Consultation

RIIO-2 Re-opener Applications 2024 Draft Determinations – ED Annex

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We are consulting on our Draft Determinations on re-opener submissions by the Distribution Network Operators (DNOs) in January 2024. Scottish Hydro Electric Power Distribution (SSEH) submitted projects under Special Condition (SpC) 3.2, Part O: Hebrides and Orkney Re-opener (HOt) and Electricity North West Limited (ENWL), Scottish and Southern Electricity Networks (SSEN), Northen Powergrid (NPg), Scottish Power Energy Network (SPEN), National Grid Electricity Distribution (NGED) and UK Power Network (UKPN) submitted projects under Special Licence Condition Part J 3.2.6.

We particularly welcome responses from those with an interest in electricity transmission and distribution networks. We also welcome responses from other stakeholders and the public.

This document outlines the scope and purpose of the consultation, the consultation questions, and explains how you can get involved. Once the consultation is closed, we will consider all responses. 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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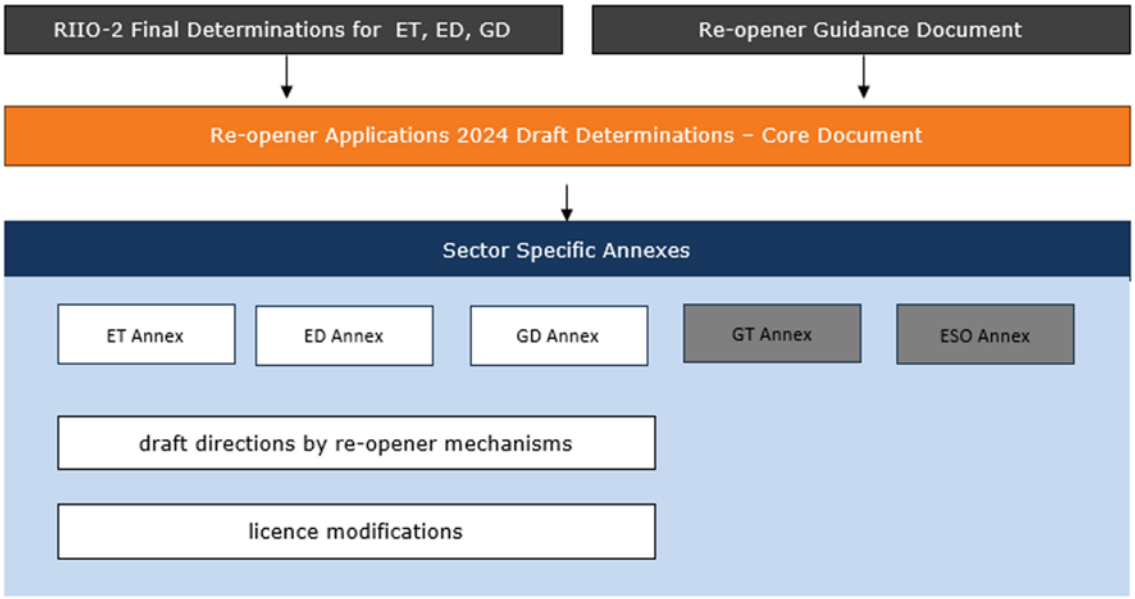
1. Introduction

1.1 This document is one of the Annexes published alongside the RIIO-2 Re-opener Applications 2024 Draft Determinations. It focuses on the re-opener mechanism and the assessment of projects submitted in the electricity distribution sector. For general information including consultation approach, stages, how to respond, etc. Please refer to the RIIO-2 Re-opener Applications 2024 Draft Determinations – Core Document.

Figure 1 Navigating our Draft Determinations



Hebrides and Orkney Re-opener

1.1 When we1 made our RIIO-ED2 Final Determinations (ED2 FDs)2 in November 2022, we remained unclear about customer needs for proposed projects in Hebrides and Orkney3 due to the possible impact of outstanding third-party decisions that were likely to affect demand.

1.2 We agreed with SSEH's proposal to utilise a re-opener that could be triggered after SSEH had finalised a whole system review of needs that takes into account

[1] The terms 'the Authority', 'Ofgem', 'we' and 'us' are used interchangeably in this document. The Authority is the Gas and Electricity Markets Authority. Ofgem is the office of the Authority.
[2] RIIO-ED2 Final Determinations SSEN Annex (ofgem.gov.uk)
[3] For a list of the projects, see 3.2.105(a) in Appendix 1.

these external decisions.4 As such, we decided not to fully fund those projects and introduced the Hebrides and Orkney Re-opener5 for SSEH to request additional funding for the costs associated with the outcomes of additional whole system analysis in the Scottish Islands to contribute to Net Zero Carbon Targets and ensure long-term security of supply to the Hebrides and Orkney islands in Scotland.

1.3 In order to allow SSEH to undertake the pre-requisite pre-construction works required to deliver the whole system solution for the Hebrides and Orkney in an efficient and timely manner, we decided to provide £20.6m in ex ante funding.6

1.4 Following the third-party decisions being made, SSEH have now conducted additional whole system analysis and applied for funding under this re-opener for four projects.

Storm Arwen Re-opener

1.5 Storm Arwen in November 2021 brought widespread disruption to the UK and resulted in over one million customers losing power. Approximately 40,000 customers were without supply for more than three days, and nearly 4,000 customers were off supply for over a week. In light of the severity of the event and the long duration that many customers endured without power, Ofgem conducted a review of the Distribution Network Operators (DNOs) response to Storm Arwen.

1.6 We published a final report in June 2022 and provided 20 recommendations relevant to all DNOs, across five areas in need of improvement[7]: (i) network resilience; (ii) planning and preparation; (iii) handling of incidents; (iv) communication and support during the incident; and (v) ongoing support after the incident. The review was distinct, but complementary to the review undertaken by the Energy Emergencies Executive Committee (E3C)[8] which was commissioned by the Department for Energy Security and Net Zero (DESNZ, formerly Business, Energy & Industrial Strategy (BEIS)) and provided 45 recommendations in December 2021.

[4] RIIO-ED2 Final Determinations SSEN Annex (ofgem.gov.uk) at paragraph 4.6
[5] SpC 3.2.105(c). A copy of SSEH's SpCs as made in February 2023 can be found at Decision on the proposed modifications to the RIIO-2 Electricity Distribution licences | Ofgem
[6] RIIO-ED2 Final Determinations SSEN Annex (ofgem.gov.uk), at paragraph 3.24.
[7] Final report on the review into network' response to Storm Arwen (ofgem.gov.uk)
[8] Storm Arwen review: final report (publishing.service.gov.uk). E3C is a partnership between government, and industry, which ensures a joined-up approach to emergency response and recovery.

1.7 The timing of Storm Arwen coincided with the submission of RIIO-ED2 Business Plan submissions. DNOs were therefore unable to incorporate lessons and specific actions to increase storm resilience during the RIIO-ED2 price control period for electricity distribution in those Business Plans. We recognised that there was a need to explore measures to minimise the impact of those storms during RIIO-ED2 and introduced an Uncertainty Mechanism: Storm Arwen Re-opener (SAR_t) under Special Licence Condition 3.2 Part J of the electricity distribution licence.

1.8 Since the Storm Arwen review was commissioned, further storms have impacted GB, including Storms Eunice,[9] Franklin Ciaŕan and Isha. Whilst these had less impact on customers compared to Storm Arwen, they reinforced the recommendations outlined in the 2022 report and need for the re-opener.

SAR_t Process to date

1.9 Section 2.13 of the Core Document outlines the full consultation approach for this re-opener. Ahead of the DNO submission Ofgem met with the DNOs via the ENA (Energy Networks Association) to help agree with the DNOs on what type of proposals should come through the mechanism to best meet the recommendations of the Government and Ofgem reports. Ofgem provided a steer that the submissions should focus on the reduction of long-term outages following storm events, and deliver long term value for money for customers. Ofgem noted that broader discussions on resilience expenditure would be held ahead of RIIO-ED3[10] to align policies, ensure its appropriate treatment and develop consistency in reporting. Ofgem noted other submissions are welcome, but they should be tightly tied to the recommendations and show clear value for consumers. The re-opener assessment and decision-making process follows the same approach that is set out in the RIIO-2 Re-opener Applications 2024 Draft Determinations – Core Document para 2.13.

[9] Whilst Storm Eunice affected more customers (1.7 million compared to 1 million affected by Storm Arwen), power was restored to these customers more quickly.
[10] RIIO-ED3 is the next electricity distribution price control, starting 1 April 2028.

What are we consulting on?

Hebrides and Orkney applications

1.10 In the January 2024 re-opener window, SSEH submitted four projects under the Hebrides and Orkney re-opener mechanism. We are consulting on our assessment of the needs case, optioneering, and efficient costs for these projects.

Storm Arwen applications

1.11 We are also consulting on our Draft Determination to fund projects relating to storm resilience by all six DNOs (ENWL, SSEN, NPg, SPEN, NGED and UKPN) via ex ante[11] allowances under the RIIO-ED2 Storm Arwen Re-opener (SAR_t).[12]

1.12 The projects proposed by the DNOs aim to action the recommendations set out in the Ofgem and E3C reports which reviewed the DNOs responses to Storm Arwen.

1.13 We are consulting on our assessment of the needs case, optioneering, and efficient costs for these submissions by the DNOs in the 2024 re-opener window. We welcome views from stakeholders on our Draft Determinations concerning the projects outlined in Chapter 2, and the detailed assessment in Chapter 3 (for the Hebrides and Orkney Re-opener) and Chapter 4 (for Strom Arwen Re-opener).

1.14 Since the submissions in January 2024, all DNOs have provided additional information to us through a combination of bilateral meetings and Supplementary Question (SQ) responses.

1.15 We are issuing this consultation following our assessment of all six re-opener applications. This document explains our assessment of these applications and the adjustments we are proposing to make to each DNO licence, including adjustments to allowances and the addition of any Price Control Deliverables (PCD).

1.16 We welcome views from stakeholders on our Draft Determinations concerning the projects outlined in Chapter 4.

[11] Refers to a value or parameter established upfront (e.g. at the price control review to be used in the price control period ahead)
[12] Links to RIIO-ED2 Storm Arwen Re-opener submissions; ENWL, NPG, NGED, UKPN, SPEN, SSEN.

Context and related publications

For Hebrides and Orkney Re-opener

1.17 The scope of this consultation is limited to the projects submitted by SSEH in the 2024 application window. Additional information on these projects can be found in the re-opener submission documents on SSEH's website.[13]

1.18 This document is intended to be read alongside:

1) RIIO-ED2 SSEN Final Determination (FD)[14]
2) RIIO-ED2 Re-opener Guidance and Application Requirements Document[15]
3) SpCs (and SpC 3.2 Parts O and R in particular) of the Licence.[16]

For Storm Arwen Re-opener

1.19 This document is intended to be read alongside:

1) Final report on the review into network' response to Storm Arwen (July 2022)
2) Storm Arwen review: final report (June 2022)[17]
3) Storm Arwen electricity distribution disruption review: terms of reference (June 2022)[18]
4) Interim report on the review into the networks' response to Storm Arwen (February 2022)[19]
5) RIIO-ED2 Final Determinations Overview document (ofgem.gov.uk) – Chapter 6, paragraph 6.43[14]
6) SpCs (and SpC 3.2 Part J in particular) of the Licence.[16]

[13] Whole system energy solutions for the Scottish Islands - SSEN
[14] RIIO-ED2 Final Determinations | Ofgem
[15] https://www.ofgem.gov.uk/publications/re-opener-guidance-and-application-requirements-document-version-3
[16] https://www.ofgem.gov.uk/industry-licensing/licences-and-licence-conditions
[17] Storm Arwen review: final report (June 2022)
[18] Storm Arwen electricity distribution disruption review: terms of reference (June 2022)
[19] Interim report on the review into the networks' response to Storm Arwen (February 2022)

2. Summary of our Draft Determinations

2.1 **Table ED1** below summarises our Draft Determinations for the Hebrides and Orkney and Storm Arwen re-openers covered in this annex. All monetary figures in this document are in 2020/21 prices to align with the RIIO-ED2 Final Determination price base.

Table ED1: Draft Determinations for the re-openers in ED

Sector Group	Network	Company requested - Number of Projects	Company Forecast costs (£m)	Ofgem's DD - Projects Approved *	Ofgem's DD - Projects Not Approved	Ofgem's DD - Cost adjustment (£m)	Ofgem's DD - Allowance (£m)
Electricity North West	ENWL	6	27.5	6	-	-	27.5
Northern Powergrid	NPGN	14	28.6	8	6	-10.86	17.8
Northern Powergrid	NPGY	11	6.2	6	5	-3.87	2.3
National Grid Electricity Distribution	WMID	16	16.5	5	11	-11.75	4.8
National Grid Electricity Distribution	EMID	15	14.4	1	14	-12.55	1.9
National Grid Electricity Distribution	SWALES	16	10.1	5	11	-6.06	4.0
National Grid Electricity Distribution	SWEST	14	20.4	4	10	-12.82	7.6
SP Energy Networks	SPD	13	37.2	3	10	-33.52	3.6
SP Energy Networks	SPMW	13	38.8	3	10	-34.72	4.0
Scottish and Southern Energy	SSEH	8	51.0	2	6	-3.62	47.4
Scottish and Southern Energy	SSES	3	5.7	1	2	-2.60	3.1
UK Power Networks	EPN	8	42.3	3	5	-18.90	23.4

Sector Group	Network	Company requested - Number of Projects	Company Forecast costs (£m)	Ofgem's DD - Projects Approved *	Ofgem's DD - Projects Not Approved	Ofgem's DD - Cost adjustment (£m)	Ofgem's DD - Allowance (£m)
UK Power Networks	LPN	-	-	-	-	-	-
UK Power Networks	SPN	20	14.4	5	15	-9.30	5.1

2.2 **Table ED2** below summarises our Draft Determinations for the Hebrides and Orkney Re-opener covered in this annex and Chapter 3 below discuss these projects in greater detail.

Table ED2: Draft Determinations on the Hebrides and Orkney Re-opener submissions in 2024

Sector Group	Network	Company Proposed Project	Company requested - Forecast costs (£m)	Ofgem's DD - Cost adjustment (£m)	Ofgem's DD -Allowances (£m)
Scottish and Southern Energy	SSEH	SSEN-D Pentland Firth East 3 (PFE3)	34.67	-	34.67
Scottish and Southern Energy	SSEH	SSEH South Uist-Eriskay solution	0.36	-	0.36
Scottish and Southern Energy	SSEH	SSEH Eriskay-Barra solution	11.25	-0.11	11.14

2.3 Error! Reference source not found. **b**elow summarises our Draft Determinations for t he Storm Arwen Re-opener covered in this annex and Chapter 4 below, discusses these projects in greater detail.

Table ED3: Draft Determinations on the Storm Arwen Re-opener submissions in 2024

Sector Group	Network	Company requested - Number of Projects	Company Forecast costs (£m)	Ofgem's DD - Projects Approved*	Ofgem's DD - Projects Not Approved	Cost adjustment £m	Ofgem's DD - Allowances (£m)
Electricity North West	ENWL	6	27.50	6	-	-	
Northern Powergrid	NPGN	14	28.61	8	6	-10.86	27.50
Northern Powergrid	NPGY	11	6.18	6	5	-3.87	17.75
National Grid	WMID	16	16.52	5	11	-11.75	2.31

Sector Group	Network	Company requested - Number of Projects	Company Forecast costs (£m)	Ofgem's DD - Projects Approved*	Ofgem's DD - Projects Not Approved	Cost adjustment £m	Ofgem's DD - Allowances (£m)
Electricity Distribution							
National Grid Electricity Distribution	EMID	15	14.40	1	14	-12.55	4.77
National Grid Electricity Distribution	SWALES	16	10.05	5	11	-6.06	1.85
National Grid Electricity Distribution	SWEST	14	20.39	4	10	-12.82	3.99
SP Energy Networks	SPD	13	37.15	3	10	-33.52	7.57
SP Energy Networks	SPMW	13	38.75	3	10	-34.72	3.63
Scottish and Southern Energy	SSEH	5	4.73	2	3	-3.51	4.03
Scottish and Southern Energy	SSES	3	5.74	1	2	-2.60	1.22
UK Power Networks	EPN	8	42.30	3	5	-18.90	3.14
UK Power Networks	LPN	-	-	-	-	-	23.40
UK Power Networks	SPN	20	14.40	5	15	-9.30	-

**Including partial funding*

3. Hebrides and Orkney Re-opener

Questions
ED.Q1. Do you agree with our assessment of the needs case for the projects under Hebrides and Orkney Re-opener submission? ED.Q2. Do you agree with our assessment of the preferred option for the projects under the Hebrides and Orkney Re-opener submission? ED.Q3. Do you agree with our assessment of the efficient costs of projects under the Hebrides and Orkney Re-opener submission?

Purpose of the re-opener mechanism

3.1 As mentioned in paragraphs 1.1 to 1.2, we have included in ED2 FDs the Hebrides and Orkney Re-opener for SSEH to request additional funding for costs associated with the outcomes of additional whole system analysis and ensuring security of supply to the Hebrides and Orkney islands in Scotland.

3.2 The purpose of this re-opener mechanism is to allow for upward adjustment of ex ante allowances after identification of customer needs once third-party uncertainties have reduced.

Applications received

3.3 In its January 2024 Hebrides and Orkney Re-opener submissions, SSEH set out their plans to deliver the following projects. **Table ED4** below, summarises the list of projects submitted under Hebrides and Orkney Re-opener.

Table ED4: List of projects submitted under Hebrides and Orkney Re-opener

Project Name	**Brief Description**
SSEN-D Pentland Firth East 3 (PFE3)	Replace the faulty PFE2 33kV subsea cable

SSEH South Uist-Eriskay solution	Replace the subsea cable which connects South Uist in the Outer Hebrides to the islands of Eriskay with a land-based 11kV cable along the Eriskay Causeway
SSEH Eriskay-Barra solution	Install an additional 11kV subsea cable to connect the Isle of Barra in the Outer Hebrides
SSEH South Uist-Eriskay solution	Install a new 33kV subsea cable (Dunvegan – Loch Carnon)

3.4 We consider these projects to be eligible for the Hebrides and Orkney Re-opener application. Following decisions being made by third parties that were likely to affect demand, SSEH have conducted additional whole system analysis to contribute to Net Zero Carbon Targets and ensure long-term security of supply for the Hebrides and Orkney islands, for the four projects included in its January 2024 submission.

3.5 As such, we consider the submission meets the requirement under SpC 3.2.105(c), ie. SSEH has incurred or expects to incur costs associated with the outcomes of additional whole system analysis in the Scottish islands to contribute to Net Zero Carbon Targets and ensure long-term security of supply, including alternative activities to installing the cables outlined in SpC 3.2.105(a). The cost estimates are higher than the Materiality Threshold (£2.16m).

3.6 Due to the tendering process, it was agreed that SSEH will update the cost information for Skye – Uist solution Phase 1 project in July 2024. We have received the updated information in July 2024. As we need time to assess the updated information, we will consult separately on this project at a later date.

3.7 In the January 2024 submission, SSEH also provided an outline of the proposals for the Hebrides and Orkney island groups for advance information. These project proposals will be submitted in the January 2025 application window. Although we do not require to assess these projects at this stage, we take the opportunity to offer our views for SSEH's consideration in paragraph in this chapter.

Needs case and optioneering assessment

3.8 As part of their submission, SSEH sets out the detail behind their plans relating to the engineering justification, including the needs case, optioneering and if appropriate associated cost benefit analysis which underpin the proposed option.

3.9 In accordance with the Re-opener Guidance, SSEH also sets out the detail on how the proposed expenditure aligns with their future business strategy, including consideration of how it relates to their RIIO-2 licence or other statutory

obligations. For instance, the projects submitted should consider the whole system solution for meeting the long-term requirement in the island groups.

3.10 We assessed the needs case against the engineering justification papers, which acts as a robust decision support tool, open to scrutiny and challenge in conjunction with other appropriate means of justification for investment decisions. We analysed the options scope, risks, and costs and benefits to inform the need for intervention and their preferred option.

3.11 We are satisfied that there is a need for the individual projects submitted in 2024 Hebrides and Orkney Re-opener. We are also satisfied that SSEH has already considered all viable options and, in arriving at its preferred options, has correctly rejected the ones that are less optimal from a consumer perspective. Our detailed analysis is given in the paragraphs below.

Pentland Firth East 3 Project

3.12 This project included the installation of a 33kV subsea cable, commissioned in September 2023, to replace the PFE2 cable which was commissioned in November 2020 but unexpectedly failed in January 2021. While SSEH was conducting an investigation and in-depth analysis of the cause of failure, they considered the security of supply to Orkney to be at too much risk, and that a replacement was therefore required as soon as possible.

3.13 SSEH had conducted an option analysis for 2050 long term solutions immediately after PFE2 failure. As all solutions that SSEH considered feasible at the time required at least one distribution link, SSEH considered the installation of a distribution link to replace the faulty cable prior to the final decision on the 2050 long term solution to be no regret.

3.14 SSEH assessed four cable options in its submission for the distribution link:

- 33kV subsea cable at 400mm2 – taken forward by SSEH to detailed analysis
- 33kV subsea cable at 500mm2 - taken forward by SSEH to detailed analysis [SSEH's preferred option]
- 33kV subsea cable at 630mm2 – rejected by SSEH as it has not been type tested by SSEH, requires onshore network investment to release full cable capacity and will delay the project by 2 years
- SSEH state that they also gave consideration to the installation of a 66kV subsea cable, however rejected it for similar reasons as the 33kV 630mm2 option.

3.15 We note that PFE3 was assessed by SSEH against an existing demand of 34.4MW, and a future peak maximum demand of 61MW to 2050 in accordance with the 2021 Distribution Future Energy Scenarios (DFES). Based on this demand forecast, we consider that the selection of a 33kV 500mm2 subsea cable rated at 35.5MW necessitates that:

- In the short term, Kirkwall Power Station (KPS) will be required to operate in the event of a Pentland Firth West (PFW) (or PFW replacement cable) failure.[20]
- In the medium term, should the Orkney transmission link[21] be delayed beyond 2030/31, the installed PFE3 cable and KPS may be insufficient to meet the full demand in Orkney in the event of a PFW failure.
- In the long term, SSEH state an ambition to have sufficient capability to maintain supplies to Orkney's full demand for loss of two in-feeding subsea cable circuits, via a third cable circuit or the use of on-island energy sources. From 2030/31, PFE3 will have insufficient capacity to meet this ambition as part of a three-cable solution without continued reliance on on-island energy sources.

3.16 We agree that there is a need for the replacement of the faulty subsea cable in order to maintain security of supply to Orkney. However, we consider the cable of the preferred option is insufficiently sized to cater for the scenarios mentioned in paragraph 3.15 above. We have previously rejected a funding application for a similar subsea cable in 2019 (the PFE2 cable) because we did not consider that SSEH had demonstrated that the proposed cable replacement solution was economic and efficient[22]. Given this, SSEH should have sufficient time to arrange type tests for larger 33kV and 66kV subsea cable so that a comprehensive list of options could be considered in subsequent projects, including this PFE3 project.

3.17 Subsequent to the project submission, SSEH provided additional analysis comparing the options of the selected cable size with other larger sized cable options. SSEH highlighted that it would take at least 2 years to facilitate the options involving selection of larger size cables, and the cost of risk of this delay is very high when the running costs of KPS and additional mobile diesel

[20] We note that security of supply on the Orkney Islands is provided through two distribution subsea cables, Pentland Firth East (PFE) and Pentland Firth West (PFW), with Kirkwall Power Station located on Orkney providing support when needed.
[21] Orkney - SSEN Transmission (ssen-transmission.co.uk)
[22] https://www.ofgem.gov.uk/sites/default/files/docs/riio-ed1_reopener_decision_-_high_value_projects.pdf

generation for the supply to the island are taken into account. The cost benefit analysis demonstrated that the benefits to proceed with PFE3 using type-tested 33kV cables (ie. the preferred option) outweighed the benefit of installing a larger cable at least 2 years later.

3.18 A key consideration in the cost benefit analysis is that there would be a delay of the project by up to 2 years to facilitate the selection of a larger cable. We appreciate that the PFE3 cable replacement was a reactive project under fault condition of PFE2 cable and the priority was to secure supplies as soon as possible, given the significant risk being carried during any delay. For other projects with longer planning horizon, we expect SSEH should arrange necessary type tests for larger 33kV and 66kV subsea cables so that a comprehensive list of options is available for consideration which can be immediately progressed.

3.19 Based on the analysis above, we are proposing to accept SSEH's PFE3 preferred option.

3.20 We consider that although the preferred option is acceptable based on short term cost of the risks mentioned in paragraph 3.18, the selected PFE3 cable size rules out a number of possible long-term options for the whole system solution for the Orkney islands. We will determine if there is any detriment to the long-term interest of consumers by requesting cost benefit analyses to compare future investment proposals with the counterfactual where a larger size cable had been installed. We may adjust funding level for future investment if we have identified any quantifiable detriment.

Uist – Eriskay solution

3.21 The South Uist – Eriskay 11kV subsea cable provides one of the two main connections between South Uist in the Outer Hebrides to the islands of Eriskay and was installed in 1987. SSEH has been assessing the whole system solutions of the Outer Hebrides and through network assessment this cable has been found to have a high network risk and associated impact costs should the cable fail in service. It has been deemed in need of replacement to reduce the associated probability of failure and risk associated to the wider network.

3.22 The optioneering by SSEH consists of:

- Continue to operate the existing cable until it fails, at which time the cable would be replaced
- Replace the existing subsea cable with (i) a same size 95mm2 cable, (ii) a larger 185mm2 cable or (iii) two new cables

- Augment the existing cable with (i) a same size 95mm2 cable or (ii) a larger 185mm2 cable
- Replace the existing subsea cable with a land based solution through the Eriskay causeway (150mm 7MVA) [preferred option].
- Defer the land-based replacement solution (ie. the preferred option above) to 2031/32.

3.23 SSEH already has a cable installed in the other side of the causeway (installed in 2001 when the causeway was constructed) and have had initial discussions with the Western Isles Council to confirm that they are receptive to the land base solution. The proposed solution also includes the decommissioning of the existing South Uist -Eriskay cable.

3.24 We agree with SSEH's preferred option; the land based solution is cheapest and is adequately sized for the future.

Eriskay – Barra solution Substation

3.25 The E-B2 11kV subsea cable provides the sole network connection to the Isle of Barra in the Outer Hebrides of Scotland. It also allows Barra Power Station (BPS) to support the 11kV network under certain outages on the Pollachar 11kV network. Therefore the island of Barra has been supplied by a single cable connection, with BPS providing back up contingency supplies.

3.26 Through network assessment and visual inspections by SSEH, the E-B2 cable has been assessed to be in a poor condition with external damage or deterioration found.

3.27 SSEH has conducted an option analysis for 2050 long term solutions. The optioneering consists of:

- Continue to operate the existing cable until it fails, at which time the cable would be replaced.
- Replace the existing cable with (i) a same size 95mm2 cable, (ii) a larger size 185mm2 cable or (iii) by two new subsea cables.
- Augment the existing cable with (i) a same size 95mm2 cable [preferred option] or (ii) a larger size 185mm2 cable.

3.28 SSEH have proposed to augment the existing subsea cable by installing another 11kV 95mm2 subsea cable and we agree. The proposed cable is sufficient to meet forecast demand to 2050 based on the 2022 DFES. Augmentation ahead of

existing cable failure provides additional resilience and is in the interest of the consumers.

Cost Assessment of the preferred options

3.29 We assessed the maturity of submitted costs, ie. how well developed the project costings are, for example, whether they are supported by market tested tenders, or whether they are still just at desktop study stage.

3.30 After establishing our view of the justified investment work from each project plus a view on their cost maturity, we then assessed the efficient cost for this project.

3.31 For assessing the asset costs, our primary approach was to apply our benchmark of unit cost for each type of asset, where relevant data is available in the RIIO-ED2 FDs and other sources including other re-opener submissions.

3.32 We have also adjusted the costs for ongoing efficiency in line with RIIO-ED2 FDs.[23]

3.33 With the assessments above, we are satisfied that the costs submitted by SSEH for the individual projects are efficient.

Additional Views

3.34 We have also carried out a preliminary assessment of information that SSEH has provided on the projects it is intending to submit applications for in the January 2025 application window. We want to highlight that there is a similar problem within the optioneering for the Skye – Harris 33kV subsea cable, in which the size of the subsea cable is still limited to 500mm2. The lack of options including larger 33kV subsea cable or higher voltage solution is likely to result in an inadequate optioneering and inefficiently sized cable. We expect SSEH to review its plan and optioneering before the 2025 submission.

[23] https://www.ofgem.gov.uk/decision/riio-ed2-final-determinations

4. Storm Arwen Re-opener

Questions
ED.Q4. Do you agree with Ofgem's assessment of the cross-boundary interconnectors proposals and the proposed funding allowance?
ED.Q5. Do you agree with Ofgem's assessment of the vegetation management proposals and rejecting the requests for an allowance?
ED.Q6. Do you agree with Ofgem's assessment of the Temporary Power Sources proposals and rejecting the requests for an allowance?
ED.Q7. Do you agree with Ofgem's assessment of the Customer Care and Welfare proposals and rejecting the requests for an allowance?
ED.Q8. Do you agree with Ofgem's assessment of the Customer Communication proposals and rejecting the requests for an allowance?

Purpose of the re-opener mechanism

4.1 In accordance with Special Condition 3.2.68, in January 2024, all DNOs had the opportunity to submit plans to increase their network's resilience to storms. This document sets out our minded-to views on DNOs' applications for funding, under the RIIO-2 Uncertainty Mechanism associated with Storm Arwen, for each proposal.

4.2 Special Licence Condition Part J 3.2.67 states "The Storm Arwen Re-opener may be used where the costs incurred or expect to be incurred by the licensee in operating its Distribution Business have changed as a direct result of the Storm Arwen Recommendations, including actions taken as a result of those recommendations".

Applications received

4.3 In the January 2024 application window, we received 6 submissions requesting an adjustment to the DNOs expenditure allowances in relation to Storm Arwen. One each from: (i) Electricity North West Limited (ENWL); (ii) Scottish and Southern Electricity Networks (SSEN); (iii) Northen Powergrid (NPg); (iv) Scottish Power Energy Network (SPEN); (v) National Grid Electricity Distribution (NGED); and (vi) UK Power Network (UKPN).

4.4 A total of 75 proposal we submitted with submissions covering 13 out of 14 licence areas, no proposals were submitted for UKPNs London Power Network licence area.

Approach to Assessment

4.5 We have assessed the submissions in accordance with the Special Licence Conditions, Re-opener Guidance and Application Requirements Document[24] and the RIIO-ED2 Price Control Financial Handbook.[25]

4.6 We considered each application and its justification for the funding requested in accordance with our principal objective and statutory duties. In line with the Re-opener Guidance and Application Requirement Document, our assessment of each project covers the four following areas:

- Recommendation assessment;
- SAR_t Principles;
- Needs case assessment;
- Assessment of options and preferred options; and
- Cost assessment.

4.7 We rely on our assessment of these four areas, alongside the SAR_t principles to determine what additional allowances, if any, should be provided to the DNO to undertake the proposed projects.

Storm Arwen recommendations assessment

4.8 As set out in the Special Licence Conditions, the SAR_t was established as a direct result of the Storm Arwen recommendations. All proposals must meet the recommendations to be considered.

4.9 We assessed each proposal based on the following:

- Does the proposal meet the published recommendations;
- Has the recommendation already been addressed and embedded into Business as Usual (BAU); and
- Does the issue the proposal seeks to address require wider policy discussion for efficient and effective implementation across the network.

4.10 We fully recognise the importance of the recommendations set out in ours[7] and government[8] reports and that the aim of this re-opener is to increase resilience based on these recommendations. However, many of these recommendations have already been addressed and embedded into BAU activities in RIIO-ED2.

[24] Re-opener Guidance and Application Requirements Document (ofgem.gov.uk)
[25] ED2 Price Control Financial Handbook (ofgem.gov.uk)

Others are not beneficial as stand-alone projects, requiring further work outside of the re-opener to achieve the required improvements. This may consist of additional projects being needed or broader policy discussions as part of RIIO-ED3 to ensure the entire energy network's resilience is enhanced. On this basis, some proposals are suggested for rejection, but they will be discussed with the DNOs and other key stakeholders as part of the wider RIIO-ED3 framework.

4.11 When discussing our recommendations, we will refer to them as Ofgem 1, 2, 3 etc. in line with the Ofgem report[7]. However, the E3C recommendations are coded based on their grouping categories, system resilience (E), Restoration & Response (R), Secondary Impacts (S), Consumer Protection (CM), Customer Welfare (W), Compensation (CP) and Additional Support (L). When we are discussing the E3C recommendations we will use the related code and the recommendation number, for example, E1.

SAR_t Principles

4.12 The SAR_t licence condition outlines what can be considered as part of the re-Opener. For the purposes of the assessment process, we have also established a set of principles to help determine the value to consumers in ensuring proportionate, practical and justified proposals.

4.13 All proposals must be:

- Proportionate to the risk and to the benefit provided;
- Reasonable in regard to cost and maturity of proposals;
- Provide value to consumers with clear identification of consequences and impacts of proposals; and
- Beneficial as a stand-alone project, and not require future engagement or policy discussions.

Needs case assessment

4.14 As part of their submission, DNOs set out the detail behind their plans relating to the engineering justification and the proposals needs case.

4.15 The Engineering Justification Papers (EJP) act as a robust decision support tool but aren’t required for all proposals. EJPs provide an opportunity to provide further justification. They should be transparent about options scope, and which risks, costs and benefits were considered by the DNO as part of the analysis to inform the need for intervention and their proposed solutions.

4.16 As part of the needs case, DNOs were also required to provide justification for why this project is being proposed now rather than in the RIIO-ED2 proposal as

well as drawing out the reasons why each project should not wait for the RIIO-ED3 submissions in 2026.

4.17 The needs case for the investment is demonstrated by the provision of an explanatory narrative and evidence to support the need for investment.

4.18 It is important to note that given the nature of the re-opener not all proposals would be economically justified, therefore allowances have been made when considering proposals to ensure the risk to customers (in particular vulnerable or worst served) is being appropriately mitigated.

Assessment of options

4.19 We undertook a technical review of the solutions considered by each DNO and determined whether we were satisfied that the DNO had suitably considered all viable options. The materials we reviewed comprised of DNO submission documents and supporting evidence (e.g. cost benefit analysis) under the SAR_t and responses to supplementary questions.

4.20 In addition, we also reviewed the efficiency of the proposed engineering solutions to determine whether the proposal is a proportionate solution to the identified needs case, ensuring the scope has not expanded beyond meeting the identified need without further justification.

Cost Assessment

4.21 In line with the SAR_t principles outlined in section 4.13, proposals must be reasonable in regard to the cost of the proposal and evidence good value for the consumer. We reviewed the cost breakdown provided by the DNOs and considered the maturity of submitted costs. This included reviewing how well developed the project costings are, for example, whether the proposal is supported by market tested tenders, or whether they are still just at desktop study or feasibility stage. We also took into account the cost benefit of the proposals to consider value for money, and where possible carried out benchmarking.

Re-opener submissions cost overview

4.22 We received submissions for all six DNOs, covering 13 out of 14 licence areas. Across all DNO's there were 75 project proposals submitted, totalling £266.75m. Our Draft Determination proposes to fund £106.26m worth of projects across the six DNOs.

4.23 A breakdown of the requested and proposed funding by the DNOs can be seen in **Table ED5** below**.**

Table ED5: Overview of SAR_t

DNO	Number of proposals	Requested funding	Proposed funding
ENWL	7	£27.5m	£27.5m
SSEN	5	£10.48m	£4.37m
NPG	26	£34.79m	£20.06m
SPEN	13	£75.9m	£7.66m
NGED	16	£61.38m	£18.17m
UKPN	8	£56.7m	£28.5m
Total	75	£266.75m	£106.26m

Outlining our minded to position

4.24 Given the large volume of proposals we have assessed, we have not provided an exhaustive breakdown of each proposal. Where we have rejected a proposal, we have aimed to provide clear reasoning, which can be linked to the SARt principles and the Storm Arwen recommendations assessment as explained above.

4.25 We would be happy to discuss our minded to positions further with the DNOs to ensure they understand our reasoning for accepting or rejecting their proposals.

4.26 Unless otherwise stated, we intend to assign PCDs to each accepted proposal.

Storm Arwen Re-opener cross over proposals

4.27 This section will jointly assess a number of similar proposals, submitted by DNOs with the aim to provide a collective Draft Determination based on the evidence provided in line with the E3C and Ofgem recommendations, Storm Arwen recommendations assessment and SARt principles.

Cross-boundary interconnectors

4.28 Five out of the six DNOs presented proposals for cross-boundary interconnectors (UKPN did not submit this as a proposal). The DNOs have explored opportunities to improve network resilience by highlighting areas where mutual aid could be utilised by installing an additional supply feed from a neighbouring DNO. **Table ED6** below provides a breakdown of the number of interconnectors and associated costs, proposed by the DNOs.

Table ED6: Proposed number of units and cost proposed by each DNO

DNO	Number of interconnectors proposed	Requested funding
ENWL	11	£1.6m
SSEN	4	£0.14m
NPG	8	£4.38m
SPEN	20	£3.3m
NGED	13	£0.94m

4.29 The proposals aim to address the E3C and Ofgem recommendations around best practice for identifying faults and reducing customer restoration time (E3C R1 & Ofgem 6) and providing appropriate and effective mutual aid to reduce customer restoration times and enhance customer support (E3C R5 and Ofgem 7).

4.30 This intervention would allow DNOs to benefit from a supply feed outside of their licence area to restore supplies to their customers, reducing customer restoration times during a severe weather event.

4.31 All the proposals are still in the early stages of development both from a costing and a design perspective. So far, DNOs have identified potential suitable circuits, considered the benefits, and provided costs. However, we believe further work is needed to develop an in depth understanding of the proposal feasibility, benefits, associated costs and detailed design to ensure a holistic and efficient network development.

Draft Determinations: Partially Accept

Needs case assessment

4.32 Based on the evidence provided, we are satisfied that all 56 proposals meet the needs of the recommendations associated with the SAR_t. The proposed interconnectors prioritise remote and rural areas which typically suffer from longer restoration times. Interconnection can be an alternative to fault identification, bypassing the need for immediate fault repairs and restoring power to customers. The fault can then be fixed once it is safe to do so. The proposal utilises an alternative source of supply from a neighbouring DNO, resulting in a reduced amount of time customers are without power.

Assessment of options and preferred options

4.33 The DNOs identified the most valuable locations for the interconnectors through collaboration exercises with other DNOs, with one of the assessment criteria being expected benefits.

4.34 At this stage we are happy that the criteria used to identify these locations is suitable but note that the exploration of these potential interconnectors is relatively immature and the feasibility of the proposals needs greater exploration.

Cost assessment

4.35 To calculate allowances, we have calculated the median cost of a cross DNO interconnector project using data submitted by the DNOs. We then apply this median project cost to the number of projects proposed by each DNO.

Minded to position

4.36 While we agree with the proposals in principle and support the innovative approach, we recognise that the proposals are currently in their infancy and there is further design and feasibility work to be completed before the full extent of the benefits and costs associated with these projects are known. We will continue to engage with DNOs on the development of interconnectors and expect to see more mature proposals brought forward in RIIO-ED3.

Cross-boundary interconnector proposed adjustments

4.37 We are minded-to adjust the funding allowances for the proposals submitted to us by ENWL, SSEN, NPg, SPEN and NGED for cross-boundary interconnectors. This follows a review of the submitted costs and further discussions with the DNOs. The proposed adjustments are set out in **Table ED7** below.

Table ED7: Summary of Cross-boundary Interconnectors proposal amendments

DNO	Requested funding	Accepted Proposed funding
ENWL	£1.6m	£1.57m
SSEN	£0.14m	£0.14m
NPG	£4.4m	£1.14m
SPEN	£3.3m	£2.3m
NGED	£0.9m	£0.89m

Vegetation management

4.38 ENWL, SSEN, SPEN and NGED all submitted proposals relating to vegetation management. Damage from vegetation and debris is one of the largest causes of

electricity disruption network failure during a storm, due to Overhead Lines (OHL) being unprotected against wind and debris.

4.39 The vegetation management submission by ENWL, SPEN and NGED, all relate to anticipated updates to the 2016 ETR132[26] technical standard which is expected to be published in November 2024, however the proposal specifics did vary. The ETR132 Technical Standard provides guidance on how to improve the performance of overhead distribution network resilience, including problems caused by falling trees and wind-blown tree branches.

4.40 ENWL's submission recognised that the ETR132 standard was not complete or published at the time of submission and did not submit a proposal. ENWL noted it would support a second re-opener window to allow for consideration of additional expenditure.

4.41 SPEN and NGED's proposal submissions requested £10.5m and £6.1m respectively for additional vegetation management to expand their current programme funded through our RIIO-ED2 Final Determination.[27]

4.42 SSEN's proposal focused on additional tree harvesting to increase their resilience of OHL to storm events.

4.43 The proposals aim to address the E3C and Ofgem recommendations that state industry standards and guidance should be reviewed and updated, including vegetation management standards (E3C E2 and Ofgem 1).

4.44 A breakdown of the requested vegetation management funding can be seen in the Table ED8 below.

Table ED8: Vegetation management proposal breakdown

DNO	Proposal name	Requested funding
ENWL	ETR132 review	£0m
NGED	Resilience tree cutting on High Voltage (HV) circuits	£6.1m
SPEN	Reflecting ETR132 Updates	£10.5m
SSEN	Restoring Overhead Line Resilience (ROLR)	£2.1m

[26] ENA ETR132
[27] RIIO-ED2 Final Determinations | Ofgem

Draft Determination: Reject

Needs case assessment

4.45 While the DNOs may be required to implement any future changes prescribed by the update to standards and guidance, the responsibility of addressing the E3C E3 and Ofgem 1 recommendations does not fall to the DNOs and is already being addressed through the review of the ETR132 standard. Given this, we do not believe that these proposals address the recommendations. Presuming there are no substantive changes to the current draft, DNOs may address future updates that come out in November once ETR132 has been published. In addition to the proposal not meeting the recommendations, we provide Totex allowances in the price control for companies to be able to manage changes in the mix of work they may have to meet. We consider vegetation management a well understood activity of a DNO and expect them to be able to manage their programmes to provide the most effective outcomes. If priority areas have been identified, these should be addressed accordingly within their RIIO-ED-2 allowance. In absence of the SAR_t, we anticipate the updates published in ETR132 would not trigger a re-opener and DNOs would be expected to incorporate any changes into their ongoing programme.

Assessment of options and preferred options

4.46 Given the proposals have been assessed as not meeting the recommendations, we have not provided commentary of our assessment on the options and preferred options.

Cost assessment

4.47 Given the proposals have been assessed as not meeting the recommendations, we have not provided commentary of our cost assessment.

Minded to position

4.48 Taking all the evidence into consideration, we are proposing to reject all funding requests associated with vegetation management as it does not address the stated recommendations.

Temporary Power Sources

4.49 Acquiring temporary power sources such as mobile generators and battery packs have been submitted by multiple DNOs, with NPg, SPEN, NGED and UKPN, submitting proposals for the purchase of a variety of temporary power sources.

4.50 Temporary power sources can be used for temporary restoration during a storm event, or to ensure power supply is provided while faults caused by storms are fixed. They have a number of deployment uses, such as providing supply to residential units, commercial properties and community hubs. During Storm Arwen, customer restoration was a priority for DNOs. The deployment and utilisation of mobile generators was extensively used to do this.

4.51 Recommendation E3C R2 and Ofgem 8 from the EC3 and Ofgem Storm Arwen reports recommend that enhanced use of generation should be explored to reduce the length of power disruptions, however the DNOs are not the owners of these recommendations.

4.52 A breakdown of the requested funding can be seen in Table ED below.

Table ED9: Temporary power sources proposal breakdown

DNO	Proposal name	Requested funding
NPG	Power Packs	£2.7m
NGED	Mobile and suitcase generation	£5.3m
UKPN	Additional generators for vulnerable customers	£6.1m
SPEN	Making greater use of generation	£3.5m

Draft Determination: Reject

Needs case assessment

4.53 We agree that the submitted proposals could help support the recommendations, however, when we assess them against the Storm Arwen recommendations assessment section and SARt principles we do not deem the proposals as suitable for the SARt. While the proposals may support the recommendations set out by E3C (R2) and Ofgem (8), based on the recommendation assessment and SARt principles, we do not believe these proposals should be accepted.

4.54 As part of the recommendation assessment, we considered whether the recommendation had already been addressed by the DNO. While the recommendation itself could be supported by an increased number of temporary power sources, as part of the RIIO-ED2 price control they are considered as BAU and little evidence was provided on how they would be utilised outside of storm events. We would like to engage with DNOs ahead of RIIO-ED3 to better

understand the optimal use of temporary power sources and would expect to see proposals in the RIIO-ED3 plans. Identifying where DNOs strategically deploy their equipment to best meet the needs of event and how the assets are utilised outside of an event.

4.55 In addition, while they have a role to play in storm events, they also have the potential to be used in planned works or other business as usual activities and we agree that they should be utilised to their maximum potential. However, we do not agree that the SAR_t is a suitable funding source as the proportionate benefits provided in the context, is low compared to its potential BAU usage.

4.56 Moreover, as part of the SAR_t, we are providing funding for fault detection. With increased and early detection of faults, we expect that the DNOs will be able to deploy generators more strategically and efficiently to the areas where they are required.

Assessment of options and preferred options

4.57 Given the proposals have been assessed as supporting the recommendations but not meeting them, we have not provided commentary of our assessment on the options and preferred options.

Cost assessment

4.58 Given the proposals have been assessed as supporting the recommendations but not meeting them, we have not provided commentary of our cost assessment.

Minded to position

4.59 Taking all the evidence into consideration, we are proposing to reject all requests for funding for temporary power sources, therefore providing no additional funding. However, we recognise the need to explore this issue in more detail and therefore, we propose to discuss this as part of the upcoming policy discussion as we prepare for RIIO-ED3.

Customer care and welfare

4.60 Improving customer welfare and care proposals were put forward by NPg and SPEN, which includes initiatives they believe goes above and beyond what is already being offered during storm events such as food provision retainers and improved customer welfare packs.

4.61 NPg identified the relevant recommendations as E3C W1, W2, W3 and W4, while SPEN did not link any recommendations to its customer care and welfare

proposals, however we decided to assessed the proposals in line with the recommendations presented by NPg.

4.62 NPg are requesting funding for a food and provision retainer and call out agreement, as well as improved welfare packs, however, the E3C recommendations do not directly link to NPg's proposal. The recommendations support the development of welfare support best practice guidance (W1), determines the need for clear roles and responsibilities (W2), expressed the need for customer to know what discretionary support is available to them (W3) and develop best practice guidance on how and when customers can make expense reimbursements (W4).

4.63 While the recommendations support development of standards and best practice they do not require DNO's to provide food provisions and enhanced welfare packs, noting in recommendation E3C that hot meals, are considered discretionary.

4.64 SPEN are proposing to support 'warm hubs' in their licence areas, including the installation of a Satellite Phone Courtesy Box within these hubs to provide remote communities with access to their DNO in the event of complete communication loss in the area. In addition, SPEN is looking to combat telecoms issues resulting from the UK moving towards a fully digital network, by installing a device into vulnerable customers' homes. This would enable land line and care links to work normally during power cuts.

4.65 A breakdown of the requested funding can be seen in Table ED below.

Table ED10: Customer welfare and care proposal breakdown

DNO	Proposal name	Requested funding
NPg	Food and provision retainer and call out agreement	£0.67m
NPg	Improved Welfare Packs	£0.54m
SPEN	Increased Customer Welfare Support	£1.0m
SPEN	Warm Customer Communication Hubs	£2.3m
SPEN	Digital Switchover Support for Vulnerable Customers	£13.4m
SPEN	Proactive Support - Medical Equipment Back-Ups	£23.5m

SPEN	Proactive Support Medically Dependent Equipment Hospital Bed	£0.03m

Draft Determination: Reject

Needs case assessment

4.66 NPg's proposals do not meet the E3C recommendations as its proposals go beyond the requirements of developing welfare best practice guidelines. Based on the evidence submitted by NPg, it is unclear whether this guidance has been developed and the request for food provisions and enhanced welfare packs is following the development of this guidance. However, all warm food provisions provided by the DNOs are currently discretionary as noted in the E3C (W3) and Ofgem (16) recommendations and is not required by Ofgem. We would encourage NPg and others to continue delivering such measures in future, and as part of RIIO-ED3 we propose to explore whether these provisions should be required by DNOs. We believe this decision needs to be assessed in the wider context of the Price Control alongside policy discussions with relevant stakeholders and we have decided that we will not be funding this proposal as part of the SAR_t.

4.67 Although SPEN's customer care and welfare proposals have not been linked to any E3C or Ofgem recommendations, we assessed the proposals in line with the recommendations presented by NPg. Similar to above, we do not believe the recommendations were met by SPEN's proposals, but also that these proposals should be discussed in the appropriate RIIO-ED3 forums to ensure the policy is agreed with broader stakeholder input.

Assessment of options and preferred options

4.68 Given the proposals have been assessed as not meeting the recommendations, we have not provided commentary of options or preferred options.

Cost Assessment

4.69 Given the proposals have been assessed as not meeting the recommendations, we have not provided commentary of our cost assessment.

Minded to position

4.70 Taking all the evidence into consideration, we are proposing to reject all requests for funding customer care and welfare. We acknowledge the need to explore this issue in more detail and therefore, we propose to discuss this as part of the upcoming policy discussions as we prepare for RIIO-ED3.

Customer Communication

4.71 SPEN and NGED, are proposing improvements to their customer communication which goes beyond BAU.

4.72 SPENs proposal consists of increased contact centre ramp up, to provide additional resource, quickly and out of hours. However, they have not associated any E3C or Ofgem recommendations to its proposal. In the absence of recommendations, we have assessed the proposal against the E3C CM2 and Ofgem 10 recommendations which state DNOs should stress test their telephony systems and websites to ensure adequate capacity during severe weather events.

4.73 NGED are proposing to enhance their telephony servers to be able to handle the large volumes of calls experienced during major events and have linked this proposal to the recommendation Ofgem 10, which states DNOs should stress test their telephony systems and websites to ensure adequate capacity during severe weather events.

4.74 Table ED11 below, outlines the funding requested from NGED and SPEN.

Table ED11: Customer care and welfare proposal breakdown

DNO	Proposal name	Requested funding
NGED	Enhancements to telephony servers	£0.41m
SPEN	Increased Contact Centre Ramp Up	£1.9m

Draft Determination: Reject

Needs case assessment

4.75 We agree that SPEN and NGEDs proposals for increased contact centre ramp up and enhancements to telephony servers does meet the E3C CM2 and Ofgem 10 recommendation. We assessed the proposals alongside our Storm Arwen recommendations assessment and SARt principles we do not deem the proposals to be suitable for the SARt, specifically as this is already a DNO BAU activity, and funding has already been provided for this type of activity in ED2 price control.

4.76 As part of the recommendation assessment, we considered whether the recommendation had already been addressed and considered BAU. While the recommendation may not have been fully addressed, we believe that a funding route already exists to funding these types of proposals as BAU through the RIIO-ED2 Price Control through its IT & Telecoms allowances.

4.77 In addition, we recognise that there is a wider policy discussion that should be had as part of RIIO-ED3 Price Control, therefore we propose to discuss this as part of the upcoming policy discussions with stakeholder input.

Assessment of options and preferred options

1.2 Given the proposals have been assessed as not meeting the Storm Arwen recommendations assessment and SAR_t principles, we have not provided commentary of options or preferred options.

Cost Assessment

4.78 The cost assessment provided by NGED does not outline a breakdown of how the costs have been determined, we are therefore unable to properly form an opinion on whether the cost of £0.41m is reasonable and proportionate to address the needs case.

Minded to position

4.79 Taking all the evidence into consideration, we are proposing to reject all requests for funding customer communication. However, we will explore this in more detail as we prepare for RIIO-ED3.

Closely Associated Indirect (CAI) Costs

4.80 As stated in the RIIO-ED2 Regulatory Instructions and Guidance Glossary we have identified the following activities as CAI costs:

- Core CAIs - Network Design and Engineering, Network Policy, Project Management, Engineering Management and Clerical Support, System Mapping, Stores, Call Centre and Control Centre;
- Wayleaves;
- Operational Training; and
- Vehicles and Transport.

4.81 We note that SSEN, SPEN, NGED and NPg have included some CAI costs such as surveys, project management and detailed functional design costs relating to their project. Table ED12 below, shows the CAIs submitted by the DNOs.

Table ED12: Closely Associated Indirect Cost Proposal Breakdown

DNO	Proposal name	Requested funding
NPg	Indirect Scalar	£2.93m

NGED	Closely associated indirects	£5.2m
SPEN	Associated Indirects for Initiatives	£3.2m
SSEN	N/A	£0.65m

4.82 Our initial view it to remove funding requests for CAI as we do not believe they are in scope of SAR_t. We applied the Indirects Scaler to load related UMs only in our RIIO-ED2 Final Determination. We do not agree that further indirect funding is required to deliver the capex work requested. We also note that not all DNOs have requested CAI allowances and therefore expect DNOs to be able to manage any CAI work associated with SAR_t within their RIIO-ED2 CAI allowances

4.83 We note that we have removed the closely associated indirects costs submitted in SSEN's HV feeder monitoring request.[28]

Q1.	**Questions**
ED.Q9.	Do you agree with Ofgem's assessment of ENWL's request for allowances?
ED.Q10.	Do you agree with Ofgem's assessment of SSEN's request for allowances?
ED.Q11.	Do you agree with Ofgem's assessment of NPg's request for allowances?
ED.Q12.	Do you agree with Ofgem's assessment of SPEN's request for allowances?
ED.Q13.	Do you agree with Ofgem's assessment of NGED's request for allowances?
ED.Q14.	Do you agree with Ofgem's assessment of UKPN's request for allowances?

ENWL Application

4.84 ENWL is seeking an increase to allowances of £27.5m to fund the cost of upgrading its network to enhance its storm resilience. ENWL has proposed 7 projects, we will outline each proposal and the initial decision based on evidence below.

4.85 ENWL gave notice of a proposed adjustment during the Storm Arwen re-opener submission window.

[28] RIIO-ED2 Final Determinations | Ofgem

4.86 Table ED13 below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to the online publication of its submission.

Table ED13: Summary of ENWL's consultation position

Proposed Activity	**Consultation position**
Proposal 1: HV network strengthening predictive modelling - Develop asset level predictive modelling of vulnerable circuits to determine the susceptibility, vulnerability and recoverability of the wood poles and overhead lines.	Accept: Recommendation met. We are satisfied that this proposal will result in the strengthening of the network infrastructure, in line with the E3C recommendation E2. It is a proactive and innovative method to identifying assets that are vulnerable to storms, and allows for a targeted upgrades to priority poles.
Proposal 2: Targeted HV undergrounding/strengthening - Strengthen vulnerable lengths of OHL through rebuilding approximately 150km of OHL, or undergrounding approximately 80km of OHL, identified through the predictive modelling programme.	Accept: Recommendation met. We are satisfied that this proposal will result in the strengthening of the network infrastructure, in line with the recommendation E3C recommendation E2. ENWL have provided clear optioneering, considering four different options. Their chosen option uses a whole system approach considering the operational impacts and risk of failure of assets, which is estimated to reduce risk to 20,000 customers.
Proposal 3: Pennine and borders interconnection – Design and installations 11 cross-boundary interconnectors.	Partially Accept: Recommendation met. See the Cross-boundary interconnectors section, 4.28
Proposal 4: Low Voltage (LV) automation enhancements - Installation of 750 LV reclosing facilities to automatically restore LV transient faults in aims to reduce the demand on field staff in storm conditions with continued efforts to restore supply to customers.	Accept: Recommendation met. ENWL have evidenced that these LV automation enhancements are an effective method to restoring supply caused by LV faults during a storm event, reducing customer restoration times and increased safety for field staff, in line with the E3C recommendation R1. In addition, the proposal estimated that over 7,500 customers will benefit and has been assessed as being proportionate and good value to consumers.
Proposal 5: Coniston HV interconnector – Installation of a new interconnector to provide an alternative power supply from Ambleside to Coniston, which can be used when a storm results in loss of supply.	Accept: Recommendation met. We are satisfied that this proposal meets the E3C recommendation E2, by strengthen network infrastructure that is expected to benefit 1,386 customers. The proposal targets a rural and remote area which is often isolated during storm events, reducing restoration times caused by having one main supply as well as difficulties accessing the area due to topography and weather conditions. We consider this project separately to those proposed in chapter 3 as we deem it a well specified undergrounding project that demonstrates clear value for these communities.
Proposal 6: Alston HV interconnector: Installation of a new interconnector to provide a new supply from Little Salkeld to Alston, which can be used when a storm event results in a loss of supply.	Accept: Recommendation met. We are satisfied that this proposal meets the E3C recommendation E2, by strengthening network infrastructure that is expected to benefit 1,373 customers. The proposal targets a rural and remote area which is often isolated during storm events, reducing restoration times caused by having one

	main supply as well as difficulties accessing the area due to topography and weather conditions. We consider this project separately to those proposed in chapter 3 as we deem it a well specified undergrounding project that demonstrates clear value for these communities.
Proposal 7: ETR132 – Recognition that the ETR132 standard is under review.	Reject: Recommendation not met. Vegetation management section of this document, 4.38

ENWL proposed adjustments

4.87 Table ED14 set out below, outlines the ENWL proposals we are minded-to accept the proposals that ENWL has submitted to us. Our minded to position follows a review of ENWL's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted, have been rejected and will not be funded.

Table ED14: Summary of ENWL proposal allowances

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 1: HV network strengthening predictive modelling	£0.8m	£0.8m
Proposal 2: Targeted HV undergrounding/strengthening	£12.6m	£12.6m
Proposal 3: Pennine and borders interconnection	£1.6m	£1.6m
Proposal 4: LV automation enhancements	£5.5m	£5.5m
Proposal 5: Coniston HV interconnector	£3.1m	£3.1m
Proposal 6: Alston HV interconnector	£3.9m	£3.9m
Total overall funding requested by ENWL and proposed Draft Determination funding	£27.5m	£27.5m

SSEN Application

4.88 SSEN is seeking an increase to allowances of £10.48m to fund the cost of upgrading its network to enhance its resilience. SSEN proposed 5 projects on behalf of both SHEPD and SEPD.

4.89 Table ED15 below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to their online publication of their submission.

Table ED15: Summary of SSEN's proposal amendments

Proposed Activity	**Consultation position**
Proposal 1: Restoring OHL Resilience – Additional funding for targeted tree harvesting, identified following Storm Arwen	Reject: Recommendation not met. Vegetation management section of this document, 4.38.
Proposal 2: HV Feeder Monitoring – Installation of 200 HV feeder monitoring devices to improve the visibility of defects on their network and improve response time during storm events.	Accept: Recommendation met. We are satisfied with this proposal from SSEN, it meets the E3C (R1) and Ofgem (6) recommendations, ensuring faults are detected and repaired quicker, reducing restoration time. The deployment of HV Feeder monitoring devices has a clear operation use, allowing for improved operational response to faults during a storm. This proposal will help to accurately find faults and allow field staff to get to these locations quickly, reducing the time spent looking for the fault and reducing customer restoration times. However, the cost breakdown submitted by SSEN shows that a large proportion of the cost are closely associated indirect and therefore have been removed from the proposed accepted funding (see section Closely Associated Indirects (CAI) costs for more details).
Proposal 3: Wood Pole Assessment Tool – Deployment of 346 Smart Hammers and 14 Resistrills to field staff to provide a more consistent and accurate measurement of condition data for wood poles and ensuring targeting wood pole replacements are carried out.	Reject: Cost of proposal is not appropriate to the benefit. The Ofgem 2 recommendation relating to improving pole condition reporting have been met, despite the proposed technology being an asset health tool rather than a storm resilience tool. However, when assessing the proposal in line with the SAR_t Principles, it was assess that that proposed cost of £0.95m is not justified for benefits the tool provided which is noted as being a reduction of pole failures by 10 poles per year, which is disproportionately of low value compared to the cost. We also believe the core benefit of this proposal will be in the management of its wider asset health which is funded through NARM. These are the grounds we are minded to reject this proposal on.

Proposal 4: Satellite Communication System – Deployment of fixed location Low Earth Orbit satellite communication systems	Reject: BAU activity. While we agree that the proposal could help to address the E3C (CM4 and R3) and Ofgem (13) recommendations, communication systems are considered as BAU and should have been submitted through Digital Communications at RIIO-ED2. Storm events in the UK are not a new phenomenon, therefore SSEN should have considered communication during storms as part of their ED2 business plans. With ongoing initiatives being explored by mobile networks operators, Ofcom and Government to further national resilient communications this may duplicate efforts. Taking this into account, we suggest discussing this policy area for developing RIIO-ED3 and therefore we reject SSEN's proposal.
Proposal 5: Cross DNO Interconnection – Design and installations 4 cross-boundary interconnectors.	Partially Accept: Recommendation met. Cross-boundary interconnectors section of this document, 4.28.

SSEN proposed adjustments

4.90 We propose to adjust the allowance request that SSEN has submitted to us. Our minded to position follows a review of SSEN's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted, have been rejected and will not be funded. SSEN' proposed adjustments are listed below in Table ED16.

Table ED16: Summary of SSEN's accepted proposal amendments

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 2: HV Feeder Monitoring	£6.7m	£4.22m
Proposal 5: Cross DNO Interconnection	£0.14m	£0.14m
Total overall funding requested by SSEN and our proposed Draft Determination funding	£10.48	£4.37m

NPg Application

4.91 NPG is seeking an increase to allowances of £34.79m to fund the cost of upgrading its network to enhance its resilience. NPG have proposed 26 projects on behalf of both NPGN and NPGY.

4.92 **Table ED17** below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to their online publication of their submission.[29]

[29] NPg SAR_t submission

Table ED17: Summary of NPG's proposal amendments

Proposed Activity	**Consultation position**
Proposal 1: Invest in mobile command vehicles in RIIO-ED2 – Invest in two 4x4 vehicles to be fitted with technology to allow them to act as remote command offices, located strategically to co-ordinate activities in the impacted community.	Reject: Unclear value to consumers. The proposal aims to address E3C recommendations R1 and CM5. While we agree this proposal could help address the recommendation, there is limited evidence that this initiative is necessary. NPG have not provided enough evidence that this proposal will solve the problems presented. It is likely that multiple command posts would be requested during a storm event, meaning local command posts would still be required. Given this, we do not believe that the proposal is reasonable. Alternatives have not been fully explored and in addition to this, the proposed mobile command vehicles have the capability to be utilised outside of a storm event during BAU for a great proportion of time and therefore it is also considered note a proportionate cost to benefit in terms of storm resilience.
Proposal 2: Invest in Unmanned Arial Vehicles (UAVs) for reconnaissance and damage assessment in RIIO-ED2 – Invest in 50 UAVs to carry out post storm reconnaissance damage assessments.	Reject: BAU Activity. Although we agree that the proposal could help address the E3C recommendations R1 and CM5, there is no needs case beyond the RIIO-ED2 provision. The use of UAVs in storm event was clearly identified prior to Storm Arwen as NPg have an existing fleet of 50 UAVs that they use to carry out post storm reconnaissance damage assessments. NPg did not submit this proposal as part of RIIO-ED2 despite being aware of their ageing fleet. Replacement fleets should be claimed within allowances provided in our RIIO-ED2 Final Determinations and is not suitable for the SAR_t. We believe that using UAVs in place of field staff could be trialled or implemented using their current fleet without the addition of 50 new UAVs.
Proposal 3, 4, 5, 6, 7, 8, 9 & 10: Generator proposals – A mixed use of generators	Reject: BAU Activity. See the Temporary Power Sources section of this document, 4.49.
Proposal 11: Improve the speed of compensation Invest in improvements to IT systems to allow quicker and more efficient processing of customer compensation.	Accept: Recommendation met. We agree that the proposal meeting the E3C CP2 recommendation. NPg are upgrading their compensation system in line with the recommendation to ensure customer compensation claims are processed quickly and efficiently.

Proposal 12: Establishing a new electronic payment system Proposal to allow compensation payments to be made via electronic payment	Reject: Proposal lacks maturity. We agree this proposal has the potential to speed up customer compensation payments in line with the E3C recommendation, thus enacting the updates to the GSOP regulation, to allow for electronic payments. However, the proposal is still at the exploratory stage and thus in line with the SARt principles. We do not deem it reasonable in regard to it's the maturity.
Proposal 13 & 14: Customer Welfare – Proposals for food and provision retainers and call out agreement and improved welfare pack	Reject: Recommendation not met. See Customer care and welfare section of this document, 4.60.
Proposal 15: Convert open conductor to Ariel Bundled Conductor (ABC) – Replacing open wire LV conductors with covered ABC to provide more mechanical strength, making the conductor less likely to break, as well as removing the risk of flashover faults from branches or debris making contact across phases.	Accept: Recommendation met. The proposal seeks to address E3C E2, R1, R5 and Ofgem1 and 6. We agree that this proposal meets E3C E2 and Ofgem 1 by updating and strengthening the network infrastructure. The proposal takes a targeted approach to identifying areas which are the most vulnerable to LV faults under storm conditions (high altitude LV feeders and costal feeders) and looks to improve the network.
Proposal 16: Install Remotely Indicating Fault Flow Indicator (RIFFI) – NPg propose to install 3 RIFFI units per feeder section (equalling 387 units across the network) which will allow for remote communication, improving fault location and restoration time.	Accept: Recommendation met. The proposal seeks to address E3C E2, R1, R5 and Ofgem1 and 6 recommendations. We agree that this proposal meets E3C R1 and Ofgem 6 recommendations by improving fault location and reducing restoration time. We are satisfied with this proposal from NPG as RIFFI has been identified as effective method to fault response and restoration, through improved fault monitoring and remote communication. NPg have provided clear optioneering and we agree with RIFFI being the preferred option as it is reasonable in cost, provides value to consumer and is beneficial as a standalone project.

Proposal 17: Install pole mounted RC/automation point - NPg propose to install pole mounted (PM) remote controlled (RC) isolation points. The installation of additional automated RC units facilitates enhanced capability to isolate faulty sections of network and faster restoration of supplies to healthy sections of the network	Accept: Recommendation met. The proposal seeks to address E3C E2, R1, R5 and Ofgem1 and 6 recommendations. We agree that this proposal meets E3C R1 and Ofgem 6 recommendations by improving fault location and reducing restoration time. We are satisfied that this proposal meets the needs case. The installation of automated RC units will reduce the restoration time cause by faults on the HV overhead line during a storm, and potentially restore customers without the need to deploy staff to site. NPg have demonstrated clear targeting of feeder which have been identifies at high risk, offering value to consumer, however the number of customers who are expected to benefit has not been provided, therefore determination of whether to cost is reasonable has not been fully assessed.
Proposal 18: Install step-up generator platform - NPg propose to enhance restoration capability by installing permanent generator platforms at the base of a pole on a HV line, which would facilitate fast deployment of a large generator which can supply at HV.	Reject: BAU Activity The proposal seeks to address E3C recommendation R3 and R5a as well as Ofgem 8 recommendation. We acknowledge that generators are a useful tool to increase recovery time and get customer back on supply. However, as part of the RIIO-ED2 price control they are considered as BAU and therefore, it is with the DNOs power to request these as part of their business plans. In addition, while they have a role to play in a storm events, they also have the potential to be used in planned works or other business as usual activities they should be utilised to their maximum potential. However, we do not agree that the SAR_t is a suitable funding source as the proportionate benefits provided in the context, is low compared to its potential BAU usage.
Proposal 19: Transformer rationalisation – replace several PM transformers with a GM substation - NPg propose to replace a cluster of small PMTs with a GM transformer. This will enable faster restoration of customers as it will only require one large generator to be deployed as opposed to multiple small	Reject: BAU activity. The proposal seeks to address E3C recommendation E2, R1 and R5 as well as Ofgem 1 and 6 recommendations. While we acknowledge the proposal may address recommendations R1 and Ofgem 6 we have assessed this proposal as being an BAU activity which should be funded by other means such as we do not see SAR_t as the key driver. We note the proposal may create load capacity rather than upgrade assets due to poor condition.
Proposal 20: Install interconnector at 8 locations	Partially Accept: Recommendation met. See the section of this document, 4.28.

Proposal 21: Replace cross arm Proposal 22: Install additional poles on existing line Proposal 23: Upgrade pole size Proposal 24: Upsize conductor Proposal 25: Underground line For the purpose of this document, we have grouped these proposals together. NPg propose to target all legacy specification bare conductor feeders at a high altitude or close to the coast at LV, which are historically impacted by extreme weather conditions, adhering to modern overhead line design specifications such as ENA TS 43-40.	Accept: Recommendation met. The proposal seeks to address E3C recommendation E2, R1 and R5 as well as Ofgem recommendations 1 and 6. We have assessed the proposals as meeting the recommendations as they will strengthen the network infrastructure and increase the resilience of the assets, particularly those which are geographically vulnerable. These proposals have identified at risk assets due to legacy specifications and aim to achieve modern design standards to ensure assets are resilient against storm conditions, focussing particularly on vulnerable geographical locations.
Proposal 26: Indirect Scalar	Reject: Out of scope for SAR_t. See the closely associated indirects section of this document, 4.81.

NPg proposed adjustments

4.93 We propose to adjust the allowance request that NPg has submitted to us. Our minded to position follows a review of NPg's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted, have been rejected and will not be funded. NPg's proposals adjustments are listed below in Table ED18.

Table ED18: Summary of NPg proposal amendments

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 11: Improving the speed of compensation	£0.03m	£0.03m
Proposal 15: Convert open conductor to ABC	£1.79m	£1.79m
Proposal 16: Install RIFFI	£0.30m	£0.30m
Proposal 17: Install pole mounted RC/automation point	£1.04m	£1.04m
Proposal 20: Proposal 20: Install interconnector at 8 locations	£4.38m	£1.14m
Proposal 21: Replace cross arm	£0.39m	£0.39m
Proposal 22: Install additional poles on existing line	£3.75m	£3.75m
Proposal 23: Upgrade pole size	£0.32m	£0.32m
Proposal 24: Upsize conductor	£2.10m	£2.10m
Proposal 25: Underground line	£9.19m	£9.19m
Total overall funding requested by NPG and proposed Draft Determination funding	£34.79m	£20.06m

SPEN Application

4.94 SPEN is seeking an increase to allowances of £75.9m to fund the cost of upgrading its network to enhance its resilience. SPEN has proposed 13 projects on behalf of both SPD and SPM.

4.95 Table ED19 below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to their online publication of their submission.[30]

Table ED19: Summary of SPEN's proposal amendments

[30] SPEN SAR_t submission

Proposed Activity	**Consultation position**
Proposal 1: Enhanced HV Pole Storm Resilience: Improve the targeting of poles using enhanced asset risk modelling, to avoid damage and reduce interruptions, also saving time on repairing damaged poles	Reject: BAU Activity. As part of RIIO-ED2, SPEN discounted their option for targeted stand-alone intervention and followed a whole circuit approach. It is unclear why this targeted approach is now considered a priority risk rather than being addressed at RIIO-ED2. SPEN did not submit an EJP as part of this proposal.
Proposal 2: Innovative OHL Smart Solutions: Installation of smart technologies on targeted areas of the OHL network, in particular Perch and LineSight solutions to improve its ability to identify faults.	Accept: Recommendation met. We agree that this proposal meets the E3C R1 recommendation and Ofgem 6 recommendation around identifying and assessing faults quickly for reduced restoration time. We recognise that LineSight is an established solution which has proven to be an effective fault detection solution for overhead lines. It allows for network faults to be quickly identified in storm events, providing operational staff with key information, therefore reducing the time off supply for customers. This proposal is above SPEN's BAU activities and is a technology they have not previously used, and this would be a new capability for SPEN.
Proposal 3: Interconnection across DNOs	Partially Accept: Recommendation met. See the cross-boundary section of this document, 4.28.
Proposal 4: OHL Digital Twin Storm Modelling: Reduce restoration times by avoiding asset failures through the application of digital technology on their HV OHL network	Accept: Recommendation met. We agree that this proposal meets the E2C R1 recommendation and Ofgem recommendation 6 around identifying and assessing faults quickly for reduced restoration time, through avoiding asset failures. This proposal is a proactive method to modelling predictive scenarios combining network risk with environmental scenarios which can be used to identify solutions to improve overhead network resilience.
Proposal 5: Reflecting ETR 132 Updates	Reject: BAU Activity. See vegetation management section of this document, 4.38.
Proposal 6: New Generation Connection Points: Installation of permanent connection	Reject: BAU Activity.

points for generators on the HV overhead network.	The proposal seeks to address E3C recommendation E2, R1 and R5 as well as Ofgem recommendations 1 and 6. While we acknowledge the proposal may address recommendations R1 and Ofgem 6 we believe this proposal is not above the expectations of its current work and we consider this a BAU activity. As the proposal will create load capacity rather than upgrade assets due to poor condition we consider the driver for this activity to also be outside SAR_t.
Proposal 7: Keeping Customers Connected – Power Packs	Reject: BAU Activity. See temporary power source section of this document, 4.49.
Proposal 8: Increased Customer Welfare Support	Reject: Proposal is not linked to a recommendation See customer care and welfare section of this document, 4.60.
Proposal 9: Digital Switchover Support for Vulnerable Customers	Reject: Proposal is not linked to a recommendation See customer care and welfare section of this document, 4.60.
Proposal 10, 11 & 12: Customer Care	Reject: Proposal is not linked to a recommendation See customer care and welfare section of this document, 4.60.
Proposal 13: Indirect	Reject: Out of scope for SAR_t See the closely associated indirects (CAI) section of this document, 4.81.

SPEN proposed adjustments

4.96 We propose to adjust the allowance request that SPEN has submitted to us. Our minded to position follows a review of SPEN's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted, have been rejected and will not be funded. **Table ED20** below, provides a summary of SPEN's proposal amendments.

Table ED20: Summary of SPEN proposal amendments

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 2: Innovative OHL Smart Solutions	£4.6m	£4.6m
Proposal 3: Interconnection across DNOs	£3.3m	£2.3m
Proposal 4: OHL Digital Twin Storm Modelling	£0.7m	£0.7m
Total overall funding requested by SPEN and proposed Draft Determination funding	£75.9m	£7.6m

NGED Application

4.97 NGED is seeking an increase to allowances of £61.38m to fund the cost of upgrading its network to enhance its resilience. NGED have proposed 16 projects on behalf of WMID, EMID, SWALES and SWEST.

4.98 **Table ED21** below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to their online publication of their submission.[31]

Table ED21: Summary of NGEDs proposal amendments

[31] NGED SAR_t submission

Proposed Activity	**Consultation position**
Proposal 1: Undergrounding HV OHL in wooded areas: Undergrounding or diversion of 340km of OHL from wooded areas to remove the risk of tree damage or avoid other damage caused by storms.	Accept: Recommendation met. We agree that this proposal meets the Ofgem 1 recommendation, relating to improving network infrastructure against severe weather events. The undergrounding of HV OHL's is a direct demonstration of strengthening the network in locations identified as being at risk from the impacts of storm. This activity goes beyond NGED's BAU activities and will provide an increased level of storm resilience along targeted circuits, reducing the number of customers as risk during a storm event.
Proposal 2: Replacing LV open wire OHL impacted by trees: covert the bare conductors to ABC, which will provide resilience to LV OHL.	Reject: Does not meet the SAR_t principles. While we agree this proposal meets the Ofgem 1 recommendation, we are proposing to reject based on the SAR_t principles, we do not believe that this proposal will be beneficial as a stand-alone project and therefore does not provide value to consumers. This proposal alone will not solve the issue of damage caused by vegetation during a storm event, vegetation management plays a role in maintaining the networks effectiveness and should be considered within BAU costs. The proposal's approach has not considered which circuits would best benefit customers who would likely be impacted during a storm event which should be a priority.
Proposal 3: Resilience tree cutting on HV circuits	Reject: BAU Activity.
Proposal 4 and 8: Fault monitoring and detection Application of Pre-Fix and LineSight detectors for fault location: Pre-Fix aims to identify disturbances on the network caused by potential faults, in order to remove these defective components before they cause a fault. LineSIGHT allows for faster identification of the location of faults and can also identify the type of fault.	Accept: Recommendation met. We have assessed both proposals as meeting the E3C R1 and Ofgem 6 recommendations which relate to identifying and assessing faults quickly for reduced restoration time. The Pre-Fix and LineSight provide fault detection capabilities will help to accurately find faults and allow field staff to get to these locations quickly, reducing the time spent looking for the fault and reducing restoration times. This activity goes beyond NGED's BAU activities and increased monitoring and restorations capabilities which will reduce restoration times during a storm event.

Proposal 5: Torque tooling for LV fuses: Replacement of fuses that have been overtightened following storm repair.	Reject: Proposal is not linked to a recommendation While NGED cite a section of the E3C report they have not provided a link to a specific recommendation this proposal aims to address. In addition, there is no evidence that this tool will provide storm resilience benefits, rather it is an asset replacement tool which will provide no operational benefit during a storm. This request is retrospective which is out of scope of the re-opener
Proposal 6: Reducing customers in a protection zone to 1000: Subdividing circuits into smaller zones by installing additional protection devices, to prevent customers upstream of the devices being affected by faults downstream of the devices.	Reject: BAU Activity. While we agree this proposal meets the Ofgem 3 recommendation, we are proposing the reject this project on the basis that it does not go beyond the BAU activities that NGED can deliver under the current RIIO-ED2 Price Control mechanisms.
Proposal 7: Automation of spur protection: Targeted programme to install TripSaver II to replace fuses on spurs that have either more than 150 customers or are longer than 10km, or where both situations apply.	Accept: Recommendation met. We agree that the proposal meets the Ofgem 3 recommendation relating to improving organisational resilience to improve the speed of customer restoration. The automation enhancements have been shown to be an effective method to restoring supply during a storm events and moving the need for operators to go to site to replace fuses, speeding up the restoration of supply, particularly for communities in rural locations that are predominantly supplied from network spurs.
Proposal 9 & 10: Generators	Reject: BAU Activity See the temporary power sources section of this document,.4.49

Proposal 11: Pre-emptive movement of resources: Funding request to allow for the pre-emptive movement of resources during storm periods to enable staff to start dealing with storm damage as soon as it occurs.	Reject: Proposal lacks maturity. While the proposal meets the E3C R7 recommendation, we do not believe it meets the SAR_t principles on the basis of the proposal not being mature enough to implement. NGED have provided no evidence on the practicalities of how this proposal will enhance business operation beyond the current process during a storm event. Furthermore, with the additional funding for fault monitoring and detection being funded through the SAR_t, we expect NGED to have more capability for early detection of faults we expect that they will be able to deploy resources more strategically and efficiently to the areas where they are required during a local storm event. The North East South West Area Consortium (NEWSAC) agreement provides the means for co-ordination of mutual aid between network operators that are able to provide additional support where required. For these reasons we reject this proposal.
Proposal 12: Enhancements to telephony servers	Reject: Does not meet the SAR_t principles. See the customer communication of this document, 4.71.
Proposal 13: Inter-DNO interconnection	Accept: Recommendation met. See the cross-boundary interconnectors section on of this document, 4.28.
Proposal 14 & 15: Inter and Intra-NGED DNO interconnections: Request funding to inter-NGED DNO interconnections to provide alternative supplies that can be used to restore power when repairs are being completed.	Reject: BAU Activity. This proposal does not go beyond the BAU activities that NGED can deliver under the current RIIO-ED2 Price Control mechanisms. We expect to see more mature proposals and will work with NGED as with other DNOs to understand interconnection ahead of RIIO-ED3.

Proposal 16: Network geospatial mapping: Funding to enhance data capture and visualisation and to provide better identification of where trees are close to overhead lines. This will enable to prioritisation of tree clearance activities as well as other resilience activities.	Reject: BAU Activity. While we agree the proposal may support the delivery of Ofgem's 1 recommendation, there is no clear justification for why this is being proposed now, rather than at the RIIO-ED2 Price Control. We consider it to be an extension of NGED's RIIO-ED2 Price Control BAU activities, which they have the ability to deliver as part of the RIIO-ED2 Price Control. In addition, the proposed benefits of this proposal go beyond storm resilience and should therefore be considered in the wider context of the RIIO-ED3 Price Control.
Proposal 17: Closely Associated Indirects (CAIs)	Reject: Out of scope for SAR_t. See the closely associated indirects section of this document, 4.81.

NGED proposed adjustments

4.99 We propose to adjust the allowance request that NGED has submitted to us. Our minded to position follows a review of NGED's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted in Table ED22 below, have been rejected and will not be funded.

Table ED22: Summary of NGED proposal adjustments

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 1: Undergrounding HV overhead lines in wooded areas	£6.4m	£6.4m
Proposal 4: Application of Pre-Fix detection for fault location	£5.4m	£5.4m
Proposal 7: Automation of spur protection	£1.8m	£1.8m
Proposal 8: LineSight detectors to identify nested and low conductor faults	£3.6m	£3.6m
Proposal 13: Inter-DNO interconnection	£0.94m	£0.89m
Total overall funding requested by NGED and proposed Draft Determination funding	£61.37m	£18.17m

UKPN Application

4.100 UKPN is seeking an increase to allowances of £56.7m to fund the cost of upgrading its network to enhance its resilience. UKPN has proposed 8 projects on behalf of EPN and SPN.

4.101 **Table ED23** below, provides a summary of each proposal and our consultation position. For the full details of each proposal, please refer to their online publication of their submission.[32]

[32] UKPN SAR_t engineering justification paper

Table ED23: Summary of UKPN's proposal amendments

Proposed Activity	**Consultation position**
Proposal 1: Modernisation of the overhead network: Programme to target the replacement of small section overhead line conductor with a more robust conductor.	Accept: Recommendation met. We agree that this proposal meets the E3C E2 recommendation, relating to ensuring network infrastructure is fit for purpose. This proposal uses identified assets which have a higher-than-normal failure rate during abnormal weather conditions such as extreme storms but are typically not identified as poor performers day to day. The aims to achieve modern design standards to ensure assets are resilient against storm conditions. We would like to see UKPN further develop their methodology to demonstrate that the types of faults seen on selected feeders is likely to be mitigated by modernising the OHL, and that the impacts of such faults could not be more economically minimised or mitigated via alternate methods e.g. vegetation management.
Proposal 2: Resilience communications: Installation of BGAN on overhead line secondary sites to provide resilient communications.	Reject: BAU Activity. While we agree that the proposal could help to address the E3C R3 recommendation, communication systems are considered as BAU and should have been submitted through Digital Communications at RIIO-ED2. Storm events in the UK are not a new phenomenon, therefore SSEN should have considered communication during storms as part of their ED2 business plans. With ongoing initiatives being explored by mobile networks operators, Ofcom and Government to further national resilient communications this may duplicate efforts. Taking this into account, we suggest that this policy area is developed ahead of RIIO-ED3 allowing engagement with key stakeholders (e.g. Ofcom). We therefore we reject UKPN's proposal.

Proposal 3 & 4: Distribution Fault Anticipation (DFA) & Metrysense 5000 sensors: DFA & Metrysense 5000 are complementary programmes. DFA is an innovative solution which allows real time monitoring of the network, meaning an issue can be identified before it causes a permanent interruption. Metrysense technology helps to reduce interruptions and assists in locating downed conductions on HV feeders, ensuring faults not which are not identified via the application of arc suppression coils are located and repaired.	Accept: Recommendation met. We agree that both proposals meet the E3C R1 recommendation relating to quickly identifying and assessing faults in the network in a severe weather event. Both proposals provide fault detection capabilities which will help to accurately find faults. DFA also promotes proactive repair, reducing the likelihood of a fault during an event, while Metrysense 5000 works to identify and locate faults for repair. These proposals reduce the time taken to identify and assess the impacts of faults, allowing for faster more coordinated restorations. This activity goes beyond UKPN's BAU activities and increased monitoring and restorations capabilities which will reduce restoration times during a storm event.
Proposal 5 & 6: Auto Reclose Technology: Deployment of TDAR functionality at source circuit breakers at Primary substations would improve supply restoration following a transient fault.	Reject: BAU Activity While we agree that the proposal could help to address the E3C R1 recommendation, relating to quickly identifying and assessing faults in the network in a severe weather event, both proposals are considered as BAU under the RIIO-ED2 Price Control and are incentivised activities under the Interruption Incentive Scheme (IIS), therefore having an impact on IIS delivery. The proposed feeders have not been demonstrated to be in storm prone areas and have therefore been proposed to be rejected.
Proposal 7: Overhead circuit sectionalisation enhancement: Further installation of auto-reclosers and fusesavers to limit the number of customers between remote control points to no more than 300.	Reject: Recommendation not met. We do not agree that the proposal will address the E3C R1 recommendation, relating to quickly identifying and assessing faults in the network in a severe weather event. While we accept the concept in principle, the selection methodology focusses on increasing sectionalisation across OHL networks in general, rather than focusing on storm performance.
Proposal 8: Additional Generators for vulnerable customers	Reject: BAU Activity See the Temporary Power Sources section of this document, 4.81.

UKPN proposed adjustments

4.102 We propose to adjust the allowance request that UKPN has submitted to us. Our minded to position follows a review of UKPN's submission to determine appropriate costs and involved further discussions to understand the rationale behind these costs. Any proposals which have not been noted in **Table ED** below, have been rejected and will not be funded.

Table ED24: Summary of UKPN's proposal amendments

Proposed activity we are minded to accept	Requested funding	Proposed funding
Proposal 1: Modernisation of the overhead network	£15.5m	£15.5m
Proposal 3: Distribution Fault Anticipation (DFA)	£8.70m	£8.70m
Proposal 4: Metrysense 5000 sensors	£4.30m	£4.30m
Total overall funding requested by UKPN and proposed Draft Determination funding	£56.7m	£28.5m

5. Draft Direction and Notice of Licence Modification

Hebrides and Orkney Re-opener

5.1 In accordance with SpC 3.2.110 of the SSEH's license, we have included the draft text of a direction in Appendix 3 with our proposed modification to the term HOt in Appendix 1 to SpC 3.2 of SSEH's licence.

Storm Arwen Re-opener

5.2 In accordance with SpC 3.14 of the license, we have included the draft text of our notice of licence modification in Appendix 4 with our proposed modification to the term SAR_t and the addition of Price Control Deliverables.

6. Next steps

6.1 We welcome your responses to this consultation, both generally, and in particular on the specific questions in Chapter 3 (for the Hebrides and Orkney Re-opener) and Chapter 4 (for the Storm Arwen Re-opener). Please send your response to: ReopenerConsultations@ofgem.gov.uk . The deadline for response is 1st October 2024.

6.2 We will carefully consider all consultation responses and endeavour to conclude our assessment of the 2024 Hebrides and Orkney Re-opener and Storm Arwen Re-opener applications with a decision by end 2024.

Appendices

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Appendix 1 SpC 3.2.105 - List of Activities under Hebrides and Orkney Re-opener

3.2.105 The Hebrides and Orkney Re-opener may be used where:

a) the licensee has incurred or expects to incur costs as a result of changes to the scope or timing of work relating to twelve sub-sea cables:
   i. Skye to Uist (North route);
   ii. Skye to Uist (South route);
   iii. Pentland Firth West;
   iv. Pentland Firth East;
   v. Mainland Orkney – Hoy South;
   vi. Orkney (additional 66kV circuit)
   vii. Eriskay – Barra 2;
   viii. South Uist – Eriskay;
   ix. Mull to Coll (double circuit);
   x. Coll - Tiree (double circuit);
   xi. Mainland - Jura (double circuit); and
   xii. Jura - Islay (double circuit); or
b) the licensee has incurred costs associated with ensuring security of supply in the Scottish islands, and can demonstrate efficient whole systems considerations have been taken into account, including considering alternative activities to installing the cables listed in paragraph (a); or
c) the licensee has incurred or expects to incur costs associated with the outcomes of additional whole system analysis in the Scottish Islands to contribute to Net Zero Carbon Targets and ensure long-term security of supply, including any alternative activities to installing the cables outlined in (a); and
d) the change in those costs in paragraphs (a) or (b) exceeds the Materiality Threshold and are not otherwise funded by the SpCs.

Appendix 2 Consultation Questions

Do you agree with our assessment of the needs case for the projects under Hebrides and Orkney Re-opener submission?

ED.Q2 Do you agree with our assessment of the preferred option for the projects under the Hebrides and Orkney Re-opener submission?

ED.Q3 Do you agree with our assessment of the efficient costs of projects under the Hebrides and Orkney Re-opener submission?

ED.Q4. Do you agree with Ofgem's assessment of the cross-boundary interconnectors proposals and the proposed funding allowance?

ED. Q5. Do you agree with Ofgem's assessment of the vegetation management proposals and rejecting the requests for an allowance?

ED. Q6. Do you agree with Ofgem's assessment of the Temporary Power Sources proposals and rejecting the requests for an allowance?

ED. Q7. Do you agree with Ofgem's assessment of the Customer Care and Welfare proposals and rejecting the requests for an allowance?

ED. Q8. Do you agree with Ofgem's assessment of the Customer Communication proposals and rejecting the requests for an allowance?

ED. Q9. Do you agree with Ofgem's assessment of ENWL's request for allowances?

ED. Q10.Do you agree with Ofgem's assessment of SSEN's request for allowances?

ED. Q11.Do you agree with Ofgem's assessment of NPg's request for allowances?

ED. Q12.Do you agree with Ofgem's assessment of SPEN's request for allowances?

ED. Q13.Do you agree with Ofgem's assessment of NGED's request for allowances?

ED. Q14. Do you agree with Ofgem's assessment of UKPN's request for allowances?

Appendix 3 Draft Direction for Hebrides and Orkney Re-opener

Introductory Note

Following our assessment of SSEH's January 2024 Hebrides and Orkney Re-opener application, we have set out our minded to view above. Any decision to add additional allowances for a project, will be implemented into the Licence via a direction. This Appendix provides notice of the proposed direction that we intend to issue to implement our Re-opener Decision, as required by SpC 3.2.125. We intend to confirm the direction at the same time as setting out our decision, taking into account responses to our minded to view and representations on the proposed direction. Any representations with respect to the minded to view or associated draft direction below must be made on or before 01 October 2024.

Proposed Direction

To: Scottish Hydro Electric Power Distribution Plc

Date: [to be inserted] 2024

Direction issued by the Gas and Electricity Markets Authority ("the Authority") under Special Condition ("Spc") 3.2.109 of the Electricity Distribution Licence ("the Licence") held by Scottish Hydro Electric Power Distribution Plc ("the Licensee") to modify the value of licence term HOt.

1. The Licensee is the holder of a licence granted or treated as granted under section 6(1)(c) of the Electricity Act 1989.

2. SpC 3.2 Part O: Hebrides and Orkney Re-opener of the Licence provides a mechanism by which the licensee may apply for a direction modifying the value of term HOt in Appendix 1 to SpC 3.2.

3. In January 2024, the Licensee submitted a Re-opener application under SpC 3.2 Part O for modification to the term HOt.

4. Further details of the reasons for and effect of this direction can be found in our decision document published alongside this direction.

5. The Authority hereby issues a direction under SpC 3.2.109 to the HOt in Appendix 1 of SpC 3.2 as follows:

Appendix 1

Uncertain Costs without Evaluative Price Control Deliverables allowances (£m)

	23/24	24/25	25/26	26/27	27/28	Total allowance (all years)
$PSUP_t$	0	0	0	0	0	0
REC_t	0	0	0	0	0	0
ESR_t	0	0	0	0	0	0
EVR_t	0	0	0	0	0	0
SWR_t	0	0	0	0	0	0
$DIGI_t$	0	0	0	0	0	0
SAR_t	0	0	0	0	0	0
LRE_t	0	0	0	0	0	0
HVP_t	0	0	0	0	0	0
WDV_t	0	0	0	0	0	0
HO_t	~~0~~34.67	0	0	~~0~~11.14	0	~~0~~45.81
SES_t	0	0	0	0	0	0
$SEFEC_t$	0	0	0	0	0	0

New text is double underscored and text removed is double struck through.

6. This direction will take effect immediately.

7. If you have any questions in relation to this direction, please contact: sai.lo@ofgem.gov.uk.

Yours sincerely,

Nathan Macwhinnie

Duly authorised on behalf of the Gas and Electricity Markets Authority

Appendix 4 Draft Notice of statutory consultation to modify the Special Conditions for Storm Arwen

Introductory Note

We are proposing to modify Special Condition 3.7 Part I (Storm Arwen Re-opener) of the holders of the electricity distribution licence.

To:

All holders of the electricity distribution licence

Electricity Act 1989
Section 11A(2)

Notice of statutory consultation on a proposal to modify the Special Conditions of the electricity distribution licences

1. Each of the licensees to whom this document is addressed is the holder of an Electricity Distribution Licence ('the Licence) granted or treated as granted under section 6(1) of the Electricity Act 1989 ('the Act').

2. The Gas and Electricity Markets Authority ('the Authority') proposes to modify the existing Special Conditions of the Licence by amending 3.2 Part I (Storm Arwen Re-opener ('SAR_t')) and Special Condition 3.14.

3. The effect of these proposed modifications is to enable the above re-opener allowances to be subject to a Price Control Deliverable ('PCD') in line with our Draft Determinations for the Storm Arwen Re-openers.

4. PCDs can be put in place to ensure companies are held to account to deliver specific outputs. If an output is not delivered or delivered to a specific standard, there is then a mechanism in place to refund customers. Where there are cost and volume uncertainties around certain network activities, PCDs allow funding to be allocated for these works but protect consumers against unspent allowances. The re-opener window for the Storm Arwen Re-opener was in the first year of the RIIO-ED2 price control. This means Licensees have submitted forecasted costs for the remaining years of the price control. Although there is some certainty around these costs, there is a risk of unspent allowances which the consumer will pay for. The PCD mechanism is a way to mitigate this risk and protect consumers from unnecessary costs.[33]

[33] More detail on PCDs can be found in Chapter 7 of RIIO-ED2 FDs - RIIO-ED2 Final Determinations | Ofgem

5. Further detail on the reasons for the proposed modifications can be found in our [RIIO-ED2 September 2024 Re-openers Draft Determinations] document available on our website.[34] The full text of the proposed modifications to Special Condition 3.2 Part I and Special Condition 3.14 are set out in Annex 2 and 3, with the new text to be added shown double underscored.

6. A copy of the proposed modification/modifications and other documents referred to in this Notice have been published on our website (www.ofgem.gov.uk). Alternatively, they are available from information.rights@ofgem.gov.uk.

7. Any representations with respect to the proposed licence modification/modifications must be made on or before 01 October 2024 to: Zara Scott, Office of Gas and Electricity Markets, 10 South Colonnade, Canary Wharf, London, E14 4PU or by email to Zara.Scott@ofgem.gov.uk.

8. We normally publish all responses on our website. However, if you do not wish your response to be made public then please clearly mark it as not for publication. We prefer to receive responses in an electronic form so they can be placed easily on our website.

9. If we decide to make the proposed modification/modifications it/they will take effect not less than 56 days after the decision is published.

Nathan Macwhinnie

Duly authorised on behalf of the Gas and Electricity Markets Authority

[34] Link to Draft Determinations

Annex 1: Consultation to the modifications to Part A of Special condition 1.2 in the Special Condition held by all holders of the electricity distribution licence.

(New text is double underscored and text removed is struck through)

Evaluative Price Control Deliverable	means a Price Control Deliverable specified in Special Condition 3.3 (Evaluative Price Control Deliverables), the Cyber Resilience OT PCD Table, the Cyber Resilience IT PCD Table, or Special Condition 3.6 (Net Zero Re-opener and Price Control Deliverable) or Special Condition 3.14 (Storm Arwen Re-opener and Price Control Deliverable).
Price Control Deliverable	means the outputs, delivery dates and associated allowances specified in Special Conditions 3.3 (Evaluative Price Control Deliverables), the Cyber Resilience OT PCD Table, the Cyber Resilience IT PCD Table, Special Condition 3.6 (Net Zero Re-opener and Price Control Deliverable), Special Condition 3.14 (Storm Arwen Re-opener and Price Control Deliverable) and other bespoke special conditions setting out Mechanistic Price Control Deliverables.
Storm Arwen Re-opener	means the Re-opener established by Special Condition 3.14 (Storm Arwen Re-opener and Price Control Deliverable) ~~Part J of special condition 3.2 (Uncertain Cost Re-openers)~~.

Annex 2: Consultation to the modifications to 3.2 Part I in the Special Condition held by all holders of the electricity distribution licence.

(New text is double underscored and text removed is struck through)

~~**Part I: Storm Arwen Re-opener (SARt)**~~

~~3.2.66 This Part establishes the Storm Arwen Re-opener.~~

~~3.2.67 The Storm Arwen Re-opener may be used where the costs incurred or expected to be incurred by the licensee in operating its Distribution Business have changed as a direct result of the Storm Arwen Recommendations, including actions taken as a result of those recommendations.~~

~~3.2.68 The licensee may only apply to the Authority for modifications to this licence under the Storm Arwen Re-opener:~~

~~(a) Between 24 January 2024 and 31 January 2024; and~~
~~(b) during such other periods as the Authority may direct.~~

~~3.2.69 The licensee must, when making an application under the Storm Arwen Re-opener, send to the Authority a written application that:~~

~~(a) sets out the changes to the way in which the licensee operates its Distribution Business and the associated costs, including an explanation of how the circumstances in paragraph 3.2.67 are met;~~

~~(b) sets out the modifications to the value of SAR_t in Appendix 1 being sought;~~

~~(c) explains the basis for calculating any modifications requested to allowances and the profiling of those allowances; and~~

~~(d) provides such detailed supporting evidence as is reasonable in the circumstances.~~

~~3.2.70 An application under this Part must:~~

~~(a) relate to changes set out in paragraph 3.2.67 agreed on or after 1 December 2021;~~

~~(b) be confined to costs incurred or expected to be incurred on or after 1 April 2023; and~~

~~(c) take account of other allowed expenditure that could be avoided or reduced as a result of the circumstances set out in paragraph 3.2.67.~~

~~3.2.71 The Authority may also instigate this Re-opener in accordance with Part S.~~

~~3.2.72 The following modifications to this licence may be made under the Storm Arwen Re-opener:~~

~~(a) modifications to the value of SAR_t set out in Appendix 1;~~

~~(b) modifications confined to allowances related to the circumstances in paragraph 3.2.67; and~~

~~(c) modifications confined to allowances for Regulatory Years commencing on or after 1 April 2023.~~

~~3.2.73 Any modifications made as a result of an application under paragraph 3.2.68 must be made under section 11A (modifications of conditions of licences) of the Act.~~

Annex 3: Consultation to the modifications to 3.14 in the Special Condition held by all holders of the electricity distribution licence.

(New text is double underscored and text removed is struck through)

Special Condition 3.14 Storm Arwen Re-opener and Price Control Deliverable (SAR_t)

Introduction

3.14.1 The purpose of this condition is to calculate the term SAR_t (the Storm Arwen Re-opener term), which contributes to the calculation of the Totex Allowance (in relation to which see the ED2 Price Control Financial Model).

3.14.2 The effect of this condition is to:

(a) specify any Price Control Deliverable relating to Storm Arwen Projects;

(b) establish a Re-opener for the Authority to trigger amendments to any such Price Control Deliverable and the outputs, delivery dates and allowances established by the other special conditions; and

(c) provide for an assessment of the Price Control Deliverables specified in this condition.

3.14.3 This condition also explains the process the Authority will follow when making any changes under this condition.

Formula for calculating the Storm Arwen Re-opener term (SAR_t)

3.14.4 The value of SAR_t is derived in accordance with the following formula:

$$SAR_t = SARO_t - SARRO_t$$

where:

$SARO_t$ means the sum of allowances in Appendix 1; and

$SARRO_t$ has the value zero unless otherwise directed by the Authority in accordance with Part D.

Part B: What is the licensee funded to deliver?

3.14.5 Appendix 1 specifies the outputs that the licensee is funded to deliver, the delivery dates for those outputs and the allowances associated with those outputs.

Part C: Storm Arwen Re-opener

3.14.6 This Part establishes the Storm Arwen Re-opener.

3.14.7 The Storm Arwen Re-opener may be used where the costs incurred or expected to be incurred by the licensee in operating its Distribution Business have changed as a direct result of the Storm Arwen Recommendations, including actions taken as a result of those recommendations.

3.14.8 The licensee may only apply to the Authority for modifications to this licence under the Storm Arwen Re-opener.

- Between 24 January 2024 and 31 January 2024; and
- during such other periods as the Authority may direct.

3.14.9 The licensee must, when making an application under the Storm Arwen Re-opener, send to the Authority a written application that:

(a) sets out the changes to the way in which the licensee operates its Distribution Business and the associated costs, including an explanation of how the circumstances in paragraph are met;

(b) sets out the modifications to the value of SAR_t in Appendix 1 being sought;

(c) explains the basis for calculating any modifications requested to allowances and the profiling of those allowances; and

(d) provides such detailed supporting evidence as is reasonable in the circumstances.

3.14.10 An application under this Part must:

(a) relate to changes set out in paragraph 3.14.7 agreed on or after 1 December 2021;

(b) be confined to costs incurred or expected to be incurred on or after 1 April 2023; and

(c) take account of other allowed expenditure that could be avoided or reduced as a result of the circumstances set out in paragraph 3.14.7.

3.14.11 The Authority may also instigate this Re-opener in accordance with Part S.

3.14.12 The following modifications to this licence may be made under the Storm Arwen Re-opener:

Appendix 1 modifications to the value of SAR_t set out in Appendix 1;

Appendix 2 modifications confined to allowances related to the circumstances in paragraph 3.14.7; and

Appendix 3 modifications confined to allowances for Regulatory Years commencing on or after 1 April 2023.

3.14.13 Any modifications made as a result of an application under paragraph must be made under section 11A (modifications of conditions of licences) of the Act.

Part D: Assessment of the Price Control Deliverable ($SARRO_t$)

3.14.14 The Authority may, in accordance with the assessment principles set out in Part C of Special Condition 3.3 (Evaluative Price Control Deliverables), direct a value for $SARRO_t$ where the licensee has not Fully Delivered an output in Appendix 1.

Part E: What process will the Authority follow in making a direction?

3.14.15 Before making a direction under paragraph 3.14.14, the Authority must send to the licensee and publish on the Authority's Website:

(a) the text of the proposed direction;

(b) the reasons for the proposed direction; and

(c) a statement setting out the period during which representations may be made on the proposed direction, which must not be less than 28 days.

3.14.16 A direction under paragraph 3.14.12 must set out:

(a) the delivery status of the output that has not been Fully Delivered;

(b) the value of the $SARRO_t$ term and the Regulatory Years to which that adjustment relates; and

(c) the methodology and data that has been used to decide the delivery status and value of any adjustments to the $SARRO_t$ term.

Appendix 1

Storm Arwen Price Control Deliverable Projects

DNO	Field	Description
ENWL	Projects 1-6	Project 1: HV network strengthening predictive modelling Project 2: Targeted HV undergrounding/strengthening Project 3: Cross DNO interconnection - £1.57m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen Project 4: Low Voltage (LV) automation enhancements - Installation of 750 LV reclosing facilities Project 5: Coniston HV interconnector - Installation of a new interconnector to provide an alternative power supply from Ambleside to Coniston Project 6: Alston HV interconnector - Installation of a new interconnector to provide a new supply from Little Salkeld to Alston
NPGN	Projects 1-10	Project 1: Improve the speed of compensation - £0.02m for IT systems to allow quicker processing of customer compensation Project 2: Convert 20.14km of open conductor to Aerial Bundled Conductor (ABC) Project 3: Install 339 Remotely Indicating Fault Flow Indicators (RIFFI) Project 4: Install pole mounted remote control (RC)/automation point 57 units

		Project 5: Cross DNO interconnection - £0.57m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen Project 6: Replace 760 cross arm Project 7: Install an additional 728 pole on existing line Project 8: Upgrade pole size of 64 poles Project 9: Upsize conductor 26.9km Project 10: Underground 65km of overhead line
NPGY	Projects 1-8	Project 1: Improve the speed of compensation - £0.02m for IT systems to allow quicker processing of customer compensation Project 2: Convert 22.5km open conductor to Aerial Bundled Conductor (ABC) Project 3: Install 48 Remotely Indicating Fault Flow Indicator (RIFFI) Project 4: Install pole mounted remote control (RC)/automation point 23 Project 5: Cross DNO interconnection - £0.57m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen Project 6: Replace 28 cross arm Project 7: Install an additional 22 poles on existing line Project 8: Underground 1.8km of overhead line
SWALES	Projects 1-5	Project 1: Undergrounding of 12km of HV overhead lines in wooded areas Project 2: Application of Pre-Fix detection for fault location at 13 substations

		Project 3: Automation of spur protection – Install 29 Tripsaver II devices to replace fuses on spurs that have either more than 150 customers or are longer than 10km. Project 4: LineSight detectors to identify nested and low conductor faults – Install 40 units to the network Project 5: Cross DNO interconnection - £0.43m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen
SWEST	Projects 1-4	Project 1: Undergrounding of 18km of HV overhead lines in wooded areas Project 2: Application of Pre-Fix detection for fault location at 27 substations Project 3: Automation of spur protection – Install 209 Tripsaver II devices to replace fuses on spurs that have either more than 150 customers or are longer than 10km. Project 4: LineSight detectors to identify nested and low conductor faults – Install 104 units to the network
WMID	Projects 1-5	Project 1: Undergrounding of 12km of HV overhead lines in wooded areas Project 2: Application of Pre-Fix detection for fault location at 13 substations Project 3: Automation of spur protection – Install 9 Tripsaver II devices to replace fuses on spurs that have either more than 150 customers or are longer than 10km. Project 4: LineSight detectors to identify nested and low conductor faults – Install 104 units to the network

		Project 5: Cross DNO interconnection - £0.41m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen
EMID	Projects 1-4	Project 1: Undergrounding of 9km of HV overhead lines in wooded areas Project 2: Application of Pre-Fix detection for fault location at 4 substations Project 3: Automation of spur protection – Install 32 Tripsaver II devices to replace fuses on spurs that have either more than 150 customers or are longer than 10km. Project 4: Cross DNO interconnection - £0.06m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen
EPN	Projects 1-3	Project 1: Overhead line modernisation – Upgrade 337km of 11kV OHL network. Targeting feeders most affected in a storm but not usually seen as poor performers Project 2: Install 756 Distribution Fault Anticipation (DFA) on all HV Feeders with a composition of more than 80% OHL circuit length Project 3: Install 216 Metrysense 5000 sensors to the feeders which are not already going to be monitored by the DFA solution.
SPN	Projects 1-2	Project 1: Overhead line modernisation – Upgrade 38km of 11kV OHL network. Targeting feeders most affected in a storm but not usually seen as poor performers Project 2: Install 520 Distribution Fault Anticipation (DFA) on all HV Feeders with a composition of more than 80% OHL circuit length.

SPD	Projects 1-3	Project 1: Cross DNO interconnection - £1.14m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen Project 2: OHL Digital Twin Storm Modelling Project 3: Innovative OHL Smart Solution
SPMW	Projects 1-3	Project 1: Cross DNO interconnection - £1.16m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen Project 2: OHL Digital Twin Storm Modelling Project 3: Innovative OHL Smart Solution
SSEH	Projects 1-2	Project 1: HV Feeder Monitoring – Installation of 51 HV feeder monitoring devices Project 2: Cross DNO interconnection - £0.14m for projects expected to materialise in the later years of RIIO-ED2 based on Storm Arwen
SSES	Project 1	Project 1: HV Feeder Monitoring – Installation of 149 HV feeder monitoring devices

Storm Arwen Price Control Deliverable (£m)

DNO	Output	Delivery date	2021 /22	2022 /23	2023 /24	2024 /25	2025 /26	Total
ENWL	Project 1	31/03/28		0.08	0.71			0.79
ENWL	Project 2	31/03/28			2.36	3.15	7.08	12.59
ENWL	Project 3	31/03/28				0.79	0.79	1.57
ENWL	Project 4	31/03/28			0.79	1.57	3.15	5.51

ENWL	Project 5	31/03/28			0.24	1.34	1.57	3.15
ENWL	Project 6	31/03/28			0.24	0.55	3.15	3.93
NPGN	Project 1	31/03/28	0.01	0.01				0.02
NPGN	Project 2	31/03/28			0.08	0.38	0.38	0.85
NPGN	Project 3	31/03/28		0.03	0.05	0.09	0.09	0.26
NPGN	Project 4	31/03/28			0.07	0.33	0.33	0.74
NPGN	Project 5	31/03/28				0.29	0.29	0.57
NPGN	Project 6	31/03/28		0.04	0.08	0.13	0.13	0.38
NPGN	Project 7	31/03/28		0.00	0.36	1.64	1.64	3.64
NPGN	Project 8	31/03/28		0.03	0.06	0.11	0.11	0.32
NPGN	Project 9	31/03/28				1.05	1.05	2.10
NPGN	Project 10	31/03/28				4.43	4.43	8.87
NPGY	Project 1	31/03/28	0.01	0.01	0.00	0.00	0.00	0.02
NPGY	Project 2	31/03/28			0.09	0.43	0.43	0.95
NPGY	Project 3	31/03/28			0.01	0.01	0.01	0.04
NPGY	Project 4	31/03/28			0.03	0.13	0.13	0.30
NPGY	Project 5	31/03/28			0.00	0.29	0.29	0.57
NPGY	Project 6	31/03/28			0.00	0.00	0.00	0.01
NPGY	Project 7	31/03/28			0.00	0.06	0.06	0.11
SWALES	Project 1	31/03/28			0.52	0.52	0.52	1.55

SWALES	Project 2	31/03/28			0.19	0.38	0.67	1.24
SWALES	Project 3	31/03/28			0.07	0.07	0.06	0.19
SWALES	Project 4	31/03/28			0.20	0.20	0.20	0.59
SWALES	Project 5	31/03/28			0.21	0.21	0.00	0.43
SWEST	Project 1	31/03/28			0.70	0.70	0.70	2.09
SWEST	Project 2	31/03/28			0.48	0.86	1.24	2.57
SWEST	Project 3	31/03/28			0.46	0.46	0.45	1.38
SWEST	Project 4	31/03/28			0.51	0.51	0.51	1.53
EMID	Project 1	31/03/28			0.40	0.40	0.40	1.20
EMID	Project 2	31/03/28			0.10	0.10	0.19	0.38
EMID	Project 3	31/03/28			0.07	0.07	0.07	0.21
EMID	Project 4	31/03/28			0.03	0.03	0.00	0.06
WMID	Project 1	31/03/28			0.51	0.51	0.51	1.54
WMID	Project 2	31/03/28			0.19	0.38	0.67	1.24
WMID	Project 3	31/03/28			0.02	0.02	0.02	0.06
WMID	Project 4	31/03/28			0.51	0.51	0.51	1.53
WMID	Project 5	31/03/28			0.20	0.20	0.00	0.41
EPN	Project 1	31/03/28			4.63	4.63	4.63	13.90
EPN	Project 2	31/03/28			1.53	1.73	1.94	5.20
EPN	Project 3	31/03/28			1.43	1.43	1.43	4.30

SPN	Project 1	31/03/28			0.53	0.53	0.53	1.60
SPN	Project 2	31/03/28			1.07	1.17	1.26	3.50
SPD	Project 1	31/03/28			0.38	0.38	0.38	1.14
SPD	Project 2	31/03/28		0.06	0.10	0.10	0.10	0.37
SPD	Project 3	31/03/28		1.94	0.06	0.06	0.06	2.12
SPMW	Project 1	31/03/28		0.00	0.35	0.44	0.37	1.16
SPMW	Project 2	31/03/28		0.06	0.10	0.10	0.10	0.37
SPMW	Project 3	31/03/28		2.29	0.07	0.07	0.07	2.50
SSEH	Project 1	31/03/28			0.36	0.36	0.36	1.08
SSEH	Project 2	31/03/28			0.09	0.06	0.00	0.14
SSES	Project 1	31/03/28			1.04	1.05	1.05	3.14

Appendix 5 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. i.e. a consultation.

4. With whom we will be sharing your personal data

No external agencies.

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 six months after the consultation 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:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data

- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas.

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

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

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