for detection of low hanging conductors. It integrates with the Network Management System (NMS) to provide near real time safety information.

Final Determination

Output parameter	Final Determination	Draft Determination
Overall decision	Accept output and technically assessed costs	Change at FD: We proposed to reject this proposal as bespoke at Draft Determinations.
Type	Mechanistic PCD	
Output	A high voltage overhead line safety management system with 2,200 sensors covering 8,000km of high voltage circuit	
Delivery Date	30th March 2028	
Totex allowances	£34.5m[7]	
Re-opener	None	
Proposed approach to allowance clawback	Downwards adjustment of allowances based on percentage completion of target number of sensors installed and integrated with ENWL's network management system	
Reporting mechanism	RRPs	N/A
Licence area	ENWL	N/A
Licence condition	SpC 3.15	N/A

Final Determination rationale and Draft Determination responses

2.31 At Draft Determinations, we recognised the potential benefits of the new technology but did not think its use needed to be explicitly incentivised. We rejected it as a PCD and recommended its implementation as business as usual (BAU).

2.32 ENWL responded that LineSIGHT enables network operators to materially reduce both new and existing public safety risks through implementation of practical measures enabled by new technology. ENWL explained that it does not replace any existing measures on overhead lines and a new

[7] Figures are gross costs and do not include efficiency challenge.

technology of this nature is neither BAU asset replacement nor is it part of the maintenance of existing equipment.

2.33 ENWL also submitted additional evidence to support LineSIGHT as a reasonably practicable measure to improve public safety and provided further details on plans to ensure timely delivery.

2.34 Having considered that additional evidence, we have now decided to accept LineSIGHT as a mechanistic PCD for deployment of 2,200 sensors over 8,000km of overhead lines.

2.35 In light of the additional new information provided by ENWL in its consultation response, we accept that LineSIGHT is a novel approach to overhead lines risk management that will take compliance with ESQCR to a new level and should not be considered to be BAU asset replacement. A mechanistic PCD is appropriate to provide the required funds for timely deployment while ensuring customer protection against the risk of under-delivery.

Vulnerable customer network improvements

Background

2.36 The vulnerable customer network improvements programme aims to reduce the likelihood and duration of unplanned interruptions on the high voltage (HV) network in areas with a high concentration of vulnerable customers through two investment proposals; (1) automating HV distribution substations, and (2) upgrading poorly performing HV feeders, at a total cost of £20m.

Final Determination rationale and Draft Determination responses

2.37 We have decided to reject this proposal in line with our Draft Determinations.

2.38 ENWL and its CEG disagreed with our proposal to reject its PCD for providing network improvements for vulnerable customers. ENWL stated that as IIS performance benefits would be marginal and only realised in the later years of RIIO-ED2, the programme would not be fundable through IIS. ENWL also said that the programme would not be fundable through the IIS because the customers who would benefit from it do not qualify as Worst Served Customers (WSC).

2.39 A consumer body agreed that there may be considerable overlap between investment in the programme and the IIS. However, it recognised that fewer and shorter interruptions would benefit customers in vulnerable situations and considered that DNOs should consider such impacts as a BAU activity.

2.40 ENWL's CEG noted that our proposal to reject the programme should be reconsidered if ENWL are able to better articulate the benefits of the programme and can demonstrate why there is not considered to be an overlap with the IIS or WSC mechanisms.

2.41 We accept that ENWL has set out that the customers who would benefit from the programme would not qualify as WSC. However, we agree with the consumer body and maintain our view that improvements made through the programme, even if marginal, would contribute to IIS performance in the same way that any other investment in reliability improvements can (ie, reductions in customer interruptions and customer minutes lost). This has been recognised by ENWL. Therefore, we are concerned that any allowance would constitute QoS funding and introduce the risk of double rewards where performance is also rewarded under the IIS. We have set out further detail on our decision on QoS funding in Chapter 6 of our Core Methodology Document.

2.42 ENWL agreed with our Draft Determinations position that all customers, including those in vulnerable situations, are affected by power cuts but stated that the programme seeks to address the fact that power cuts have a higher impact on vulnerable customers (eg, due to medical dependency). We recognise the impact and worry power cuts can cause vulnerable customers, especially those medically dependent on electricity supply, and the importance of maintaining high levels of reliability for these customers. We also note that ENWL's WSC programme would be delivered in addition to this programme, therefore not jeopardising reliability improvements for those supplied by the worst performing parts of the network.

2.43 However, we remain concerned that the prioritisation of areas ENWL report as having high concentrations of customers in vulnerable situations would result in a shift of focus away from areas of the network with poorer performance (which may themselves be serving vulnerable customers). This would potentially have a negative impact on more customers than those currently identified as part of ENWL's bespoke proposal. In addition, we note that the forecast of benefits ENWL report is low at ~£2.03m total IIS benefit (based on 2020/21 CI and CML improvements) relative to the £20m cost to customers to deliver this programme of investment and consider that the scale of the investment could provide significantly higher benefits to more customers if targeted at poorer performing parts of the network.

2.44 We note that ENWL have provided clear evidence of stakeholder and customer feedback on this proposal. That support is linked to the ability of the programme to improve reliability for vulnerable customers. However, we are concerned that it has not taken into consideration the fact that the number of vulnerable customers that benefit from a particular substation or feeders could change over the RIIO-ED2 price control period. It is also not clear how the discussions were framed and whether it was clear to customers (including those this programme is intended to benefit the most) what the reliability performance currently is (ie, how CI and CMLs translate into average power cuts), what the improvement would be as a result of the programme of investment and whether they are willing to pay for such reliability improvements. We therefore have concerns

regarding customer's willingness to pay considering the expected marginal improvements, the cost to deliver the proposed investments and the wider context of the current economic climate which is placing additional pressure on customer's bills, particularly those in vulnerable situations.

2.45 In addition, we note that the programme in total is intended to benefit 162,673 customers, of which 50,106 are vulnerable (31%) and 17,461 (10.7%) are 'highly vulnerable'. Taking into account that ENWL's region has a high volume of customers in vulnerable situations with around 70% of its customers being eligible for the Priority Services Register and 10% being considered to be in the most vulnerable circumstances, we consider that by focusing on the poorest performing parts of the network, ENWL will be able to deliver reliability improvements that would provide the opportunity for rewards under the IIS, and which would likely also benefit many customers in vulnerable situations across its network.

2.46 Having taken into consideration the consultation responses, we have decided to reject this proposal in line with our Draft Determinations. That is because, for the reasons set out above, we remain of the view that there is considerable overlap with the IIS and the programme would risk double rewarding ENWL for its network reliability improvements over RIIO-ED2.

Consumer Value Propositions

2.47 The table below summarises the CVP proposals that ENWL submitted as part of its Business Plan and our Final Determinations position in relation to each. Where appropriate, further information setting out the rationale for our decisions is set out under specified headings.

CVP name and description	Consultation response summary	Final Determination	Draft Determination
Smart Street: Voltage management technology that alters output voltage at distribution transformers to reduce consumer energy consumption.	Stakeholders agreed that addressing Smart Street as a PCD was preferable. ENWL suggested we consider joining up potential rewards from a CVP and the Low Carbon Network Fund (LCNF) second tier rewards. ENWL also highlighted that rejecting CVPs	Accept, no reward: We consider that this CVP should not receive an award because the modelled benefits may be overstated. However, we consider there is value in delivering this proposal and that protecting consumers by attaching a PCD is appropriate.	Same as FD

CVP name and description	Consultation response summary	Final Determination	Draft Determination
	like Smart Street may disincentivise DNOs from proposing future CVPs in future Price Controls.	Please see paragraphs 2.25 - 2.29 for further detail.	
Customer Load Active System Services (CLASS): Voltage management technology installed at primary substations that allows for demand control on ENWL's network. Demand reduction caused by voltage changes can then be provided to the ESO for its residual balancing purposes.	A consumer body agreed with our Draft Determinations position to reject this CVP. ENWL's CEG understood our rationale but believed CLASS had shown benefits that were worth rewarding despite competition concerns. ENWL suggested we consider joining up potential rewards from a CVP and the Low Carbon Network Fund (LCNF) second tier rewards to ensure DNOs are rewarded for innovation and network development.	Reject outright: We have decided to reject the reward and the costs for this CVP proposal. Ofgem has consulted on the regulatory treatment of CLASS in RIIO-ED2 separately. All the regulatory options being explored for CLASS as part of the recent consultation would make accepting a CVP relating to CLASS from one DNO to be inappropriate and risk disrupting the intention of any future decision on the treatment of CLASS. Ofgem is due to publish its decision on the regulatory treatment of CLASS in RIIO-ED2 in December 2022.	Same as FD

3. Setting ex ante allowances

Introduction

3.1 This chapter sets out our Final Determinations on ex ante allowances for the different cost areas within ENWL's business plan submission. This chapter should be read alongside other parts of our Final Determinations that set out our overall approach to RIIO-ED2.

Ex ante allowances

3.2 Ex ante Totex referenced in this chapter comprises forecast controllable costs and is inclusive of our proposed ongoing efficiency challenge, unless stated otherwise. Furthermore, the figures presented in this chapter do not include real price effects (RPEs) to allow comparison with DNOs' submissions.

3.3 Table 17 compares ENWL's submitted ex ante Totex for its network, our Draft Determination proposals, and our Final Determinations position at a disaggregated cost activity level.

Table 17: ENWL RIIO-ED2 submitted Totex versus allowed Totex by cost activity (£m, 2020/21 prices)[8]

Cost activity	RIIO-ED2 submitted	DD (Net Before NPCA)	FD (Net Before NPCA)	FD incl Access SCR (Net After NPCA)	Difference to submitted (on a Net Before NPCA basis)
Connections	20	18	22	37	9%
New Transmission Capacity Charges	-	-	-	-	0%
Primary Reinforcement	41	16	39	44	-7%
Secondary Reinforcement	62	121	47	47	-25%
Fault Level Reinforcement	32	26	26	26	-19%
Civil Works Condition Driven	27	22	19	19	-29%
Blackstart	-	-	-	-	0%
Legal & Safety	42	34	33	33	-22%

[8] Note that these costs do not include post-modelling adjustments for reversing of ongoing efficiency for Worst Served Customers and Visual Amenity, adding Cyber resilience OT allowances and the Shetland Link RAV transfer, and deducting related party margins, disposals, and other controllable opex.

QoS & North of Scotland Resilience	20	-	-	-	-100%
Flood Mitigation	4	3	5	5	35%
Physical Security	5	4	4	4	-7%
Rising and Lateral Mains	17	14	16	16	-7%
Overhead Line Clearances	9	7	8	8	-2%
Losses	10	8	8	8	-20%
Environmental Reporting	31	23	27	27	-12%
Operational IT and Telecoms	78	64	71	71	-10%
Worst Served Customers	21	17	20	20	-7%
Visual Amenity	6	5	6	6	0%
Diversions (excl Rail)	18	59	18	18	0%
Diversions Rail Electrification	0	-	-	-	-100%
Civil Works Asset Replacement Driven	9	8	10	10	10%
Asset Replacement NARM	166	134	153	153	-7%
Asset Replacement Non-NARM	68	55	60	60	-13%
Asset Refurbishment Non-NARM	25	20	23	23	-6%
Asset Refurbishment NARM	30	24	25	25	-17%
IT and Telecoms (Non-Op)	36	29	33	32	-7%
Non-Op Property	12	10	11	11	-7%
Vehicles and Transport (Non-Op)	23	18	20	20	-11%
Small Tools and Equipment (STEPM)	23	19	17	17	-26%
HVP RIIO-ED2	-	18	-	-	0%
Shetland	-	-	-	-	0%
Tree Cutting	32	40	30	30	-6%
Faults	127	103	120	120	-6%
Severe Weather 1-in-20	2	-	-	-	-100%

Occurrences Not Incentivised (ONIs)	46	38	40	40	-14%
Inspections	17	14	15	15	-9%
Repair and Maintenance	54	44	50	50	-9%
Dismantlement	2	2	1	1	-47%
Remote Generation Opex	-	-	-	-	0%
Substation Electricity	10	8	10	10	-7%
Smart Metering Rollout	13	11	9	9	-29%
Total Closely Associated Indirects (CAI)	404	327	387	334	-4%
Total Business Support	256	208	233	212	-9%
Cost Activities Sub-Total	1,800	1,569	1,617	1,563	-10%
Excluded Cost Activities	-22	-	-	-	-100%
Total Totex (modelled component)	1,778	1,569	1,617	1,563	-9%
Technically Assessed Totex	113	72	105	105	-7%
Total Totex	**1,890**	**1,640**	**1,722**	**1,668**	**-9%**

Technically assessed costs

3.4 For technically assessed costs, we have made the following adjustments, listed in Table 18 below. Our view of bespoke proposals is presented in Chapter 2. Some further detail is provided in the section "Engineering Justification Paper review" and Appendix 1.

Table 18: Technically Assessed Costs (£m, 2020/21 prices)

Proposal name	**Submitted**	**DD[9]**	**FD**	**Confidence**
Smart Street PCD	78	78	78	High
LineSight PCD	34.5	-	34.5	Lower

[9] DD and FD figures are gross costs and do not include efficiency challenge.

Engineering Justification Paper review

Overview

3.5 Our review of ENWL's Engineering Justification Papers (EJPs), and the associated supporting information, is one of several assessment tools that has contributed to our overall assessment of ENWL's submission. The position set out in this section should be considered in the wider context of the cost assessment methodology set out in Chapter 7 of the Core Methodology Document.

3.6 Following our review of EJPs in accordance with paragraph 2.23 of the Engineering Justification Papers for RIIO-ED2 Guidance document[10], our review of Draft Determination consultation responses and additional material provided by ENWL, this section sets out our engineering assessment as part of our Final Determinations.

3.7 As discussed in Chapter 7 of our Core Methodology Document, our assessment provides a view on each EJP that was assigned one of three outcomes: Justified, Partially, or Unjustified.

3.8 A summary of our review of ENWL's EJPs is presented in Appendix 1, showing the number of EJPs in each category and how our overall assessment has changed between Draft and Final Determinations. We have provided more detail in Appendix 1 on EJPs of significant value where our review determined the EJP to be Partially Justified or Unjustified, noting instances where we have changed our EJP review position as part of our Final Determinations.

3.9 We intend to work with DNOs and other stakeholders to identify additional and enhanced reporting requirements to improve our ongoing monitoring and review of DNOs' performance and delivery of their outputs in period. We set out some potential examples of areas where we will consider enhanced reporting in Appendix 2.

Table 19: Summary of Ofgem's view of ENWL's EJPs

EJP Review Outcome (Count of EJPs)	**Final Determinations**	**Draft Determinations**
Justified	22	18
Partially Justified	24	28
Unjustified	3	3
Total EJPs	49	49

[10] RIIO ED2 Engineering Justification Paper Guidance https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/riio_ed2_engineering_justification_paper_guidance.pdf

Load Related Expenditure (LRE): Draft Determination responses and Final Determination rationale

3.10 Chapter 7 of the Core Methodology Document details the interactions between our engineering review of the LRE EJPs and the activity level assessment of LRE.

3.11 Limited additional information was provided by ENWL in relation to the EJPs that we had deemed to be Partially Justified or Unjustified at Draft Determinations. Therefore, we have maintained our Draft Determinations position for all of ENWL's LRE EJPs.

3.12 Please see Appendix 1 for further detail on our assessment of the LRE EJPs.

Non-Load Related Expenditure (NLRE): Draft Determinations responses and Final Determinations rationale

3.13 ENWL's consultation response on NLRE provided additional information on its proposed volumes for condition-based asset replacement. This included the asset data driving the proposed interventions for portfolio works and the asset data and scope of interventions for higher volume works. This has resulted in four EJPs, which are NARM based, that we now consider to be Justified EJPs. Other papers remain Partially Justified and Unjustified as in Draft Determinations.

3.14 ENWL noted some errors in the engineering volume analysis that informed our view of modelled volumes within our activity level analysis. ENWL also noted instances where it submitted an EJP under the materiality threshold set out in the RIIO-ED2 EJP Guidance. We agree that it would be unfair to penalise ENWL in this instance, even if the EJP was deemed unjustified and not penalise other DNOs who did not submit an EJP.

3.15 ENWL's LineSIGHT technology was one of the major investment areas which ENWL highlighted in its consultation response and bilateral engagements, noting the wide-ranging benefits which are associated with the proposed investment, and submitting additional evidence. We acknowledge the benefits that have been presented, and we note the proposed rollout and deployment plan which ENWL discussed in the bilateral engagement. However, we retain some concerns that with no specific outputs from the investment, there remains uncertainty that the proposed benefits will be realised. To account for this, a PCD has been introduced, as outlined in Chapter 2. To ensure that we can accurately gauge the benefits of these works, we will require additional reporting to highlight impacts to fault response and safety performance, along with changes to expenditure in NOC.

3.16 We note that ENWL submitted new information in relation to some aspects of condition-based replacement, for example the replacement of HV switchgear and detailed clear asset information that informed the proposed interventions. Furthermore, ENWL was able to clarify the boundary for investments based on individual condition points on assets,

which provides high confidence that, should works change within period, there will be a clear evidence trail for the decisions. For EJPs for which we received this level of additional evidence, in general, we have moved our Draft Determinations position from either Partially Justified or Unjustified to a Final Determinations position of Justified.

3.17 There were other NLRE EJPs which were deemed Unjustified or Partially Justified at Draft Determinations for which we received no additional information from ENWL (eg wood pole interventions). For these areas, we have maintained our Draft Determinations position.

TIM

3.18 Our updated cost confidence assessment results in a proposed Totex Incentive Mechanism (TIM) incentive rate for ENWL of 49.4%. For further details on the TIM, see Chapter 9 of the Overview Document.

BPI Stage 3

3.19 We have decided that ENWL does not incur any penalty following our BPI Stage 3 assessment. This is the same approach that we proposed at Draft Determinations following the BPI Stage 3 assessment as we did not consider ENWL to have submitted any lower confidence costs.

3.20 ENWL agreed with the overall assessment. We continue to consider that ENWL has not submitted any lower confidence costs and have therefore decided that it will not incur a Stage 3 penalty.

BPI Stage 4

3.21 We have decided that ENWL will earn no reward following our BPI Stage 4 assessment. This is the same approach that we proposed at Draft Determinations.

3.22 ENWL considered that the modelling and assessment process undertaken at Draft Determinations was flawed and the efficiency of its Final Business Plan was not recognised as a result. We consider that the methodology set out at Draft Determinations is appropriate and have therefore decided to retain our approach. Nonetheless, as highlighted in the Overview Document, we will review the BPI process as part of our future review of price controls.

3.23 Table 20 sets out our decisions on high confidence cost categories and allowances (before the application of RPEs and ongoing efficiency).

Table 20: Final Determination on Stage 4 (£m, 2020/21 prices)

Cost Category	ENWL's view	Ofgem view	BPI reward
Modelled Costs	1,777.7	1,731.6	N/A

Cost Category	ENWL's view	Ofgem view	BPI reward
Bespoke Outputs and Technically Assessed	112.5	110.5	N/A

4. Adjusting ex ante allowances for uncertainty

Introduction

4.1 In this chapter we set out our Final Determinations positions on the bespoke UMs that ENWL proposed in its Business Plan.

4.2 We set out more detail on the common UMs in our Core Methodology Document and Overview Document, including our full Final Determinations position and rationale.

Bespoke UM Proposals

4.3 In our SSMD we invited DNOs to propose bespoke UMs with suitable justification in their business plans. When assessing those we have considered the extent to which the supporting information provided by the DNOs justifies the key criteria outlined in the BPG:

- materiality and likelihood of the uncertainty
- how the risk is apportioned between consumers and the network company
- the operation of the mechanism
- how any drawbacks may be mitigated to deliver value for money and efficient delivery.

4.4 We also considered whether the uncertainty was regionally specific, or sector wide, to assess whether a common UM could be more appropriate. You can find the background and our assessment approach in Chapter 6 of our Overview Document. For full details on the bespoke UMs, refer to ENWL's Business Plan.

4.5 The table below summarises the bespoke UM proposals that ENWL submitted and outlines our Final Determinations position.

Bespoke UM name and description	**Consultation response summary**	**Final Determination**	**Draft Determination**
LRE: A reopener for managing load related expenditure.	No responses received in relation to this bespoke UM. Please refer to Chapter 3 of the Core Methodology Document for more information on	Reject: We consider it is addressed by our common LRE UMs. Please refer to Chapter 3 of the Core Methodology Document for more information.	Same as FD

Bespoke UM name and description	Consultation response summary	Final Determination	Draft Determination
	responses to our LRE UMs.		
LCT LV service solutions: A volume driver for LCT services	No responses received in relation to this bespoke UM. Please refer to Chapter 3 of the Core Methodology Document for more information on responses to our LRE UMs.	Reject: We consider it is addressed by our common LRE UMs. Please refer to Chapter 3 of the Core Methodology Document for more information.	Same as FD
Wayleaves and Diversions: Volume drivers and annual logging-up for different wayleaves and diversions activities (Wayleaves and Easements compensation claims and Diversions for wayleaves terminations).	Consultation responses from three DNOs disagreed with our Draft Determinations proposal to not provide a UM for Diversions. Please refer to Chapter 6 of the Overview Document for more information.	Reject bespoke UM: We have decided to implement a common Wayleaves and Diversions Re-opener. Please refer to Chapter 6 of the Overview Document for more information.	Same as FD: But unlike at Final Determinations, we did not previously propose a common Diversions Re-opener.
Ash Dieback: A volume driver for Ash Dieback affected trees (Class 4 only).	ENWL disagreed with out Draft Determination position, noting that the management of ash dieback trees in RIIO-ED2 will increase and that challenges in applying a unit price are	Reject: We maintain our Draft Determination position that ex-ante allowances are provided for tree cutting to enable the DNOs to adapt to the changing nature of the challenges associated with vegetation management. This includes risks associated with new or	Same as FD

Bespoke UM name and description	Consultation response summary	Final Determination	Draft Determination
	not insurmountable.	emerging challenges such as Ash Dieback. We continue to think that a volume driver would create challenges in setting a unit price and in verifying the felling of only class 4 trees.	
Polychlorinated Biphenyls (PCBs): To address the uncertainty and risk that the volumes of PCB-contaminated assets may be significantly higher or lower than currently expected.	We did not receive responses that commented specifically on this bespoke UM proposal. ENWL advised as part of its response to Core-Q16, that it agrees with and welcomes a common mechanism for the sector.	Reject bespoke UM: We have decided to reject this proposal as a bespoke UM and to address PCB contamination in pole mounted transformers through a common volume driver design for all DNOs with an overhead network. The replacement of ground mounted transformers will be addressed using ex ante allowances. Additional detail can be found in Chapter 3 of the Final Determinations Core Methodology Document.	Same as FD
Net zero and reopener development Fund: To enable net zero related development work, small value net zero facilitation projects, and local area energy plan support.	ENWL stated that this fund has been applied to both GD2 & T2 and it considers that its objectives apply equally to the ED sector.	Reject: We consider the scope of proposed activities to be BAU and ENWL can manage the associated costs within its Totex allowances. Additionally, we have implemented a common Net Zero Re-reopener to address uncertainty related to the achievement of net zero.	Same as FD

Bespoke UM name and description	Consultation response summary	Final Determination	Draft Determination
Distribution Net Zero Fund UIOLI: Proposal to create a community energy fund and provide decarbonisation support.	ENWL disagreed with our position and advised the proposal has strong stakeholder support and extends the work that has been undertaken in ED1. We received five responses in support of ENWL's decarbonisation support offer to communities.	Reject UIOLI. We have decided to reject treatment as a bespoke UIOLI allowance because we don't consider this proportionate to the expenditure. However, we consider there is value in carrying out engagement with local communities as a Business as Usual (BAU) activity in RIIO-ED2. As we consider the associated costs to be BAU, they are subject to benchmarking. We have decided to outright reject the remaining expenditure associated with this proposal for decarbonisation advice services, and for the delayed payment scheme for connection costs.	Updated at FD: We proposed to reject this bespoke UM and associated expenditure as insufficient evidence had been provided to justify the need for this fund.

Bespoke UM name and description	Consultation response summary	Final Determination	Draft Determination
West Coast of Cumbria (previously known as Moorside) Re-opener: Nuclear development on the west coast of Cumbria: Proposal to continue RIIO-ED1 re-opener for the uncertain costs associated with the potential for new nuclear generation seeking to connect in Cumbria and subsequent network investment required.	ENWL and two industry stakeholders responded on this UM, and all three were in favour of it.	Accept bespoke UM: We still see a need for the UM and have incorporated ENWL's concerns about further provision for early works funding within the scope of the re-opener. See below for further detail.	Same as FD
Access SCR reform: A regulatory driven changes proposal	No responses received in relation to this bespoke UM. Please refer to Chapter 12 of the Overview Document for information on responses to our RIIO-ED2 treatment of the Access SCR.	Reject: We consider it is addressed by our common LRE Re-opener. Please refer to Chapter 12 of the Overview Document and Chapter 3 of the Core Methodology Document for more information.	Same as FD

West Coast of Cumbria Re-opener

Purpose	To enable funding for the licensee for network investment associated with potential new nuclear generation connecting on the West Coast of Cumbria.
Benefits	This bespoke UM ensures the best protection for consumers and risk balance given there are no baseline allowances for this activity. Costs will only be requested should the need arise within RIIO-ED2 and will only be awarded where they are justified in accordance with the re-opener criteria.

Background

4.6 In RIIO-ED1, ENWL had a bespoke mechanism to manage the impact of major changes required to their network should new nuclear generation connections take place near Sellafield in Cumbria. This was known as the 'Moorside condition' reflecting the likely geographical location of the development on the West Coast of Cumbria (WCC).

4.7 In our Draft Determinations, we set out our proposal to update this bespoke UM to recognise changes in scenarios and triggering events.

Final Determination

Output Parameter	**Final Determination**	**Draft Determination**
Overall decision	Accept bespoke UM	Same as FD
UM type	Re-opener	Same as FD
Re-opener Window	Any time during RIIO-ED2	Same as FD
Trigger	Licensee triggered	Same as FD
Materiality threshold	RIIO-ED2 common materiality threshold of 0.5%	RIIO-ED2 common materiality threshold of 1%
Additional requirements	n/a	n/a
Licence condition	Special Condition 3.6	Continuation from RIIO-ED1

Final Determination rationale and Draft Determination responses

4.8 We have decided to implement the West Coast of Cumbria Re-opener for ENWL in RIIO-ED2. We have determined that the updates to the UM, which include updates to trigger events and process for early funding, are required to support any efficiently incurred costs ENWL may incur in relation to new nuclear generation seeking to connect at the Moorside nuclear site.

4.9 We agree with ENWL's response that the UM should cover small modular developments at the Moorside nuclear site, as well as single large nuclear development projects. We have amended the name of the re-opener from the 'Moorside Re-opener' to the 'West Coast of Cumbria Re-opener' to reflect the fact that the nuclear development may not be one large project known as 'Moorside'.

4.10 Additionally, we have decided to implement our Draft Determinations position, that trigger events should be updated to incorporate Large Onshore Transmission Investment (LOTI) projects put forward by National Grid and distribution connection applications from generators at the Moorside nuclear site.

4.11 In response to our Draft Determinations, ENWL, an environmental interest group and a local authority all agreed with the proposals for the bespoke UM. The environmental interest group provided further comment stating that landscape sensitivity should be considered as part of any allowances awarded through the re-opener. This is something that we will consider as part of a re-opener application.

4.12 ENWL requested that the design of the re-opener be amended to provide allowances for early design and planning works associated with connecting at the Moorside nuclear site. We agree that the potential complexity of preliminary works required to connect new nuclear generation at Moorside nuclear site, including system design considerations and interactions with the planning consent regime, is significant. As such, we agree that some funding may need to be provided for these early works through the re-opener. However, we also consider it important to ensure that these works are only funded when there is sufficient certainty that a nuclear generation project at the Moorside nuclear site is reasonably likely to progress. Appendix 11 of our RIIO-2 Re-opener Guidance and Application Requirements Document: Version 3 details the process through which early funding may be provided under the West Coast of Cumbria Re-opener.

5. Network Innovation Allowance

Introduction

5.1 Our SSMD and the Core Methodology Document set out the criteria that we have used to assess NIA funding requests. The Core Methodology Document also details our Final Determinations position for the RIIO-ED2 NIA Framework and extension of the existing Strategic Innovation Fund to the DNOs.

5.2 ENWL in its business plan proposed it should be awarded £25m of NIA over 5 years, equivalent to £5m per year, which it stated was approximately £2m more annually than it had access to in RIIO-ED1. It justified this increase with reference to the need to accelerate the transition to a net zero energy system.

Final Determination

Parameter	Final Determination	Draft Determination
Level of NIA funding	£8.4m, to be reviewed at the latest by 2025.	£6m, to be reviewed by 2025.

Final Determination rationale and consultation responses

5.3 We have decided to award ENWL £8.4m, which is £2.4m more NIA than proposed at Draft Determinations. The RIIO-ED2 allowance is equivalent to 3 years' worth of ENWL's average annual RIIO-ED1 allowance.

5.4 ENWL was the only stakeholder who commented on the NIA proposed for it. It disagreed with our approach of linking allowances to DNOs' size for reasons summarised in the Core Methodology Document.

5.5 Furthermore, ENWL argued that because our approach to benchmarking reduced its NIA as compared to annual levels in RIIO-ED1, our proposed NIA jeopardised its ability to deliver its business plan commitments in relation to innovation. ENWL also reiterated that it needed more NIA in RIIO-ED2 than in RIIO-ED1 to meet the decarbonisation challenge.

5.6 ENWL has satisfied us that it would have struggled to deliver its innovation programme with the NIA proposed at Draft Determinations, resulting in a materially reduced innovation offering both relative to RIIO-ED1 and its RIIO-ED2 business plan submission. We consider that this would be detrimental to consumers. On that basis, we reconsidered the application to ENWL of our approach to benchmarking and concluded that in the circumstances of its case, it was reasonable to benchmark ENWL against its individual RIIO-ED1 benchmark that was set at 0.7% of RIIO-ED1 base revenue annually, rather than using the sector-wide equal benchmark of 0.5% we proposed at Draft Determinations. We considered that in their case the benchmark can be higher to avoid a detrimental

impact on consumers, and because their submission was of high quality and performed satisfactorily against all five SSMD criteria.

5.7 We do not think however that ENWL presented robust reasoning for why it should be awarded more NIA than in RIIO-ED1. It did not provide additional evidence in response to Draft Determinations to support this ask.

Appendix 1 Key Engineering Recommendations

A1.1 This section provides additional details regarding our assessment of specific EJPs.

A1.2 Due to the high number of EJPs presented within the submission, we have not provided our view on each of ENWL's EJPs within this document. Instead, this appendix focuses on EJPs of significant value where our Final Determinations review determines the EJP to be Partially Justified or Unjustified.

Table 21: LRE - Key Engineering Recommendations

EJP	Final Determination	Draft Determination
LRE EJP 15 motorway service area EV enablement - North	Unjustified Limited additional information has been provided.	Unjustified The options analysis was detailed with sufficient evidence to provide comfort that despite the detailed assessments due during RIIO-ED2, there was confidence in the development to approve. However, we deemed these works unjustified as there were multiple funding streams likely to be available for these works which caused a risk of double funding.
LRE EJP 16 motorway service area EV enablement - South and Central		Office for Zero Emission Vehicles (OZEV) have developed an intervention scheme in electrifying the motorway network - the Rapid Charging Fund (RCF), therefore there was a risk that these EJPs may be funded through RIIO-ED2 as well as the RCF.
LRE EJP 8 service unlooping programme	Partially Justified Limited additional information has been provided.	Partially Justified We believed that the EJP provided sufficient justification for the needs case and optioneering, with initial concerns resolved through supplementary questions (SQs). However, there remained significant uncertainty in the deliverability of the proposed scheme in relation to customer behaviour, as acknowledged by ENWL.

		Due to uncertainty in relation to consumer behaviour, there was a volume and deliverability risk associated with this proposal.
LRE EJP 9 Monitoring Programme	Partially Justified Limited additional information has been provided.	Partially Justified This was a continuation of the ongoing RIIO-ED1 programme. The EJP presented several credible drivers for the installation of the LV monitoring devices, as well as associated benefits. The lower certainty scenarios within the EJP were indicative of the uncertainties in LCT uptakes, especially around the electrification of heating. Due to the uncertainty in relation to LCT uptake, there was a volume and deliverability risk associated with this proposal.
LRE EJP 4 Northern Gateway / South Heywood	Partially Justified Limited additional information has been provided.	Partially Justified The proposal was for a new primary substation to feed a planned development on the Greater Manchester Strategic Plan for homes, jobs and the environment. Existing infrastructure could not meet the development needs and to comply with Security of Supply a new substation and underground cable network was required. There was a risk that the Greater Manchester Strategic Plan would change, leading to uncertainties in the volumes and deliverability.

Table 22: NLRE (Non-NARM) - Key Engineering Recommendations

EJP	**Final Determinations**	**Draft Determinations**
NARM EJP 1 Transformers intervention programme	Justified ENWL's response provides sufficient additional information to move the EJP from Partially Justified to Justified.	Partially Justified Initial concerns regarding the delivery of the proposed volumes were largely addressed through SQ responses. However, insufficient justification was

	ENWL have provided information on their optioneering process to determine if a transformer is to be replaced or refurbished. Detail is given for individual transformers to be replaced and refurbished, with written comment that describes each transformer's current condition.	provided for the efficiency of the proposed volumes to fully justify. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes will differ from the volumes that ENWL have proposed in their submission.
NARM EJP 7 Oil assisted cables (EHV and 132kV)	Partially Justified – Accept Submitted Volumes Insufficient additional information has been provided, and we note that there remains a risk associated with the efficient delivery of the proposed volumes. Therefore, the EJP is Partially Justified, and additional reporting is required.	Partially Justified The EJP provided sufficient justification for the needs case, as well as the proposed optioneering. However, we did not believe that volumes had been sufficiently justified at this stage. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ from the volumes that ENWL had proposed in their submission.
NARM EJP 5 Overhead lines (towers)	Partially Justified Limited additional information has been provided.	Partially Justified Replacement programme to refurbish or replace ageing EHV and 132kV overhead towers. Justification was based on NARM targets and uses the Common Network Asset Indices Methodology (CNAIM) model to determine Health Indices. In summary, both the needs case and the proposed solution based on options presented were justified. However, we did not believe that volumes had been sufficiently justified at this stage. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ

		from the volumes that ENWL proposed in their submission.
NARM EJP 4 Overhead lines (wood poles)	Partially Justified Limited additional information has been provided.	Partially Justified The selection for intervention appeared appropriate at a high level, but it was unclear why there was a disproportionally high volume of HV HI5 poles being replaced against other voltage levels. Broadly, the control measure appeared appropriate in future, but the limited detail on optioneering suggests that this had been the only option considered when there were multiple options present. There was insufficient data within this proposal to suggest that the volumes were fully justified. The deliverability section was light in detail, relying it appears on the RIIO-ED1 run rate being consistent. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ from the volumes that ENWL have proposed in their submission.
NARM EJP 2A HV switchgear	Justified ENWL's response provides sufficient additional information to move the EJP from Partially Justified to Justified. Detail is given for individual primary switchgear to be replaced and refurbished, with written comment that describes each switchgear's current condition, including the health score and index, and criticality index for each switchgear operating on their	Partially Justified Replacement programme to refurbish or replace ageing HV Switchgear under NARM. Justification was based on NARM targets and uses CNAIM model to determine Health Indices. There was insufficient data within this proposal to suggest that the volumes were fully justified. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ

	network. Details on the defects for each is recorded where available, and a driver for intervention described.	from the volumes that ENWL proposed in their submission.
PRO EJP 2 Harker	Partially Justified Limited additional information has been provided.	Partially Justified Both the need and solution were justified. However, the nature of the interactions with NGET and SP Transmission mean that it would not be efficient to provide a full up-front allowance for the EJP. There was a deliverability risk in relation to this EJP due to the uncertainty associated with the whole system solution.

Table 23: NLRE (NARM) - Key Engineering Recommendations

EJP	Final Determinations	Draft Determinations
NNARM EJP 6 Protection refurbishment	Justified As discussed within Chapter 7 of the Core Methodology Document, volumes associated with CV8 and CV9 refurbishments have been accepted.	Partially Justified Replacement programme to replace protection equipment due to deteriorating condition and performance. Justification was based on asset age and deterioration as well as failures resulting in CIs and CML. It was noted that run rates were higher in RIIO-ED2 than in RIIO-ED1. K-series relays were indicated as able to be delivered at higher run rates that RIIO-ED1 protection equipment due to the simplicity in replacing these assets; however, PBO relays made up a significant part of the population of relays to be replaced and no similar indication was given to the ability to deliver against these targets. Due to the lack of justification for the increased volumes, in particular the PBO relays, there was a deliverability risk associated with the EJP.
NNARM EJP 4 Cables (HV)	Justified ENWL's response provides sufficient additional information to move the EJP from Partially Justified to Justified. ENWL have provided an updated EJP, with an appendix detailing the specific circuits for intervention in ED2, addressing the risks that we identified at Draft Determinations.	Partially Justified Replacement programme to replace ageing and unsafe plain lead cables. Justification was based on cable age and deterioration as well as unsafe laying protection conditions of cables when excavating. In summary, both the needs case and the proposed solution based on options presented were justified, however uncertainty remained regarding the proposed volumes.

		Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ from the volumes that ENWL proposed in their submission.
ENV EJP 1 PCB removal programme	Partially Justified Limited additional information has been provided.	Partially Justified We generally agreed with the original assessment as there was a statistically relevant volume derived from an agreed model. However, the additional testing may highlight deviations from the modelled volumes. Information was relatively light and additional detail could have been provided to give further assurance for the proposed solution. Due to the lack of justification for the specific volumes, and the uncertainty associated with the outputs from the additional testing, there was a risk that the out-turn volumes would differ from the volumes that ENWL proposed in their submission.
QOS EJP1 Vulnerable customer improvement programme	Partially Justified Limited additional information has been provided.	Partially Justified The EJP demonstrated the benefits to consumers from the proposed solution, including reduced duration of an unplanned interruption, improved quality of supply to vulnerable customers, and reduced likelihood of a loss of supply. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ from the volumes that ENWL proposed in their submission.

TREE EJP 1 Tree management	Partially Justified Limited additional information has been provided.	Partially Justified The needs case for these works was clear. However, we did not believe that sufficient justification had been provided within the EJP for the proposed volumes. Due to the lack of justification for the specific volumes, there was a risk that the out-turn volumes would differ from the volumes that ENWL proposed in their submission.

Appendix 2 Examples of Enhanced Reporting

Category	Asset Category	Volumes (Additions)	Relevant reporting lines	Potential monitored outcomes
LV UGB	LV UGB	1514	No. of assets	Replacement of assets in poor condition Replacement of ageing assets Addressing safety concerns in areas of high footfall
LV UG Cables (km)	LV Main (UG Consac)	0	km of assets	Replacement of obsolete assets (incompatibility with maintenance and repair materials and procedures) Improved safety
	LV Main (UG Plastic)	88.8		
	LV Main (UG Paper)	0		
EHV & 132kV Cables (km)	33kV UG Cable (Non Pressurised)	59.7	km replaced Oil content removed Leakage stopped	Portfolio of fluid filled cables reduced Leakage stopped from cables Increased ratings with modern equivalent Reduced long term oil management costs
	33kV UG Cable (Oil)	0		
	33kV UG Cable (Gas)	0		
	132kV UG Cable (Non Pressurised)	24.9		
	132kV UG Cable (Oil)	0		
EHV Switchgear	33kV CB (Air Insulated Busbars) (ID) (GM)	0	No. of assets replaced Sites addressed based on safety concerns	Addressing defective batches of assets Replacement of the large ageing population
	33kV CB (Gas Insulated Busbars) (ID) (GM)	82		

Category	Asset Category	Volumes (Additions)	Relevant reporting lines	Potential monitored outcomes
	33kV Switchgear - Other	4		which have reached obsolescence with minimal support from the Original Equipment Manufacturer Facilitation of full remote control at some sites, enabling modern protection and communication systems Removal of oil and SF6 CBs from the network.
N/A Linesight	Overhead Lines (OHL)	TBC	Number of Sensor Deployed Number of sensors connected to Control Room	Improving safety for OHLs