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Consultation

RIIO-ED2 Draft Determinations SSEN Annex	
Subject	**Details**
Publication date	29 June 2022
Response deadline	25 August 2022
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The next electricity distribution price control (RIIO-ED2) will cover the five-year period to 31 March 2028. In December 2021 the Distribution Network Operators (DNOs) submitted their Business Plans to Ofgem setting out proposed expenditure for RIIO-ED2. We have now assessed these plans and this document, and others published alongside it, set out our Draft Determinations for DNO allowances under the RIIO-ED2 price control for consultation. Responses are sought to the questions posed in these documents by 25 August 2022. Following our consideration of these responses we will confirm our Final Determinations by December 2022.

The full suite of Draft Determinations documents outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses before confirming our Final Determinations. We

want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at Ofgem.gov.uk/consultations. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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1. Introduction

Purpose of this document

1.1 This document sets out our Draft Determinations for the Electricity Distribution (ED) price control (RIIO-ED2), for the areas that are specific to SSEN. The RIIO-ED2 price control will cover the five-year period from 1 April 2023 to 31 March 2028. All figures are in 2020/21 prices except where otherwise stated.

1.2 The purpose of this document is to focus on those elements of our consultation position for the price control settlement which specifically affect SSEN's licence areas including Scottish Hydro Electric Power Distribution PLC (SSEH) and Southern Electric Power Distribution PLC (SSES).

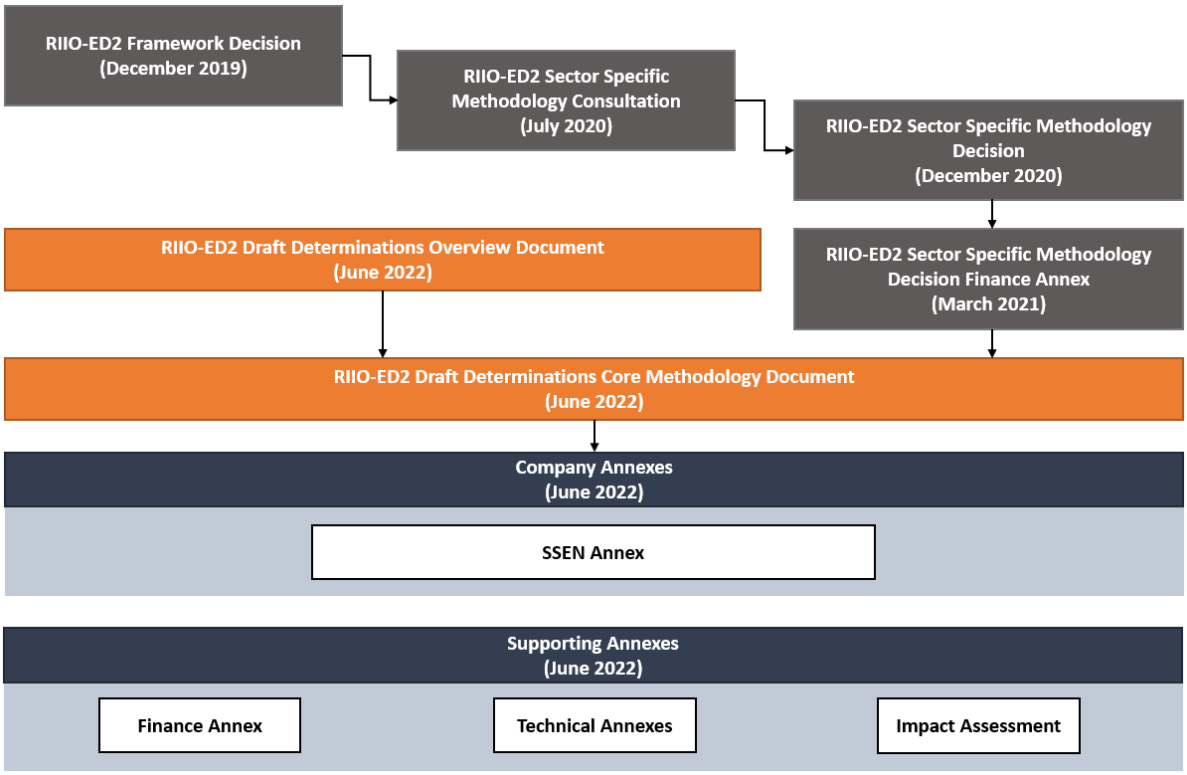
1.3 This document sets out any proposals that are specific to SSES, including:

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

1.4 This document is intended to be read alongside the RIIO-ED2 Draft Determinations Core Methodology Document and RIIO-ED2 Draft Determinations Overview Document. Figure 1 sets out where you can find information about other areas of our RIIO-ED2 Draft Determinations.

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

Figure 1: Draft Determinations document map



What comprises SSEN's Draft Determinations?

1.5 This section sets out a high-level summary of the elements of our Draft Determinations which are specific to SSEN.

1.6 Table 1 summarises our assessment of SSEN across the four stages of the BPI and where you can find additional information about our consultation position for each stage.

Table 1: Summary of proposed SSEN BPI performance

BPI stage	Ofgem proposed position	Further detail
Stage 1 Minimum Requirements	Pass	Overview Document for approach to assessment and rationale
Stage 2 Consumer Value Propositions	£2.8m reward	Chapter 2 of this document
Stage 3 Penalty	£4.4m penalty	Chapter 3 of this document
Stage 4 Reward	No reward	Chapter 3 of this document

BPI stage	Ofgem proposed position	Further detail
Cap calculation	N/A	Overview Document for approach to assessment and rationale
Overall	£1.6m penalty	

1.7 The cost confidence assessment we have undertaken as part of this process results in a proposed Totex[2] Incentive Mechanism (TIM) incentive rate for SSEN of 49.2%. For further details on the TIM, see Chapter 9 in the Overview Document.

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

Table 2: SSEN RIIO-ED2 submitted Totex versus proposed Totex (£m, 2020/21)[3]

Cost area	SSEN submitted Totex	Ofgem proposed Totex	Difference	Difference
Load related capex	490	386	-104	-21.2%
Non-load related capex	1,330	1,010	-320	-24.1%
Non-operating capex	221	173	-48	-21.6%
Network operating costs	716	561	-154	-21.6%
Closely associated indirects	981	768	-212	-21.6%
Business support costs	495	388	-107	-21.6%
Totex	4,232	3,287	-945	-22.3%

1.9 The common outputs that we are proposing for all DNOs in RIIO-ED2 are set out in Table 3 with further details provided in the Core Methodology Document. Table

[2] Totex is a shorthand term for total expenditure.
[3] Submitted Totex is net costs, including our cost exclusions and reallocations and excluding Real Price Effects (RPE), ongoing efficiency, non-controllable costs, and pass-through costs (except New Transmission Capacity Charges (NTCC)). Proposed Totex is net costs, excluding RPEs, non-controllable costs, pass-through costs (except NTCC), but includes Ofgem's view of ongoing efficiency and is before post-modelling adjustments for uncertainty mechanisms.

3 also sets out the bespoke outputs that we are proposing to apply to SSEN in RIIO-ED2 (further details are contained within Chapter 2).

Table 3: Summary of proposed common and bespoke outputs applicable to SSEN

Output name	Output Type	Further detail
Common outputs for the ED Sector		
Annual environmental report	ODI-R	Chapter 3, Core Methodology Document
Distribution System Operator (DSO) incentive	ODI-F	Chapter 4 Core Methodology Document
Digitalisation licence condition	Licence Condition (LC)	Chapter 4 Core Methodology Document
Technology Business Management taxonomy for classifying digital/IT spend	ODI-R	Chapter 4 Core Methodology Document
Innovation project to modernise regulatory reporting	ODI-R	Chapter 4 Core Methodology Document
Customer satisfaction survey	ODI-F	Chapter 5, Core Methodology Document
Complaints metric	ODI-F	Chapter 5, Core Methodology Document
Time to connect	ODI-F	Chapter 5, Core Methodology Document
Guaranteed standards of performance – Connections	LC	Chapter 5, Core Methodology Document
Major connections incentive	ODI-F	Chapter 5, Core Methodology Document and Chapter 2 of this document
Treating domestic customers fairly	LC	Chapter 5, Core Methodology Document
Consumer vulnerability incentive	ODI-F	Chapter 5, Core Methodology Document and Chapter 2 of this document
Vulnerability annual report	ODI-R	Chapter 5, Core Methodology Document

Output name	Output Type	Further detail
Interruptions incentive scheme	ODI-F	Chapter 6, Core Methodology Document and Chapter 2 of this document
Guaranteed standards of performance – reliability	LC	Chapter 6, Core Methodology Document
Network asset risk metric (NARM)	PCD, ODI-F	Chapter 6, Core Methodology Document and Chapter 2 of this document
Cyber resilience IT	PCD	Chapter 6, Core Methodology Document and Confidential SSEN annex
Cyber resilience operational technology (OT)	PCD	Chapter 6, Core Methodology Document and Confidential SSEN annex
Bespoke outputs for SSEN		
Protecting Marine Biodiversity	CVP	Chapter 2 of this document
Personal Resilience Plans	CVP	Chapter 2 of this document
Embedded Whole Systems Support Services for Local Authorities	CVP no reward	Chapter 2 of this document
Shetland	Licence Obligation (LO)	Chapter 2 of this document

1.10 The common UMs that we are proposing for all DNOs in RIIO-ED2 are set out in Table 4 with further details in the Core Methodology Document. We also set out the bespoke UMs that we are proposing for SSEN in Table 4 (further detail is in Chapter 4).

Table 4: Summary of proposed common and bespoke UMs applicable to SSEN

UM Name	UM type	Further detail
Common UMs to the ED Sector		

UM Name	UM type	Further detail
Coordinated Adjustment Mechanism	Re-opener	Overview, Chapter 5 of SSMD[4]
Real Price Effects	Indexation	Annex 2, Chapter 4 of SSMD
Ofgem licence fee	Pass-through	Annex 2, Chapter 8 of SSMD
Business rates	Pass-through	Annex 2, Chapter 8 of SSMD
Transmission Connection Point Charges	Pass-through	Annex 2, Chapter 8 of SSMD
Pension deficit repair mechanism	Pass-through	Annex 2, Chapter 8 of SSMD
Ring-fence costs	Pass-through	Annex 2, Chapter 8 of SSMD
Miscellaneous pass-through	Pass-through	Annex 2, Chapter 8 of SSMD
Environmental legislation	Re-opener	Chapter 3, Core Methodology Document
Visual amenity	Use It Or Lose It (UIOLI)	Chapter 3, Core Methodology Document
Polychlorinated biphenyls	Volume driver	Chapter 3, Core Methodology Document
Load Related Expenditure (LRE) – Secondary Reinforcement	Volume driver	Chapter 3, Core Methodology Document
LRE – Low Voltage (LV) Services	Volume driver	Chapter 3, Core Methodology Document
LRE - General	Re-opener	Chapter 3, Core Methodology Document

[4] For more details on our Sector Specific Methodology Decision (SSMD) https://www.ofgem.gov.uk/publications/riio-ed2-sector-specific-methodology-decision.

UM Name	UM type	Further detail
Net Zero	Re-opener	Chapter 3, Core Methodology Document
Digitalisation	Re-opener	Chapter 4, Core Methodology Document
DSO	Re-opener	Chapter 4, Core Methodology Document
Worst Served Customers	UIOLI	Chapter 6, Core Methodology Document
Severe Weather 1-in-20	Pass through	Chapter 6, Core Methodology Document
Storm Arwen	Re-opener	Chapter 6, Overview Document
Physical security	Re-opener	Chapter 6, Core Methodology Document
Electricity system restoration	Re-opener	Chapter 6, Core Methodology Document
Cyber resilience OT and IT	Re-opener	Chapter 6, Core Methodology Document and Confidential SSEN annex
Cyber Resilience OT	UIOLI	Chapter 6, Core Methodology Document and Confidential SSEN annex
Smart meter information technology costs	Pass-through	Chapter 7, Core Methodology Document
Smart meter communications costs	Pass-through	Chapter 7, Core Methodology Document
Streetworks costs	Re-opener	Chapter 7, Core Methodology Document
Rail electrification	Re-opener	Chapter 7, Core Methodology Document
High Value Projects	Re-opener	Chapter 7, Core Methodology Document
Cost of debt indexation	Indexation	Chapter 2, Finance Annex

UM Name	UM type	Further detail
Cost of equity indexation	Indexation	Chapter 3, Finance Annex
Tax review	Re-opener	Chapter 7, Finance Annex
Inflation indexation of Regulatory Asset Value (RAV)	Indexation	Chapter 9, Finance Annex
Electric Vehicle Provider of Last Resort	To be confirmed	Chapter 6, Overview Document
Proposed bespoke UMs to SSEN		
Shetland	Re-opener	Chapter 4
Hebrides & Orkney	Re-opener	Chapter 4

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

Table 5: Summary of proposed NIA applicable to SSEN

Consultation position for SSEN NIA
£9.6m initial allowance, to be reviewed in 2025

1.12 Table 6 summarises the financing arrangements that we are proposing to apply to SSEN and all other DNOs. Please refer to Chapter 4 of our Finance Annex for more detail on these areas.

Table 6: Summary of financing arrangements applicable to SSEN.

Finance Parameter	SSEN Rate	Source
Notional gearing	60%	See Table 19 in Finance Annex
Cost of equity allowance	4.75%	
Cost of debt allowance	2.26%	

Finance Parameter	SSEN Rate	Source
WACC allowance	3.26%	

2. Setting outputs

Introduction

2.1 This chapter sets out our Draft Determinations for output areas that specifically apply to SSEN. In this chapter we provide our proposals on:

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

Common outputs

2.2 The SSEN-specific parameters for the common outputs which we are proposing for all DNOs in RIIO-ED2 are set out in the tables below. Further details on these outputs and our consultation position are set out in the Core Methodology Document.

Interruptions Incentive Scheme

2.3 Tables 7-10 summarise SSEN's unplanned Customer Interruptions (CI) and Customer Minutes Lost (CML) targets and revenue cap and collar.

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

2.5 Please refer to Chapter 6 of the Core Methodology Document for our consultation position and rationale. Planned CI and CML targets will be updated at Final Determinations, once 2021/22 performance data has been finalised.

Table 7: Consultation position – IIS – unplanned CI targets

	2023/24	2024/25	2025/26	2026/27	2027/28
SSEH	59.1	58.8	58.5	58.3	58.0
SSES	47.7	46.9	46.2	45.5	44.9

Table 8: Consultation position – IIS – unplanned CML targets

	2023/24	2024/25	2025/26	2026/27	2027/28
SSEH	46.4	45.7	45.1	44.4	43.7
SSES	42.5	41.9	41.2	40.6	40.0

Table 9: Consultation position – IIS – revenue cap (£m)

	2023/24	2024/25	2025/26	2026/27	2027/28
SSEH	6.0	6.0	6.0	6.0	6.0
SSES	11.5	11.5	11.5	11.5	11.5

Table 10: Consultation position – IIS – revenue collar (£m)

	2023/24	2024/25	2025/26	2026/27	2027/28
SSEH	15.1	15.1	15.1	15.1	15.1
SSES	28.8	28.8	28.8	28.8	28.8

NARM PCD and ODI-F

2.6 Table 11 summarises our proposals for SSEN's Network Asset Risk Metric (NARM) baseline network risk output for RIIO-ED2. Please refer to Chapter 6 of the Core Methodology Document for our consultation position and rationale.

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

Network	Draft Determinations Proposed Baseline Network Risk Output
SSEH	218,499,356
SSES	685,313,429

Consumer Vulnerability Incentive (ODI-F)

2.7 Tables 12 and 13 summarise SSEN'S vulnerability incentive targets for the value of fuel poverty services delivered and the value of low carbon support services delivered, with financial targets set out in net present value (NPV).

Table 12 Consultation position – Consumer Vulnerability Incentive (ODI-F): the value of fuel poverty services delivered (NPV, £m)

	Year 2 target	Year 5 target
SSEN bespoke target	£2.6m	£15.7m

Table 13 Consultation position – Consumer Vulnerability Incentive (ODI-F): the value of low carbon support services delivered (NPV, £m)

	Year 2 target	Year 5 target
SSEN bespoke target	£1.7m	£6.4m

2.8 The NPV values proposed by SSEN in tables 12 and 13 are the forecasted values based on the delivery of its vulnerability strategy.

2.9 We have reviewed the targets proposed and the supporting rationale. That review is ongoing, and we will work with all DNOs to ensure that the DNOs' targets are complete, comparable and independently assured using the common Social Value Framework ahead of Final Determinations.

2.10 Our approach to bespoke target setting and further detail on these metrics can be found in Chapter 5 of our Core Methodology Document.

Major Connections Incentive (ODI-F)

2.11 The Major Connections Incentive will be an ODI-F with a maximum penalty exposure of 0.9% base revenue and applied to performance in the Major Connections Customer Satisfaction Survey.[5] Please see "Creating consistency in baselines for ODI incentive rates, caps, or collars" in section 10 of the Finance Annex for our proposal to translate this incentive to 0.35% RoRE.

2.12 The penalty is calculated by applying approximately a 0.1% penalty rate per Relevant Market Segment (RMS), and will be applied based on the number of RMS where effective competition has not been demonstrated.[6] Based on the outcomes of the Distribution Price Control Review 5 ('DPCR5') Competition Test and our minded-to proposals on the competition review for:

[5] See the Major Connections Incentive section of the Core Methodology Document for more details.
[6] For more details on which RMS have demonstrated evidence of effective competition, see our minded-to proposals https://www.ofgem.gov.uk/publications/consultation-our-review-competition-electricity-distribution-connections-market

- SSEN's SSEH region, there would be a maximum penalty of 0.8% of base revenue
- SSEN's SSES region, there would be a maximum penalty of 0.5% of base revenue.

Common outputs consultation question

SSEN-Q1. What are your views on the company specific parameters we have proposed for the common outputs that are set out above?

Bespoke outputs

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

2.14 We said that companies were required to support their bespoke proposals with robust justification. In our Business Plan Guidance (BPG)[7], we asked for this justification to ensure that the potential consumer benefits put forward under bespoke proposals were significant enough to merit introducing any additional cost and/or regulatory complexity associated with them.

2.15 In making our Draft Determinations for RIIO-ED2 outputs, we have sought to strike a balance between these trade-offs for each bespoke proposal. You can find the background and our assessment approach in our Overview Document.

2.16 SSEN has submitted 14 bespoke outputs and five CVPs. The bespoke outputs include one bespoke ODI-R, four bespoke ODI-Fs, eight PCDs and one licence obligation. We provide a summary of each bespoke proposal below, with the full details of each bespoke output put forward by SSEN found in its Business Plan submission.[8] We set out our assessment of each output and detail which of them we are proposing to accept and apply to SSEN in RIIO-ED2.

2.17 SSEN also provided 24 'Aims' in its RIIO-ED2 Business Plan. We welcome SSEN's commitment to delivering these outputs. However, we do not consider that the SSEN Aims require bespoke reporting requirements in the licence as these will be covered through their obligations under Standard Licence Condition 50 (Business

[7] https://www.ofgem.gov.uk/publications/riio-ed2-business-plan-guidance
[8] https://ssenfuture.co.uk/

plan commitment reporting) or in common reporting licence obligations, eg the Annual Environmental Report (AER).

2.18 We encourage SSEN to maintain transparency of delivery with its stakeholders on its RIIO-ED2 performance through its own reporting procedures. For the full list of SSEN's Aims, please see Appendix 2.

Bespoke Output Delivery Incentives

2.19 Table 14 below summarises the bespoke outputs that SSEN submitted as part of its Business Plan and outlines our consultation position.

Table 14: SSEN's bespoke ODI proposals

Output name and description	Consultation position
Digital satisfaction (ODI-F): Maintain/ improve industry-leading 9.3 digital satisfaction score	**Reject:** We are proposing to reject this proposal as we found that SSEN provided insufficient evidence to support the use of an ODI-F. Stakeholders should note that, in light of Storm Arwen, we are proposing to develop additional reporting metrics for communication channels, such as websites, applications, and social media; and we are considering whether these metrics should feed into RIIO-ED2 Broad Measure of Customer Satisfaction incentive. Please refer to Chapter 5 of our Core Methodology Document for more information.
Facilitating participation in flexibility markets (ODI-F): Set up an annual flexibility providers' forum and survey enabling regular feedback.	**Reject:** We are introducing a DSO incentive as a common ODI-F which includes an annual stakeholder survey, as detailed in Chapter 4 of our Core Methodology Document.
Transparency of information (ODI-F): Provide timely, accurate and accessible DSO data across all DSO roles.	**Reject:** We are introducing a DSO incentive as a common ODI-F. This includes data publication and provision under the DSO performance panel assessment and stakeholder survey criteria. Further information on the DSO incentive can be found in Chapter 4 of our Core Methodology Document.
Improving provision of forecasting information (ODI-F): Continually improve the provision of forecast information for both new and existing flexibility markets.	**Reject:** We are introducing a DSO incentive as a common ODI-F. This includes a forecasting accuracy metric as regularly reported evidence within the DSO performance panel assessment. Further information on the DSO incentive can be found in Chapter 4 of our Core Methodology Document.
Whole systems feedback survey: Track key stakeholder feedback annually through a qualitative and quantitative survey.	**Reject:** SSEN states in its Business Plan that the feedback survey is part of work being undertaken through their proposed 'Whole System Support' CVP. We do not consider it appropriate to duplicate stakeholder survey arrangements already existing in stakeholder engagement plans as well as in the proposed CVP activities, nor to establish separate processes requiring additional funding to those already in place. We expect to see feedback on whole systems support incorporated into existing processes.

Bespoke ODIs consultation question

SSEN-Q2. What are your views on our proposals for SSEN's bespoke ODIs?

Bespoke Price Control Deliverables

2.20 Table 15 below summarises the bespoke PCD proposals that SSEN submitted as part of its Business Plan and outlines our consultation position.

Table 15: SSEN's bespoke PCD proposals

Output name and description	Consultation position
Worst-Served Customers (WSC): By 2028 improve the network performance for at least 75% of worst-served customers	**Reject:** We are proposing a common UIOLI allowance for each DNO to make service improvements for their WSC. Our consultation position is set out in Chapter 6 of our Core Methodology Document.
Subsea cables – targeted intervention: Replacement or augmentation of 15 subsea cables with the greatest needs case	**Reject:** We are proposing to reject this proposal, as it is covered within NARM.
Subsea cables – strategic upgrades: Three new cables between Skye and Uist, and Pentland Firth West to Orkney	**Reject:** We are proposing to reject this proposal as it is covered within NARM.
Distributed Embedded Generation: spend a total of £42.5m on standby generation for island communities, across seven Distributed Embedded Generation (DEG) sites.	**Reject:** We are proposing to reject the proposal for a bespoke PCD, as we are not satisfied that SSEN has provided sufficient evidence to justify that the delivery risk is materially different in RIIO-ED2. Therefore, we consider that SSEN continues to be best placed to manage this risk going forward.
Reduce SF6 emissions from our assets: To reduce SF6 emission from assets by a minimum of 35% (from 2019/20 levels), in line with SSEN's science-based target of 1.5ºC.	**Reject:** We are proposing to reject this proposal, as we are not satisfied that SSEN has provided the evidence or justification to support the proposed activities at the identified cost to consumers. We will engage with the DNOs on their methodology used to identify SF6 contaminated assets for the purposes of the AER and the environmental reopener.
Nature-Based Solution for Carbon Removal: To deliver 2,000 hectares of woodland restoration and 1,200 hectares of peatland restoration which is expected to remove over 300,000 tCO2e by 2045 and provide 3,000 biodiversity units.	**Reject:** We are proposing to reject this proposal as we do not consider it to be good value for money for consumers as the restoration efforts are not linked to network projects, developments, or delivering benefits on existing sites. SSEN has not provided a sufficient methodology for how long-term carbon sequestration will be accounted for within their science-based target. We request that SSEN submit further information as outlined in the Core Methodology Document.
Polychlorinated Biphenyl (PCB) compounds: Asset	**Accept as common UM**. With adjustment to form a common volume driver design for all DNOs with

Output name and description	Consultation position
replacement programme to address PCB contaminated assets	an overhead network. Additional detail can be found in Chapter 3 of the Core Methodology Document
Reduce leakage from fluid-filled cables: To remove 72km of oil-filled cables on the network by 2028 and reduce leakages by a minimum of 20%.	**Reject:** We are proposing to reject this bespoke PCD in the absence of any justification as to why delivery is at risk. SSEN will be required to report on fluid-filled cables as part of the AER and we request that SSEN submit further information as outlined in the Core Methodology Document.

Bespoke Licence Obligations (LO)

2.21 Table 16 below summarises the bespoke LO proposal that SSEN submitted as part of its Business Plan and our consultation position.

Table 16: SSEN's bespoke LO

Output name and description	Consultation position
Shetland: Investment to extend operational life of Lerwick Power Station until 2035 to ensure security of supply to customers on the island.	**Accept**: We are proposing to accept this as we are satisfied that SSEN has provided evidence and justification to support the proposed bespoke LO. We support SSEN's proposal as we recognise the potential implications for security of supply, in the interim, prior to the new transmission connection coming online, and in the longer term. We note from the proposal that SSEN is committed to enhancing reliability of supply to island customers. It notes that there are limited options to deliver this solution and we are of the view that this is the most efficient option given timescales indicated. We will work with SSEN on the details of this LO ahead of Final Determinations.

Consumer Value Propositions

2.22 Table 17 below summarises the CVP proposals that SSEN submitted as part of its Business Plan and our consultation position in relation to each. Where necessary, we have provided detail on our rationale for our consultation position in the section following the table.

Table 17: SSEN's CVP proposals

Output name and description	Consultation Position
Protecting marine biodiversity: To improve the biodiversity in the seas around the island communities in locations at or close to SSEN's subsea cables. This includes the restoration of 17 hectares of seagrass meadows to support sea life and fish populations.	**Accept and reward, with conditions**. We consider that SSEN's proposal goes beyond business as usual (BAU) and provides a consumer benefit. Please see paragraphs 2.23 to 2.28 below for further detail.
Personal Resilience Plans: Providing Personal Resilience Plans for all newly registered Priority Services Registered (PSR) customers and retrospectively incorporating the most medically vulnerable customers, and allowing all PSR1+ customers without access to alternative back-up generation to purchase battery packs using a voucher.	**Accept and partially reward:** We do not consider that the Personal Resilience Plan provision element of this proposal goes beyond BAU and the expectation that DNOs have a sophisticated approach to PSR management and power cut support in RIIO-ED2. However, we consider that the provision of vouchers for battery packs for all eligible PSR1+ customers to go beyond BAU and provides demonstrable consumer benefit. Please see paragraphs 2.29 to 2.34 below for further detail.
Embedded Whole Systems Support Services for Local Authorities: Provide support to local authorities and community groups by applying our expertise to facilitate the optimisation of the electricity network, delivery of whole system opportunities and net zero transition.	**Accept no reward:** We are proposing to accept this activity in baseline funding but reject the reward. We do not consider that this proposal goes beyond baseline expectations in terms of proactive rather than reactive DNO engagement with local authorities. However, we will fund the activity in baseline as the activity should deliver positive benefits for consumers. We note there is some stakeholder support for this CVP from local authorities, but do not agree that DNO consumers should reward activity that should be undertaken as a matter of course. As a result, we propose that this proposal does not receive a CVP reward.
Supporting broadband to island communities through DNO assets: Speed up the rollout of faster broadband, which aims to deliver value for consumers, businesses and communities in remote locations.	**Reject:** We are proposing to reject this activity and the associated reward. We recognise the wide social value of the connectivity work, and the strong consumer support for SSEN providing additional broadband capacity to the islands, but do not agree that solely DNO consumers should bear the cost. In particular, we note that there are subsidised and commercial partnership routes already available that the DNO could utilise that do not appear to have been explored by the DNO for the purposes of its Business Plan proposal.
'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation' combined - SSEN proposed a CVP with two	**Reject:** We are proposing to reject this CVP because we consider that it does not provide good value for money for consumers. We consider that the level of direct network benefits does not justify the level of spending. Please see further information

Output name and description	Consultation Position
components. The first is to work with local partners to deliver energy efficiency interventions. The second is to stimulate local market flexibility.	under the heading 'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation' below.

CVP Consultation questions

SSEN-Q3. What are your views on our proposals to reject SSEN's CVP relating to Embedded Whole Systems Support Services for Local Authorities and its CVP relating to supporting broadband to island communities through DNO assets?

Protecting marine biodiversity: Life Below Water

Table 18: Protecting marine biodiversity: Life Below Water description

Protecting marine biodiversity: Life Below Water	
Purpose	To improve the biodiversity in the seas around their island communities, in locations at or close to their subsea cables, through targeted seagrass meadow planting
Benefit	Reduce carbon in the atmosphere, decrease coastal erosion, protect coastal areas from storm damage while improving water quality and sea life biodiversity

Background

2.23 SSEN has proposed to improve biodiversity in the marine environments at or near its subsea cables around the island communities it serves. It proposes to plant seagrass meadows which play a critical role in the equilibrium of coastal ecosystems. Over the last century, up to 92% of the UK's seagrass has disappeared.[9]

[9] Green, A. E., Unsworth, R. K. F., Chadwick, M. A., & Jones, P. J. S. (2021). Historical Analysis Exposes Catastrophic Seagrass Loss for the United Kingdom. Frontiers in Plant Science, 12. https://doi.org/10.3389/fpls.2021.629962

Consultation position

Table 19: Consultation position – Protecting marine biodiversity CVP

Output parameter	Consultation position
Deliverable	Plant a minimum of 17 hectares of seagrass beds at or near subsea cable sites
NPV value (£m)	£3.4m
CVP reward (£m)	£1.7m
Proposed approach to allowance clawback	Return of funding for seagrass planting activities under 17 hectares and proportionate reward

Rationale for consultation position

2.24 We propose to accept SSEN's CVP to protect marine biodiversity by investing in seagrass planting alongside its subsea cables. We consider SSEN's proposal to pursue marine biodiversity to remediate impacts from its subsea projects to be beyond its baseline expectations and to provide a consumer value benefit.

2.25 The Challenge Group (CG) indicated its partial support as this initiative could bring substantial benefits in marine biodiversity, carbon storage and coastal climate resilience. However, it noted that there are significant risks associated with deliverability, including cost, which would have a significant impact on the benefits. The CG would support a reward subject to it being possible to establish a reasonably robust benefit calculation.

2.26 We have concerns about the methodology used by SSEN to calculate consumer benefits and the resulting CVP reward amount. We intend to engage with SSEN to develop a sufficiently robust methodology for calculating the value that consumers place on biodiversity ahead of RIIO-ED2 Final Determinations.

2.27 SSEN has indicated in its proposal that there is stakeholder support for this proposal and that SSEN should explore new and different ways to address biodiversity across its licence areas. While SSEN has not proposed a methodology for monitoring the biodiversity improvements, we are of a view that this can be adequately addressed through a commitment between SSEN and the group(s) to deliver the seagrass planting. Furthermore, we propose that SSEN report on the progress of this proposal in the Annual Environmental Report.

2.28 SSEN has committed to implementing a clawback methodology that returns both the funding and any proportionate associated element of the reward to

consumers. We will continue to engage with SSEN to determine a methodology to do so in the event of under- or non-delivery.

Consultation question

SSEN-Q4. What are your views on our consultation position to accept SSEN's CVP to protect marine biodiversity (life below water)?

Personal Resilience Plans

Table 20: Personal Resilience Plan description

Personal Resilience Plan	
Purpose	To provide all medically dependent customers without access to alternative back-up generation with battery packs.
Benefit	Reduces stress for those most vulnerable during a loss of supply.

Background

2.29 In its Business Plan, SSEN proposed a CVP to deliver tailored resilience plans to all existing medically dependent customers and to all new PSR sign ups. In addition, SSEN proposed to provide at least 20,000 medically dependent customers with a battery pack during RIIO-ED2 as part of this CVP. The cost SSEN has requested to deliver this proposal is £7.3m. This cost is broken down into £0.8m for the provision of the personal resilience plans and £6.5m for the provision of battery packs.

Consultation position

Table 21: Consultation position – Personal Resilience Plan CVP

Output parameter	**Consultation position**
Deliverable	Tailored resilience plans to all medically dependent customers and all new PSR sign ups – funded through baseline allowances. Battery packs provided and installed for at least 20,000 medically dependent customers.
NPV value (£m)	£3.9m
CVP reward (£m)	£1.1m
Proposed approach to allowance clawback	Reporting through the annual vulnerability ODI-R report.

Output parameter	Consultation position
	Clawback at the end of period – based on the outcomes delivered. The percentage value forecast not delivered applied to the CVP reward and returned to customers.

Rationale for consultation position

2.30 We are proposing to accept the battery provision element of this proposal as a CVP with reward. We consider that a CVP reward should only be applied to the battery provision element of the proposal as we consider that provision of personal resilience plans should be delivered by SSEN as part of its baseline funded vulnerability strategy.

2.31 We consider that the provision of personal resilience plans does not demonstrate ambition beyond the vulnerability baseline expectations. We expect DNOs to have a data and information strategy to meet the needs of vulnerable customers in line with Principle 1 of the baseline expectations.[10] This should apply to how DNOs effectively support those vulnerable customers during a loss of supply.

2.32 We understand that other DNOs dispatch back-up generators and/or batteries in power interruptions. However, we are supportive of SSEN's ambition to install the battery packs within the homes of medically dependent customers in vulnerable situations to offer some protection and provide peace of mind in the event of shortages and delays in provision.

2.33 SSEN's CEG is supportive of this CVP proposal but raises questions regarding the process for a customer obtaining a battery pack, noting that it should be confirmed who is responsible for exploring other funding options in advance of providing that customer with an SSEN funded battery pack. We consider that SSEN should make this detail clear to customers in its delivery of this proposal.

2.34 The CG noted its partial support for the CVP proposal overall. We share its concerns regarding how tailored the personal resilience plans would be for the cost. The CG was positive about SSEN's testing of the battery packs as this helps to justify the positive benefits stated.

[10] RIIO-ED2 SSMD Annex 1, Appendix 3 RIIO-ED2 Sector Specific Methodology Decision | Ofgem

Consultation question

SSEN-Q5. What are your views on our consultation position to accept and partially reward SSEN's CVP for personal resilience plans?

'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation'

Background

2.35 SSEN proposed a CVP bringing together two components. The first related to working with local partners to deliver energy efficiency improvements in its licence areas. The second involved stimulating local flexibility markets through, for instance community engagement, funding feasibility studies and incentives for low carbon technology adoption or guidance.

2.36 As part of the energy efficiency component of the CVP, SSEN proposed funding four types of energy efficiency interventions: LED light bulbs, smart storage heating, home insulation and smart controls. SSEN proposed spending approximately £22.9m on these energy efficiency interventions through a 50% co-funding model. The proposed cost of the local flexibility market stimulation component of the CVP was approximately £13.9m across a range of potential interventions, examples of which are provided in the preceding paragraph.

2.37 SSEN proposed the two components as separate CVPs in its draft business plan, but merged them for its final business plan, saving 25% in delivery costs.

Consultation position

Table 22: Consultation position – 'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation' CVP

CVP	Consultation position
Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation'	Reject

Rationale for consultation position

2.38 We note that neither the CG nor SSEN's CEG recommended funding this CVP. The CG questioned whether the proposed activities go significantly beyond what might

be expected from a proactive DSO. The CEG expressed concerns relating to: the value for money of the proposal and the low social return on investment; the type of measures being proposed by SSEN; the scale of investment; whether funding energy efficiency intervention is an appropriate role for a DNO/DSO; whether delivering advice should be considered as part of the DSO minimum requirements outlined in our Business Plan Guidance; that interventions represented a postcode lottery; and that the support from domestic customers was biased on an ill-informed understanding of the bill impact.

2.39 The extent to which a CVP has received the support of the CG and CEG and whether any concerns are satisfactorily explained is set out in our Business Plan Guidance as one of our assessment criteria.[11] We do not consider that SSEN has adequately addressed the CG or CEG concerns, many of which we share.

2.40 In particular, we share the CEG's concern around the scale of investment and the low social return for investment. We are specifically concerned about the low level of network benefits associated with the proposals, which total £5.9m and come entirely from two of the proposed energy efficiency interventions (LED light bulbs and smart storage heating). We are also concerned that the 'Local and community flexibility market stimulation' component has a negative net present value of -£2.25m over ten years and offers no network benefits.

2.41 DSO baseline expectation 3.1.4[12] requires DNOs to tailor both their information provision and engagement approaches to reflect different needs of potential market participants, including groups in vulnerable situations. We are not satisfied that the proposals relating to flexibility market stimulation go significantly beyond this DSO baseline expectation, a concern that was also expressed by the CEG. Combined with the negative NPV of this component of the CVP we do not believe it should be funded.

Consultation question

SSEN-Q6. What are your views on our proposal for SSEN's 'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation' CVP?

[11] Paragraph 8.21, RIIO-ED2 Business Plan Guidance | Ofgem
[12] Appendix 4, p.81 RIIO-ED2 Business Plan Guidance | Ofgem

3. Setting baseline allowance

Introduction

3.1 This chapter sets out our Draft Determinations on baseline allowances for the different cost areas within SSEN's Business Plan submission. We intend this chapter to be read alongside other parts of our Draft Determinations that set out our overall approach to RIIO-ED2.

Baseline allowances

3.2 Baseline Totex referenced in this chapter comprises forecast controllable costs[13] and is inclusive of our proposed ongoing efficiency challenge, unless stated otherwise. Furthermore, the figures presented in this chapter do not include real price effects (RPEs) to allow comparison with DNOs' submissions.

3.3 Table 23 and Table 24 compare SSEN's submitted baseline Totex for each of its networks with our Draft Determinations position at a disaggregated cost activity level.

Table 23: SSEH RIIO-ED2 submitted Totex versus proposed Totex by cost activity (£m, 2020/21 price base)

SSEH	Cost Activity	Submitted Totex	Proposed Totex	Difference	Difference
Capex[14]	Connections	47	37	-10	-22.0%
Capex	New Transmission Capacity Charges	22	17	-5	-22.4%
Capex	Primary Reinforcement	41	32	-9	-21.4%
Capex	Secondary Reinforcement	15	12	-3	-21.5%
Capex	Fault Level Reinforcement	0	0	-0	-20.0%
Capex	Civil Works Condition Driven	6	5	-1	-22.0%

[13] Non-controllable costs, while included in overall allowed revenue recoverable by DNOs, are not included in baseline Totex and are treated separately. See Chapter 7 of the Core Methodology document for more details on what is and isn't included in the numbers presented here.
[14] Capex is a shorthand term for capital expenditure and Opex is a shorthand term for operational expenditure

Capex	Blackstart	2	1	-0	-20.5%
Capex	Legal & Safety	4	3	-1	-22.0%
Capex	Quality of Service (QoS) & North of Scotland Resilience	23	-	-23	-100.0%
Capex	Flood Mitigation	1	0	-0	-21.9%
Capex	Physical Security	-	-	-	-
Capex	Rising and Lateral Mains	5	4	-1	-22.4%
Capex	Overhead Line Clearances	26	20	-6	-22.5%
Capex	Losses	1	1	-0	-22.2%
Capex	Environmental Reporting	35	27	-8	-21.7%
Capex	Operational IT and telecoms	40	31	-9	-22.2%
Capex	Worst Served Customers	22	17	-5	-22.1%
Capex	Visual Amenity	4	3	-1	-22.0%
Capex	Diversions (excl Rail)	15	12	-3	-22.0%
Capex	Diversions Rail Electrification	-	-	-	-
Capex	Civil Works Asset Replacement Driven	7	5	-2	-22.2%
Capex	Asset Replacement NARM	108	84	-24	-21.8%
Capex	Asset Replacement Non-NARM	60	47	-13	-22.2%
Capex	Asset Refurbishment Non-NARM	19	14	-4	-22.4%
Capex	Asset Refurbishment NARM	1	1	-0	-22.6%
Capex	IT and Telecoms (Non-Op)	48	38	-11	-21.9%
Capex	Non-Op Property	17	13	-4	-22.3%

Capex	Vehicles and Transport (Non-Op)	7	5	-2	-21.8%
Capex	Small Tools and Equipment	9	7	-2	-22.5%
Capex	High Value Projects (HVP) RIIO-ED2	32	25	-7	-21.9%
Capex	Shetland	-	-	-	-
Opex	Tree Cutting	49	38	-11	-22.0%
Opex	Faults	61	47	-13	-22.0%
Opex	Severe Weather 1 in 20	10	-	-10	-100.0%
Opex	Occurrences Not Incentivised (ONIs)	6	5	-1	-22.1%
Opex	Inspections	24	18	-5	-22.0%
Opex	Repair and Maintenance	28	22	-6	-22.1%
Opex	Dismantlement	0	0	-0	-22.1%
Opex	Remote Generation Opex	26	20	-6	-22.0%
Opex	Substation Electricity	7	5	-2	-22.0%
Opex	Smart Metering Roll Out	1	1	-0	-20.5%
Opex	Total Closely associated indirects (CAI)	346	270	-76	-22.1%
Opex	Total Business Support	181	141	-40	-22.1%
Cost activities sub-total[15]		1,356	1,032	-324	-23.9%
Excluded cost activities[16]		-33	-		-
Total Totex (modelled component)		1,323	1,032	-292	-22.0%

[15] Proposed Totex for Worst Served Customers and Visual Amenity are shown here including ongoing efficiency for comparability with other activities, but ongoing efficiency is removed from these two activities as a post-modelling step. See Worst Served Customers and Visual Amenity sections in Chapter 7 of the Core Methodology document for the proposed Totex values excluding ongoing efficiency.

[16] QoS & North of Scotland Resilience, Diversions Rail Electrification and Severe Weather 1 in 20 cost activities are excluded from the modelled component of Totex. See Chapter 7 of the Core Methodology document for details.

Technically assessed Totex	82	55	-27	-32.8%
Total Totex	1,406	1,087	-319	-22.7%

Table 24 SSES RIIO-ED2 submitted Totex versus proposed Totex by cost activity (£m, 2020/21 price base)

SSES	Cost activity	Submitted Totex	Proposed Totex	Difference	Difference
Capex	Connections	147	117	-31	-20.9%
Capex	New Transmission Capacity Charges	2	1	-0	-21.9%
Capex	Primary Reinforcement	114	90	-24	-20.9%
Capex	Secondary Reinforcement	51	40	-11	-21.4%
Capex	Fault Level Reinforcement	52	41	-11	-20.8%
Capex	Civil Works Condition Driven	22	17	-5	-21.4%
Capex	Blackstart	4	3	-1	-20.0%
Capex	Legal & Safety	10	8	-2	-21.4%
Capex	QoS & North of Scotland Resilience	18	-	-18	-100.0%
Capex	Flood Mitigation	24	19	-5	-21.4%
Capex	Physical Security	-	-	-	-
Capex	Rising and Lateral Mains	24	19	-5	-21.8%
Capex	Overhead Line Clearances	34	27	-7	-21.7%
Capex	Losses	1	1	-0	-21.5%
Capex	Environmental Reporting	86	67	-18	-21.2%
Capex	Operational IT and telecoms	75	58	-16	-21.7%
Capex	Worst Served Customers	3	3	-1	-21.4%
Capex	Visual Amenity	7	6	-1	-21.4%

SSES	Cost activity	Submitted Totex	Proposed Totex	Difference	Difference
Capex	Diversions (excl Rail)	97	76	-21	-21.5%
Capex	Diversions Rail Electrification	-	-	-	-
Capex	Civil Works Asset Replacement Driven	13	11	-3	-21.5%
Capex	Asset Replacement NARM	192	151	-41	-21.4%
Capex	Asset Replacement Non-NARM	131	103	-28	-21.5%
Capex	Asset Refurbishment Non-NARM	38	30	-8	-21.7%
Capex	Asset Refurbishment NARM	17	13	-4	-21.2%
Capex	IT and Telecoms (Non-Op)	90	70	-19	-21.3%
Capex	Non-Op Property	18	14	-4	-21.6%
Capex	Vehicles and Transport (Non-Op)	7	6	-2	-21.6%
Capex	Small Tools and Equipment	25	19	-5	-21.5%
Capex	HVP RIIO-ED2	54	42	-12	-22.5%
Capex	Shetland	-	-	-	-
Opex	Tree Cutting	140	110	-30	-21.3%
Opex	Faults	209	164	-45	-21.4%
Opex	Severe Weather 1 in 20	10	-	-10	-100.0%
Opex	Occurrences Not Incentivised (ONIs)	41	32	-9	-21.4%
Opex	Inspections	18	14	-4	-21.4%
Opex	Repair and Maintenance	85	66	-18	-21.4%
Opex	Dismantlement	2	2	-0	-21.4%
Opex	Remote Generation Opex	-	-	-	-

SSES	Cost activity	Submitted Totex	Proposed Totex	Difference	Difference
Opex	Substation Electricity	13	10	-3	-21.4%
Opex	Smart Metering Roll Out	5	4	-1	-20.0%
Opex	Total Closely associated indirects (CAI)	634	499	-136	-21.4%
Opex	Total Business Support	306	240	-66	-21.4%
Cost activities sub-total[17]		2,818	2,194	-624	-22.1%
Excluded cost activities[18]		-27	-		-
Total Totex (modelled component)		2,791	2,194	-597	-21.4%
Technically assessed Totex		36	5	-30	-84.7%
Total Totex		2,826	2,199	-627	-22.2%

Technically assessed costs

3.4 For technically assessed costs, we have made the following adjustments, listed in Table 25 below. Our proposed view of bespoke proposals is presented in Chapter 2. Further details on other items are provided later in this chapter.

[17] Proposed Totex for Worst Served Customers and Visual Amenity are shown here including ongoing efficiency for comparability with other activities, but ongoing efficiency is removed from these two activities as a post-modelling step. See Worst Served Customers and Visual Amenity sections in Chapter 7 of the Core Methodology document for the proposed Totex values excluding ongoing efficiency.

[18] QoS & North of Scotland Resilience, Diversions Rail Electrification and Severe Weather 1 in 20 cost activities are excluded from the modelled component of Totex. See Chapter 7 of the Core Methodology document for details.

Table 25: Consultation position – technically assessed costs

Proposal name	Draft Determinations proposal		
	Submitted	Proposed (1)	Confidence
	£m	£m	
Physical Security	44	0	Lower
Shetland	56	56	Lower
CVP: Supporting broadband to island communities through our assets	8.0	0	High
CVP: Protecting marine biodiversity: life below water	2.6	2.6	Lower
CVP: Personal Resilience Plans	7.3	6.5	High
(1) Proposed costs do not include efficiency challenge			

3.5 For physical site security, SSEN proposed costs for two new system control centres. We agree with SSEN on the general limitations of the existing control room and that the need for new builds is generally clear. However, no specific information is provided regarding the proposed locations, delivery dates, design stages, or procurement strategy for the proposed new control centres. As such, it is not possible to determine how deliverable the proposals are or whether the requested allowances are appropriate. As such we consider these to be lower confidence costs and propose to reject these costs in full.

3.6 For Shetland, SSEN's revised submission (received in April 2022) of £56m was significantly lower than its original Business Plan submission of £100m. In its resubmission, costs were moved from baseline to uncertainty mechanisms. Given this significant change in submitted costs, after the original deadline, we consider these costs to be lower confidence. We do not propose removing any costs at this stage as we have not had sufficient time to fully assess the proposal. We will continue to work with SSEN on its proposal for Shetland in the run up to Final Determinations.

3.7 For its 'broadband to the islands' proposal, we consider that the costs presented were clear, justified, and in line with benchmarked unit costs. However, we do not consider that the activity itself is appropriate for the DNO to undertake, and so propose to reject these costs in full.

3.8 For its marine biodiversity proposal, we consider that SSEN did not provide sufficient independent cost information to support a high confidence classification for these costs. SSEN notes that there is limited cost information available for the UK and their unit cost assumptions noted that ongoing research is required for the upscaling of seagrass planting which may cause costs to decline. However, based on the proposed benefits of seagrass planting to marine ecosystems, soil erosion prevention, and carbon sequestration, we propose to fund this CVP subject to a re-quantification of benefits. For further detail see Chapter 2 of this document.

3.9 For its Personal Resilience Plans proposal, we consider that SSEN provided sufficient cost information to support a high confidence classification for these costs. SSEN notes that four different small battery packs have been trialled as part of the testing of this proposal. We propose removing £0.8m as we consider the provision of Personal Resilience Plans to be BAU activity which SSEN should undertake as part of its delivery of its vulnerability strategy. Assessment of efficient costs for business support activities formed part of the overall Totex modelling. We propose providing funding for the provision of the battery packs.

Engineering Justification Paper (EJP) Review

3.10 We have reviewed each of the individual EJPs submitted by SSEN, as well as the supporting documentation. The EJPs were assessed in accordance with paragraph 2.23 of the Engineering Justification Papers for RIIO-ED2 Guidance document.[19]

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

3.12 Our reviews of the EJPs is one of several assessment tools that has contributed to our overall assessment and proposed costs and volumes. The positions set out in

[19] https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/riio_ed2_engineering_justification_paper_guidance.pdf

this specific section should be considered in the wider context of the cost assessment methodology set out in Chapter 7 of the Core Methodology Document.

3.13 SSEN submitted a total of 150 EJPs to substantiate its RIIO-ED2 submission.

3.14 We consider that SSEN's EJPs are generally well presented. We consider the majority of the needs cases for investment have provided suitable evidence to be considered demonstrated and were broadly in line with wider industry trends.

3.15 We asked supplementary questions (SQ) of SSEN to support the background information and assumptions used within EJPs and to help with our engineering assessment; for example, the source of asset condition data and demand assumptions. As a result of the engineering review of the EJPs, we have identified risks mainly related to optioneering (which in some cases drives volumes) and deliverability.

3.16 A summary of our review assessing SSEN's EJPs as either Justified, Partially Justified, or Unjustified is presented in Table . We have provided more detail on EJPs of significant value where our review determined the EJP to be Partially Justified or Unjustified in Appendix 1.

Table 26: Summary of SSEN's EJP Review

EJP Review Outcome	No. of EJPs
Justified	54
Partially Justified	79
Unjustified	16
Other (Not Reviewed by Engineering Hub)[20]	1
Total EJPs	150

Load Related Investment Proposals

3.17 We consider that SSEN has provided sufficient evidence to demonstrate a need for investment and has presented sufficiently robust optioneering and options selection for the majority of the primary reinforcement investments. While the

[20] Where the EJP was considered out of scope of our engineering assessment, eg the EJP was primarily designed for specialist review other than engineering resource.

need for some investments is based on selected energy scenarios, the assumptions presented by SSEN are reasonable and give confidence that the investment will be necessary under a range of potential future outcomes.

3.18 There are, however, some instances where we were not satisfied that SSEN provided sufficient evidence of the need for investment in RIIO-ED2 against the scenarios presented and the optioneering process appears limited, both in selection of preferred options and the proposed deliver plans. A number of schemes appear to be at an early stage of development which give rises to some concerns regarding cost certainty.

3.19 We consider that SSEN has provided sufficient evidence to demonstrate a need for investment in relation to secondary reinforcement, and at a basic level, the investment types proposed by SSEN appear appropriate. Within the submission and subsequent SQ responses, SSEN provided a high-level overview of the modelling and forecasting methodologies that have been used to estimate the RIIO-ED2 volumes.

3.20 However, the volumes proposed, and associated costs are highly dependent on actual demand uptake forecasts which naturally are based on assumptions. We consider that this leads to a risk that the outturn volumes will differ from those proposed within SSEN's business plan.

3.21 Our LRE review was based on the review of each of SSEN's individual EJPs; some of which are discussed within this document. Our LRE engineering review and recommendations have helped inform the LRE Draft Determination proposals. The overall Draft Determination proposals reflect the wider assessment undertaken, including the processes described in Chapters 3 and 7 of the Core Methodology document.

Non-Load Related Investment Proposals

3.22 Generally, we consider that SSEN has provided sufficient evidence to demonstrate the needs case for the proposed condition-based asset replacement and refurbishment EJPs. However, there are numerous examples where volumes have increased from RIIO-ED1 with limited justification and the associated ramp up presents a risk in deliverability. Based on the information provided by SSEN, the plans in these areas appear to be at an early stage and only generic information regarding optioneering and delivery strategy has been presented.

3.23 SSEN presented several EJPs for subsea cable investments related to the islands of Orkney and the Hebrides. During the review period SSEN proposed changes to its original Business Plan through the Hebrides and Orkney Whole System (HOWS) Uncertainty Mechanism.

3.24 We recognise and understand that there is a need for the proposed investments, however several of the proposed investments would benefit from further individual justification, such as inspection and test data, how the timing of investment has been chosen, detailed costs, and programme information for individual projects. The portfolio of projects also needs to be reviewed to take account of dependencies between individual circuits and to provide an overarching delivery strategy to better clarify the benefits and economies of scale related to projects being undertaken together.

3.25 SSEN's other non-load related EJPs cover a wide range of topic areas, including replacement of new System Control Centres, and IT and Telecom investments. These EJPs are varied in terms of the quality of supporting evidence presented for the proposed investment and we consider that several of the EJPs do not show a sufficient level of maturity to justify the proposed investment; with insufficient evidence provided for aspects such as planning considerations and deliverability.

3.26 We also note that several of these EJPs, mostly in relation to Non-Operational IT investment are dependent on, or enable, other Non-Operational IT investments which will require close control and monitoring to ensure all the benefits are delivered for the budgets stated.

TIM

3.27 Our cost confidence assessment results in a proposed Totex Incentive Mechanism (TIM) incentive rate for SSEN of 49.2%. For further details on the TIM, see Chapter 9 in the Overview Document.

BPI Stage 3

3.28 We propose that SSEN incurs a £4.4m penalty following our BPI Stage 3 assessment.

3.29 Table 27 sets out our proposals on lower confidence cost categories where we have disallowed costs and our rationale for any associated Stage 3 penalties.

Table 27: Draft Determination and rationale for BPI Stage 3

Proposal name	Lower confidence cost disallowance	BPI penalty	Rationale
Physical Security	£44m	£4.4m	Needs case clear however, no specific information is provided regarding the proposed locations, delivery dates, design stages, or procurement strategies for the proposed new control centres. As such, it is not possible to determine how deliverable the proposals are or whether the requested allowances are appropriate.

BPI Stage 4

3.30 We propose that SSEN will earn no reward following our BPI stage 4 assessment.

3.31 Table 28 sets out our proposals on high confidence cost categories and allowances (before the application of RPEs and OE).

Table 28: Draft Determination on Stage 4

Cost category	SSEN view (£m)	Ofgem view (£m)	BPI reward
Modelled costs	4,118.1	3,567.4	N/A
Supporting broadband to island communities through our assets	8.0	0	N/A
Personal Resilience Plans	7.3	6.3	N/A

Consultation Question

SSEN-Q7. What are your views on our proposals for the outcome of Stages 3 and 4 of the BPI for SSEN?

4. Adjusting baseline allowances for uncertainty

Introduction

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

4.2 We set out detail on the common UMs in our Core Methodology Document and Overview Document, including the broader consultation position and rationale.

Bespoke UMs

4.3 We invited the DNOs to propose bespoke UMs with suitable justification in our SSMD.[21] We have considered the extent to which the supporting information justifies the key criteria outlined in the Business Plan Guidance[22]:

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

4.4 We also considered whether the uncertainty was regionally specific, or sector wide, to assess whether a common re-opener could be more appropriate. You can find the background and our assessment approach in Chapter 6 of our Overview Document.

4.5 The table below summarises the bespoke UM proposals that SSEN submitted and our consultation position.

4.6 Full details on the bespoke UMs are available in SSEN's Business Plan.

Table 29: SSEN's bespoke UM proposals

UM name	Consultation position
Wayleaves and Diversions: for costs associated with	**Reject:** We find insufficient justification for SSEN's proposed UM, or a common UM for wayleaves and

[21] Paragraph 5.37 of our SSMD https://www.ofgem.gov.uk/publications/riio-ed2-sector-specific-methodology-decision.
[22] Paragraph 5.44 of our BPG https://www.ofgem.gov.uk/publications/riio-ed2-business-plan-guidance

UM name	Consultation position
uncertain diversions costs following wayleave terminations.	diversions more broadly. We consider the forecasting risk that this UM seeks to address should be managed by DNOs through their business plans and the proposed ex ante diversions allowances. We do not consider the forecasting risk for diversions to be materially different enough from any other cost activity to require a re-opener. We also want to ensure that DNOs are incentivised to minimise diversions costs, and we consider ex ante funding to be the best approach to do this.
Shetland: for costs associated with the supply of energy on the Shetland Islands.	**Accept:** we are proposing to accept that there is uncertainty related to the costs faced on the Shetland Islands. However, we need to work with SSEN to better define the re-openers proposed as it notes that having proposed several UMs does risk that they could together create bill volatility.
Subsea cables: for costs associated with subsea cable replacement following damage or faults, additional remote backup generation and cable decommissioning. This submission contains three separate UM proposals.	**Reject:** we are proposing to reject SSEN's bespoke subsea cable volume driver because we do not consider it justified. We consider that SSEN continues to be best placed to manage risk relating to their subsea cable portfolio on a proactive basis, underpinned by a robust understanding of the health of these assets. **Reject**: we are proposing to reject SSEN's bespoke UM re-opener to provide additional funding for remote power generation for SSEH communities following cable faults on distribution or transmission assets as we do not consider it to be sufficiently justified. We have accepted SSEH's company-specific claim to account for the additional costs that arise from serving islands on their network, which we think sufficiently addresses this factor. **Reject**: we are proposing to reject SSEN's bespoke re-opener to cover unforeseen subsea cable decommissioning requirements initiated by Marine Scotland or the equivalent public authorities in England (which could include cable inspections and partial or full cable removals). We agree that a re-opener mechanism may be the appropriate mechanism to deal with uncertainty of this kind, however we do not consider that SSEN has provided sufficient justification or evidence of this risk materialising to warrant such a mechanism in RIIO-ED2.
Hebrides & Orkney: for costs associated with the outcomes of additional whole system analysis in the Scottish Islands to meet net zero to be undertaken in RIIO-ED2	**Accept:** we are proposing to accept this as a bespoke UM as we agree that clarification of infrastructure needs is subject to various external factors that will not be known until later in the price control.
OpEx adjustor: for costs associated with adjusting the	**Reject:** We are proposing to reject this because we consider DNOs continue to be best placed to manage

UM name	Consultation position
efficient level of operating expenditure SSEN requires to deliver specific uncertainty mechanisms.	the forecasting risk related to indirect costs, noting that the interaction with uncertainty mechanisms is not new to RIIO-ED2. SSEN's proposal is similar to the Opex Escalator introduced in RIIO-T2, but the balance between variant and non-variant expenditure in RIIO-T2 is likely to be significantly different than in RIIO-ED2, as indicated by the significantly higher proportion of variant allowances funded ex-ante in RIIO-T2. Our proposal to not introduce an automatic Opex adjustment mechanism is also consistent with our approach in RIIO-GD2.
Distributed Generation (DG) Monitoring: for costs related to the possibility of increased DG monitoring requirements resulting from Ofgem's review of the issue.	**Reject:** We are proposing to include this within the common Digitalisation UM.
Polychlorinated Biphenyls (PCB) volume driver: To manage the risk that the volumes of PCB-contaminated assets may be significantly higher or lower than currently expected.	**Accept as common UM:** We propose to adjust this UM to form a common volume driver design for all DNOs with an overhead network. Additional detail can be found in the Core Methodology Document.
Ash dieback removal: for costs associated with removing Ash dieback diseased trees in contact proximity of our network.	**Reject:** We are proposing baseline allowances for tree cutting to enable the DNOs to adapt to the changing nature of the challenges associated with vegetation management. This includes risks associated with new or emerging challenges such as Ash dieback.
Strategic Investment: for costs related to uncertain load-related expenditure driven by the net zero transition and rising demand for electricity.	**Reject:** we consider this is addressed by our common LRE UMs. Please refer to Chapter 3 of the Core Methodology Document for more information.

Bespoke UM Consultation questions

SSEN-Q8. What are your views on our proposals for SSEN's bespoke UMs?

Hebrides & Orkney

Table 30: Hebrides & Orkney re-opener description

Hebrides & Orkney re-opener	
Purpose	To allow for upward adjustment of baseline allowances after identification of customer needs once third-party uncertainties have reduced.

Hebrides & Orkney re-opener	
Benefits	The consumer bears less risk of paying for over- or under-investment in infrastructure needs for the islands.

Background

4.7 Pending the impact of third-party decisions due in 2022 that are likely to affect demand (such as the UK Government Contracts for Difference auctions and Ofgem's decision on Access reform), SSEN propose utilising a re-opener that may be triggered after it has finalised a whole system review of need that takes these external decisions into account. [23, 24]

Consultation position

Table 31: Hebrides and Orkney re-opener consultation position

Output parameter	Consultation position
Trigger	DNO trigger
Re-opener window	Annual application windows before Year 3 of RIIO-ED2 onwards.
Delivery	Ex ante allowances with reopener

Rationale for our consultation position

4.8 A number of external factors that may affect the type and extent of SSEN investment in infrastructure to the islands were not decided at the time of Business Plan submission in December 2021. Decisions such as the Contract for Difference auctions will influence infrastructure planning but will not be known until later in 2022. The level of activity and demand resulting from the Access SCR decisions will also not be apparent until after the start of RIIO-ED2.

4.9 For these reasons, we accept that a re-opener is a sensible proposal to balance the risk of either over-investment ahead of need, or under-investment that subsequently needs cost-inefficient replacement. To some extent, there will always be a level of uncertainty surrounding future requirements, but in this case

[23] https://www.gov.uk/government/publications/contracts-for-difference/contract-for-difference#the-fifth-cfd-allocation-round-ar5
[24] https://www.ofgem.gov.uk/publications/access-and-forward-looking-charges-significant-code-review-decision-and-direction

we agree with SSEN's conclusion that these two specific, time-bound, events are likely to make a material difference to their analysis.

4.10 For that reason, we propose to put a time-stop on the ability to trigger this re-opener. Having application windows in the first two years only of the price control will help ensure that the outcomes of these external events are swiftly taken into account in SSEN's whole system review of need for the islands, and for decisions to be made and implemented within the timescale of RIIO-ED2.

4.11 We also agree that the re-opener should be DNO triggered only; it is SSEN's responsibility to provide the analysis and justification for any proposed change to baseline allowances through this mechanism, based on the outcome of their review.

4.12 We note SSEN's resubmission, which included the reallocation of £70.44m from baseline to UMs. We assessed the resubmitted expenditure forecast in line with our cost assessment approach detailed in the Core Methodology document. We are not proposing to accept a PCD on the baseline expenditure elements of this activity at this stage given uncertainty around the resubmitted package. However, we propose to continue working with SSEN ahead of Final Determinations to reach a final view on the appropriate balance between baseline allowances and uncertainty mechanisms, and any additional controls that may be needed.

Consultation question

SSEN-Q9. What are your views on our proposal for a re-opener? Do you think this is the most suitable mechanism to mitigate investment decision risks in this area?

Shetland

Table 32: Shetland re-opener description

Shetland re-opener	
Purpose	To allow for upward adjustment of baseline allowances after identification of customer needs once third-party uncertainties have reduced.
Benefits	The consumer bears less risk of paying for over- or under-investment in infrastructure needs for the islands.

Background

4.13 The Shetland islands distribution network is not currently connected to the GB mainland. It is supplied by energy generated on the islands. SSEH runs the distribution network. It also operates generation assets and Power Purchase Agreements (PPAs) to meet demand on the islands. In RIIO-ED1, the costs of SSEH's activity in Shetland have been funded through a combination of defined Totex allowances, re-opener UMs applicable to all of the Totex allowances, and direct pass-through of some costs.

Consultation position

Table 33: Shetland re-opener consultation position

Output parameter	Consultation position
Trigger	DNO and Authority trigger
Re-opener window	Annual application windows from Year 3 of RIIO-ED2 onwards.
Delivery	Re-opener

Rationale for our consultation position

4.14 We have technically assessed SSEN's revised baseline funding request of £56m for Shetland in line with our cost assessment approach. Given the significant change in baseline funding request in the resubmission, we propose to continue working with SSEN ahead of Final Determinations to reach a final view on the appropriate balance between baseline allowances and uncertainty mechanisms, and any additional controls that may be needed.

4.15 We recognise that there is significant cost uncertainty in this area prior to the construction of the transmission link. As such we propose a re-opener from Year 3 of RIIO-ED2 onwards, when the Transmission link will be closer to completion, to review the whether £56m is an appropriate level of funding for these works.

Consultation questions

SSEN-Q10. What are your views on our proposal for a re-opener to deal with the uncertain costs associated with Shetland? Do you think this is the most suitable mechanism to mitigate investment decision risks in this area?

5. Innovation

5.1 Our SSMD and the Core Methodology Document set out the criteria that we have used to assess NIA funding requests.[25] The Core Methodology Document also details our proposals for the RIIO-ED2 NIA Framework and extension of the existing Strategic Innovation Fund to the DNOs.

Network Innovation Allowance

5.2 SSEN in its Business Plan proposed it should be awarded £17.5m of NIA over five years, equivalent to £3.5m per year. This is less than SSEN was allowed to spend annually in RIIO-ED1, but 8.7% more than it spent on average.

5.3 We set out below our Draft Determinations on SSEN's RIIO-ED2 NIA funding.

Consultation position

Table 34: NIA consultation position

Name of the measure	DNO proposal	Consultation position
Level of NIA funding	£17.5m over five years	£9.6m initial allowance, to be reviewed in 2025.

Rationale for consultation position

5.4 We propose that SSEN should be awarded £9.6m (see Core Methodology Document, paragraph 1.131, on our proposal to review in 2025 whether more NIA funding is required). SSEN's proposed award is equivalent to three years' worth of 80% of its annual RIIO-ED2 NIA request. This is an initial 3-year allocation of NIA allowances, calibrated based on assessment against the NIA criteria and the subsequent benchmarking of allowances (see Core Methodology Document paragraph 3.133 on our approach to benchmarking NIA).

5.5 We consider that SSEN satisfactorily met four of our five NIA criteria.

- SSEN proposed areas in which to target its innovation spending which we agree carry risk and are suitable for ringfenced innovation stimulus funds.

[25] Paragraph 4.96 of our SSMD Overview Document https://www.ofgem.gov.uk/publications/riio-ed2-sector-specific-methodology-decisionhttps://www.ofgem.gov.uk/publications/riio-ed2-sector-specific-methodology-decision.

SSEN submitted evidence of stakeholder engagement in the development of its innovation proposals, although SSEN's CEG stated engagement in this area had been less robust than in other areas.

- SSEN has evidenced that it is planning to undertake innovative initiatives using BAU funds during RIIO-ED2.
- It also showed that its proposals incorporate best practice. SSEN's CEG provided supporting evidence, noting that SSEN has developed a robust process for identifying and delivering innovation and supporting a strong innovation culture.
- SSEN provided evidence that it has in place a process to monitor innovation spend.
- However, we are not confident that SSEN has in place rigorous procedures for innovation to be rolled out to BAU which we consider must include a robust process to monitor benefits from innovation projects. SSEN did not submit evidence that clearly demonstrated it has such a process in place. SSEN did previously populate the E6 table of the regulatory reporting packs in RIIO-ED1, which reports quantified benefits from innovation. However, in response to our recent request, it did not provide supporting evidence, such as in the form of models, that these estimates were based on a robust process. Moreover, SSEN's Business Plan submission contained only a brief narrative with little detail on its process in this area, and we are therefore not satisfied that SSEN is already monitoring benefits using a robust process.

5.6 We welcome SSEN's commitment to publish an annual innovation deployment report which received support from SSEN's stakeholders in principle, once a robust monitoring and measurement framework has been established and implemented.

Consultation question

SSEN-Q11. What are your views on the level of proposed NIA funding for SSEN?

Appendix 1 - Key Engineering Recommendations

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

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

Table 35: LRE - Key Engineering Recommendations

Paper	Comments	Identified Risks
EJP 44: Fleet and Bramley 400/132kV Substation Group	**Partially Justified.** The needs case is based on demand growth causing P2/7 non-compliance. The delivery of the preferred solution is proposed for 2027/28. However, Consumer Transformation Distribution Future Energy Scenarios (DFES) forecast shows peak demand >1500MW by 2024/25. The paper provides no explanation of how the proposed date was reached, or what steps would be taken in the event that the demand group became non-compliant ahead of delivery. The paper also states that investigations into a whole system option with National Grid Electricity Transmission (NGET) will remain ongoing into 2022. It is understood that if this option was to have merit the preferred solution would be superseded. The paper provides no information on how such a potential change would be managed.	We consider there is a risk related to the delivery date as the EJP does not present sufficient justification. There is also uncertainty over the preferred solution due to ongoing assessment of the NGET whole system option, which presents a further risk.
EJP 69: HV Feeders - Load Related	**Partially Justified.** The needs case for increased capacity is considered valid. However, although the "hotspot modelling" used to determine feeder volumes appears robust, it is still based on significant assumptions and projections.	We consider that there is a risk related to the assumptions used materialising and delivery of the proposed volumes.

Paper	Comments	Identified Risks
EJP 365: 33kV Rutter Pole Circuit Reinforcements	**Unjustified.** The paper puts forward the needs case to replace rutter poles now rather than natural replacement when reaching end of life based on asset health. The benefit is identified as reduced CI and CML, however current impact on CI and CML is not presented, nor is improvement after. Clarification indicated that the current CI and CML for the circuits within this EJP are very small and that it is difficult to quantify the actual CI and CML (without intervention) to any degree of accuracy.	Reduced CI and CML is stated as a benefit, however clarification indicated that current CI and CML for the circuits within this EJP are very small. We therefore consider that there is a risk related to the proposed benefits to the consumer.
EJP 70: LV Feeders	**Partially Justified.** The needs case for increased capacity is considered valid. However, although the "hotspot modelling" used to determine feeder volumes appears robust, it is still based on significant assumptions and projections.	We consider that there is a risk related to the assumptions used materialising and delivery of the proposed volumes.
EJP 48: Ashling Road 33/11kV Primary Substation	**Partially Justified.** The need is for P2/7 compliance and is driven by low carbon technologies (LCT) forecast uptake based on the Customer Transformation DFES scenario. The existing load index is 84%, with 119% predicted at end of ED2 without intervention and 81% with intervention. The chosen approach is to use a flexible solution for two years and then reinforce.	We agree with the proposed approach, however scenario out-turn will influence the investment need and timing. We consider that there is a risk related to the predicted demand materialising.
EJP 72: Keith 33kV Circuit Reinforcements	**Partially Justified.** The need is for reinforcement on Keith GSP's 33kV circuits due to predicted load growth. Reinforcement of Keith 303 and 304 is proposed in 2027 and 2028 with temporary reinforcement in 2023/24. Investment for Keith 307 is proposed for 2023/24 and is considered justified.	We agree with the investment for Keith 307, however, we consider that there is a risk related to the demand outturn for Keith 303 and 304.

Table 36: NLRE: NARM - Key Engineering Recommendations

Paper	Comments	Identified Risks
EJP 324: Tree Cutting	**Partially Justified.** We are supportive that there is an ongoing need for tree cutting. The EJP requests funding for a light detection and ranging (LiDAR) survey in 2025 and Ash Dieback surveys in 2024/25. LiDAR surveys will be undertaken over the entire overhead line (OHL) asset base within ED1 with SEPD run and analysis of data complete. SHEPD LiDAR flight was undertaken in 2021 and data to be complete in 2022. LiDAR is repeated again in 2025 for SEPD, and 2026 for SHEPD (every four years).	We consider that the next LiDAR surveys due to be undertaken in 2025 and 2026 will better inform future volumes. There is therefore a potential risk in the proposed volumes until the next LiDAR flights are complete. Future volumes will then be more accurate. SHEPD volumes could change following LiDAR data that maybe available prior to Final Determinations.
EJP 317: 6.6/11 kV OHL Poles EJP 316: LV Poles, LV Services (OHL) and LV Conductor (OHL) EJP 318: 33 kV Overhead Line Poles & Conductor CAPEX Intervention	**Partially Justified.** We recognise an ongoing need for the replacement of 6.6/11 kV OHL Poles, however the EJPs lack detail of where asset condition data (input to CNAIM[26] models) is obtained from. It was confirmed that only assets that have recent inspection data have been considered for intervention and that assets without data are capped at HI3 and hence not considered. Clarifications indicates that <20% of this asset base are inspected annually.	With less than 20% of this asset base inspected annually this introduces a risk related to the proposed volume. It should also be noted that if there is a change to the health and safety regulations for creosote, this could change the cost and life (hence volumes) of future wooden poles replacements.
EJP 311: LV Underground Mains and Service	**Partially Justified.** The EJP clearly sets out the needs case and a cost benefit analysis (CBA) approach is used to determine when it is most cost effective to overlay vs repair. As the volume justified by the CBA greatly exceeds delivery capability, SSEN has capped the proposed volumes in line with expected ramp up capability.	Due to the ramp up in capability to deliver the proposed volume, we consider that there is a risk related to deliverability.
EJP 418: OHL Clearances	**Unjustified.** The volumes for this EJP are to be provided between Draft Determinations and Final Determinations. The EJP did not have any clear description of, or comparison to, previous run rates to validate or benchmark provisional volumes.	Proposed volumes are to be provided between Draft Determinations and Final Determinations, hence

[26] Common Network Asset Indices Methodology

Paper	Comments	Identified Risks
		there is a potential risk related to volumes.
EJP 322: Rising and Lateral Mains Driven By Condition & Asset Replacement	**Partially Justified.** The proposed volumes are based on a sample of 380 buildings which have then been used to inform the forecast for circa 290,000 buildings. The relatively low sample rate is considered a risk to the required volume. The proposed volume is also a significant increase from ED1.	Due to the accuracy and deliverability of the proposed volume, we consider that there is a risk related to the proposed volume and its deliverability.
EJP 312: 6.6/11kV Underground Cables	**Partially Justified.** As the volume justified by the CBA greatly exceeds delivery capability, SSEN has capped the proposed volumes against expected capability. There is some concern related to the trends that fault rates and costs have "steadily" increased over time (2014-2021) in the SSES area. However, this is only apparent in the period 2014-2018. The 2018-2021 trend being downwards in both aspects.	Due to the ramp up in capability, we consider that there is a risk related to deliverability.
EJP 387: Shetland Standby Project	**Partially Justified.** We consider that there is a clear needs case for some form of solution to manage loss of the high voltage direct current link. The use of existing assets plus the addition of fault ride through equipment is proposed, however ultimately the requirements will be closely linked to actual demand out-turn. Limited information was presented on how achievable the proposal to extend the life of Lerwick Power Station is or how it has been costed.	We consider that there is a risk related to the exact requirement for fault ride through assets as this is linked to demand outturn which is currently uncertain.

Table 37: NLRE and Non-NARM - Key Engineering Recommendations

Paper	Comments	Identified Risks
EJP 415: Southern Electric Power Distribution: Distribution System Control Centre EJP 416: Scottish Hydro Electric Power Distribution: Distribution System Control Centre	**Unjustified.** The needs case for a new control room is considered valid based on expanding workforce and limited available space in the current buildings. However, the design for the proposed new control rooms is at RIBA Stage 0, which is the very first stage for building design. Further stages of design are required to develop a more detailed design and hence cost. The design has been	There is significant uncertainty surrounding the design and cost of these works. The proposed new control rooms are at an early phase of development, the locations have not yet been chosen and

	based on an existing SSEN site and includes demolition; however, the exact location is yet to be finalised with the land search ongoing and expected to be concluded by the end of 2022. Hence the local council has not been approached for planning permission (at the date of this assessment) which could influence the design and preferred site.	the local councils have not been approached for the relevant planning permissions. All of this creates a material risk as these factors could influence the chosen location, design and associated cost.
EJP 2: DSO Workforce Capability	**Unjustified.** The EJP presents the workforce required to transition to a DSO model. The needs case is considered somewhat justified due to it being dependent on the outturn uptake of LCTs under the DFES. The costs and volumes presented appear with minimal justification and there was no sensitivity analysis with regards to the DFES scenarios which may affect the required workforce.	As the EJP provided minimal justification of costs and volumes, along with no sensitivity analysis of how external factors would influence the workforce required, we consider there to be a risk related to the need and timing of the workforce along with the availability of the workforce.
EJP 8: Fluid Filled Cables (FFC)	**Unjustified.** The needs case of the resubmitted EJP is considered valid and the optioneering is based on different volumes of leak reduction achieved. SSEN's preferred option has the most favourable NPV.	We consider that there is a risk that the stated leak reductions will not be achieved.
EJP 6: Non-Operational Property	**Partially Justified.** We agree with the need and justification presented within the EJP, however we consider that there is a risk to individual investments being delivered.	We consider that there is a risk related to individual investment areas being delivered.
EJP 372: Banbury Avenue EJP 434: Welbourne Village EJP 440: Andover Commercial Park EJP 449: Faraday Road EJP 432: Spring Park Campus EJP 367: Digiplex Data Centre EJP 446: Barters Farm	**Partially Justified.** The connection EJPs are based on specific customer connections and therefore dependent on the customer going ahead with their need. Generally, the connection EJPs presented limited details of background assumptions, however this was later provided in an SQ response and considered valid.	Due to each EJP being driven by a specific customer connection, there is a potential risk that specific schemes may not be taken forward by the customer or the customers' needs may change.

EJP 422: OT2 Optical Transport Network Rollout	**Partially Justified.** The proposed solution appears to be a pragmatic balance between options. However, it is not possible to clearly determine the exact scope of works from the EJP as various methods by which the communications infrastructure could be upgraded are noted.	There is a potential risk related to the various methods by which the communications infrastructure could be upgraded, as this could change the cost and benefits.
EJP 424: Protection	**Partially Justified.** The needs case and optioneering are considered reasonable, however there is a deliverability risk due to the availability of engineers. The delivery risk is mainly for later years in ED2 where the volume ramps up on the assumption of more engineers becoming trained and available.	We consider there to be a delivery risk related to the availability of engineers in later years of ED2 which could mean the volumes cannot be delivered.
EJP 33: MDM & Data Lake EJP 29: DSO Management (Optimiser) EJP 36: Connections+ EJP 21: Connectivity++ EJP 41: DSO Enablement (Orchestrator) EJP 40: Commercial Optimisation EJP 32: Linear Assets EJP 1: Flexibility Contracting EJP 31: DSO ANM	**Partially Justified.** Many of the IT projects have multiple dependencies or enable other IT projects. SSEN have considered the IT projects as a portfolio, however we still believe the main risks are related to delivering the stated benefits within the time and budget requested. There is also a risk related to the availability of people / IT skills needed.	As the IT projects will require various levels of resourcing, managing multiple outputs, deliverables to then enable linked projects we believe that there is a risk that not all the stated outcomes and benefits within the time and budget requested will be delivered.

Appendix 2 – SSEN Aims

Table 38: List of SSEN 'Aims'

Output name	Description
Meeting the needs of small / medium business (SSEN Aim)	SSEN propose to introduce a Business Support Register
Safety Engagement (SSEN Aim)	Extend the engagement on safety around assets, reaching 50,000 partners and members of SSEN's communities by 2028
Shareholder Fund (SSEN Aim)	Introduce a shareholder-financed £500,000 annual 'Powering Communities to Net Zero' fund to support LCT accessibility initiatives for those in vulnerable situations, and community-led environmental and resilience schemes
Average speed of response (SSEN Aim)	Improve average speed of response to 20 seconds on the telephone for power cuts and to five minutes on social media.
PSR gap analysis (part of strategy)	Reach over 1 million PSR customers by 2028, refreshing data every 24 months
Fuel poverty support (part of strategy)	By 2028 support 50,000 households (equivalent to 114,000 customers) with fuel poverty
Training and development (part of strategy)	Train 30 employees to the City & Guilds energy efficiency qualification and introduce 200 vulnerability champions across the business from the start of ED2.
Training and development (part of strategy)	Deliver education on LCTs to the most vulnerable and hard to reach through partners
Educating on the benefits of energy efficiency and Low Carbon Technology, tackling digitally exclusion (part of strategy)	Deliver a programme of targeted interventions to prepare future customers (39,000 children) whilst supporting existing customers with learning difficulties (2,400 adults) with education on fuel poverty, energy efficiency and LCTs, and upskill digitally-excluded customers (5,000) in using online services
Energy Efficiency Enablement Programme (part of strategy)	Work with partners to reduce barriers to the installation of energy efficiency measures by 440 households in vulnerable situations
Personal and Social Support Packs (part of strategy)	By 2028, deliver 5,000 energy efficiency packs to fuel-poor households, and 5,000 power cut resilience packs to PSR customers, tailored to their needs
Keeping the public safe around our assets (SSEN Aim)	Aim to remove redundant equipment from unoccupied sites within 3 months to prevent risk to the public from the start of ED2

Output name	Description
Enabling LCT connections (SSEN Aim)	Ready the network for net zero, consistent with up to 1.3m Electric Vehicles and up to 800,000 heat pumps connecting by 2028
Enabling LCT connections (SSEN Aim)	Ready the network for net zero, consistent with a total of 8GW of distributed energy resource (including windfarms, solar, and energy storage) connecting by 2028
Improving our connections process (SSEN Aim)	Improve the end-to-end process (application, design, quote and connection) for all connections and introduce automated quotation services for domestic LCT and minor connections customers by 2025
Deploying flexible solutions (SSEN Aim)	Target 5GW of Constrained Managed Zones across multiple service types and grow our flexible connections to 3.7GW of capacity across 35 zones by 2028
Whole systems engagement for local authorities (SSEN Aim)	Support Local Authorities' energy and heat strategy development through provision of relevant data sets and annual engagement on DFES scenarios)
Sustainable Supplier Code (SSEN Aim)	Sign up 80% of supply chain (by value) by 2028 to SSEN's Sustainable Supplier Code
Reduce travel-related emissions (SSEN Aim)	Electrify 80% of core vehicle fleet by 2028, reduce average road mileage by 15% (from pre-covid levels) and limit air travel where possible.
Set Science Based Targets, accredited with the SBTi (Part of Environmental Action Plan)	Set an ambitious 1.5 degree SBT (including losses) requiring at least a 35% reduction in carbon footprint by 2028
Manage Losses on network (Part of Environmental Action Plan)	Implement a strategy to efficiently manage losses on the network in the long-term re-classify losses as a Scope 2 emission and act to reduce actual losses
Reduce emissions from mobile diesel generation during interruptions (SSEN Aim)	Reduce emissions by replacing mobile generators wherever possible with lower carbon alternatives or by using alternative lower carbon fuel types by 2028
Reduce the reliance on back up embedded diesel generation on SSEN's islands (SSEN Aim)	Reduce reliance on diesel back-up generation, exploring local solutions and flexibility opportunities from the start of ED2
Innovation Reporting (SSEN Aim)	Publish an annual Innovation Deployment Customer Report to improve the transparency of the benefits of SSEN's innovation programme

Appendix 3 - Consultation questions

1. Introduction

2. Setting outputs

SSEN-Q1. What are your views on the company specific parameters we have proposed for the common outputs that are set out above?

SSEN-Q2. What are your views on our proposals for SSEN's bespoke ODIs?

SSEN-Q3. What are your views on our proposals to reject SSEN's CVP relating to Embedded Whole Systems Support Services for Local Authorities and its CVP relating to supporting broadband to island communities through DNO assets?

SSEN-Q4. What are your views on our consultation position to accept SSEN's CVP to protect marine biodiversity (life below water)?

SSEN-Q5. What are your views on our consultation position to accept and partially reward SSEN's CVP for personal resilience plans?

SSEN-Q6. What are your views on our proposal for SSEN's 'Energy Efficiency Accelerator for Smarter Networks' and 'Local and community flexibility market stimulation' CVP?

3. Setting baseline allowance

SSEN-Q7. What are your views on our proposals for the outcome of Stages 3 and 4 of the BPI for SSEN?

4. Adjusting baseline allowances for uncertainty

SSEN-Q8. What are your views on our proposals for SSEN's bespoke UMs?

SSEN-Q9. What are your views on our proposal for a re-opener? Do you think this is the most suitable mechanism to mitigate investment decision risks in this area?

SSEN-Q10. What are your views on our proposal for a re-opener to deal with the uncertain costs associated with Shetland? Do you think this is the most suitable mechanism to mitigate investment decision risks in this area?

5. Innovation

SSEN-Q11. What are your views on the level of proposed NIA funding for SSEN?

Appendix 4 - Privacy notice on consultations

Personal data

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

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

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

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

2. Why we are collecting your personal data

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

3. Our legal basis for processing your personal data

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

4. With whom we will be sharing your personal data

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

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

Your personal data will be held for twelve months after the project is closed.

6. Your rights

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

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

7. Your personal data will not be sent overseas

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

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

10. More information

For more information on how Ofgem processes your data, click on the link to our "Ofgem privacy promise".