LOAD RELATED EXPENDITURE

SSEN Re-opener Application – Core Narrative

October 2025

Scottish & Southern Electricity Networks

Contents

1. ABOUT SSEN DISTRIBUTION

Who we are

1.1 SSEN Distribution (SSEN) operates and maintains the electricity distribution networks north and west of the central belt of Scotland and across central southern England.

1.2 Through our two licensed electricity distribution network areas, Scottish Hydro Electric Power Distribution (SHEPD) and Southern Electric Power Distribution (SEPD), we deliver power to over 3.9m homes and businesses. We operate over 111,000 substations and pole-mounted transformers, and 128,000km of overhead lines and underground cables across one third of the UK land mass.

1.3 We serve some of the most diverse and unique geographies across the UK, keeping customers and communities connected whilst developing the flexible electricity network solutions vital to achieving net zero. Our network serves some of the UK's most remote communities and some of the most densely populated. Our two networks cover the greatest land mass of any of the UK's Distribution Network Operators (DNOs), covering 72 local authority areas and 75,500km^2 of extremely diverse terrain.

1.4 Our core purpose is to power communities to thrive today and create a net zero tomorrow. We have a responsibility to supply customers with safe and reliable power, allowing them to focus on the things that matter most, while we work hard to build a smarter, flexible, greener network that's fit for the future.

1.5 SSEN is part of SSE plc, one of the largest companies in the UK, FTSE listed, and which operates across the energy sector. SSE's activities and investments contribute around £9bn to the UK economy every year. Its vision is to be a leading energy company in a net-zero world. As one of the UK and Ireland's leading generators of renewable energy and one of the largest electricity network companies in the UK, sustainability and climate action are at the core of our business strategy. As such we see ourselves as a driver of sustainable growth in the UK and key partner of the UK Government in delivering its program. SSE plc is grounded in strong ethical principles, which translates to us doing the right thing as we undertake business. Examples include our commitments to the Fair Tax Mark, being a Real Living Wage, Hours and Pensions employer, meeting Science-based Carbon Targets and empowering people to speak up against wrongdoing through our Whistleblowing Policy.

2. EXECUTIVE SUMMARY

Summary of This Submission

2.1 This is the second part of our Load Related Expenditure (LRE) Re-opener, containing the Cost Submission. It follows the Part 1 - 'Strategic Needs Case' that we submitted to Ofgem in January 2025.[1] This submission is on behalf of both our SHEPD and SEPD licence areas.

2.2 We are applying in this LRE Re-opener window to enable connections, maintain network compliance through core investment over the remainder of RIIO-ED2 and mobilise for delivery from the start of ED3. Funding approval will unlock investment in local infrastructure, enabling economic growth by supporting new commercial and residential development, electrification of demand, and creation of jobs across our communities. We set out in this document the optioneering, justification and cost approaches that we have taken to reach the submission value. [redacted]

2.3 We are seeking the following from Ofgem:

i. that Ofgem follow the LRE Re-opener guidance, allowing for consultation responses and the full supplementary question process before publishing Draft and Final Determinations;[2]
ii. a commitment from Ofgem to assess the October 2025 submission building on its assessment of our Strategic Needs Case submission from January 2025;[3]
iii. that Ofgem will fully assess the ED3 mobilisation costs that we have included, in line with Ofgem's letter to DNOs from 12 August 2025;[4]
iv. that Ofgem uses the competitively tendered, market reflective costs that we have included in our submission to set allowances rather than benchmarking to outdated RIIO-ED2 Final Determination unit rates; and
v. a commitment to provide a decision against our October 2025 submission as soon as reasonably practical and no later than March 2026. Timely decision making is critical to enable timely and efficient delivery of infrastructure.

1 From here on referred to as the Strategic Needs Case.

2 Ofgem Re-opener Guidance and Application Requirements Document, Ofgem

3 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025

4 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025

2.4 The below table provides a summary of our Cost Submission including both core investment and ED3 mobilisation costs.

Table 1: Summary of allowance adjustments relevant to this re-opener submission*

Licence Area	Baseline Ex ante Non variant Allowance £m	Total Forecast Expenditure £m	Forecast Additional Expenditure over Baseline Allowances £m
SEPD	355.8	847.8	492.0
SHEPD	119.4	350.4	231.0
Total	**475.2**	**1,198.3**	**723.1**

*Baseline allowance values include an adjustment for Carry-over Green Recovery allowances.

2.5 We have identified additional network investment requirements of £723m[5] in the 132kV and Extra High Voltage (EHV) networks for load and fault level replacement over the remainder of RIIO-ED2. This is supported by an increased needs case evidenced through three key routes:

- increases from 2020 to 2023 DFES forecast load assumptions including aligning to our Strategic Development Plan view of network development,
- accepted connections, and
- the change in policy through Access SCR.[6]

2.6 To support this submission, we are including 68 EJPs and associated CBAs where more than one option was assessed. Our process to produce these has included updating schemes that were developed for our RIIO-ED2 business plan submission to correspond to current requirements as outlined above. We are also including cost justification papers which have been thoroughly assured by our contract partners Arcadis, and our EJPs have been assured by Threepwood as part of the Distribution Network Options Assessment (DNOA) process. This is further underpinned by letters confirming ability to deliver from our contract partners, demonstrating the investment that is sought as part of this LRE reopener will proceed straight through to delivery as the programme ramps up exponentially over the next year.[7] The timely delivery of these schemes will facilitate development in the south of England and north of Scotland, and drive economic growth and job creation. We have not included EJPs for those projects which are under £2m aligned to the approach taken for RIIO-ED2. These projects have already progressed through the delivery cycle to enable construction of our RIIO-ED2 LRE programme.

2.7 We have made significant progress in securing both delivery capacity and long-lead materials for our LRE programme. Orders for critical long lead plant such as

5 Unless otherwise stated all monetary values presented in this document are in a 2020/21 price base.

6 Access and Forward-Looking Charges Significant Code Review: Decision and Direction, Ofgem, 3 May 2022.

7 Please see Appendix 8 for these letters of commitment from our delivery partners.

transformers and switchgear have been placed, substantially mitigating supply-chain risk.

2.8 For the total investment that we are submitting, including the restatement of baseline, £1,190m will deliver 2,023MVA of capacity over the course of RIIO-ED2, and support delivery of an estimated 4,801MVA within ED3. Overall, across the SSEN licence areas we are requesting an allowance increase of approximately 2.5 times the baseline LRE allowances approved at RIIO-ED2 FDs. This will enable us to release 1.6 times our submitted business plan MVA within RIIO-ED2, and support projects releasing four times this amount in ED3 providing capacity to enable connections, decarbonisation and drive economic growth. This estimate represents a better £/MVA released figure for customers, following application of our evidenced market uplift rates to baseline allowances.

Table 2: Summary of MVA released relevant to this re-opener submission

	MVA Released (ED2)			MVA Released (ED3)
Licence Area	Submitted Baseline	Total Forecast	Forecast Additional MVA released	Total Forecast
SEPD	1,039	1,643	604	4,161
SHEPD	202	380	178	640
Total	1,241	2,023	782	4,801

2.9 To successfully and efficiently deliver these projects, where lead times can be as long as seven years (i.e. spanning two or three five-year price controls), we have issued our largest ever tender to market for delivery framework partners, initially valued at £800m. This is the result of our transformational strategy designed in partnership with our supply chain, to deliver programmatic network investment in RIIO-ED2 and beyond and is explained in more detail in Chapter 4 – Deliverability and Risk.

2.10 We expect our LRE to exceed our baseline RIIO-ED2 allowances during financial year 2026/27. Within this, we forecast that by July 2026 our committed costs will be £492m in SEPD and £256m in SHEPD. This means that in committed costs alone, we will have spent £136m over allowances for SEPD and £137m for SHEPD, including Long Lead Materials (LLM). [redacted] As such we welcome Ofgem's swift review of our submission and seek approval of allowances to fund our additional LRE.

Overview of Previous Submission

2.11 Our Strategic Needs Case outlined the growing need for network investment driven by key decarbonising industries such as shipping, distilleries and car manufacturers. The uptake of low carbon technologies (LCTs) for transport and heating is also driving requirements for network investment to unlock the whole system benefits of enabled local flexibility. All the recommended interventions outlined in the EJPs are required to

either remain compliant with Engineering Standards or to connect customers who have submitted a request to connect. We have modelled our investments based on DFES Consumer Transformation (CT). We are also ensuring these investments include the view out to 2050. Ofgem's written response to our Strategic Needs Case confirmed that following their review it had "not identified significant areas of concern with your proposed approach to developing your load related plans."[8]

Strategic Relevance of Re-opener Application

2.12 Ofgem have acknowledged the strategic importance of this re-opener throughout our engagement and by directing the additional October 2025 re-opener window. A positive outcome by April 2026 will enable the investment in infrastructure necessary to drive growth in the economy. Not enabling this work means delays to customer connections, economic growth, and decarbonisation.

2.13 This re-opener offers the ability to confidently secure the supply chain, mitigate some cost increases and develop the required skills base by flexing regulatory mechanisms and allowances to identified need. Since the RIIO-ED2 Final Determinations (FDs) there has been a huge shift in geopolitics, driven in part by the pandemic, but also a changing world order leading to more protectionist policies such as tariffs. These changes alongside the global drive for electrification and decarbonisation have led to a shortage of skilled workers, a shortage of raw materials, and a shortage of manufacturing slots for key pieces of electrical equipment. More locally, purchasing land in the UK is requiring an increasing premium, especially in areas such as West London, where there is little or no scope to augment existing sites due to the pressures of housing development. This means that the unit costs set at the time of RIIO-ED2 FDs are no longer reflective of costs required to deliver the investment needed. Our analysis shows that these costs have risen by approximately 40% above inflation. This is supported by detailed work with our GSP contract partners. Applying cost-assessment based on historical costs in this context would be irrational; backward-looking cost assessment is not fit for purpose for assessing investment requests in this environment, and this re-opener gives an opportunity to explore and test alternative methodologies before the ED3 settlement.

2.14 The numerous changes and pressures that we have seen on the network since RIIO-ED2 FDs demonstrate the shift from expected investment need at LV and HV level, towards the EHV network in the first instance. While we are forecasting the LV and HV reinforcement needs to materialise within ED3, the current pressure is at EHV level. As such, it is important that Ofgem applies the same agility that it intended for the LRE Secondary Reinforcement Volume Driver to the LRE Re-opener.

8 Load Related Expenditure Re-opener, Ofgem letter to SSEN Distribution regarding our January submission, 29 May 2025

2.15 In preparing this submission we have taken the approach that, where we can size for 2050 now, at low incremental cost, we should. In many cases, our EJPs set out large programmes of work at our GSPs where we are taking the first steps towards that today through a modular approach to build towards the 2050 solution. This is evident in some of the more reactive need driven work to connect customers. In many cases, we are taking a staged approach to release capacity required now, utilising flexibility in the short term with a clear plan to build the 2050 solution. For example, completing low regret work on site to allow us to mobilise the next stage of the 2050 solution quickly in the future. This aligns with the approach being taken for ED3 through long integrated network development plans.[9]

2.16 We are driving efficiency through our GSP framework contracts, which allow our contractors to pass on efficiencies of scale and enable a more coordinated approach by delivering all projects in one area at the same time. We describe this portfolio-based approach in more detail in Chapter 4 – Deliverability and Risk. These appointments establish consistent and scalable delivery capability across both licence areas, supporting the effective execution of our RIIO-ED2 commitments, and a fundamental shift towards long-term, collaborative relationships with our supply chain. Our contract partners are building their capability to deliver throughout RIIO-ED2 and into ED3 with no slowdown in delivery in between. Ofgem stressed that this was a key priority during our October 2025 Cost Visit. We need to be able to give contractors more certainty of a pipeline of investment across price controls in order for them to have the confidence to build the skills and capability required to deliver the unprecedented levels of investment across the electricity network as identified by the National Infrastructure Commission.[10] This approach is fully consistent with the on-going work in the Government-sponsored cross-industry Networks Sector Growth Plan[11].

2.17 Delivering these projects comes with challenges. Historically the timing of price controls has led to disjointed delivery profiles while funding is secured for the next period. In this submission and leading into ED3 we want to give Ofgem greater visibility of the projects we have that span price controls and demonstrate the clear need for ED3 mobilisation funding to ensure projects can start delivery on the ground in the first year of ED3. Appendix 9 – ED3 LRE Mobilisation sets out our ask of £108.3m for mobilisation funding.

2.18 This ED3 mobilisation funding will ensure continuity of LRE at the start of the ED3 period, to be aligned with our ED3 business plan which we will submit to Ofgem in 2026. Bridging the RIIO-ED2 to ED3 transition is in line with Ofgem's evolved mandates. Early investment under mobilisation funding avoids reactive responses, ensuring deliberate and structured progression toward future network enhancements.

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9 ED3 Sector Specific Methodology Consultation, Core Document, Ofgem, 8 October 2025, pp.24 – 34.

10 Electricity distribution networks: Creating capacity for the future, National Infrastructure Commission, 21 February 2025

11 https://www.beama.org.uk/what-s-new/news/electricity-networks-and-supply-chain-sector-to-develop-sector-growth-plan-aligned-with-government-s-modern-industrial-strategy.html

2.19 The investment that we are requesting in this full LRE Re-opener application will:

- Support a steady and progressive delivery ramp up.
- Maintain momentum of rapid growth and decarbonisation.
- Support economic growth through infrastructure expansion.
- Support proactive response to the overarching goals for net zero by 2050.
- Mitigate pressures in relation to supply chain management and efficient delivery.
- Ensure the network is ready for net zero, avoiding fragmented delivery during regulatory transitions.
- Overall, will avoid negative outcomes through minimising uncertainty, reinforcing confidence among stakeholders, and mitigate against unexpected setbacks.

2.20 If LRE activities are delayed due to insufficient funding at the end of RIIO-ED2, then material shortages, escalated prices, and greater exposure to market uncertainties are likely to amplify delivery costs in ED3.

Approach to Assessing Needs

2.21 Our LRE Re-opener investment is firmly aligned with the direction of travel set out by Government's National Infrastructure and Service Transformation Authority (NISTA) with networks seen as the key enabler for decarbonisation and the basis for core economic growth across the rural areas of the North of Scotland, and the more populated areas in the South of England. This document evidences our need for additional investment within RIIO-ED2 and is heavily supported by our robust approach to cost uncertainty and substantial justification of all elements of the submission.

2.22 We have ensured our stakeholders are core to driving network investment requirements and are well informed and consulted on our long-term plans for the development of the network. Since our Strategic Needs Case submission our full suite of Strategic Development Plans (SDPs) has been published.[12] This approach takes the reach of a full GSP, identifies the key industries in the area, and works closely with trade industry bodies such as the Whisky Association and The Ports Association alongside councils and local government to inform the likely energy needs out to 2050. We will continue to deploy our SDP approach, making sure it works well with the development of the RESP (the methodology of which is due to be consulted on from November). The tRESP and SDP approach are aligned in considering future strategic needs and plans, with RESP incorporated in our strategic planning process, underpinning the trajectory for investment within the ED3 price control period. The SDP documents the current and proposed investments within that GSP to enable the economic growth that customers want, to deliver on government policy to increase housing stock, and to enable the securing of land parcels for future development as part of the feasibility and consents for schemes for the ED3 period.

12 Strategic Development Plans, SSEN

Structure of This Application

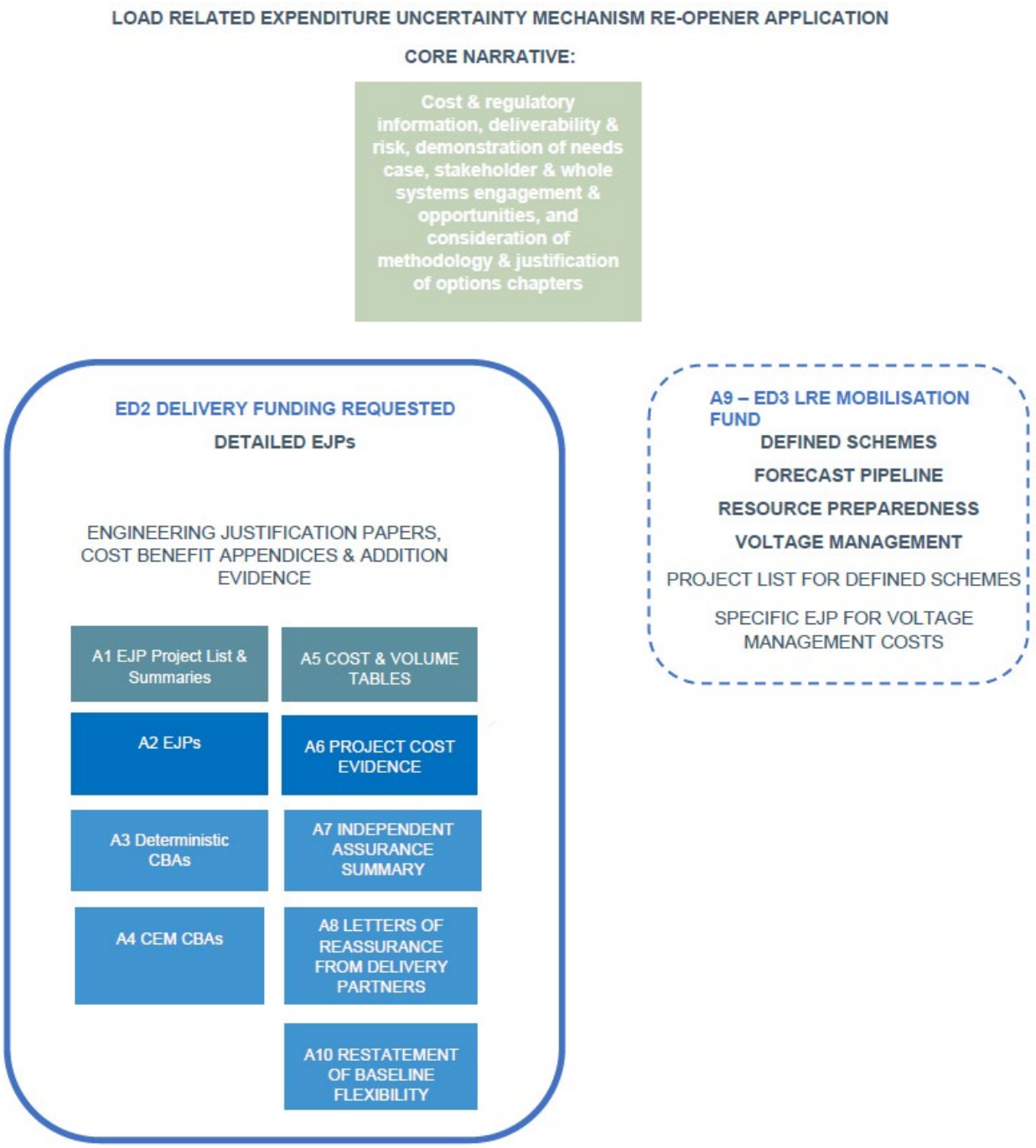
2.23 Our application consists of:

- A core narrative document developed to address the requirements of Ofgem's Re-opener Guidance for all recommended interventions included in our application, and
- Appendices consisting of:

    1. Project Lists and Summaries for Engineering Justification Papers (EJPs)
    2. EJPs
    3. Deterministic Cost Benefit Analysis
    4. Common Evaluation Methodology Cost Benefit Analysis Covering the Recommended Interventions
    5. Cost and Volume Tables
    6. Project Cost Evidence
    7. Independent Assurance Reports – Costs and Scheduling
    8. Letters of Reassurance from Delivery Partners
    9. ED3 LRE Mobilisation Funding Request
    10. Restated Flexibility Schemes

2.24 The structure and outline content of this application is illustrated in Figure 1 below.

Figure 1: SSEN October 2025 Load Related Expenditure Re-opener Application Structure



Related Documents

- **Ofgem Final Determinations[13] including SSEN Annex**
- **SSEN Business Plan[14] including Load Related Expenditure Annex**
- **SHEPD Special Licence Conditions[15] specifically Special Condition 3.2, Part K**
- **SEPD Special Licence Conditions[16] specifically Special Condition 3.2, Part K**
- **Ofgem Re-opener Guidance and Application Requirements Document, including Appendix 8 Load Related Expenditure Re-Opener Guidance[17]SSEN Load Related Expenditure Strategic Needs Case Re-opener Part 1 submission**
- **Strategic Development Plans[18]**
- **National Infrastructure Commission Electricity distribution networks: Creating capacity for the future[19]**
- **SSEN Part 1 Strategic Needs Case Load Related Expenditure Re-opener submission January 2025**

Application Contact Point

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13 RIIO-ED2 Final Determinations | Ofgem

14 Our RIIO-ED2 Business Plan - SSEN

15 Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem

16 Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem

17 Ofgem Re-opener Guidance and Application Requirements Document, Ofgem

18 Strategic Development Plans, SSEN

19 Electricity distribution networks: Creating capacity for the future, National Infrastructure Commission, 21 February 2025

3. COST AND REGULATORY INFORMATION

3.1 This chapter provides information on how we have derived and used cost data in our submission. More detail is included in individual project chapters, subsidiary annexes and individual CBAs and EJPs.

Summary of January 2025 Submission

3.2 Our Strategic Needs Case presented a breakdown of our LRE baseline allowances and forecast expenditure across RIIO-ED2, based on revised EJPs.[20] We provided justification for additional allowances and justified the increased investment required on the network due to increased demand. We demonstrated the approach we are taking to plan the network, forecasting to expected 2050 demand where that is most efficient for customers. We also noted the market pressures that we are experiencing, and the urgency of getting customers connected – a key priority for Ofgem and Government.

Detail of This Cost Submission

3.3 Ofgem included two re-opener windows for LRE in their RIIO-ED2 FDs to "ensure the right investment at the right place at the right time".[21] We welcome the direction of this additional re-opener window in October 2025 which enables us to provide information to substantiate our investment and funding request. [redacted] It is therefore imperative that a decision relating to this application is not delayed beyond March 2026.

3.4 Our proactive approach to investment ensures efficient costs are incurred by customers and enables earlier connections. To be able to continue to support our supply chains, ramp up delivery and drive economic growth, we require a decision from Ofgem by the end of March 2026 on additional funding for the RIIO-ED2 period.

3.5 The EJPs included in this submission demonstrate our needs case, option selection and cost analysis. We have incorporated feedback received from Ofgem after submitting our Strategic Needs Case and have submitted addendums for each of the EJPs to address this. We have also submitted the CBAs associated with each EJP in cases where more than one option was taken forward to CBA and CEM CBA where applicable.

3.6 As detailed in Table 3, the forecast additional expenditure over baseline LRE allowances in RIIO-ED2 is £412.2m in SEPD and £202.6 in SHEPD (in 2020/21 prices). This table

20 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025, pp. 35-42.

21 RIIO-ED2 Final Determinations Core Methodology Document, 30 November 2022, p.16.

does not include additional investment for ED3 mobilisation. More detail is provided in the Allowance Adjustment section and our submitted C and CV tables in Appendix 5.

Table 3: Summary of allowance adjustments by network driver (excluding ED3 Mobilisation)

Table RRP Ref	Table Name	RIIO-ED2 Load Related Expenditure Re-opener (LRE_t) £m		
		SEPD	**SHEPD**	**Total**
C2	Connections within the price control	[redacted]	[redacted]	[redacted]
CV1	Reinforcement (Primary Network)	[redacted]	[redacted]	[redacted]
CV3	Fault Level Reinforcement	[redacted]	[redacted]	[redacted]
CV4	New Transmission Capacity Charges	[redacted]	[redacted]	[redacted]
LRE Forecast Additional Expenditure		**412.2**	**202.6**	**614.8**

The RIIO-ED2 LRE Allowance Framework

3.7 Rapid growth in SEPD connections work and accelerated decarbonisation in SHEPD have significantly increased network capacity requirements beyond both Ofgem's RIIO-ED2 DFES assumptions and the forecasts used for our RIIO-ED2 Business Plan submission. In their RIIO-ED2 FD, Ofgem committed to multiple LRE uncertainty mechanisms to address uncertainty in the pace and scale of investment required in the fast-changing environment in which we operate. Since then, Ofgem's governance has evolved to include the net zero and Growth Duties.

3.8 We're submitting the necessary investment increase to support economic growth along with delivery of net zero across our license areas. Our cost approach includes a detailed review of existing LRE allowances, volume drivers, and other relevant categories like Green Recovery and Flexibility Expenditure. The RIIO-ED2 LRE package spans RRP categories CV1–CV4 and C2, which we reference throughout. RIIO-ED2 baseline allowances are based on the FDs with an adjustment made to account for our forecast Green Recovery spend. We are however seeing outturn and forecast delivery costs that are significantly higher than these. External market driven supply chain pressures have increased costs well beyond RIIO-ED2 FD unit rates. We have demonstrated and explained these cost changes in the Treatment of Costs section below, as well as in Appendix 6 Project Cost Evidence.

3.9 We need Ofgem's agreement to our Cost Submission to avoid unacceptable commercial risk by March 2026 (see Figures 2 and 3). To meet economic growth goals and continue

the net zero transition, we're already committing to contracts for unfunded projects. We ask Ofgem to recognise these market tested and efficiently incurred costs. If Ofgem were to benchmark us to FD unit rates as they have proposed for ENWL's LRE submission they are suggesting that we are able to deliver for significantly less than competitive market rates.[22]

3.10 Figure 1 below show when baseline allowances are forecast to be exceeded and estimate committed and forecast RIIO-ED2 spend by early 2026/27. Many projects will move into delivery before 2026/27, with costs committed before April 2026. For those still in design, long lead materials and delivery costs will also be committed by then.

22 Please refer to paragraph 3.30 for further detail as well as Chapter 6 Stakeholder and whole electricity system engagement and opportunities, Ofgem Engagement for further detail. This is where we have summarised the arguments we included within our response to Ofgem's Draft Determination on ENWL's January 2025 LRE Re-opener submission.

Figure 2: Forecast Expenditure, SHEPD (financial years)

Figure 3: Forecast Expenditure, SEPD (financial years)

LRE Uncertainty Mechanism Components

The LRE Re-opener

3.11 The Load Related Expenditure re-opener is purposed as an opportunity for DNOs to apply for funding, to mitigate as much as possible any uncertainty related to LRE for the RIIO-ED2 price control.

3.12 Two re-opener windows existed in Special Condition 3.2 of the Electricity Distribution Licence, and on 12 August 2025 Ofgem directed two additional windows for use by DNOs: the first from 24 to 31 October 2025, and the second from 24 to 31 January 2026. This application is being submitted in the October 2025 window, in accordance with our Strategic Needs Case which outlined the basis on which we require additional funding compared to RIIO-ED2 FD allowances. This Cost Submission outlines the detail of the projects and justification for the funding requested.

3.13 Special Condition 3.2: Part K sets out two scenarios in which DNOs may apply for additional allowances via the LRE Re-opener. This includes where there are:

- changes in current or forecast load-related constraints on the Distribution System (or the proportion of constraint costs going through Use of System Charges), or
- changes in conditions on the Distribution System.

3.14 As part of Ofgem's letter to DNOs on 19 December 2024, and again in their letter of 12 August 2025, Ofgem outlined recent and forthcoming policy developments that Ofgem expects DNOs to consider when submitting an application under the LRE Re-opener. These policy developments have impacted the LRE that SSEN needs to undertake within RIIO-ED2, as well as in preparation for ED3. We have submitted Appendix 9, supporting our ED3 LRE Mobilisation costs, which forms an additional level of investment outside of the core EJPs supporting this submission. We have also restated spend against our baseline allowances for the counterfactual value of schemes deferred by flexibility in line with the way this was treated as part of the RIIO-ED1 close out process.

LRE Volume Drivers

3.15 There are three volume drivers that would come under the banner of Load Related Expenditure in RIIO-ED2. Alongside the LRE Re-opener mechanism they were designed to allow DNO allowances to flex up and down as network investment need became clearer during the price control period.

Secondary Reinforcement Volume Driver & Low Voltage Services Volume Driver

3.16 These volume drivers are clearly defined within the Special Licence Conditions, and we have ensured that there is no overlap with our LRE Re-opener submission. As much of our CV2 – Secondary Reinforcement spend is related to these Volume Drivers we have excluded assumed CV2 Volume Driver allowances and expenditure for the purposes of ensuring our LRE Re-opener submission ask is clear.

3.17 There has been a shift to EHV in terms of reinforcement need, partly due to longer lead times and large connections, so rather than seeing requirements at the LV and HV

levels, we have been required to target our load related expenditure at EHV level within RIIO-ED2. Our spend to date and forecasts over RIIO-ED2 reflect this, and hence we need to utilise the LRE Re-opener rather than the LVSVD and the SRVD. This shift in expected use of mechanisms means that while Ofgem developed the volume drivers to be agile mechanisms to release funding in a mechanistic way, targeting LV and HV reinforcement, we require a determination for costs incurred at EHV level to be applied in a similarly agile way.

3.18 Whilst we are seeing the delay to investment need at LV and HV level, current forecasts and trends show that this is beginning to materialise and will continue into ED3. As such, we are readying our workforce and supply chains to ensure efficient delivery and unit rates for customers and are including relevant requests as part of the ED3 LRE mobilisation submission, as per Appendix 9.

Indirects Scaler

3.19 As the licence provides for CAIs to be applied to LRE through the Indirects Scaler mechanism, the costs outlined within this submission exclude the overheads required to support the delivery of this investment.

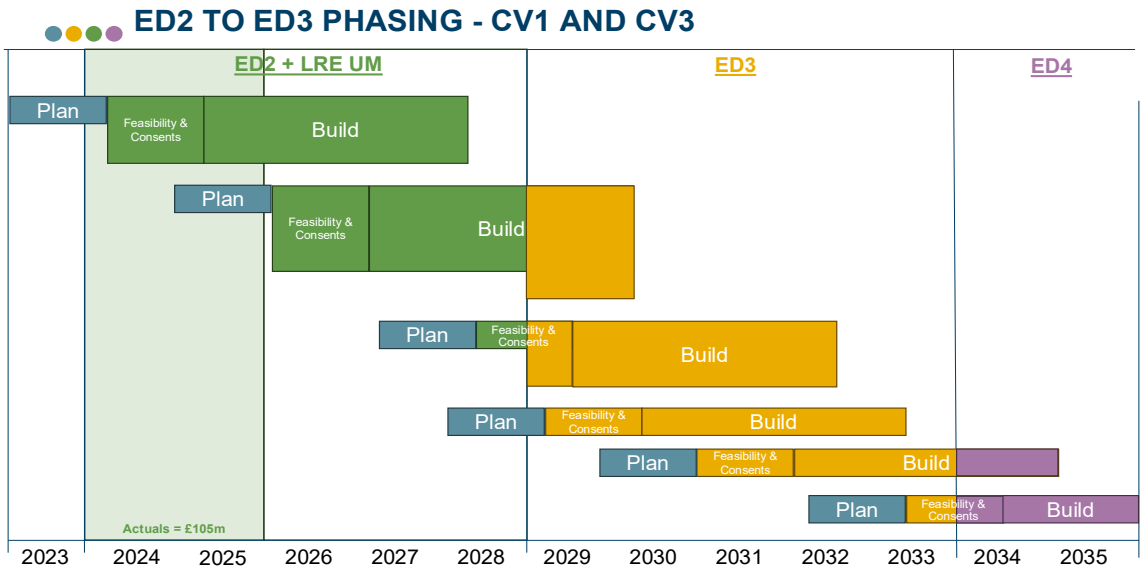
Beyond RIIO-ED2: Cross Price Control Projects

3.20 We recognise that network investment does not necessarily align with the price control periods if we are to meet the needs of our customers. Ofgem have also acknowledged this through multiple engagement forums, and it is in the consumers best interest for network investment to continue to ramp up consistently between RIIO-ED2 and ED3, rather than there being a dip in delivery as the sector has seen during previous price control transitions. Our EJPs consider the year in which investment is needed, and in some cases means that investment does not fall within a single price control period. We have outlined examples below:

- Where feasibility and consents work is required within RIIO-ED2 to meet a network need in ED3. This could be due to one of the following reasons:
  - Feasibility and consents work for complex projects that will need to be completed in RIIO-ED2 for project delivery in early ED3.
  - Multi-year construction and commissioning that needs to be started in RIIO-ED2 to meet a network need identified for ED3.
- Where construction and commissioning works have been deferred in RIIO-ED2 due to our optimisation of work programmes or changing network need priorities. This presents two different scenarios:
  - Where reinforcement originally required within RIIO-ED2 is deferred until ED3, but reinforcement needs to be started within RIIO-ED2 to meet the deferred network need in ED3.

- A network need originally identified within RIIO-ED2 is deferred to at least ED3 and so only flexibility procurement costs will be incurred, however, there is a high chance that the project will be required in a later price control period.

Figure 4: Phasing of CV1 and CV3 spend over RIIO-ED2 and ED3



Allowance Adjustment

3.21 The RIIO-ED2 LRE allowances package is summarised by the following table and is split across various CVR RRP C and CV tables as shown.

Table 4: Baseline LRE ex ante non variant allowance excluding CV2 (£m, 20/21)

	Load Related Allowances after NPCA and Ongoing Efficiency £m					
SSES	**2024**	**2025**	**2026**	**2027**	**2028**	**ED2**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**355.8**
SSEH	**2024**	**2025**	**2026**	**2027**	**2028**	**ED2**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**119.4**
SSEN	**2024**	**2025**	**2026**	**2027**	**2028**	**ED2**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**475.2**

*Allowance relates to Fleet-Bramley Project. Spend for Fleet-Bramley will be reported in CV1 – Primary Reinforcement.

3.22 As much of CV2 is made up of the Secondary Reinforcement Volume Driver (SRVD) and Low Voltage Services Volume Driver (LVSVD) we have excluded these from our analysis. This means that the trigger thresholds for LRE above baseline allowances are £2.16m for SHEPD and £5.56m for SEPD. The materiality thresholds are also shown below, and our forecasts and committed spend show that we expect to exceed these.

Table 5: RIIO-ED2 Re-opener Materiality Thresholds (£m, 20/21)

	SEPD	SHEPD
RIIO-ED2 Materiality Thresholds	5.56	2.16

Core LRE Re-opener

3.23 The table below summarises our total forecast view of LRE in RIIO-ED2 and the additional allowances we are requesting under this re-opener to deliver this programme of work.

Table 6: LRE Total Forecast Expenditure (Baseline and LRE Re-opener excluding ED3 Mobilisation) excluding Volume Drivers (£m, 20/21)

	LRE Total Forecast Expenditure £m					
SSES	2024	2025	2026	2027	2028	ED2
[redacted]						
TOTAL						768.0
SSEH	2024	2025	2026	2027	2028	ED2
[redacted]						
TOTAL						322.0
SSEN	2024	2025	2026	2027	2028	ED2
[redacted]						
TOTAL						1,090.0

Table 7: LRE Forecast Additional Expenditure over baseline allowances (£m, 20/21)

	RIIO-ED2 Load Related Expenditure Re-opener (LREt) £m					
SSES	2024	2025	2026	2027	2028	ED2
[redacted]						
TOTAL						412.2
SSEH	2024	2025	2026	2027	2028	ED2
[redacted]						
TOTAL						202.5

SSEN	2024	2025	2026	2027	2028	ED2
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**614.7**
ED3 Mobilisation						**108.3**
Total Adjustment						**723.1**

Table 8: LRE MVA released (MVA)

Table RRP Ref	Table Name	Load Related Expenditure - MVA	
		SEPD	**SHEPD**
CV1 To complete in RIIO-ED2	Reinforcement (Primary Network) & Fault Level	[redacted]	[redacted]
CV1 To complete in ED3	Reinforcement (Primary Network) & Fault Level	[redacted]	[redacted]
Total LRE Forecast MVA released		**5,804**	**1,020**

3.24 These projects are a combination of schemes that have been reviewed and revised since our RIIO-ED2 business plan submission and new projects that are required to meet current and future demand. Our RIIO-ED2 Business Plan submission forecast that we would release 1039MVA in SEPD and 202MVA in SHEPD based on the DFES at that time. New projects that have arisen due to updated DFES predictions have also been included in this submission. A list of these projects and how they map to the LRE Re-opener submitted projects can be found in Appendix 1 – EJP Project List & Summaries.

3.25 As mentioned in our Needs Case Submission, there are three categories of projects that we are looking to submit a needs case for, which cut across these categories of investment:

- **Target RIIO-ED2 completion schemes.** These are forecast under the 2022 CT scenario, with DFES load growth layered onto the existing demand and contracted demand. There risks being network compliance issues within RIIO-ED2 if the associated work is not undertaken.
- **Schemes which need to start in RIIO-ED2 to complete in ED3.** These schemes have long lead times for larger works which we can see are needed in ED3. If we

don't do this work now, these projects could lead to network compliance issues in ED3 and/or delays to connection in ED3.

- **Access SCR schemes.** These are connection applications that trigger costs within the price control. Implications of not undertaking this work now is that customers would be waiting until ED3 for connection.

Table 9: Project-level forecast LRE by investment categories

Restatement of Baseline Flexibility

3.26 Our commitment to maximising the efficiency and timing of investment with the use of flexibility remains a key cornerstone of our network investment delivery strategy. We utilise DFES forecasts to determine where and when investment is required alongside customer connection requests when procuring flexibility. This enables us to connect customers sooner while reinforcement projects are being delivered. Our investment decisions are underpinned by our DNOA process which details the amount of flexibility recommended by the standard CEM tool.

3.27 Our spend against baseline allowances includes our calculation of deferred network investment achieved through our optimised use of flexibility. This follows the same approach that Ofgem applied to 'SSEN non-traditional solutions' in their RIIO-ED1 Close Out Final Decision.[23]

3.28 To calculate this, we have identified all projects that are assumed would be deferred due to the procurement of flexibility services. For each, the existing project phasing has been deferred to reflect flexibility service operation to create the counterfactual timeline. This has enabled us to determine when costs would have been incurred had the project not been deferred with flexibility. Where the counterfactual timeline contains costs in RIIO-ED2 which are now forecast to be incurred in ED3 this cost is recorded as 'reinforcement

23 RIIO-ED1 Close out: Decision on proposed adjustments, Ofgem, 2 October 2024

deferred' associated with the year in the counterfactual case. The below table shows these deferred costs.

Table 10: Restatement of baseline flexibility

[redacted]

ED3 Mobilisation Costs

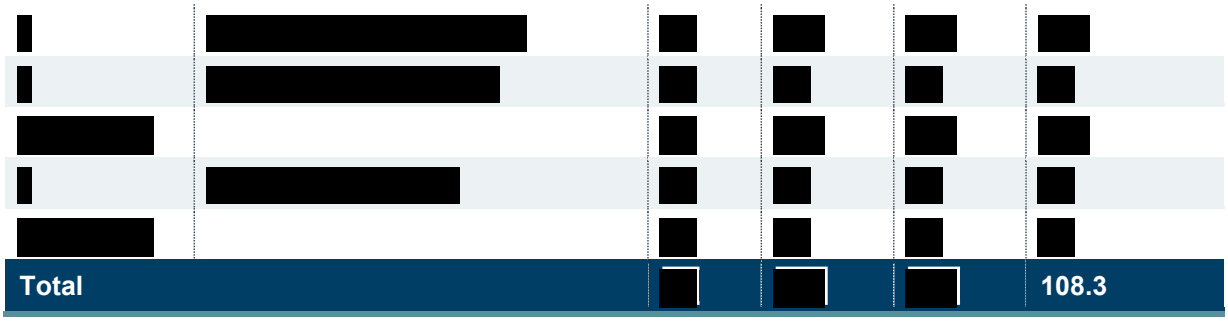
3.29 The fourth category of investment is required to mobilise projects that are due to start at the beginning of ED3. The ED3 LRE Mobilisation costs consist of the following four categories:

- Defined schemes (Cat 1)
- Forecast pipeline (Cat 2)
- Resource Recruitment and Training (Cat 3)
- Voltage Management (Cat 4)

3.30 These are costs that we will be spending in RIIO-ED2 to mobilise LRE for ED3, to ensure that there is no slowdown in delivery over the cross over between price controls, creating alignment and continuity between price controls. We have provided more explanation in relation to the ED3 LRE Mobilisation costs in Our Approach to ED3 LRE Mobilisation in Chapter 5 Demonstration of Needs Case of this document. The detail of the assumptions and rationale for this expenditure is contained in Appendix 9 – ED3 LRE Mobilisation.

Table 11: ED3 LRE Mobilisation

		ED2 £m			ED2 TOTAL £m
Category		2026	2027	2028	
[redacted]					



Treatment of Costs

3.31 The context in which DNOs are currently delivering means that we are seeing significant cost increases above the unit rates that Ofgem set in their RIIO-ED2 FDs. The contracting market has become increasingly constrained and in turn this has increased the costs incurred to deliver integral network investment.

3.32 As part of their assessment of ENWL's LRE Re-opener submission from January 2025, Ofgem benchmarked their submitted costs against those previously set unit costs. We recognise that Ofgem uses cost benchmarking in various contexts to act as a proxy for competition in a monopoly market where competitive pricing wouldn't otherwise occur. However, this approach poses a considerable risk of underfunding critical strategic investments in current market conditions at the mid-point of the price control where there is insufficient evidence across the DNO cohort to support robust benchmarking. Should this approach be repeated for future LRE Re-opener cost assessments, including this submission from SSEN, it would not be possible for us to deliver key projects within our plan, and this would adversely impact our critical contributions to economic growth and net zero.[24]

24 Please refer to Chapter 6 Stakeholder and whole electricity system engagement and opportunities, Ofgem Engagement for further detail, where we have summarised the arguments that we included within our response to Ofgem's Draft Determination on ENWL's January 2025 LRE Re-opener submission.

3.33 Special Condition 3.2.75 (a) (ii) states:[25]

Part K: Load Related Expenditure Re-opener (LRE_t)

3.2.74 This Part establishes the Load Related Expenditure Re-opener.

3.2.75 The Load Related Expenditure Re-opener may be used where:

(a) the licensee's Load Related Expenditure has increased or is expected to increase, as a result of an increase in:

i. current or forecast load-related constraints on the Distribution System that are in place at the time the licensee makes a Load Related Expenditure Re-opener application relative to the constraints associated with the forecast demand used by the Authority to set ex ante allowances for the Price Control Period; or

ii. the proportion of expenditure associated with load-related constraints on the Distribution System to be funded through Use of System Charges relative to the assumptions used by the Authority to set allowances that are in place at the time the licensee makes a Load Related Expenditure Re-opener application; or

3.34 This is the exact context that DNOs are currently working in.

3.35 This LRE Re-opener consists of competitively tendered, market reflective costs. [redacted] We have prioritised the roll out of a new contracting approach under our GSP framework, which we have outlined further in Chapter 4 – Deliverability and Risk. This is a clear demonstration of real competitive tendering and market reflective costs. These costs should therefore not be benchmarked against those which were set as part of RIIO-ED2 FDs: to do so would incorrectly assume that we can deliver projects for below the competitive market rate.

Cost Variances Between RIIO-ED2 Benchmarked Unit Rates and Competitively Tendered Market Reflective Costs

3.36 Our expenditure, forecasts, pipeline projects and project delivery all continue to be affected by persistent higher-than-inflation cost increases and increased global demand for materials, and manufacturing capability. This is particularly apparent in the LRE project delivery space where adverse market conditions are driving changes to contract clauses around risk and cost volatility are leading to increased delivery costs. In response to this we have prioritised a new GSP contracting framework for major projects as explained in Chapter 4 – Deliverability and Risk.

3.37 The majority of the EJPs were finalised in 2023/24 and early 2024/25 in order that they could be handed over to the delivery teams to start feasibility and consents to enable

25 Distribution Licence Special Conditions consolidated, Special Condition 3.2.75 (a) (ii), Ofgem Electronic Public Register, 11 February 2025

delivery within RIIO-ED2, or early ED3. These were based on RIIO-ED2 FD unit rates which were our best view of delivery costs at the time of writing.

3.38 We have followed the principle of making the right decision at the right time, based on the information available at that time. This is summarised for each EJP in Appendix 1 EJP Project List & Summaries and is demonstrated throughout our supporting EJPs and associated analysis in Appendices 2 EJPs, 3 Deterministic CBAs and 4 CEM CBAs. We are delivering capacity to 2050 in a global market and need a realistic view of market rates for delivery. Costs to deliver projects outlined in our portfolio of submitted EJPs has increased across the board over the past five years. Our approach to categorising and explaining these cost changes is as follows:[26]

- Aligning price base and assumptions
- Grouping by Asset Type across the portfolio

3.39 Now that we have more up to date views of delivery costs, each EJP has been costed at a project/asset type level utilising the SSEN Cost Estimate Class 2 (CEC2) Estimating Tool. This derives contracted/framework rates with our key GSP Framework Contractors and equipment providers. This is the actual market reflective expected cost to deliver each of these projects. We have commissioned external assurance of our submitted costs, and this is included in Appendix 7 – Independent Assurance Summary – Cost and Schedule.

3.40 Table 12 below illustrates a summary of the key variances between RIIO-ED2 FD unit rate derived costs and CEC2 derived costs against the EJP cost allowances as follows:

- Plant and equipment – material price variances over and above inflation driven by a constrained supply chain.
- 132kV/66kV non-SF6 Indoor GIS equipment which is new technology onto the SSEN network and therefore not included in RIIO-ED2 FD unit rates.

26 All % variances are over and above the indexation for inflation 2020/21 to 2025/26.

Table 12: Overview of market reflective cost variance against EJP allowance by asset category, 2020/21 price base

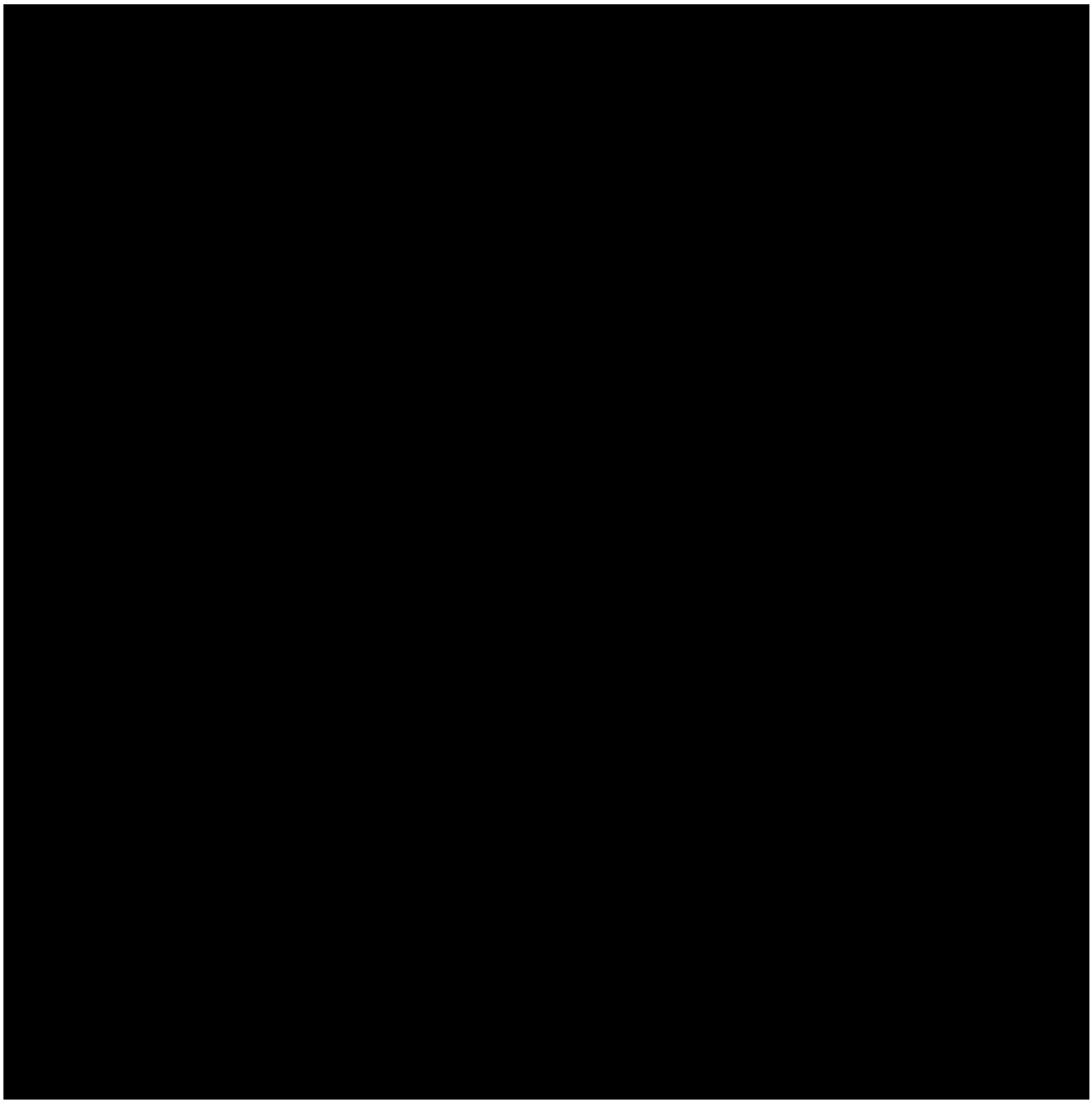


Table 13: Overview of cost movements and summary of key variances, 2020/21 price base

[redacted]

3.41 Please see Appendix 6 – Project Cost Evidence for further detail.

[redacted]

3.43 [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

3.45 [redacted]

Driving Efficiency

3.46 Our procurement and commercial strategies aim to secure, maintain and grow a resilient and sustainable supply chain to support the investment required within a challenging market environment.

3.47 This strategy aims to deliver long-term sustainable supply chain capacity and ensure value for money. We will achieve this through:

- **Evidence led procurement** – utilising existing framework agreements to execute at pace and ensure capacity, adopt where possible standardised solutions to maximise efficiency of design and procurement and securing key equipment and delivery capacity.
- **Building Relationships** – strengthening relationships across all tiers of the supply chain to position ourselves as the customer of choice. We rely on a robust and healthy supply chain, and therefore our Executive Committee meet strategic partners and suppliers to discuss and action material issues. This has been achieved by developing a Supplier Engagement approach focused on performance through gold, silver and bronze categorisation within SSE Group and SSEN.

- [redacted]
- **Governance** – Cost estimates are completed in line with SSE's Commercial Manual, we utilise a commercial and contract strategy applicable for the project and Procurement, Insurance and Legal (PIL) reviews are undertaken at stage gate approvals to identify and mitigate project risks and identify opportunities and are critical to support project objectives.

3.48 We have established long-term framework agreements with strategic delivery partners in both SHEPD and SEPD to deliver work in the most efficient way across all drivers through a portfolio approach. Please refer to Chapter 4 – Deliverability and Risk for further detail on this. [redacted]

Customer Bill Impact

3.49 Our proposed investments will be both a driver and enabler of economic growth in our licence areas, enabling data centres to be connected in our SEPD licence area and the decarbonisation of industries such as whisky distilleries in our SHEPD licence area. To deliver the step change in network capacity required to meet net zero and CP2030 targets we need to increase our investment in the network, as explained throughout this submission. We have demonstrated the needs case for this investment and that part of our funding request, for ED3 LRE Mobilisation, will enable us to continue to steadily ramp up network investment between price controls which in turn will reduce the variability over time to customer bills.

3.50 The allowances we are requesting in this submission represent a bill increase of £3.71 and £5.20 per year for a domestic customer with average consumption in SEPD and SHEPD respectively. To calculate this, we have used Ofgem's financial parameters and taken an average value per year over five years to mirror the RIIO-ED2 price control. Customer bills are likely to see an increase between RIIO-ED2 and ED3 as investment

[redacted]

delivery increases, as outlined in Ofgem's recent Sector Specific Methodology Consultation and enabling work to start now on important network investment will smooth some of the impact of this.

3.51 Our optioneering has shown that this work is required over RIIO-ED2 and ED3 to connect customers and meet network requirements. Enabling us to start this work now means that we can most effectively manage this ramp up in investment and associated customer bill impact. It also allows for a smoother glide path to long term delivery of outputs and ensures that delivery is maximised from the start of ED3.

4. DELIVERABILITY AND RISK

Delivery Acceleration Since January 2025

4.1 Since our Strategic Needs Case submission, we have discussed with Ofgem the need to be set up to deliver for the long term into ED3 and beyond. Ofgem has agreed that this is important. To enable this, we have included ED3 mobilisation costs within this submission, detailed in Appendix 9 – ED3 LRE Mobilisation.[28] [redacted] Our delivery partners are committed to delivering the programme as detailed in the supporting evidence of Appendix 8 – Letters of Reassurance from Delivery Partners.

4.2 Our strong governance framework Distribution Governance Investment Framework (DGIF) has allowed projects to advance through feasibility stage with our strategic delivery partners taking the lead in DGIF Stage 3 Refinement and Stage 4 Execution throughout 2025. The delivery progress made since January 2025 is a result of the firm relationships we have built with our contractors.

4.3 Outage planning is well under way, with operational coordination between our internal teams and delivery partners, looking at both Load and Non-Load network requirements. Alongside outage planning, proactive engagement with third-party stakeholders continues, targeting all necessary planning permissions, consents and permits.

4.4 The following sections provide detail of our delivery and risk strategy, covering our delivery model, integrated delivery plan, risk management, supply chain readiness, resources, and stakeholder engagement – all components of our approach to programme delivery.

RIIO-ED2 LRE Performance and Projections

4.5 We have significantly increased our load related delivery in year 2 of RIIO-ED2, increasing delivery from 57% of year 1 allowances in 2023/24 to 95% of year 2 allowances in 2024/25. The graph below shows spend to date, and the trend of increasing delivery that we will continue to see as we ramp up throughout the remainder of the price control.

28 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025

Figure 6: SSEN RIIO-ED2 LRE Delivery Profile

4.6 While our cumulative to date LRE remains below allowances, we have increased delivery significantly compared to year 1 of RIIO-ED2. This is in line with our accelerated delivery plans and is the result of our prioritisation of new contracting approaches and feasibility and consents activity in year 2.

4.7 As demonstrated in our Strategic Needs Case, we expect this trend to continue and accelerate as we progress through RIIO-ED2 and start preparatory investment for ED3. This includes projects continuing to mobilise to deliver against the increasing load growth that we are seeing, supported by an increased needs case evidenced by increases from 2020 to 2023 DFES forecast load assumptions, accepted connections and the change in policy through Access SCR.

Delivery Progress

4.8 The integrated delivery plan includes detailed timelines for feasibility and consents, procurement, construction, commissioning, and energisation activities, as well as critical dependencies such as modification applications, land acquisition, consents, outages, long lead materials, and resource mobilisation.

4.9 The delivery schedule is planned against multiple financial year targets, ensuring timely completion of priority projects to meet network demand, regulatory requirements and connect customers. Projects are prioritised to ensure the required capacity upgrades are delivered on schedule, fulfilling both customer and system requirements, this includes:

- Projects with target completion in RIIO-ED2.
- Projects starting in RIIO-ED2 and completing in ED3.

- Projects with feasibility and consents being progressed in RIIO-ED2.

4.10 The projects across all three priorities that make up our LRE programme have already been passed to our strategic delivery partners for progression through DGIF Stage 3 Refinement, which includes feasibility and consents. The volume of LRE projects entering DGIF Stage 4 Execution is set to increase throughout 2025/26 as illustrated in the delivery schedule overview below.

Figure 7: SEPD LRE Delivery Plan Profile

Figure 8: SHEPD LRE Delivery Plan Profile

Early Supply Chain Engagement

4.11 The successful delivery of our LRE programme is underpinned by a proactive and collaborative approach to supply chain readiness. Through structured early engagement, we have shared our forward-looking delivery plans and incorporated supplier feedback to shape a delivery model that is both resilient and scalable. We provide our partners with early and ongoing visibility of our work bank, enabling them to plan and invest in the capabilities required to meet future demand. This includes workforce development including design and delivery capacity. Please refer to letters of reassurance from key delivery partners in Appendix 8 – Letters of Reassurance from Delivery Partners.

4.12 Historically SSEN operated in a more predictable supply chain environment with lower market demand for long lead plant items and greater manufacturing capacity. This allowed for a responsive, ad hoc procurement approach that effectively met project delivery timelines. However, global shifts in supply and demand dynamics, combined with SSEN's evolving network requirements towards a longer-term planning approach – [redacted] – have fundamentally changed this landscape. Supply chains are now more constrained, with global economies competing for the same cables, equipment, materials and labour. This means we require a more proactive and structured approach to ensure deliverability. [redacted]

4.13 [redacted]

Strategic Delivery Partnerships

4.14 In SEPD we successfully concluded a competitive procurement process in 2023, appointing three strategic delivery partners: OCU, Clancy, and Keltbray (now operating as Aureos). In SHEPD, a parallel procurement process was completed in early 2025, resulting in the appointment of Brush, Freedom, Macaulay Askernish Ltd, along with OCU and Clancy.

Figure 9: SEPD Delivery Partners

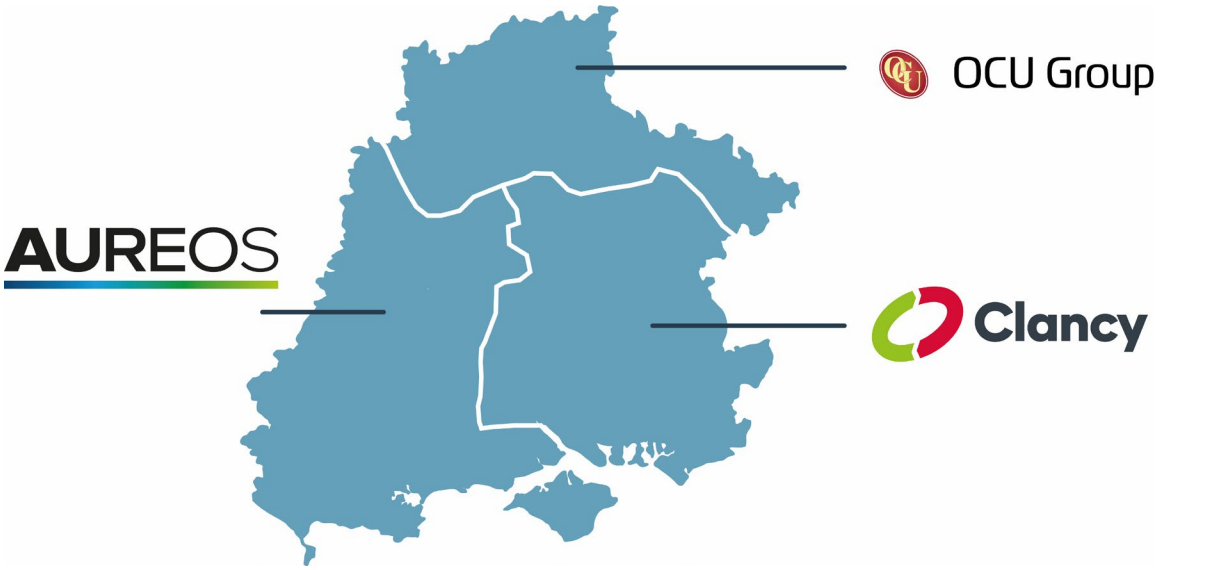
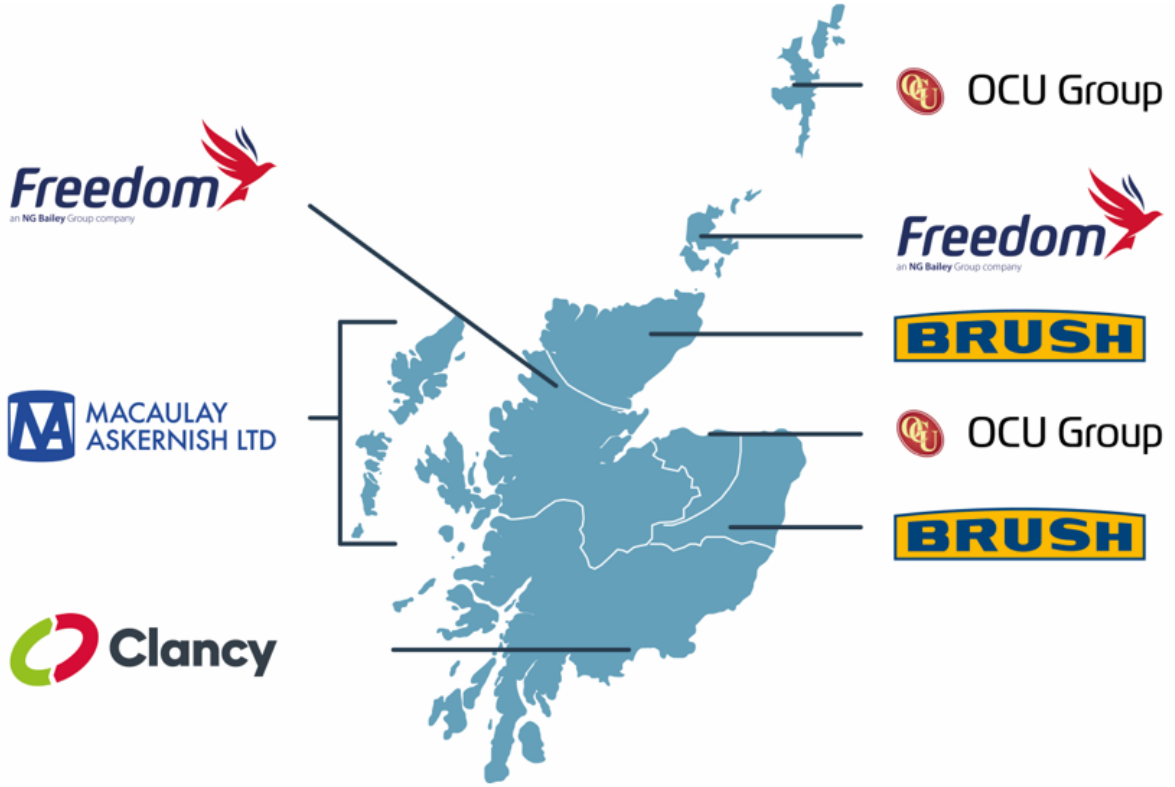


Figure 10: SHEPD Delivery Partners



4.15 These appointments establish consistent and scalable delivery capability across both licence areas, supporting the effective execution of our RIIO-ED2 commitments, and a fundamental shift towards long-term, collaborative relationships with our supply chain. Together, these frameworks enable us to deliver our RIIO-ED2 commitments and build the foundation for future investment cycles.

4.16 The commitment to the successful delivery of our LRE programme is further evidenced by the letters in Appendix 8 - Letters of Reassurance from Delivery Partners, received from our SEPD delivery partners, two of which, Clancy and OCU, were recently appointed as strategic partners in our SHEPD licence area. These endorsements evidence the depth of collaboration and alignment across our programmes, reflecting the strong relationships we have built with our supply chain and our deliberate shift toward long-term strategic partnerships.

4.17 Our delivery strategy is centred around our GSP delivery model, which integrates supply chain and workforce strategies to create a scalable and resilient platform for growth. [redacted]

4.18 This approach enables visibility of our work in the short, medium, and long term, allowing early engagement with and creating opportunities to collaborate with LAs and other utilities in delivering our plan.

Robust Governance

4.19 The deliverability of our LRE programme is supported by a robust governance model – DGIF which ensures that decision-making is transparent, timely, and aligned with enterprise objectives.

4.20 The DGIF process comprises five distinct stages, each separated by formal Investment Decision (ID) Points. These ID points serve as critical approval gates, ensuring that technical, financial, and strategic considerations are rigorously assessed before a project progresses.

4.21 This structure enables earlier and more informed decisions, reducing delivery risk and enhancing accountability across planning, feasibility and consents, delivery, and handover stages.

Figure 11: Distribution Governance and Investment Framework

Organisational Alignment

4.22 We have established a delivery model that promotes integrated leadership and shared accountability across SSEN and our GSP delivery partners.

4.23 We have clearly defined roles and responsibilities across the enterprise, ensuring that those with the greatest influence on delivery outcomes, such as our strategic delivery partners and key plant suppliers, are engaged early. This alignment extends to the planning and execution of critical milestones, such as energisation and project completion dates, where delivery partners are directly accountable.

4.24 Our delivery teams operate as integrated units, co-located in regional hubs. These teams bring together SSEN and contractors to collaboratively develop integrated delivery plans, including resource demand profiles, plant logistics, outage coordination, and consent management. This co-location fosters a culture of openness, rapid decision-making, and continuous learning.

4.25 We also provide our partners with early and ongoing visibility of our work bank, enabling them to plan and invest in the capabilities needed to meet future demand. This includes workforce development, digital tooling, and design capacity.

Capacity Planning

4.26 We recognise that the current market presents significant competition for skilled resources, creating risks in recruitment, training, and retention, as well as in maintaining safe and sustainable working patterns and value for our customers. These challenges are particularly acute in the context of a growing and increasingly complex capital delivery programme. To address this, we have worked closely with our delivery partners to develop a detailed and dynamic demand profile that identifies the critical resource requirements needed to successfully deliver our LRE programme and meet our RIIO-ED2 commitments.

4.27 [redacted]

4.28 [redacted].

4.29 [redacted]

Wayleaves and Consents

4.30 Ongoing collaboration with local and national authorities is essential to ensure the successful delivery of our LRE programme without delays. Securing consents and wayleaves relies on proactive stakeholder engagement woven into every stage of the project lifecycle from initial feasibility and consenting through construction and legacy handover. We strategically engage with landowners, statutory consultees and communities early, anticipating and resolving permission and access challenges, de-risking consenting, accelerating wayleave negotiations and building lasting trust.

4.31 We have segmented stakeholder engagement by geography and theme, partnering with local planning authorities, regional bodies and charities to align on long-term energy needs and planning policy, coordinate planning application and wayleave frameworks, and unlock investment opportunities and secure programme advocacy. These strategic

partnerships lay the groundwork for smooth consent pathways and robust support for our delivery programmes.

4.32 [redacted]

4.33 Our dedicated consent team is embedded across all project phases to steer planning submissions, permit approvals and wayleave documentation. Their deep expertise in regulatory requirements and stakeholder concerns drives swift decision-making, keeps projects on schedule and safeguards our social licence to operate.

4.34 By understanding and meeting stakeholder expectations, we reinforce community and customer support, maintain positive relationships with landowners and regulators, and enhance the overall value and impact of our infrastructure investments, thereby de-risking the deliverability of our LRE programme.

Maintaining Acceleration of Delivery

4.35 Our delivery partners are set up to deliver the programme as set out in this submission. These projects in many cases will continue to be delivered into ED3, and our delivery partners are already moving this portfolio through our governance processes. This requires up front commitment of plant and resources to enable our delivery partners to maintain the level of delivery required to meet our net zero and economic growth objectives.

4.36 Our procurement strategy supports efficient delivery across the portfolio, delivering the capacity the country needs in timeframes that are being set by our customers. We have:

- Confirmed that our delivery partners have a deliverable and fully resourced schedule that meets SSEN's requirements defined under the LRE programme.
- A commitment from delivery partners that they have mobilised and will continue to maintain the necessary resources, including skilled personnel, equipment, and supply chain capacity, to ensure uninterrupted progress of the LRE programme.
- A commitment from our delivery partners that subject to the issuance of construction purchase orders for the delivery of the proposed programme and SSEN scheduling the necessary outages, we will deliver the agreed outputs defined in this LRE Re-opener.

4.37 The letters of reassurance received from our SEPD delivery partners, two of which, Clancy and OCU, were recently appointed as strategic partners in the SHEPD licence area, are included in Appendix 8 – Letters of Reassurance from Delivery Partners.

4.38 [redacted]

[redacted]

4.39 This additional funding is essential to ensure we can progress with this portfolio approach, keeping costs down for consumers, preventing bottlenecks and preserving economic growth.

5. DEMONSTRATION OF NEEDS CASE

Recap of January 2025 Submission

5.1 Our Strategic Needs Case submission demonstrated that increased network demand exceeds the forecasts from the 2020 DFES, which was used for the RIIO-ED2 Business Planning process.[29] This increase in demand has been driven by increased connections from EVs, heat pumps, as well as new large industrial loads, such as data centres drawing and decarbonising industries, such as whisky distilleries. We also highlighted the increase in generation connection requests. Overall, the 2023 DFES showed reduced variability and aligns more closely with net zero pathways, justifying the need for additional investment. This means that RIIO-ED2 baseline allowances are not sufficient to meet network investment requirements.

5.2 This LRE funding would unlock wider investment for projects in freeport development, creative industries, inward investment from manufacturers, defence projects as currently identified by the Office for Investment and form part of the soon to be established Connections Accelerator Service.

DFES Changes from RIIO-ED2 Business Plan

5.3 For our RIIO-ED2 business plan submission, we followed a well-defined and robust process to develop our load related investment plan, consistent with the approach outlined by Ofgem for use across all network companies. As part of the RIIO-ED2 settlement, Ofgem's allowances were set to most closely align with the ST DFES, which was highlighted as unlikely to deliver net zero. We defined load related reinforcement works required under this scenario and ensured these were also required under the more ambitious CT and LtW scenarios. This was our test for high certainty of need, as these projects were required under all net zero compliant scenarios according to our 2020 DFES.

5.4 Though we based our plan on DFES ST, it included additional expenditure to cover the requirements of the CT scenario. The expenditure covering the CT scenario was removed by Ofgem at FDs and our proposed allowance was reduced to align to the ST scenario only. This additional expenditure, over and above ST, would have ensured the early and timely establishment of the capability (supply chain, people and network) required to deliver to CT throughout this price control. Although this was not included in our allowances, we were confident that we would be able to use the re-opener windows

29 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025, pp. 19-24.

in January 2025 and January 2027, as outlined by Ofgem in the SSEN Annex to the RIIO-ED2 Final Determinations.[30]

5.5 To give visibility of our view of a net zero trajectory we also proposed a third category of expenditure that would be funded solely through the LRE Re-opener. Our estimate of this category of expenditure, at the time of business plan submission, was £188.3m, and this section sets out the changes we have seen since then, and the approach and evidence to justify further investment of £723.1m over the remainder of the RIIO-ED2 period.[31]

5.6 In comparison to the 2020 DFES used for our RIIO-ED2 submission, we have found the variability across scenarios has reduced considerably in our latest 2024 DFES, which aligns with NESO's 2024 FES Pathways[32]. We consider the HT scenario as our best view within the 2024 DFES, and this has been used within our various regulatory reports throughout 2025, and within our SDPs. This scenario meets net zero through a mix of electrification and hydrogen, with hydrogen mainly used around industrial clusters.

5.7 Figures 12 and 13 below show the comparison of forecast LCT volumes for 2025/26 in each DFES iteration, against actual connected volumes. Overall, EV numbers continue to grow significantly in both licence areas, especially in SEPD where this is ahead of the national average. With the ST scenario, Heat Pump projections have reduced slightly in SEPD but increased in SHEPD. The reduction in HP numbers is reflective of the slow rate of uptake across the country. Due to the higher percentage of off-gas buildings in SHEPD compared to the GB average, the adoption of heat pumps is expected to accelerate above the national trend, especially in areas where off-gas buildings are common.

30 RIIO-ED2 Final Determinations Core Methodology Document, 30 November 2022, Ofgem, RIIO-ED2 Final Determinations , p16, para 3.9. "We have reduced LRE allowances from those proposed in our Draft Determinations by £188m to reflect consultation feedback on our cost assessment methodology. This ex-ante allowance is calibrated using various parameters, including adjustments of some elements to match a net zero compliant Future Energy Scenario (FES), System Transformation, for LCT uptake. However, we have implemented a package of UMs that will enable networks to invest immediately and without administrative burden if LCT uptake exceeds this scenario."

31 Our RIIO-ED2 Business Plan - SSEN

32 Future Energy Scenarios: ESO Pathways to Net Zero, NESO, July 2024

Figure 12: Electric Vehicle volumes 2025/26 forecast vs actual

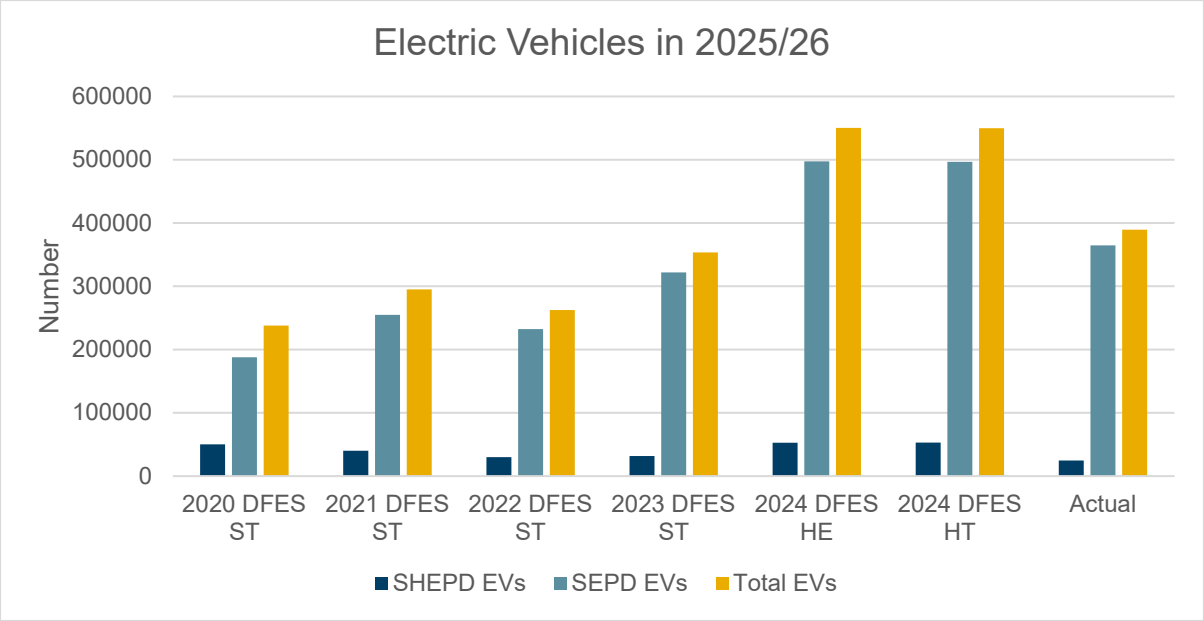
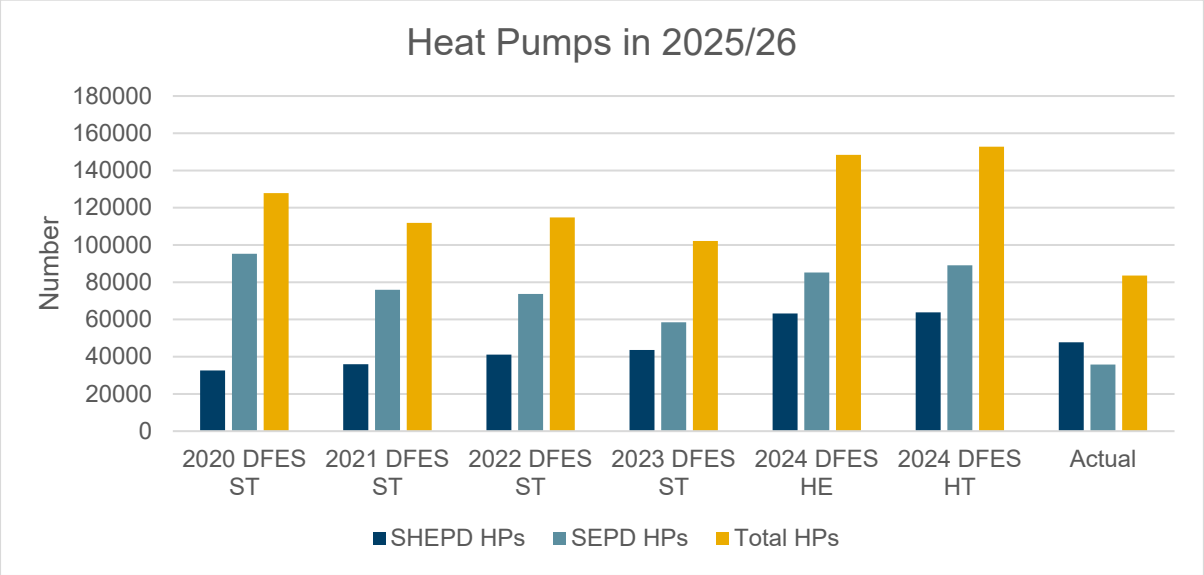


Figure 13: Heat Pump volumes 2025/26 forecast vs actual



5.8 From these figures, EV actuals are significantly higher than the 2020 FES/DFES projections that allowances were in-part set against, and HP actuals are lower by approximately 45,000 units. It should be considered however that we have just started Q3 of the 2025/26 year, and these numbers will continue to increase.

5.9 Additionally, we are experiencing increased engagement and connection requests from industries that are decarbonising, including whisky distilleries, ports, data centres and manufacturing, which are creating significant point loads in both existing demand centres and some of our most remote and least interconnected areas.

Impact on the Network

5.10 Since RIIO-ED2 FDs, our analysis has shown that our 2025/26 recorded demand is above the 2021 DFES ST forecast used to set allowances, for approximately 15% of our substations within SEPD, and approximately 34% in SHEPD. This comparison was drawn from the load figures used within our 2022 Network Development Plan (NDP) submissions against our 2025 RRE2 tables.

5.11 We attribute this increase mainly to an increase in LCTs and to large demand customers, which have connected to our network since the RIIO-ED2 FDs. We have a robust DFES methodology that seeks inputs from a variety of stakeholders, however large commercial demand needs that LAs are not aware of, are often difficult to predict without targeted engagement to wider commercial industry.

5.12 We are aware of this challenge and have taken action to address over the past year. Our specialists have engaged with commercial stakeholders to better inform future projections. An example of this is our recent work to engage with whisky distilleries across our SHEPD area, to provide a better view of their plans to electrify production. This approach will allow us to understand customer needs earlier and build these into our forecasts if they are highly certain.

5.13 The demand increase is in certain locations, rather than being spread across all parts of the network. However, given the increased number of demand customers not yet connected, it is likely this will affect more substations as we progress through RIIO-ED2. The figures below show the projected number of substations overloaded with contracted connections not included and included respectively. If further action is not taken to address this visible growth in connections, network headroom will continue to reduce, creating a potential barrier for net zero requirements.

Figure 14: Network capacity taken from 2025 NDP, SHEPD (without connections)

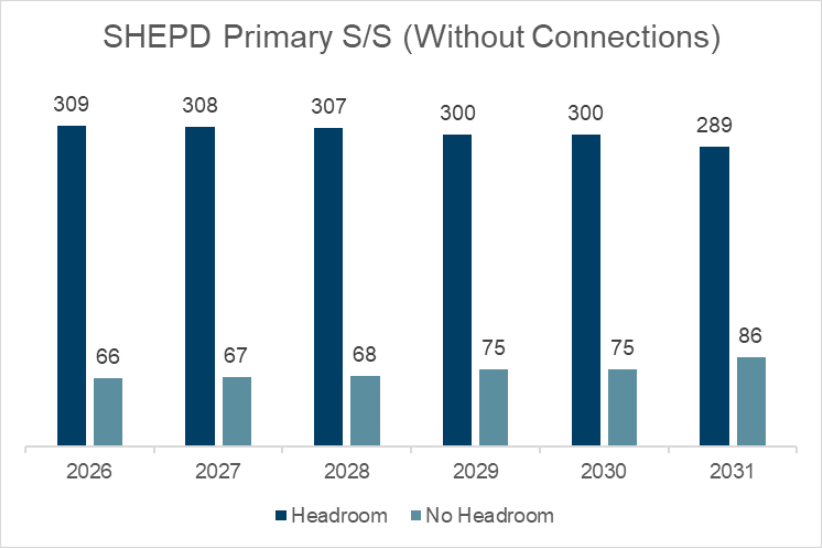


Figure 15: Network capacity taken from 2025 NDP, SHEPD (with connections)

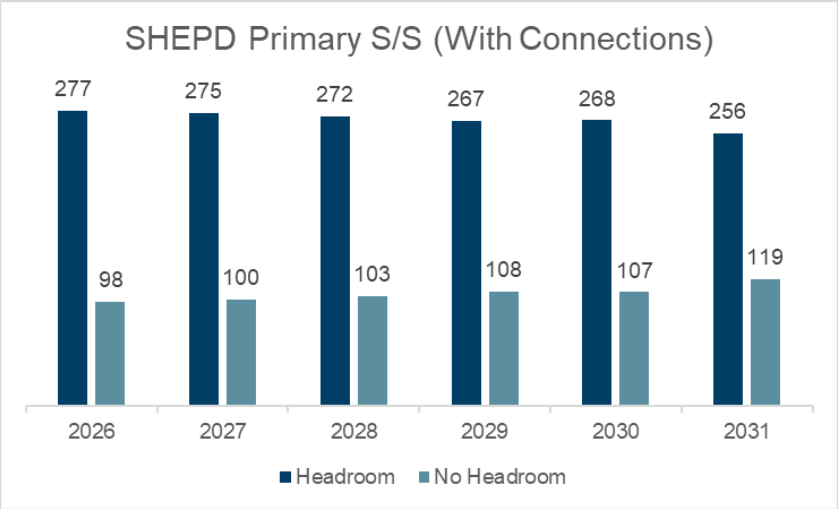


Figure 16: Network capacity taken from 2025 NDP, SEPD (without connections)

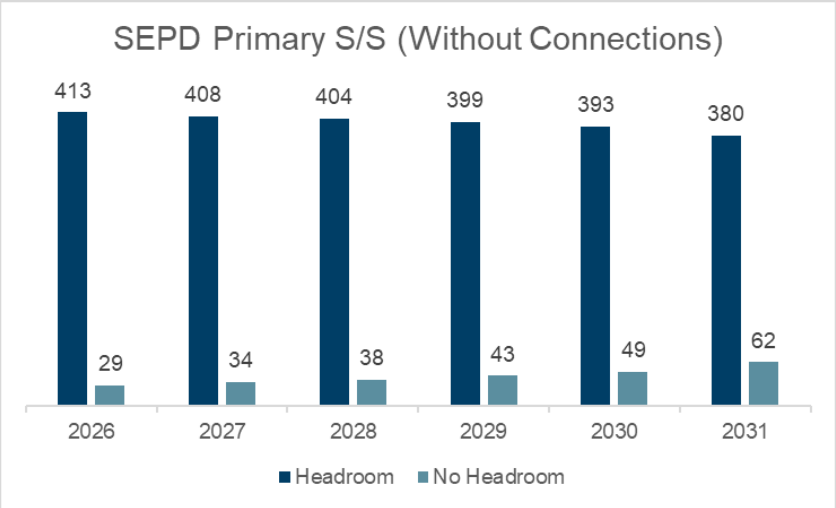
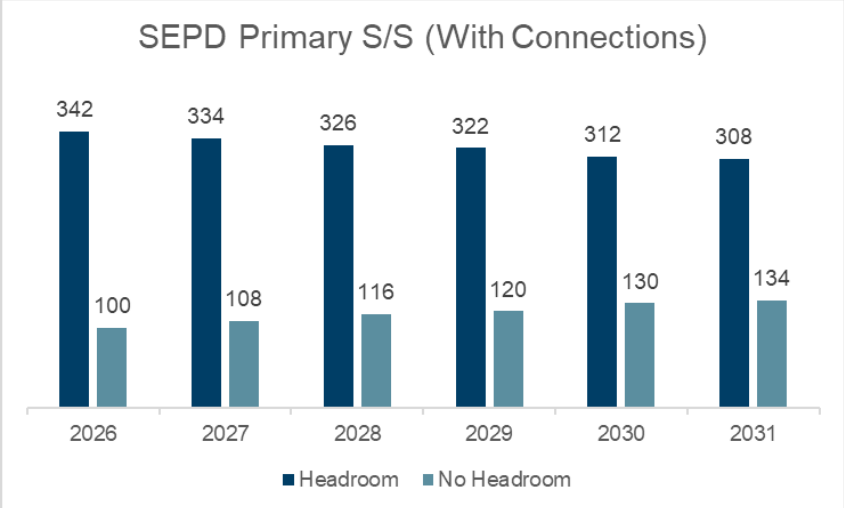


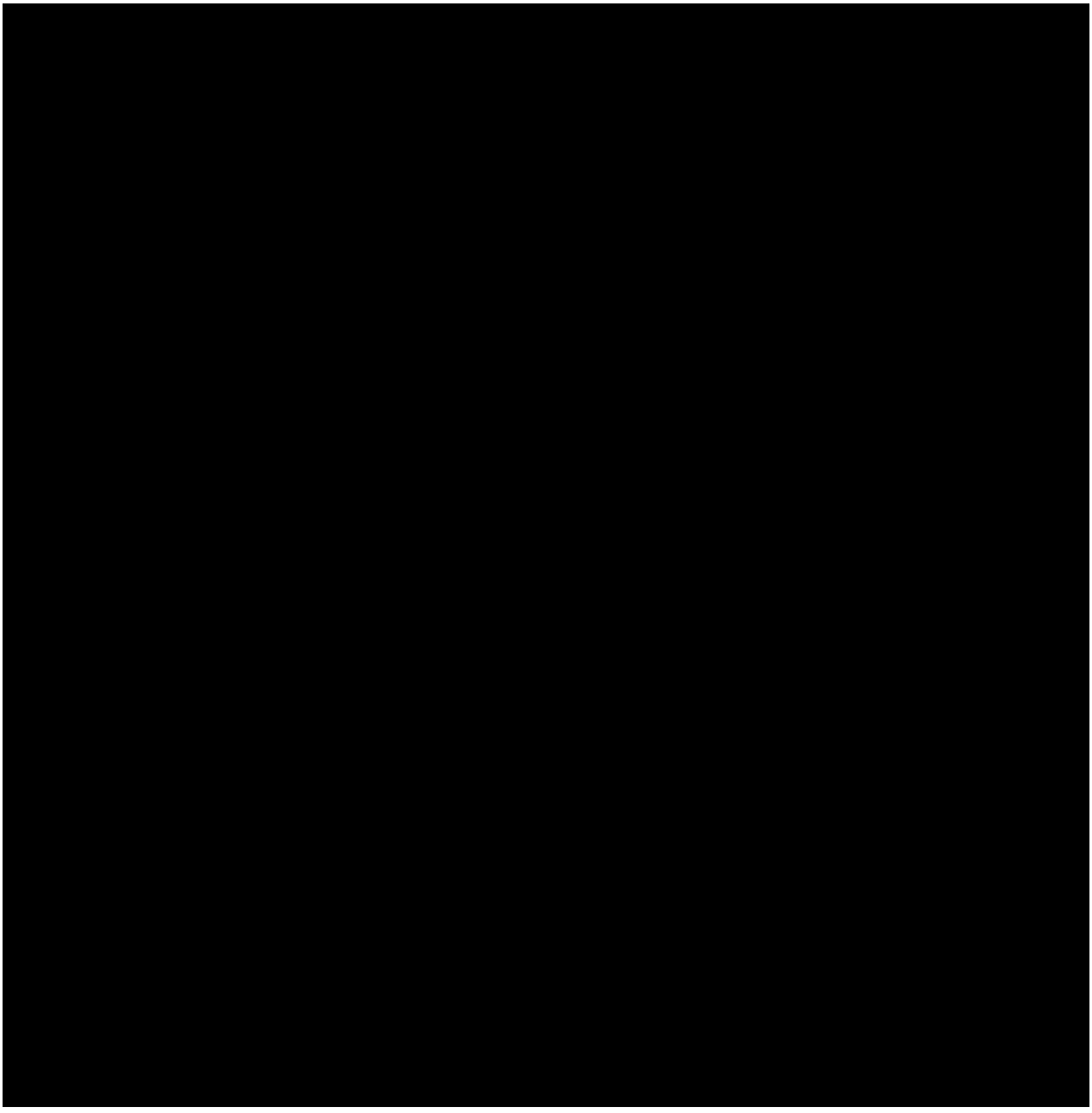
Figure 17: Network capacity taken from 2025 NDP, SEPD (with connections)



Growth in Connections and Connections Access Charges

5.14 Over the last five years we have seen an increase in the number of applications and accepted quotations to connect renewable generation. These are mostly hybrid projects, consisting of energy storage combined with other technologies and solar as result of the geography and planning conditions. The number of projects seeking to connect before 2030 has considerably surpassed our forecast in 202 which supported our RIIO-ED2 business submission. This includes an increase in the number of accepted generation connection offers of 74% in 2022/23, with continued increases in subsequent years.

Table 14: Growth in Connections



Access SCR

5.15 One of the key changes at the start of RIIO-ED2 was the introduction of new Access arrangements through the Access Significant Code Review (Access SCR). This is particularly impactful for new demand connections and is why we have needed to look at these connection requests in the context of our overall plans for network reinforcement within our EJPs.[33] The reduced financial costs to our customers from the changes within the new arrangements have also helped to drive an increase in the number of connections requests that have been received since the start of RIIO-ED2. The speed of decarbonisation via electrification has accelerated driven by industry, and the rapid digital transformation is driving new increased in demand.

5.16 In our Strategic Needs Case we explained that our needs case for investment is underpinned by our requirement to connect customers. We summarised how our investment justification considers both reaction to customer applications and a strategic approach that will allow us to meet our customers' forecasted needs. This is largely driven by the Access SCR and the transition from customer led to system led investment.

5.17 The introduction of Access SCR has driven a rise in demand connections, prompting us to assess these requests within our broader network reinforcement plans. Lower connection costs have contributed to increased applications, while rapid electrification and digitalisation continue to accelerate demand. To better anticipate future growth, we've built relationships with key stakeholders, particularly decarbonising industries, to understand their plans early. This enables us to design a network that supports local development and aligns with the UK's net zero goals.

5.18 We've built a team of engagement specialists to gather data, including Local Area Energy Plans from LAs, which underpin our strategic planning and enable us to plan ahead of need. While much demand growth is linked to electrification, some, like the rise in data centre connections driven by Artificial Intelligence (AI), is not. We've reflected this in our EJPs by designing a network that can accommodate larger, unforeseen connections without limiting low carbon uptake. In West London (SEPD), working with the GLA, NESO, and NGET, we've introduced ramping agreements to allow earlier connections and manage demand growth on HV networks previously constrained by Transmission.

Differences Between Our Licence Areas

5.19 At SSEN, we operate and maintain two licence areas: in the north of Scotland (SHEPD) and south of England (SEPD) with very different characteristics. In SHEPD we have a high proportion small, distributed communities many of which have historically had aggregated demands of less than 1MW. Engineering security of supply planning standard P2 allows for aggregate demand <1MW to have a single connection without alternative backfeed and a historic exemption is in place in SHEPD for some

33 Please see Annex 4 Investment in Connections – Access SCR schemes where we have provided further context and examples of this.

communities with slightly larger demands where it was historically not economic to build a second circuit. However, as these rural areas become increasingly reliant on one source of energy for both heating and transport, and as load increases (often above 1MW) this results in the necessity for increased investment to ensure continuity of supply and realistic restoration times. In many cases compliance with P2 alone would drive this but we must recognise that P2 was created in a less electrified less digital time. Since our RIIO-ED2 submission Access SCR has changed the way that connections are cost recovered, enabling the lower cost especially for rural businesses and developers to connect and decarbonise in SHEPD, driving more connections and upstream reinforcement costs funded through allowances.

5.20 The SHEPD licence area covers 25% of the UK land mass but serves less than 2% of the population and has over 100 subsea cables linking the key island groups of the Inner Hebrides, Western Isles, Orkney and Shetland. Distances between generation and demand centres are much larger than in the South, meaning that keeping the system within limits of voltage is as if not more challenging than thermal limits.

5.21 SHEPD has its own uncertainty mechanism, the Hebrides and Orkney Whole System Uncertainty Mechanism (HOWSUM). This is focussed on increasing network resilience in island communities, while enabling decarbonisation. There are multiple drivers for HOWSUM including future demand and generation forecasts, continued resilience of the island groups, the need to reduce Diesel Embedded Generation (DEG) emissions, and the replacement of life expired assets. HOWSUM proposals have been developed through our strategic planning process, consistent with the LRE Re-opener, and relevant SDPs are examined to understand the optimum 2050 visions for connections to these island groups. Detailed planning of whole system options, including transmission, DEG and third party, has been considered through detailed analysis. This has then fed into CBA and EJP supported proposals, which are being consulted on by Ofgem. We've responded to Ofgem's draft determination along with other stakeholders. Ofgem are now reviewing these responses and additional evidence provided before making a final determination.

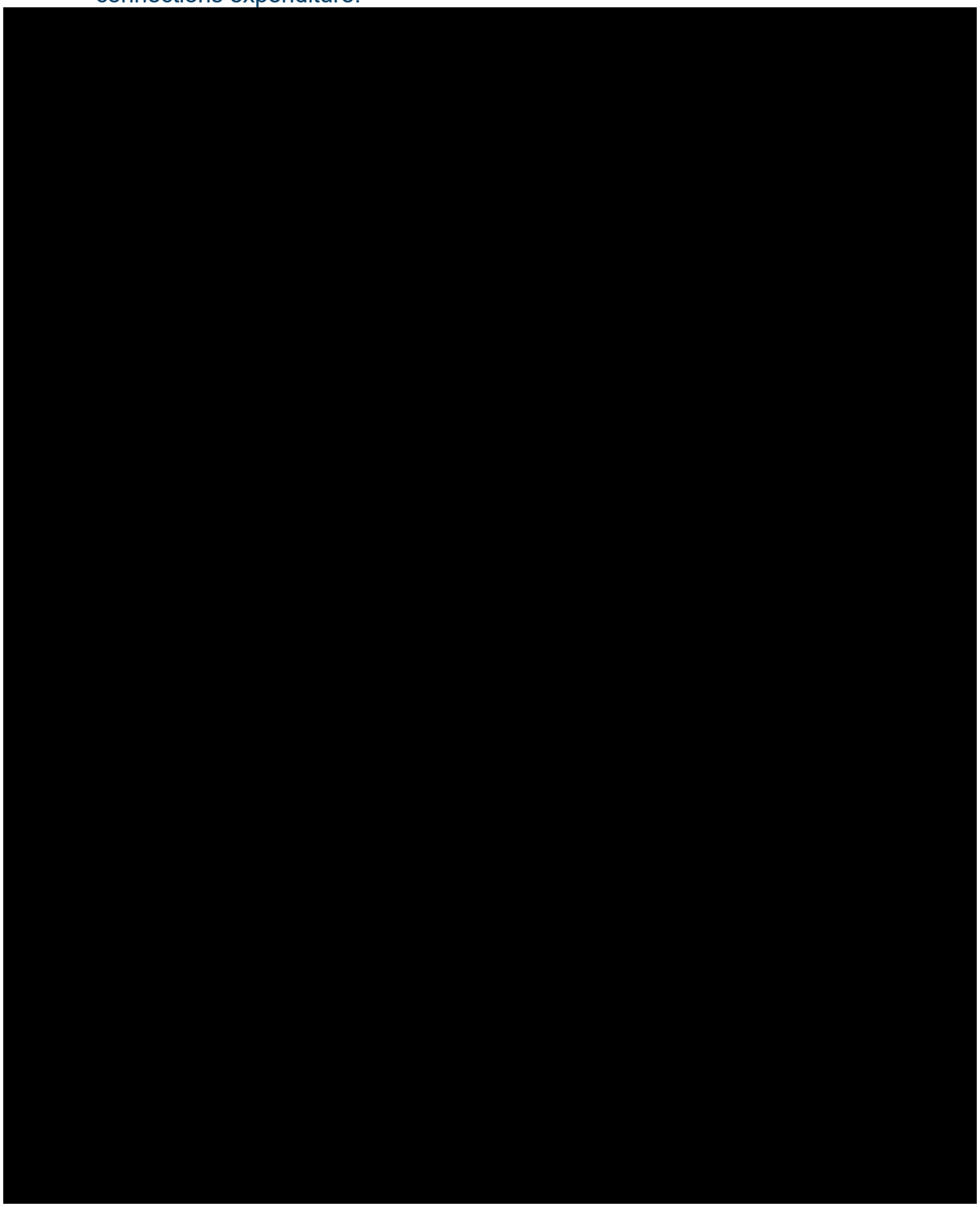
Impact of Clean Power 2030 (CP2030)

5.22 The goal of CP2030 is delivering clean power by reordering the connections queue. Most projects proposed in our LRE Re-opener are driven by demand, rather than generation or storage and are not likely to be materially impacted by the changes due to CP2030.

5.23 The path to CP2030 is well underway. All customer submissions for Gate 2 have been made, and NESO are committed to produce the ‘Whole queue’ by December 2025. This will give DNOs confirmation of which jobs are progressing, and which are being given a Gate 1 offer. The whole queue is to be formed with jobs that are both ‘ready’ in terms of land rights, planning permission and ‘needed’ under the terms of the CP2030 action plan. To be needed, each job will be strategically aligned with the capacity buckets for each of the different technology types. Initial forecasting was carried out prior to the submission, but now the portal has closed, it is clearer how each of these technology types aligns with the categories. This also included currently connected generation

capacity. This information is shown on the graphs below. At this stage the graph shows all submissions for Gate 2. These are still to go through the initial and detailed checks, and so these numbers may reduce.

5.24 Although demand is not directly affected by connections reform, the process is likely to have an impact on demand through a reduction in the amount of contracted battery storage. This will likely free up some capacity, that is currently allocated to contracted batteries which may not proceed under Gate 2, but only accounts for <5% of the overall connections expenditure.



5.25 [redacted] with a significant amount of these projects being protected as they are likely to connect before 1 January 2027 or are deemed to be 'suitably progressed'. In summary we see little risk of CP2030 significantly altering our delivery plans for the remainder of RIIO-ED2.

Our Approach to ED3 Mobilisation

5.26 As detailed in this submission, we have undertaken significant work to understand the current drivers for investment under the LRE Re-opener. The next significant milestone will be the production of a comprehensive plan for the period 2028-2033 which will form part of our ED3 Business Plan submission. As noted in Ofgem's recent ED3 Sector Specific Methodology Consultation, a key driver in this period will be the requirement to build "to ensure the network can accommodate the increase in distributed energy resources and enable them to be utilised by the wider system."[34]

5.27 Our proposed ED3 Mobilisation allowance will ensure a seamless investment pathway between RIIO-ED2 and ED3 with no loss in momentum due to the change in regulatory periods. This funding ask is in accordance with Ofgem's letter to DNOs from 12 August 2025, as part of Appendix 9 – ED3 LRE Mobilisation.[35]

5.28 There is a clear need to ensure that there is no slowdown in delivery between price controls. Our contractors are set up to deliver and need to be sure of the investment levels that are available through the price control process. We have a large portfolio of work developed based on the DFES and rapid increase in connections. Our projects are separated into those that are due to start with delivery complete in RIIO-ED2 and those that start execution in RIIO-ED2 but will complete execution and energise in ED3. These make up the core of our LRE Re-opener request.

5.29 [redacted]

5.30 Within the additional £108m we are requesting in Appendix 9 ED3 LRE Mobilisation, some relates to activities which need to be undertaken in RIIO-ED2 for the delivery of identified ED3 projects. We have a further set of projects where we know we need to

34 ED3 Sector Specific Methodology Consultation, Core Document, Ofgem, 8 October 2025

35 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025

alleviate a constraint on the network but the final optioneering hasn't yet been completed. [redacted] Failing to maintain this programme of work would create inefficiencies for our own planning and operation, as well as adversely affecting our connecting customers and, by extension, wider society. We have explored these adverse implications in more detail within Appendix 9 ED3 LRE Mobilisation.

5.31 Our ED3 LRE Mobilisation funding request is made up of the four categories identified below. This will not be comprehensive for all costs for all schemes, and some aspects are a generalised ask based on our most accurate forecast view.

Defined Schemes

5.32 These are costs associated with developing schemes that we have already identified as critical for delivery in ED3 to keep us on the trajectory to progressing towards net zero and the network requirements for 2050 based on our recent forecasts. These are known and named schemes that could be developed within RIIO-ED2 to prevent any delay to delivery in ED3. This would enable us to provide confidence to the supply chain and our contract partners, to ensure continuity of construction delivery through from the end of RIIO-ED2 and into ED3.

Forecast Pipeline

5.33 These are costs associated with development costs for projects based on forecast network requirements for 2050 but not yet associated with specific schemes. This development work could be undertaken within the RIIO-ED2 period to then get a head start on schemes at the start of ED3. This would enable the pipeline of work to be progressed at pace, preventing a gap in funding between price control periods, based on tRESP and where there is confidence to invest in strategic development aspects. This category also includes costs that we are spending within RIIO-ED2 readying for the ED3 period where those committed downpayments for specific assets are firm.

Resource Recruitment and Training

5.34 Increased run rate in delivery of outputs and spend that we're seeing necessitates workforce preparation beyond the scope of the workforce renewal taken into account as part of CAIs.

Voltage Management

5.35 There is a requirement to deploy voltage management solutions at these strategic locations during the RIIO-ED2 period. The planned interventions would assist with current voltage challenges and accelerate targeted strategies to meet rising demand and evolving customer expectations. We anticipate building on this approach in ED3.

5.36 We have submitted an EJP which outlines existing network arrangements, projected load growth, and a summary of the network assessment supporting the need for voltage management. It evaluates strategic options, presents CBA findings, and addresses feasibility, risks, and implementation challenges. The EJP endorses a preferred solution, detailing costs, timelines, and key mitigation strategies.

5.37 [redacted]

5.38 [redacted]

5.39 Please refer to Appendix 9 – ED3 LRE Mobilisation for further detail on the four categories outlined above, and our full funding request for these ED3 LRE Mobilisation costs.

6. STAKEHOLDER AND WHOLE ELECTRICITY SYSTEM ENGAGEMENT AND OPPORTUNITIES

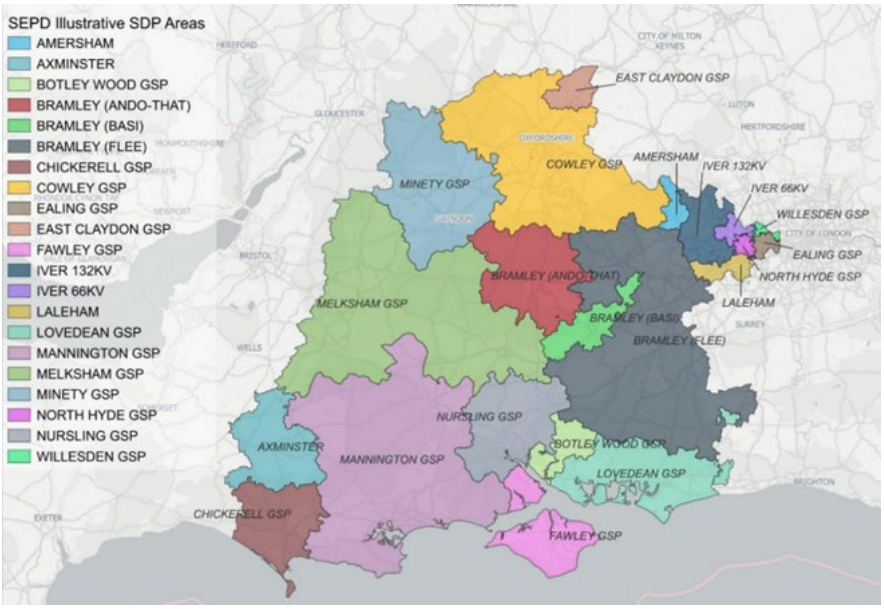
Recap of January 2025 Submission

6.1 Our Strategic Needs Case described the extensive engagement we have undertaken with stakeholders. [36] These stakeholders include local authorities, electricity transmission operators, and national bodies such as NIC, NESO, and DESNZ. We explained how this engagement underpins our SDPs, which are co-created with stakeholders. We also highlighted our use of the LENZA tool to support Local Area Energy Plans (LAEPs) which feed into our SDPs. Finally, we detailed the coordination that we undertake with transmission operators, and the transparency in DSO decision-making. This section provides an update of our engagement during 2025.

Strategic Development Plans

6.2 As detailed in Chapter 7, we have continued to publish our SDPs through 2025 and have now completed the publication of SDPs across both our licence areas. [37] The full coverage of our SDPs is shown in Figures 20 and 21 below.

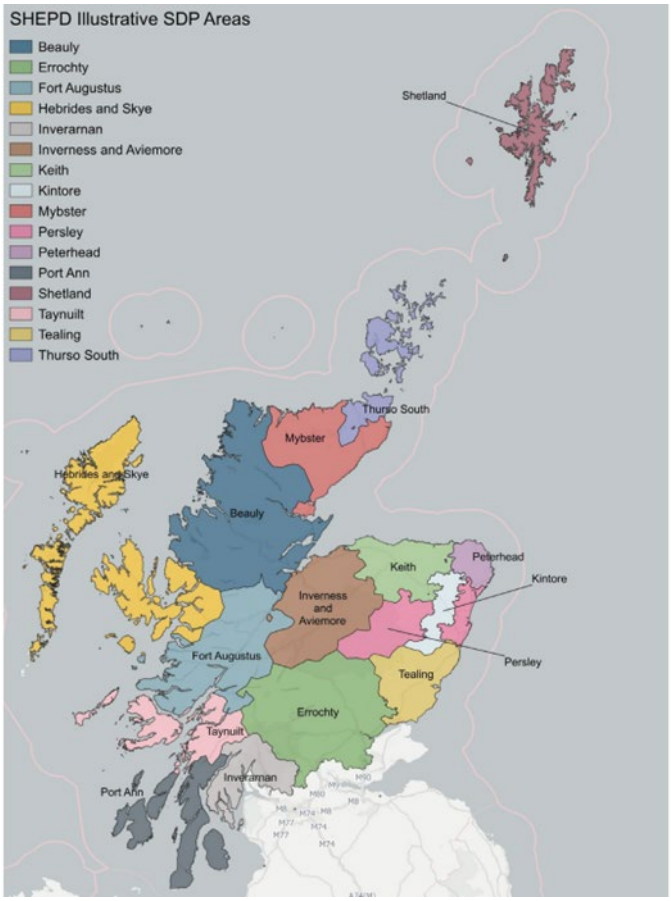
Figure 20: Published SDPs for our SEPD licence area



36 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025, pp. 28-34.

37 Strategic Development Plan (SDP) - SSEN

Figure 21: Published SDPs for our SHEPD licence area



6.3 Each of these SDPs has been published as a consultation inviting stakeholder feedback. This ensures our future plans meet the needs and ambitions of the communities we serve.

6.4 In addition, we have also engaged on our SDPs via dedicated webinars at our 'Network Insights' webinars during 2025 and publicised the SDPs via our monthly Local Authority newsletter. This has invited further bilateral meetings with interested stakeholders including local authorities, regional stakeholders such as West London Business and the NESO in its role as RESP.

Connecting Our Customers

6.5 At SSEN we are focusing on how we can accelerate customer connections whilst network reinforcement is being delivered including our proposals that form this submission. We know that being enablers of development in our licence areas is conducive to economic growth, so we are working hard to find interim solutions for our customers. Below are some key examples of how we are doing this.

- Flexibility – In our EJPs, where economically viable, we are proposing the use of flexibility to get customers connected ahead of reinforcement delivery.

- Access products – We're offering faster connections to customers who are happy with reduced access to the network. This can either be on an interim or permanent basis.
- Ramping agreements – We have agreed with NGET that we can offer 5MW ramping agreements to our customers in SEPD to remove the need for waiting for transmission works to complete. This allows customers to connect up to 15MW of capacity across three separate years.
- Staged connections – Across our SEPD and SHEPD licence areas, we have been working with domestic, commercial and industrial developments to understand how we can meet their load requirements stage by stage. For example, we are working with housing developments to meet their phased need for capacity where the full capacity requested can't be released immediately.

Regional Energy Strategic Plan (RESP) Developments

6.6 Ofgem confirmed the policy frameworks for RESPs in April this year.[38] The tRESPs are an important consideration for our load related needs in ED3 and we will be ensuring that our plans for ED3 fully account for tRESP after it is published in early 2026.

6.7 Ahead of this we have been actively engaging with NESO during tRESP development including:

- Supporting applications for strategic investment need across both our licence areas.
- Attending RESP forums, dedicated DNO meetings on tRESP development and regular bilateral meetings with regional contacts.
- Supporting communications on tRESP through our monthly local authority newsletter. This has promoted both RESP forums and NESO's request for information on strategic investment needs.
- Reviewing draft tRESP materials and providing comments to NESO.
- Proactively inviting NESO to our stakeholder events and offering opportunities for engagement.

Stakeholder Support for Our LRE programme

Local Areas

6.8 Stakeholders across both of our licence areas have expressed a need for greater distribution network capacity and for that to be delivered within relatively short timescales. This includes recent discussions with stakeholders in diverse areas such as West London, Oxfordshire, Southampton and Inverness.

6.9 This capacity is predominately for demand customers including strategic needs such as housing developments. Whilst these developments are recognised in our DFES

38 Regional Energy Strategic Plan policy framework decision, Ofgem, 2 April 2025.

forecasts, they still require funding to deliver the required capacity upgrades. On this basis we believe that additional funding to deliver network upgrades will be welcomed by our stakeholders. Please see Annex 3 Investment in Connections – Access SCR Schemes where we have provided further detail through case studies.

Supply Chain

6.10 We have recently carried out a strategic review of procurement strategy. As part of that we issued supply chain surveys to 120 suppliers. Themes that were present in response to those surveys included:

- Suppliers are ready to invest in capacity, manufacturing, skills and digital tools but only if pipelines are credible and long term.
- Supply chain is calling for clearer multiyear work banks, early engagement and guaranteed workstreams.
- Suppliers see SSEN as a long-term partner with values aligned on safety, sustainability and innovation.

6.11 Supply chains have emphasised that unlocking ED3 delivery depends on greater pipeline visibility, standardisation and collaborative procurement models. [redacted]

6.12 Our network planning methodology that we have used for the EJPs included within this LRE Re-opener submission, specific looking out to the network requirements of 2050, provides supply chain with the visibility of long-term delivery that they have requested. To be able to make that early commitment required to secure these supply chains, we need to have confidence that these will be fully funded. We outline our detailed request further in Chapter 3 – Cost and Regulatory Information.

Ofgem Engagement

Ofgem's Draft Determination of ENWL's LRE Re-opener submission

6.13 We responded to Ofgem's Draft Determination of ENWL's LRE Re-opener submission published 18 July 2025 to express our concern around the cost assessment approach taken and the potential implications if such an approach was to be applied to SSEN's LRE Re-opener submission.[39]

6.14 Our primary concern was that Ofgem had applied RIIO-ED2 Final Determination unit rates, which are based on a mixture of historical and forecast cost information submitted in 2021, to benchmark ENWL's submission. Using backward looking costs to set future allowances poses a considerable risk of underfunding critical LRE investments. We also highlighted that Ofgem had not considered integral cost modelling updates that will be required if DNOs are to have sufficient allowances to enable delivery at the pace

39 Draft Determinations on RIIO-2 Re-opener Applications 2025: Electricity Transmission, Electricity Distribution and Gas Distribution, Ofgem, RIIO-2 Re-opener Applications 2025 Draft Determinations – ED Annex, 18 July 2025

required in ED3. In our view, the LRE Re-opener windows in RIIO-ED2 are an opportunity for Ofgem to develop its thinking in advance of the next price control.

6.15 We remain of the view that should this approach be repeated for this SSEN LRE Re-opener submission, it would not be possible to deliver key projects within our plan, and this would adversely impact our critical contributions to economic growth and net zero. We proposed in that response and have demonstrated within this narrative that the best way for Ofgem to enable these critical network investments is to allow market tested costs.

Ofgem's Draft Determination of SSEN's HOWSUM Re-opener submission

6.16 Similarly to the purpose of the LRE Re-opener mechanism, the HOWSUM Re-opener mechanism provides a route to funding for SSEN specifically to deploy investments as a result of whole system analysis in our unique Scottish islands region.

6.17 In our response to Ofgem's Draft Determination to our HOWSUM submission from January 2025, we highlighted the reasons why we do not agree with Ofgem's assessment of our proposed options.[40] We support Ofgem's agreement in their Draft Determination for our submitted solutions that SSEN had demonstrated the network need, but we note that we had provided significant analysis to support our optioneering in our submission. It is imperative that network companies are provided with clear feedback and allowances for all re-openers to progress with the magnitude of investment required between now and 2050. We have responded to this consultation and continue to engage with Ofgem separately.

Ofgem's Direction letter for additional LRE Re-opener windows 12 August 2025

6.18 On 12 August 2025 Ofgem wrote to DNOs directing two additional windows for LRE Re-openers.[41] Within this letter Ofgem highlighted the importance of the policy context that is impacting load related work for DNOs, and noted that the publication of several of these has provided additional clarity regarding the strategic direction for meeting delivery of net zero.[42] These policy publications share a clear consensus of the importance of swift delivery of load related work at electricity distribution level in order for the nation to meet net zero ambitions. This supports the approach we are taking, including our desire

40 Draft Determinations on RIIO-2 Re-opener Applications 2025: Electricity Transmission, Electricity Distribution and Gas Distribution, Ofgem, RIIO-2 Re-opener Applications 2025 Draft Determinations – ED Annex, 18 July 2025

41 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025

42 Policy publications referenced by Ofgem include: DESNZ, Clean Power 2030 Action Plan, 13 December 2024; National Infrastructure Commission, Electricity distribution networks: Creating capacity for the future, 21 February 2025; DESNZ, Electricity Distribution Networks study: government response, 7 July 2025; Ofgem, Regional Energy Strategic Plan policy framework decision, 2 April 2025; Ofgem, Framework decision: electricity distribution price control (ED3) | Ofgem, 30 April 2025, NESO, Connections Reform design documents and methodologies, April 2025.

to work in a way that minimises disruption to customers, and prevents risk of customer connections being delayed due to constraints.

6.19 Ofgem also noted the approach they had taken when assessing ENWL's LRE Re-opener submission from January 2025, stating, "we considered the long-term strategic direction, the subsequent distribution network needs, and ultimately the overall investments required in RIIO-ED2 in order to ensure that the UK will be best placed to meet those needs."[43] As detailed within our Strategic Needs Case submission from January 2025, and since throughout the regular meetings we have had with Ofgem since that submission, this is the approach we are taking to investment included in this submission. We explained within Chapter 2 – Business Strategy Alignment and Chapter 3 – Demonstration of Needs Case of our January submission how we are looking forward to the investment required for the 2050 network, to ensure efficient investment for customers, for low regret investment.[44] The EJPs that we are submitting as part of this submission highlight those investments required to be delivered within RIIO-ED2, and to set up for a streamlined delivery in ED3.

6.20 This letter of Ofgem's also referenced the importance of DNOs investing "in line with a coherent longer-term strategy", including where RIIO-ED2 investment forms "part of a justifiable longer-term plan or mobilisation plan for ED3."[45] In line with this, we have included costs which form our ED3 LRE mobilisation plan, where we are investing within RIIO-ED2 for delivery within ED3. We have outlined the different categories of investment further in Chapter 5 – Demonstration of Needs Case, as well as comprehensively in Appendix 9 – ED3 LRE Mobilisation.

6.21 Within Ofgem's letter of 12 August 2025, they referenced the work that Ofgem's Decentralised Energy Systems team is doing as part of the ED3 development in relation to voltage management. The purpose of this work is to provide flexibility capacity through temporary demand reduction at primary substations for functionality in ED3. In response to Ofgem's letter, we are using this re-opener to include the funding costs that are required for development of that work on our network. These costs are included as part of Appendix 9 – ED3 LRE Mobilisation, which outlines the work we are investing in, to ready ourselves for ED3.

6.22 [redacted] We have developed an EJP based on the engagement we have had to date with Ofgem's Decentralised Energy Systems team and have included any assumptions we have had to make.

43 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025.

44 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025, pp. 12-24.

45 Letter from Ofgem to Regulation Managers of Electricity Distribution Licensees, Load Related Expenditure Re-opener windows, 12 August 2025.

6.23 This builds on much of the work the team has completed previously in relation to Customer Load Active System Services (CLASS).

6.24 [redacted] Please refer to Chapter 5 – Demonstration of Needs Case for further information, as well as Appendix 9 – ED3 LRE Mobilisation and EJP SSEND LOVEDEAN VM 001.

Bilateral engagement with Ofgem

6.25 Since our Strategic Needs Case submission to Ofgem in January 2025 we have met on a monthly – bimonthly basis with Ofgem. Throughout this engagement we have tested the approaches we are taking in relation to long term network planning, evidence base required, cost approach, inclusion of ED3 mobilisation costs among other topics. We have also used some of these meetings to address some of Ofgem's feedback to our January 2025 submission from the supplementary question process. Ofgem has provided feedback through these meetings, and we have responded to this by making changes and additions to the content and evidence base for this October 2025 LRE Re-opener submission. For a summary of the specific bilateral engagement that we have undertaken with Ofgem throughout this process, please refer to Table 19 in Annex 1, Meeting Ofgem's Requirements.

6.26 Ofgem also responded by letter to our Strategic Needs Case submission from January 2025 on 29 May 2025. Within this letter, Ofgem provided a commitment in writing to directing an additional re-opener window from 27-31 October 2025. They also stated that they have *"not identified significant areas of concern with your proposed approach to developing your load related plans."*

6.27 There are several points that we have progressed with Ofgem since their letter in May. Ofgem did not agree to separate benchmarking of costs for ED3 process, which was an aspect that we requested within our Strategic Needs Case submission. We have worked with Ofgem since then and have expanded on this further within Chapter 3 – Costs and Regulatory Information, Approach to Costs. In relation to Ofgem's treatment of our incurred expenditure, Ofgem reiterated the point that they had made at a previous bilateral that it is our responsibility to manage and develop our network efficiently, and that the LRE UM re-opener is the appropriate mechanism to seek funding according to those principles. We have continued to work with Ofgem over the last few months and have outlined in detail the work we are doing to manage those costs in the most efficient way in Chapter 4 – Deliverability and Risk.

7. CONSIDERATION OF METHODOLOGY AND JUSTIFICATION OF OPTIONS

Recap of January 2025 Submission

7.1 In our Strategic Needs Case, we detailed the standard engineering options considered within EJPs, noted in Table 15 below:

Table 15: Standard options for network intervention

Option	Description
Do Nothing	No change to existing network topology
Reinforcement of Existing Assets	Upgrade the existing assets with higher capacities
Reinforcement by Adding New Assets	Install new assets to enhance and complement existing assets to facilitate a greater network capacity
Network Reconfiguration	Facilitating load growth by changing the existing network running arrangement or reallocating the group demands
Flexibility	Procure flexibility alone to facilitate load growth
Flexibility and Reinforcement	Use flexibility procurement to reduce peak demand and defer capital investment on network reinforcement

7.2 We also explained our use of flexibility services and the Common Evaluation Methodology (CEM), as well as the Strategic CBA that we have developed to ensure least-worst regrets planning. We provided details about the assurance provided by the technical consultancy, Threepwood, to independently assure the process of our DNOA outcomes.[46]

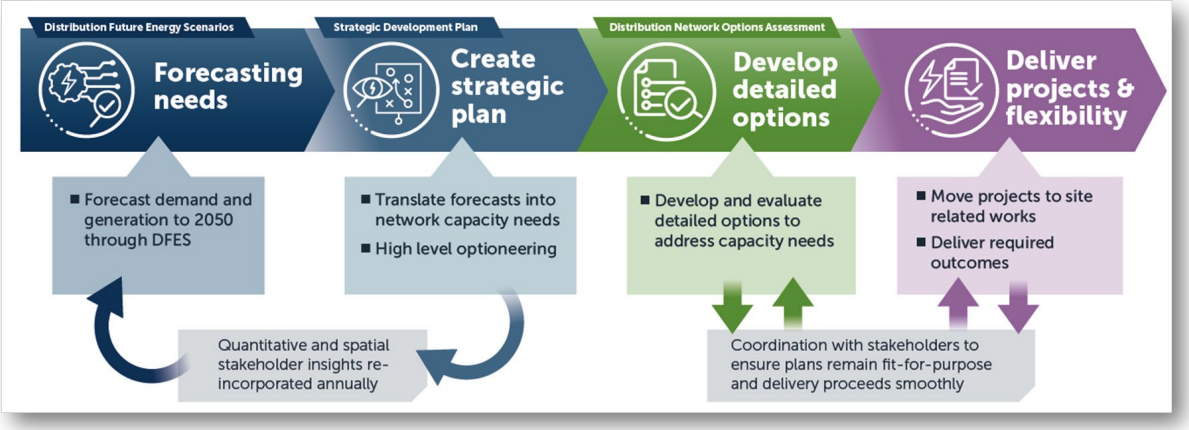
Our approach to Strategic Development Planning

7.3 Our Strategic Needs Case provided an overview of our strategic development process and the importance of our SDPs. These are high level plans focusing on defined spatial areas of our networks and considering the future needs of our stakeholders through to 2050. SDPs are reviewed annually which allows us to account for evolving developments such as demand flexibility markets and industrial decarbonisation. It also aligns with the proposals and direction for the development of RESP. The high-level process is shown below in Figure 22. All SDPs are published on our website.[47]

46 Load Related Expenditure Re-Opener Submission, Core Narrative, January 2025, Load Related Expenditure Uncertainty Mechanism Re-opener Core Narrative January 2025, pp. 25-26 and pp. 43-44.

47 Strategic Development Plan (SDP) - SSEN

Figure 22: SSEN Strategic Planning Process



7.4 The projects included in this submission are firmly aligned with the SDPs which have been developed concurrently with our LRE programme over the past two years. This approach makes a valuable tool to engage with stakeholders and secure feedback about our plans for the network. For those councils that have ambitious net zero targets, and monitor carbon emissions against carbon budgets for sustainability, the SDPs provide a useful tool to gain funding to support decarbonisation and to provide visibility of our future works.

Our approach to Flexibility and Options Assessment

7.5 Policy developments such as the NIC Report and Ofgem's ED3 publications are directionally changing the focus of local flexibility and our approach to the development of markets. We are now proactively building on our work to utilise flexibility to create capacity quickly for new connections while developing flexibility for other use cases including applications in project delivery and resilience.

7.6 We continue to assess all load related investments for flexibility opportunities as per our published DNOA methodology. This was updated in early 2025 to expand its scope to consider HV/LV needs and the potential for energy efficiency and now considers network needs for the next 10 years and has introduced an annual review process.[48] It now includes clear explanation of the role of DSO in the load related development process to provide additional assurance of conflicts of interest management.

7.7 Our optimised RIIO-ED2 LRE programme includes the use of flexibility procurement which can be used to efficiently defer some network investments. Based on our activity to date, we expect that our flexibility procurement programme will enable us to defer approximately £84m of reinforcement in RIIO-ED2. We have included efficiency values in this submission which represent our cumulative estimated deferrals. We cover our approach to value estimation of flexibility deferrals in Chapter 3 – Cost and Regulatory Information.

48 Distribution Network Options Assessment Methodology, SSEN Distribution, April 2025

Assessment of Flexibility Viability

7.8 When considering the potential opportunity for flexibility services, we examine three key aspects:

Whether flexibility will resolve the technical need

7.9 The technical assessment ensures we are only using flexibility services where they will safely support the management of the network. In some uses cases this might not be possible, for example management of transient fault currents on the system, or demand restoration for fault situations. In these cases, the feasibility of flexibility services to resolve the issue has been discussed in detail before being ruled out.

The benefits of using flexibility services

7.10 The Common Evaluation Methodology (CEM) tool is used to quantify the benefit of flexibility services and determine the number of years for which flexibility services should be used to defer the identified reinforcement.

The ability to procure the required flexibility service in the area

7.11 This assessment considers whether we can procure flexibility services in the region. This includes looking at a range of factors including the portion of domestic and industrial customers, the number of forecasted EVs and any generation or storage facilities expected to be connected. These are combined with forecast flexibility participation rates based on data from all DSOs. This approach has allowed us to focus our market development on areas where we have confidence that we will secure the flexibility services we need. Without this assessment there would be a risk of limited participation providing partial volumes which we may ultimately not use, as we would need to accelerate the build solution to ensure the network remained secure.

7.12 We continue to build the markets further, with planned actions outlined in the Flexibility Roadmap, and there are many actions we have taken over the last year in line with these aims.[49] A particular focus has been on our processes, which has included moving to Overarching Agreements for our flexibility services (with 21 different companies having signed this) and a new Flexibility Market Platform.[50] This has allowed us to attract multiple Flexibility Service Providers with a range of discrete generation assets and aggregated portfolios who are able to offer volume over the widest possible geographical areas and at significant scale.

49 Our Flexibility Roadmap 2024/25, SSEN Distribution

50 Flexibility Services Procurement Report 2023-24, SSEN Distribution, 29 April 2024

Assurance from DNOA

7.13 DNOA outcomes summarise our future plans including the detailed consideration of flexibility services within each EJP and are helpful to our stakeholders when understanding our plans for the network at a more granular level than the SDP.[51]

7.14 Independent process assurance is an integral part of our published DNOA methodology which helps provide transparency to our stakeholders. We use the independent engineering consultancy, Threepwood to undertake assurance of both the DNOA and the underlying EJPs. Threepwood's assurance of our DNOA outcomes has continued through 2025 updated in line with our published methodology. Draft assurance reports are shared with our DSO Advisory Board for comment before being published on our website.[52]

Assessment of investment options

7.15 Technically feasible options are assessed through one or more of three CBA packages, depending on their characteristics:

- **Deterministic (Ofgem) CBA:** this compares the Net Present Value (NPV) of different technical options to determine the most efficient solution.[53]
- **Common Evaluation Methodology (CEM):** this tool allows us to assess where flexibility could be used as a more efficient option for capacity management, as outline above in Assessment of flexibility viability.
- **Strategic CBA:** this CBA considers a wider range of benefits that can be more difficult to monetise and allows us to assess different future load scenarios such that we can take a least worst regrets approach to investment. Below we provide more context on this CBA.

The Strategic CBA

7.16 A more strategic way of assessing investment allows us to both consider the future uncertainty and the wider benefits of a strategic approach. We achieve this through enhancing an industry standard tool, the Whole System CBA[54], to both take a least worst regrets approach to strategic investment and consider broader benefits. The Whole System CBA is already agreed for use in Ofgem's Coordinated Adjustment Mechanism (CAM) and so we are building on an already approved tool. We refer to this enhanced tool as the Strategic CBA.

7.17 The Strategic CBA leverages the Social Return on Investment framework developed by the ENA to assign a monetary value to economic, environmental, and social costs and

51 SSEN DNOA

52 Publications and Reports, SSEN

53 RIIO-ED2 CBA Guidance

54 Whole energy systems – Energy Networks Association (ENA)

benefits. It can help identify the optimum timing of an intervention by considering requirements under multiple DFES. It can also consider the size and scope of solution required, i.e. whether there is benefit on a broader, more strategic solution implementation, rather than an incremental approach. The Strategic CBA assesses which network option offers the *'least worst'* regret across the four DFES given the uncertainty of future load growth. This approach does not however consider the probability of each of the different scenarios occurring and the NPV output from the tool is considered in conjunction with the 'least-worst' regret output.

7.18 The results of the Strategic CBA are broken down into three categories: costs/benefits to SSEN, costs/benefits to society and costs/benefits to customers. For each of these three categories, an overall benefit entered as a positive number and an overall cost is entered as a negative. The capex and operating expenditure used in the Deterministic CBA tool are represented in the costs/benefits to SSEN. The benefits to society and customers are calculated as follows.

7.19 The DFES technology projections can be used in the Strategic CBA to evaluate different benefits in the area impacted by the investment. Different investment decisions on timing and the solution proposed will enable different amounts of load to connect to our network at different points in time. The option chosen impacts the potential benefits for customers and society as well as the investment cost. When assigning benefits to investment options, the investment driver and impact of the work on available network capacity compared to the current capacity is considered to ensure the attribution of investment and benefit is reasonable.

7.20 The benefit types are grouped into customer benefits and societal benefits and the benefit types built into the tool are listed below:

Customer benefits:

- Realised Connections – Demand
- Realised Connections – Generation
- Annual savings from enabling low carbon technologies

Societal benefits:

- Avoided (benefit) or incurred (cost) carbon emissions
- Avoided (benefit) or incurred (cost) air quality emissions
- Job creation (local economy stimulus)
- Annual savings from decarbonising transport
- Societal benefit of enabling schools
- Societal benefit of enabling affordable homes

7.21 The Strategic CBA has been used where there is a possibility for further insight into the different benefits realised through alternative investment options or into the impact of investment timing.

Addressing Ofgem comments from Supplementary Questions within October 2025 submission

7.22 In response to the EJPs we submitted in January 2025, Ofgem sought further clarifications through Supplementary Questions (SQs) and bilateral meetings. We have now reviewed Ofgem's draft determinations of RIIO-T3, ENWL's LRE Re-opener and SSEN's HOWSUM re-opener submissions from January 2025 as well as the feedback we received directly from Ofgem through SQs and bilateral meetings.

7.23 From this review, a common theme identified was Ofgem's request for greater clarity of options assessment, and further justification of why certain options had either not been considered or had been rejected during the optioneering process. This enabled us to identify a set of additional evidence requirements from Ofgem's review of our EJPs, and those of other network operators. These included further detail on the choice of GIS switchgear over AIS, changes from mesh to radial configuration, voltage rationalisation and load shift options. The consolidated list is included below in Table 16.

Table 16: Evidence Requirements addressed in EJPs

7.24 Following the requirements being identified, we reviewed our completed EJPs and relevant additional Evidence Requirements for each scheme have been identified and provided. An addendum has been added to the back of each EJP with these details.

8. CONCLUSION

8.1 This funding application supports the development and operation of projects through the RIIO-ED2 period to March 2028. It also sets an intended direction for our work in ED3, supported by associated development activities. We summarise below the plans and requests associated with each project. We welcome engagement with Ofgem and stakeholders, and a swift determination process to facilitate progression of these plans.

8.2 This investment plan will ensure that all types of customers are able to receive a high level of service, whether they are connecting their electric car, heat pump, rooftop solar panel or a new housing scheme, factory or data centre. To ensure no one experiences long delays in getting access to the grid, this investment is urgently required. Reliable and rapid access to the grid is a crucial condition for powering economic growth.

8.3 Our LRE Re-opener application therefore seeks approval from Ofgem because:

- **It is an enabler of economic growth**: this investment in our distribution network is essential to unlock growth in housing, commercial, and industrial development – enabling local and national economic expansion.
- **It will deliver net zero and green jobs**: this load related investment is critical to supporting the electrification of heat and transport, integrating renewables, and enabling the green economy.
- **It will avoid constraints and delays**: ensuring capacity is available when and where it's needed avoids delays to customer connections and enables innovation zones, data centres, and new industries to establish and grow.
- **It will level up regional growth**: this infrastructure investment supports inclusive growth, ensuring regions in both the north and south of the country can attract investment and benefit from the energy transition.
- **It is an economic enabler**: this investment in electricity infrastructure generates wider economic benefits well beyond physical infrastructure – stimulating supply chains, creating jobs, and boosting productivity.
- **It will avoid regret from underinvestment**: Transmission is now experiencing significant constraint costs and delays – a situation we must not replicate in Distribution. Actively investing ahead of constraints will avoid regret and deliver an efficient pathway to a low carbon economy.

8.4 In this LRE Re-opener **we are requesting £412.2m in SEPD and £202.6m in SHEPD (2020/21 price base), and £108.3m for ED3 mobilisation funding**. This will mean that over the rest of **RIIO-ED2 we will deliver a total of 2,023 MVA**, and it will **support delivery of an estimated 4,801MVA within ED3**. Overall, across the SSEN licence area, by increasing the allowance to approximately 2.5 times baseline we will release 1.6 times baseline MVA within RIIO-ED2, and 4 times baseline into ED3 providing capacity to enable connections, decarbonisation and drive economic growth. As noted in Table 13: Growth in Connections, this investment will also enable delivery of over 400 Access SCR connections schemes.

Annex 1 – Meeting Ofgem's requirements

Ofgem Re-opener Requirements

A1.1 The following tables set out where we meet Ofgem's Re-opener Licence and Guidance requirements in this submission.

Table 17: Mapping Ofgem's Re-Opener Licence Requirements

Ofgem Re-Opener Licence requirement	Requirement met?	Where / how addressed
Special Condition 3.2 Uncertain Cost Re-openers, **Part K Load Related Expenditure Re-opener (LREt) 3.2.75**		
(a) the licensee's Load Related Expenditure has increased or is expected to increase, as a result of an increase in: i. current or forecast load-related constraints on the Distribution System that are in place at the time the licensee makes a Load Related Expenditure Re-opener application relative to the constraints associated with the forecast demand used by the Authority to set ex ante allowances for the Price Control Period; or	✓	Cost and Regulatory Information; Deliverability and Risk; Demonstration of Needs Case
ii. the proportion of expenditure associated with load-related constraints on the Distribution System to be funded through Use of System Charges relative to the assumptions used by the Authority to set allowances that are in place at the time the licensee makes a Load Related Expenditure Re-opener application; or	✓	Cost and Regulatory Information; Stakeholder and Whole Electricity System Engagement and Opportunities; Appendix 6 – Project Cost Evidence
(b) there is a change in conditions on the Distribution System relative to the assumptions used to set allowances; and	✓	Demonstration of Needs Case; and Stakeholder and Whole Electricity System Engagement and Opportunities
(c) the increase or expected increase in Load Related Expenditure: i. is not provided for by the sum of Load Related Expenditure ex ante non variant allowances specified in Appendix 2, and any previously directed values for LREt and SINVt;	✓	Cost and Regulatory Information
ii. is not provided by the operation of Special Condition 3.9 (Load Related Expenditure Volume Drivers); and	✓	Cost and Regulatory Information
iii. exceeds the Materiality Threshold.	✓	Cost and Regulatory Information

Table 18: Mapping Ofgem's Re-Opener Guidance Requirements

Ofgem Re-opener Guidance requirement	Requirement met?	Where addressed
Needs Case and Preferred Option	✓	Deliverability and Risk; Demonstration of Needs Case; Consideration of Methodology and Justification of Options; EJPs; Deterministic CBAs; CEM CBAs.
Stakeholder Engagement and Whole System Opportunities	✓	Stakeholder and Whole Electricity System Engagement and Opportunities
Cost Information	✓	Cost and Regulatory Information
Cost Benefit Analysis and Engineering Justifications	✓	Cost and Regulatory Information; Deliverability and Risk; Demonstration of Needs Case; Consideration of Methodology and Justification of Options; EJPs; Deterministic CBAs; CEM CBAs.

Summary of bilateral engagement

A1.2 The following table sets out a summary of engagement with Ofgem on the project to date, including Ofgem's feedback on our proposed approach and where we have addressed this feedback.

Table 19: Bilateral engagement with Ofgem on SSEN LRE Re-opener application

Engagement date	Scope	Discussion and outcomes
21 August 2024	Shared our Net Zero First approach, and how our LRE UM submission fits within that.	Methodology; ramp up of demand on network; supply chain considerations; LRE recommendation.
19 September 2024	We provided further detail around how we have reassessed our LRE programme of work noting the changes since submission of our RIIO-ED2 Business Plan.	Ofgem stressed that they would not be able to review the full set of EJPs making up the profile of our expected LRE spend over baseline.
03 October 2024	As part of Ofgem Cost Visit.	Ofgem challenged our underspend for the first year of RIIO-ED2, asking us to provide clear detail around deliverability of our plan in our submission for January 2025.

Engagement date	Scope	Discussion and outcomes
23 October 2024	Shared our proposal of using January 2025 LRE Re-opener window as a Needs Case Submission, and January 2027 window as point for Ofgem to review all EJPs in full. Took Ofgem through two EJPs to demonstrate the approach we are taking.	Ofgem confirmed that they understood that our proposal is for needs case sign off in January 2025, with funding request in January 2027. Said they would want to review a selection of EJPs that present the variety of engineering solutions utilised to enable them to sign off our approach. Ofgem provided verbal guidance on level of detail they would want to see for the summaries of EJPs.
15 November 2024	We shared example information of that which would be included in the list of needs case schemes, shared an overview of our proposed narrative document and discussed how the submissions for January 2025 and January 2027 would work within the parameters of the Re-opener Guidance.	We took action to write up the scope of what Ofgem's needs case approval would cover. We shared this with Ofgem [redacted]. Ofgem asked us to consider which EJPs we would submit to ensure they reflect a full range of the technical interventions and solutions. This is reflected in the 10 EJPs we have submitted as part of this application. Ofgem committed to check they are content for our Strategic Needs Case to be viewed as a Part 1 submission under the LRE UM re-opener guidance. This was confirmed in Ofgem's email to SSEN [redacted].
13 & 14 January 2025	We met to discuss our intended submission for the January 2025 re-opener window, as well as the timing of a future window, before the existing January 2027, that Ofgem is looking to direct. We discussed the need for our submission to consider the uncertainty of expected policy developments on the optimal LRE investment strategy.	Ofgem confirmed that the agree that we should submit our Strategic Needs Case under the January 2025 Re-opener window as originally planned. Ofgem confirmed they will review this submission and continue to engage with us ahead of our future full LRE UM re-opener submission. We confirmed that our submission will consider the uncertainty of expected policy developments on

Engagement date	Scope	Discussion and outcomes
		the optimal LRE investment strategy, as noted by Ofgem. Ofgem confirmed that they will be in touch with DNOs to agree timing for an additional LRE UM re-opener window.
18 February 2025	We met to discuss any initial feedback Ofgem had following receipt of our Strategic Need Case submission, and to discuss the timing of the next re-opener window.	Ofgem agreed that we would continue to meet regularly ahead of the next re-opener window, which Ofgem was yet to direct.
30 April 2025	We reiterated the longer-term approach that we are taking to investment planning on our network, which is reflective of the NIC review and DESNZ ambitions. We outlined the costs that we will be incurring within RIIO-ED2 ahead of ED3, for projects that we will deliver in ED3, noting that we intend to request funding for that spend in RIIO-ED2 as part of the LRE Re-opener.	At this meeting Ofgem committed to directing an additional re-opener window for October 2025 before our next agreed meeting in June.
18 June 2025	We presented the addendum that we proposed to include for each EJP to demonstrate where and how we had taken into account Ofgem's feedback as part of the SQ process. We discussed points that we intended to include within our response to Ofgem's Draft Determination on ENWL's LRE Re-opener submission from January 2025, focussing on their cost assessment. We outlined the context in which real market costs have increased significantly since Ofgem set unit rates for RIIO-ED2 benchmarking, as well as the different tools that the benchmarking process for RIIO-ED2 was intended to be used, and hence the need for Ofgem to revise their approach to cost assessment. We emphasised that the result would otherwise be that projects would not be able to be delivered.	Ofgem agreed that the proposed addendum appeared to include the type and level of detail that they would want to see, and that that would be sufficient as an addition to our EJPs rather than requiring us to completely redo each EJP. Ofgem challenged the use of the LRE Re-opener for recovery of increased cost increases since RIIO-ED2 benchmarking and requested that we include a response to that within our response to the Draft Determination to ENWL's LRE Re-opener submission from January 2025.
20 August 2025	We thanked Ofgem for their letter of 12 August 2025 which they sent to DNOs directing two additional LRE Re-opener windows – one in October 2025 and one in January 2026.	

Engagement date	Scope	Discussion and outcomes
	We showed Ofgem the way we proposed to present the variance in costs that we have seen for projects since RIIO-ED2 allowances were set, compared with the actual costs we are seeing for delivery. We took Ofgem through an EJP to demonstrate the methods we have applied as part of the EJP process for establishing which option should be progressed. We reiterated to Ofgem that we would be submitting a request to recover costs incurred within RIIO-ED2 as we develop projects to be delivered from day one of ED3.	
23 September 2025	We outlined the cost categories that we intend to include as part of the ED3 mobilisation costs that Ofgem referenced in their letter to DNOs of 12 August 2025. We outlined the approach we have taken to assessing costs to be included in our re-opener submission, noting that they consist of competitively tendered, market reflective costs. We referenced Special Condition 3.2.75 (a) (ii) which refers to the use of the LRE Re-opener for circumstances where LRE has increased due to increase in proportion of expenditure associated with load related constraints relative to the assumptions made by Ofgem when setting the allowances that are currently in place.	

Annex 2 – Definitions and Abbreviations

Acronym	Definition	Acronym	Definition
BSP	Bulk Supply Point	LHEES	Local Heat and Energy Efficiency Strategies
C	Connections	LRE	Load Related Expenditure
CAM	Coordinated Adjustment Mechanism	LV	Low Voltage
CBA	Cost Benefit Analysis	LVSVD	Low Voltage Services Volume Driver
CEM	Common Evaluation Methodology	LtW	Leading the Way
CHP	Combined Heat and Power	MW	Mega Watt
CP2030	Clean Power 2030	MVA	Megavolt Amperes
CT	Consumer Transformation	NARMS	Network Asset Risk Metric
CV	Costs and Volumes	NESO	National Energy System Operator
DEG	Diesel Embedded Generation	NIC	National Infrastructure Commission
DESNZ	Department for Energy Security and Net Zero	NPCA	Non-Price Control Allowance
DFES	Distribution Future Energy Scenarios	ODM	Operational Decision Making
DGIF	Distribution Governance and Investment Framework	Ofgem	Office of Gas and Electricity Markets
DNO	Distribution Network Operator	PCFM	Price Control Financial Model
DNOA	Distribution Network Options Assessment	PCNZ	Powering Customers to Net Zero
DSO	Distribution System Operator	RESP	Regional Energy Strategic Plan
ED3	The upcoming price control for the Electricity Distribution sector, which will run from 1 April 2028 – 31 March 2033.The third price control in the Electricity Distribution RIIO framework.	RIIO-ED2	The second price control in the Electricity Distribution RIIO framework, where RIIO is Revenue = Incentives + Innovation + Outputs.
EJP	Engineering Justification Paper	RRP	Regulatory Reporting Pack

ENA	Energy Networks Association	SAP	Senior Authorised Person
EHV	Extra High Voltage	SCR	Significant Code Review
Elexon	Market Facilitator	SDP	Strategic Development Plan
FY	Financial Year	SEPD	Southern Electric Power Distribution
GSP	Grid Supply Point	SHEPD	Scottish Hydro Electric Power Distribution
GIS	Gas Insulated Switchgear	SHET	Scottish Hydro Electric Transmission
HOWSUM	Hebrides and Orkney Whole System Uncertainty Mechanism	SLC 31E	Standard Licence Condition 31E Procurement and use of Distribution Flexibility Services
HV	High Voltage	SLD	Single Line Diagram
ID	Investment Decision	SROI	Social Return on Investment
JSDL	Joint System Design Liaison	SRVD	Secondary Reinforcement Volume Driver
kV	Kilo Volts	SSEN	Scottish and Southern Electricity Networks Distribution business
LA	Local Authority	ST	System Transformation
LAEP	Local Area Energy Plan	tRESP	Transitional Regional Energy Strategic Plan
LCP	Large Capital Project	TSWP	Tidal Stream Wave Power
LCT	Low Carbon Technology	UM	Uncertainty Mechanism
LENZA	Local Energy Net Zero Accelerator	VFES	Vulnerability Future Energy Scenarios
LHEES	Local Heat and Energy Efficiency Strategies		

Annex 3 – Investment in Connections - Access SCR schemes

A3.1 As we noted in Chapter 5 – Demonstration of needs case, one of the key changes at the start of RIIO-ED2 was the introduction of new Access arrangements through the Access Significant Code Review (Access SCR). This is particularly impactful for new demand connections and is why we have needed to look at these connection requests in the context of our overall plans for network reinforcement within our EJPs.

A3.2 The regulatory reporting process for reinforcement associated with connections (cost apportioned capex) is reported in the C2 – Connections table submitted in Appendix 5 – Costs and Volumes Tables. The nature of project delivery means that they don't naturally coincide with changes in policy such as Access SCR, or Price Control Periods. Therefore, adaptations and alternative approaches have needed to be adopted during RIIO-ED2 to account for C2 – Connections. Table 14: Growth in Connections is repeated below for context.

Table 14: Growth in Connections

[redacted]

Case Studies – SEPD

A3.3 As part of Access SCR reforms that came into effect at the start of the RIIO-ED2 price control, the charging boundary for a distribution connection changed. There is now a 'fully shallow' approach to charges for demand customers, meaning SSEN can better plan and coordinate reinforcements at the higher voltages on the network. This involves chargeable upfront costs that only represent extension assets on the SHEPD network, up to a high-cost cap, with SSEN responsible for investment in upstream reinforcement. The move to this sort of charging has led to an increase in the number of demand connections during RIIO-ED2. [redacted]

A3.4 Within our SEPD licence area we're enabling a vast array of different projects all with different contributions to both local and national economic growth. Many of these projects contribute towards job creation, improved infrastructure, increased productivity and in some cases facilitate critical investment for the UK's economy. There are three key areas where we are driving economic growth through connections, as detailed below.

New Housing and Communities

A3.5 Within our SEPD licence area, we are actively supporting the delivery of multiple large-scale housing and mixed–use developments, enabling the construction of tens of thousands of new homes alongside essential infrastructure such as schools, retail centres, and business units. In several instances, individual projects are facilitating the build-out of up to 6,000 homes, complemented by new educational facilities, commercial spaces, and employment hubs.

A3.6 As a DNO, our role in enabling these developments is critical to unlocking regional economic growth. The impact is both direct – through job creation, increased activity across supply chains, and construction sector stimulation – and indirect, by enhancing local infrastructure, boosting consumer spending, and improving labour mobility.

A3.7 Beyond the economic uplift, these developments deliver significant social value. They contribute to addressing housing shortages, support the provision of affordable homes, reduce homelessness, and foster vibrant communities through the introduction of new amenities and public services.

A3.8 By ensuring timely and efficient grid connections, we are not only powering new communities but also helping to shape a more resilient, inclusive, and prosperous future for the regions we serve.

A3.9 Increasingly, new homes are being constructed with integrated LCTs such as heat pumps, solar panels, battery storage, and EV charging infrastructure. These contribute to long-term economic and societal benefits. By lowering energy costs for households over the long term, supporting the transition to net zero, and stimulating green jobs across installation, maintenance, and manufacturing sectors, these technologies help build more sustainable communities. Their widespread adoption also enhances energy resilience and supports national decarbonisation goals, reinforcing the value of our role in enabling future-ready infrastructure.

Innovation and Research Industry

A3.10 We recognise the critical role our infrastructure plays in enabling the development of cutting-edge science, technology, and AI. By enabling innovation clusters and supporting the decarbonisation of energy-intensive industries, we help attract investment, create high-skilled jobs, and foster regional development. This aligns with national priorities around net zero, energy security, and levelling up, reinforcing our commitment to delivering long-term value for customers and communities.

A3.11 In facilitating these advancements, we are not only future proofing our networks but also playing a pivotal role in shaping a smarter, more sustainable economy. Our collaboration with academia, industry, and government ensures that the UK remains at the forefront of global innovation.

Railways

A3.12 We're also facilitating connections to support rail expansion and electrification and recognise that enabling increased capacity for railway infrastructure – both freight and passenger – is a strategic driver of economic growth and societal benefit. This not only boosts productivity but also promotes social inclusion by improving access to jobs and services. Furthermore, electrified rail networks support national decarbonisation goals, offering a cleaner, more sustainable transport alternative that strengthens resilience and reduces environmental impact. Our proactive collaboration with transport authorities and stakeholders ensures that rail infrastructure is future-ready, helping to build a more connected, equitable, and sustainable country.

Case Studies – SHEPD

A3.13 The projects outlined involve three of the largest decarbonising industries in Scotland: whisky production, public transport by sea, and large-scale industry that will support supply chains for the development of offshore wind in the North Sea. These developments will all also have large direct and indirect impacts on growth of the related local economies, with new jobs, improved travel infrastructure and increases in productivity. These are distinct and separate from funding requested as part of HOWSUM.

Ports and Distilleries

A3.14 Ports and whisky distilleries represent significant sources of industrial activity and future energy demand in Scotland. The Scotch whisky industry is a major economic contributor, accounting for 74% of Scotland's food and drink exports and 22% of the UK's total in 2023. It supports over 41,000 jobs in Scotland and an additional 25,000 across the UK.[55] The distillation process requires high-temperature heat, traditionally supplied by fossil fuels such as oil, LPG, and natural gas. Transitioning to electrified systems could significantly increase the demand capacity on the distribution network, leading to distilleries becoming one of the largest sources of electricity demand in the region. The Scotch Whisky Association has an ambition to reach net zero emissions by 2040.[56]

A3.15 Scotland's ports also play a vital role in transport, trade, and regional connectivity, with growing electrification needs such as shore power for vessels and EV charging infrastructure becoming increasingly important for future energy planning. SSEN's SeaChange innovation project has been funded through the Strategic Innovation Fund (SIF). This project involves building a 'Navigating Energy Transitions' (NET) tool, which will help ports to plot their most viable pathways for decarbonisation. This tool will then give network operators like SSEN visibility of the predicted electrical load arising from ports. This will improve demand forecasting and inform SSEN's strategic network planning.[57]

A3.15 As part of this process, we have produced and published SDPs for our licence area which will be updated on an annual basis. The first project listed below falls under the Outer Hebrides and Skye SDP, which is currently out for consultation, while the latter two are covered by Beauly SDP, which recently concluded its consultation.[58]

Pier Upgrades in Lochmaddy

A3.17 [redacted]

55 Scotch Whisky Association, Facts and Figures

56 Scotch Whisky industry launches new sustainability strategy

57 SSEN's nature and shipping innovation projects win £1m in new development funding, SSEN

58 Strategic Development Plans, SSEN

[redacted]

Freeport Development

[redacted]

Distillery Electrification

[redacted]

EXTERNAL APPENDICES

Appendix 1 – Project List & Summaries

Appendix 2 – EJPs

Appendix 3 – Deterministic CBAs

Appendix 4 – CEM CBAs

Appendix 5 – Cost and Volume Tables

Appendix 6 – Project Cost Evidence

Appendix 7 – Independent Assurance Summary – Costs & Schedule

Appendix 8 – Letters of Reassurance from Delivery Partners

Appendix 9 – ED3 LRE Mobilisation

Appendix 10 – Restatement of Baseline Flexibility

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