Consultation

Consultation on the assessment of three 2023 Medium Sized Investment Project from SP Transmission

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We are consulting on three of SP Transmission plc's (SPT's) submissions under the Medium Sized Investment Projects (MSIP) re-opener mechanism. 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.

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

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

Contents

1. Introduction

1.1 Network companies are natural monopolies. Effective regulation of privatised for-profit monopolies is essential to ensure they cannot unfairly exercise their monopoly power to the detriment of their customers. This is particularly important in the case of essential utilities, such as energy, where consumers have no choice on whether or not to pay what they are charged. It is therefore crucial that an effective regulator protects energy consumers by controlling how much network companies can charge their customers. Ofgem[1] does this through periodic price controls that are designed to ensure network companies are properly incentivised to deliver the best possible outcomes for current and future energy consumers. This includes ensuring that consumers only pay for investments that are needed and do not overpay for those investments.

1.2 The current price control model is known as RIIO (Revenue = Incentives + Innovation + Outputs). RIIO-ET2 is the second electricity price control under the RIIO model and runs from 1 April 2021 until 31 March 2026. It includes a range of Uncertainty Mechanisms (UMs) that allow us to assess applications for further funding during RIIO-ET2 as the need, cost or timing of proposed projects becomes clearer. This ensures that consumers fund projects only when there is clear evidence of benefit, and we have clarity on likely costs and cost efficiency. These mechanisms also ensure that the RIIO-ET2 price control has flexibility to adapt as the pathways to Net Zero become clearer.

1.3 Where possible, we have set automatic UMs, such as the Generation and Demand Connection Volume Drivers, which provide Electricity Transmission Owners (ETOs) with immediate funding when they are required to undertake new customer connection works. In other areas, where the degree of uncertainty is too great to allow for an automatic mechanism, we set "re-openers" which will allow us to assess ETO proposals robustly, once sufficiently accurate information is made available.

1.4 The MSIP re-opener provides ETOs with an annual opportunity to request additional funding for sub £100m projects, many of which may be critical for achieving Net Zero targets. It was developed to ensure that ETOs are able to

[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.

undertake necessary investments in the transmission network, funding for which has not been provided in RIIO baseline allowances.

1.5 An ETO can submit a request for additional funding via the MSIP re-opener during specific "windows" (between 24 and 30 April 2021 and between 25 and 31 January in each subsequent regulatory year of the price control period) where it considers and the Authority agrees that a project is covered under the areas listed in RIIO-ET2 Final Determinations (FDs), as implemented by Special Condition 3.14.6 (SpC 3.14.6) of its licence (SPT's licence is referred to as the Licence in this consultation document).[2] Projects within the scope of that licence condition will be considered and scrutinised by Ofgem to establish the level of efficient costs to be remunerated. For the applications covered in this consultation, we have assessed SPT's needs cases, optioneering and cost efficiency.

1.6 In the January 2023 reopener window, SPT submitted eight applications, of which five are initial needs case submissions and the remaining three are full applications. We have already published consultation on our assessment of the five initial needs case submissions on 28 June 2023.[3] This document summarises our assessment of the three full submissions as listed below.

1) Coalburn Supergrid Transformer (SGT) Number 4 (SGT4): installation of the 400/132kV SGT4 in Coalburn 400kV Substation to increase the substation capacity for enabling connection of onshore wind generation
2) Constraint Management Pathfinder - Line End Open (LEO) and Operational Intertrip Scheme (OTS) Modifications: extension of the existing Anglo-Scottish OTS and LEO schemes with modification works at Strathaven, Crystal Rig, Elvanfoot and Fallago 400kV substations and Wishaw 275kV substation
3) Wishaw - Eccles - Torness - Smeaton OTS: installation of the OTS with modification works at the Wishaw, Eccles, Torness, Smeaton, Strathaven, Crystal Rig and Fallago 400kV Substations

1.7 We welcome views from stakeholders on our draft determinations concerning the projects outlined in Chapters 2 to 4, which propose acceptance of the needs cases for all projects with proposed adjustments to the project costs to efficient levels.

[2] https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determination_nget_annex_revised.pdf (Table 12: Areas covered by the MSIP re-opener)
[3] Consultation: 5 SP Transmission's 2023 MSIP applications | Ofgem

MSIP submission, assessment, and approval process

1.8 ETOs have a duty to provide connections to users and to develop and maintain an efficient, co-ordinated and economical transmission network. Therefore, it is for an ETO to decide when it is the right time to initiate a new project that may be needed during the RIIO-ET2 price control period.

1.9 Transmission projects can be driven by factors outside the direct control of the ETOs, for example where a customer requires a grid connection, and can mean that there is insufficient clarity over project need, optimal solutions, timing, and and/or efficient costs to align with:

- the fixed business planning timeframes of a periodic price control (such as RIIO-ET2) and
- the fixed submission window provided for in the licence.

Uncertainty can have a disproportionately adverse impact on development activity and work deemed necessary by ETOs to deliver a connection in a timely manner. Delays to work to progress the connection of low carbon generation, which would contribute towards meeting the Net Zero target, may lead to additional costs for GB consumers or adversely affect GB's ability to meet its targets.

What are we consulting on?

1.10 The MSIP licence condition[4] provides for companies to make re-opener applications during the RIIO-2 price control period for projects planned to deliver 11 activities as specified in SpC 3.14.6.[5] SPT considers that all of these projects relate to one or more of the specified activities and we agree.

1.11 We are consulting on our assessment of the needs case, optioneering, and efficient costs for these three submissions by SPT in the 2023 MSIP Re-opener window.

[4] SPT Special Licence Conditions can be found in Licence Conditions – Zip File accessible at: Statutory consultation on modifications to the RIIO-2 Transmission, Gas Distribution and Electricity System Operator licence conditions | Ofgem

[5] The 11 MSIP activities under SpC 3.14.6 are listed in Appendix 1 for reference.

Context and related publications

1.12 The scope of this consultation is limited to SPT's 3 full MSIP submissions listed above in paragraph 1.6. Additional information on these MSIPs can be found in the MSIP re-opener submission documents[6] on SPT's website.

1.13 This document is intended to be read alongside:

1) RIIO-ET2 Re-opener Guidance and Application Requirements Document[7]

2) Special Conditions (and SpC 3.14 in particular) of the Licence.[8]

Consultation stages

1.14 This consultation will open on 9 October 2023 and close on 6 November 2023. We will review and publish the responses a few weeks after the consultation closes. We will endeavour to publish our decision by winter 2023.

Figure 1: Consultation stages

Stage 1	**Stage 2**	**Stage 3**	**Stage 4**
Consultation open	Consultation closes (awaiting decision). Deadline for responses	Responses reviewed and published	Consultation decision/policy statement
09/10/2023	06/11/2023	winter 2023	end 2023

How to respond

1.15 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

1.16 We've asked for your feedback on each of the questions throughout. Please respond to each one as fully as you can.

1.17 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

[6] MSIP Reopeners - SP Energy Networks
[7] https://www.ofgem.gov.uk/sites/default/files/2023-03/Reopener%20Guidance%20and%20Application%20Requirements%20Version%203.pdf
[8] https://www.ofgem.gov.uk/publications/decision-proposed-modifications-riio-2-transmission-gas-distribution-and-electricity-system-operator-licence-conditions-1-april-2022

Your response, data and confidentiality

1.18 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.19 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you *do* wish to be kept confidential and those that you *do not* wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

1.20 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 3.

1.21 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

1.22 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

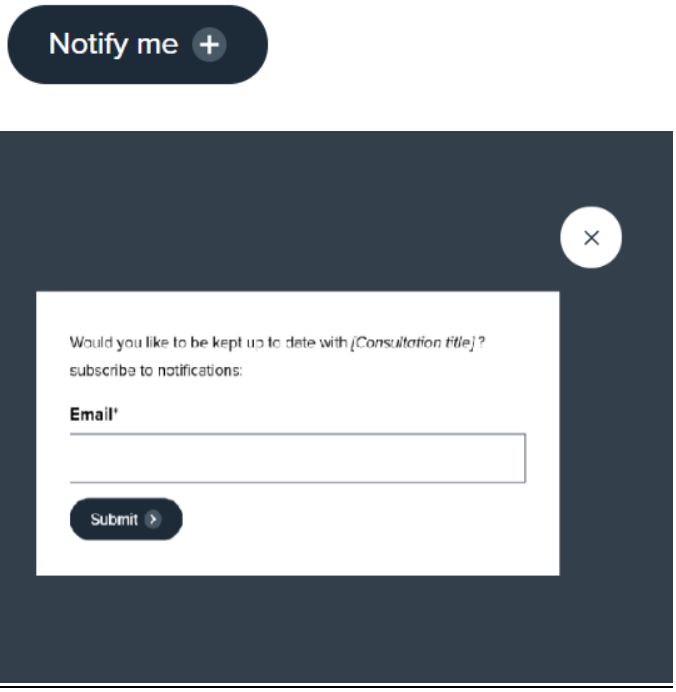
1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand or could it have been better written?
4. Were its conclusions balanced?

5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. Ofgem.gov.uk/consultations



Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

Upcoming > **Open** > **Closed** (awaiting decision) > **Closed** (with decision)

2. Coalburn Supergrid Transformer Number 4 (SGT4) project

Questions

Q1. Do you agree with our view to confirm our provisional decision made in 2022 on accepting the needs case and the preferred option for Coalburn SGT4 project?

Q2. Do you agree with our draft determination on the efficient costs for the Coalburn SGT4 project?

2.1 In its January 2022 and 2023 MSIP Re-opener submissions, SPT set out its plan to carry out reinforcement work at Coalburn 400/132kV Substation. This plan consisted of reconfiguration works and the installation of a new SGT (SGT4). SPT submitted the initial needs case in 2022 and the final needs case and cost information in 2023. The purpose of the project is to increase the substation capacity and to enable the connection of 288MW of contracted onshore wind generation.

2.2 We consider this project to be eligible for MSIP application (under SpC 3.14.6, MSIP specified activity a.). This is because it is a Generation Connection project, and at £15.159m, its forecast cost exceeds the £3.36m Materiality Threshold and is £8.77m above the level that could be provided for under Special Condition 3.11 (Generation Connections volume driver), which is more than £4.24m, the threshold set in SpC 3.14.6(a).

SPT's needs case submission

2.3 SPT submitted the initial needs case application of this project in the 2022 MSIP re-opener window. In April 2022, we published our provisional decision[9] to accept the needs case and preferred option. This was conditional on our assessment of SPT's full application, including appropriate evidence on the project costs, delivery dates, and proposed Price Control Deliverables (PCDs).

2.4 SPT submitted its full application in the January 2023 MSIP Re-opener window.

[9] https://www.ofgem.gov.uk/publications/decision-msip-responses

Our view of the needs case and preferred option

2.5 As mentioned above we accepted the needs case and preferred option in our provisional decision published in April 2022, to support expected generation growth in the area.

2.6 We have reviewed the relevant project updates and consider our decision on the needs case and preferred option remains appropriate.

Cost Assessment of the preferred option

2.7 The total project cost submitted by SPT was £15.159m. SPT listed the estimated cost, procurement strategy and cost firmness for all the contracts as below.

Contract Name	Cost (£m)	Procurement Strategy	Firmness
Planning Application Costs	[Redacted]	Fixed cost from Local Planning Authority	Fixed
Environmental Surveys	[Redacted]	SPT Environmental and Planning frameworks.	Fixed
On-Site Project Environmental Support	[Redacted]	SPT Environmental framework. Works ongoing.	Agreed but will be re-measured
Coalburn-Galawhistle 132kV circuit diversion	[Redacted]	Competitive tender.	Fixed
Engineering Surveys	[Redacted]	GI was a competitive tender (4 bids requested, 4 bids received). Noise Survey went to specialist contractor. GPR Surveys were competitively tendered. Works complete.	Fixed
Balance of Plant Works	[Redacted]	Estimate based on initial tender returns	Estimate
Civil Works (Extension)	[Redacted]	Competitive tender.	Agreed but re-measurable
Civil Works (SGT1 scope change)	[Redacted]	This will be a competitive tender.	Estimate
Substation Security	[Redacted]	Cost estimate based on framework rates.	Estimate
Project Land Consent Costs	[Redacted]	Agreed.	Fixed
Landscaping	[Redacted]	Cost estimate based on previous tenders with similar scope.	Early estimate
Linmill1- Gala Bay 132kV Bay Swap Contract	[Redacted]	Competitive tender for supply of new equipment. Single source contracts to update and commission configuration changes.	Fixed
Protection & Control System Changes	[Redacted]	Competitive tender for supply of new equipment.	Early Estimate

Contract Name	Cost (£m)	Procurement Strategy	Firmness
		Single source contracts to update and commission configuration changes.	
Free issue main plant	[Redacted]	Framework PO placed	Fixed
Platform Enabling Works	[Redacted]	Competitive tender.	Agreed but re-measurable
360MVA Transformer supply, delivery and installation	[Redacted]	Transformer award following bulk order process.	Fixed [Redacted] & Early estimate [Redacted]
240MVA Transformer Move/ Refurbishment	[Redacted]	Estimate based on comparable works.	Estimate
Tree Clearance Works	[Redacted]	Competitive tender.	Fixed
Welfare Provision	[Redacted]	Estimate based on current programme and framework rates.	Agreed but will be re-measured based on known future information received
Operational Kit	[Redacted]	Direct PO with specialist suppliers.	Early estimate
Substation Design House	[Redacted]	Framework partner.	Agreed but will be re-measured
Platform Design House	[Redacted]	Competitive tender.	Fixed
Risk	[Redacted]		Early estimate
Total	**15.159**		

2.8 We consider the disaggregated model used by SPT, within which contracts are disaggregated and tendered separately, is helpful to drive cost efficiencies. We consider the procurement strategy deployed by SPT is acceptable.

2.9 Upon our request, SPT aggregated the contract costs and further provided the breakdown of project cost according to project activities as shown below.

All Costs in 2018/19 prices (£m)	Direct Cost	Contractor Indirects	Total Project Costs
Surveys	-	0.195	0.195
Site Works	2.260	-	2.260
Supply, Installation and Commissioning	10.041	-	10.041
Project Management	-	0.990	0.990
Detail Design	-	0.487	0.487
Risk	1.186	-	1.186
Total	**13.487**	**1.672**	**15.159**

Closely Associated Indirect (CAI) Costs

2.10 We note that SPT included some CAI costs such as surveys, project management and detailed design costs relating to the project as shown in the above table. According to the RIIO-ET2 Final Determinations (FDs), these CAI costs should be funded through the Opex Escalator (OE) mechanism. Details of the OE mechanism is set out in full within FDs.[10]

2.11 In the cost submission, SPT's view is that in order for the OE to be applied correctly, the total contractor costs including those contractor CAI costs must be classified as direct. SPT referred to the joint letter[11] dated 2nd March 2023 to Ofgem from the three ETOs for the full detail on the reasoning. This letter was sent to us when we were consulting our assessment of National Grid Electricity Transmission's (NGET's) 2022 MSIP applications.

2.12 We have carefully considered the reasoning the three ETOs raised in their joint letter. As part of the Decision on NGET's 2022 MSIP Applications[12] published on 19 April 2023, we confirmed that application of the OE to be in line with the application we set out in RIIO-ET2 FDs and in our consultations on NGET's 2022 MSIP applications. The rationale we set out in that decision document (Chapter 2) included consideration of the points ETOs raised in the joint letter. Alongside

[10] RIIO-ET2 FDs – ET Annex, chapter 4, decisions on OE contained in paragraphs 4.42 – 4.48: https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determinations_et_annex_revised.pdf
[11] https://www.ofgem.gov.uk/sites/default/files/2023-04/Opex%20Escalator_Letter_Ofgem_010323_FINAL.pdf
[12] https://www.ofgem.gov.uk/publications/decision-ngets-2022-msip-re-opener-applications

this decision we have also published a statutory consultation to modify the licence of NGET to give effect to its 2022 MSIP projects.

2.13 The three ETOs provided their individual response and a joint response to the statutory consultation as mentioned in paragraph 2.12, disagreeing on our decision on the application of OE. We have again considered the arguments from the three ETOs carefully and confirmed the application of the OE in the decision on the statutory consultation published on 6 October 2023.[13]

2.14 In line with our decision on the application of the OE, our initial view is to adjust the project cost in SPT's funding request by taking out the CAI costs from the direct project cost. It is because surveys, project management and detailed design are CAI activities that fall under the scope of the indirect costs covered by the OE as the appropriate funding mechanism for these costs. The costs for undertaking these CAI activities should not be included in the direct capex of the project.

Risk Allowance

2.15 We also note from the cost breakdown that SPT has included a risk allowance of £1.186m, ie 9.5% of the direct cost (£12.495m) in the cost submission. SPT confirmed that there is no risk allocation within individual contract and anything over and above the contract values will be treated as a variation to the contract and is funded via risk.

2.16 In the MSIP submission, SPT provided a list of risk registers including potential extra costs in contract award values, outage delays, winter working (weather risk), design or scope uncertainties and remedy to ecological problems.

2.17 During our cost assessment, SPT further explained that Coalburn is a complex site, with this project involving the extension of the 400kV compound and busbar system, extension of the 132V compound and significant reconfiguration (including extension) of the busbar system, installation of a new 400/132kV transformer, and relocation of an existing 400/132kV transformer within the site. These works are concurrent and interact with other site works related to connections projects, which is an additional factor in the estimated risk value.

[13] https://www.ofgem.gov.uk/publications/decision-modify-special-conditions-electricity-transmission-licence-held-national-grid-electricity-transmission-plc https://www.ofgem.gov.uk/publications/decision-modify-special-conditions-electricity-transmission-licence-held-national-grid-electricity-transmission-plc

2.18 We consider the proportion of risk allowance at 9.5% is higher than the average risk across projects at 7.5% of the direct cost, as set out in the FDs following a review of outturn risk on a number of RIIO-1 projects.

2.19 As part of the decision on NGET's Bengeworth Road Grid Supply Point project[14] published on 14 June 2021, we decided that for future projects we intend to adopt the approach of using our benchmark level (7.5%) to inform our assessment of risk and contingency. We will also consider any compelling evidence of risks that are outside of the scope of comparable onshore projects when determining whether to incorporate any project-specific adjustments to the risk and contingency component of the allowance.

2.20 In the decision on NGET's 2022 MSIP Applications[15] published on 19 April 2023, we confirmed that we would apply the same approach to the MSIPs, which is consistent with the RIIO-ET2 determinations that capped average risk across projects at 7.5% of assessed efficient project costs. We do not believe we have seen sufficient reason to apply a different approach in this case.

2.21 We do not consider the risk registers as mentioned in 2.16 and further explanation of risk in 2.17 are compelling evidence of risks that are outside the scope of comparable onshore projects. We propose to reduce the amount of risk allowance from 9.5% to 7.5% of the direct cost of project.

Our draft determinations

2.22 In April 2022, we already published our provisional decision[16] to accept the needs case and preferred option. As part of the provisional decision, we are satisfied that there is a need for the Coalburn SGT4 project, that SPT has already considered all viable options in the needs case submission, and that it has correctly rejected all options but one.

2.23 We are proposing to confirm our provisional decision to accept the needs case and preferred option for the Coalburn SGT4 project.

2.24 We are also proposing to adjust the funding request by SPT to an efficient level by taking out the indirect cost and reducing the risk allowance as shown in the table below, for the reasons detailed from 2.10 to 2.21.

[14] National Grid Electricity Transmission (NGET) Bengeworth Road Grid Supply Point (GSP) Project | Ofgem
[15] https://www.ofgem.gov.uk/publications/decision-ngets-2022-msip-re-opener-applications
[16] https://www.ofgem.gov.uk/publications/decision-msip-responses

Cost category	SPT request (£m)	Ofgem adjustment – cost efficiency (£m)	Ofgem adjustment – cost reclassified as indirect (£m)	Ofgem draft determination (£m)
Contractor costs	13.973	0	-1.672	12.300
Risk Allowance	1.186	-0.263	0	0.923
Total	**15.159**	**-0.263**	**-1.672**	**13.223**

3. Constraint Management Pathfinder - LEO and OTS Modifications project

Questions

Q3. Do you agree with our initial view on the needs case for the Constraint Management Pathfinder - LEO and OTS Modifications project?

Q4. Do you agree with our initial view on the preferred option proposed by SPT?

Q5. Do you agree with our draft determination on the efficient costs for the Constraint Management Pathfinder - LEO and OTS Modifications project?

3.1 The project proposed to develop the Anglo-Scottish OTS and LEO components of the SPT-NGET Interconnector Control Schemes (ICS) System Integrity Protect Scheme (SIPS) in response to an STCP 16-1 Planning Request received from NGESO in respect of their B6 Constraint Management Pathfinder initiative. SPT received the planning request for the extension of the LEO scheme on 4th November 2021 and for the extension of the OTS on 7th December 2021.

3.2 This project included modification works at Strathaven, Crystal Rig, Elvanfoot and Fallago 400kV substations and Wishaw 275kV substation.

3.3 We consider this project is eligible for application under the MSIP re-opener as it is "a system operability or constraint management project that has been requested by the System Operator" and "a protection project that are needed following system studies by the System Operator or the licensee showing a need for an operational intertrip" (ie SpC 3.14.6 (f) and (i) iii). The submitted cost of this project is £1.440m. Although this is below the Materiality Threshold of £3.36m, as specified in 3.14.9(b), in aggregate the 2023 MSIP-re-opener window projects have an estimated value of £17.688m, which exceeds the Materiality Threshold. We therefore have considered them to be eligible because they fulfil the requirement as listed in the FDs.[17]

SPT's Needs Case

3.4 The LEO scheme collects plant and protection status information from 43 circuit ends along the routes crossing boundary B6 and the east-west 400kV circuits between Strathaven and Torness. These line status points are then transmitted to

[17] Paragraph 4.54 of RIIO-2 FDs ET Annex (revised) https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determinations_et_annex_revised.pdf

a central location at Strathaven 400kV substation and made available to the individual schemes within the ICS which use them in their scheme logic.

3.5 In March 2022, NGESO published the results of its B6 Constraint Management Pathfinder[18], which detailed the successful parties who will provide services that the NGESO estimates will save consumers between £20m and £40m between October 2023 and September 2024. Of the 10 generation sites awarded contracts, 6 are not currently connected to the OTS (two of which are in SHET's licence area). Therefore, works are required to add the necessary hardware at Strathaven 400kV substation and the associated generation sites, and to modify the OTS scheme to integrate the new sites.

Our initial view of needs case

3.6 Through the development of its B6 Constraint Management Pathfinder, NGESO has determined that there is benefit in extending the LEO scheme towards the B7a boundary in NGET's licence area, adding a further 22 circuit ends, which requires SPT to install additional hardware and to modify the operation of the existing LEO scheme. We agree with the NGESO's assessment.

3.7 Our initial view is therefore that the needs case put forward by SPT is valid.

Assessment of options and justification for the preferred option

3.8 SPT has considered the following two options:

1) Extension of OTS and LEO schemes as needed (preferred option)
2) Full replacement of OTS and LEO schemes

3.9 We have undertaken a technical review of the solutions considered by SPT and are satisfied that SPT has suitably considered all viable options. The materials we reviewed comprised of SPT's initial submission under the MSIP re-opener and responses to supplementary questions.

Option 1: Extension of OTS and LEO schemes as needed (preferred option)

3.10 The Planning Requests received from the ESO proposed the extension of the LEO and OTS schemes and SPT consider it to be feasible to implement this proposal.

[18] https://www.nationalgrideso.com/document/247836/download

Works will be required at Strathaven, Crystal Rig, Elvanfoot and Fallago 400kV substations and Wishaw 275kV substation.

3.11 SPT selected this option because extending the existing systems is the lowest cost option and results in the shortest scheme outage requirements. The existing LEO and OTS schemes entered service in 2008 and have been augmented and modified as required by the configuration of the primary system and in response to requests from the ESO. The schemes meet current and future performance requirements and is capable of being extended.

3.12 We agree with SPT's consideration and rationale for selecting this option as the preferred option because it provides the same benefits as other options but with the lowest cost.

Option 2: Full replacement of OTS and LEO schemes

3.13 This option involves a full like-for-like replacement of the system to maintain the existing functionality and apply the same functions to the new elements.

3.14 SPT rejected this option as it is not necessary to replace the schemes in their entirety to achieve the functionality required by the Planning Requests and this approach would result in higher capital costs and increased scheme outage durations for no additional benefit.

3.15 We agree with SPT's rationale for rejecting this option because it offers no additional benefit at a higher cost.

Cost Assessment of the preferred option

3.16 The submitted cost of this project is £1.440m. SPT detailed the estimated cost, procurement strategy and cost firmness for all the contracts as below.

Contract Name	Cost (£m)	Procurement Strategy	Firmness
Surveys	[Redacted]	To place contracts as required	Fixed
Engineering Procurement and Construction Contractor	[Redacted]	Competitive tender	Agreed but re-measurable
Substation Control and Information System / Human Machine Interfaces Updates	[Redacted]	Ongoing service framework contractor	Agreed but re-measurable
Telecoms	[Redacted]	Framework contractor	Agreed but re-measurable
LVAC Modification	[Redacted]	Framework contractor	Agreed but re-measurable

Contract Name	Cost (£m)	Procurement Strategy	Firmness
Battery Systems	[Redacted]	Competitive tender	Agreed but re-measurable
Risk	[Redacted]		Estimate
Total	**1.440**		

3.17 We consider the disaggregated model used by SPT, within which contracts are disaggregated and tendered separately, is helpful to improve cost efficiencies. We consider the procurement strategy deployed by SPT, with competitive tender for the main body of works, is acceptable because this is the largest cost component within the project and competitive tender is helpful to obtain lower available cost in the market.

3.18 Upon our request, SPT aggregated the contract costs and further provided the breakdown of project cost according to project activities as shown below.

All Costs in 2018/19 prices (£m)	Direct Cost	Contractor Indirects	Total Project Costs
Surveys		0.002	0.002
Site Works	0.138		0.138
Supply, Installation and Commissioning	0.911	-	0.911
Project Management	-	0.056	0.056
Detail Design	-	0.190	0.190
Risk	0.143	-	0.143
Total	**1.193**	**0.248**	**1.440**

Closely Associated Indirect (CAI) Costs

3.19 We note that SPT included some CAI costs such as surveys, project management and detailed design costs in the project as shown in the above table. According to the RIIO-ET2 Final Determinations (FDs), these CAI costs should be funded through the Opex Escalator (OE) mechanism. Details of the OE mechanism is set out in full within FDs.[19]

3.20 Applying the same rationale as discussed in paragraphs 2.11 to 2.14, our initial view is to adjust the project cost in SPT's funding request by taking out the CAI costs, because surveys, project management and detailed design are CAI

[19] RIIO-ET2 FDs – ET Annex, chapter 4, decisions on OE contained in paragraphs 4.42 – 4.48: https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determinations_et_annex_revised.pdf

activities that fall under the scope of the costs covered by the OE as the appropriate funding mechanism for these costs. The costs for undertaking these CAI activities should not be included in the direct capex of the project.

Risk Allowance

3.21 We also note that SPT has included a risk allowance of £0.143m, ie 13.6% of the direct cost (£1.051m) in the cost submission. The proportion is much higher than the average risk across projects at 7.5% of the direct cost, as set out in the FDs.

3.22 In the MSIP submission, SPT provided a list of risk registers including potential extra costs in outage delays, customer or third-party changes or delays, material or equipment cost, and design or scope uncertainties.

3.23 During our cost assessment, SPT explained that this project is characterised by high levels of technical complexity, employing industry leading technology. Its progress and timing are dependent on multiple transmission system users and other transmission owners. The equipment costs are dominated by microprocessor-based equipment which is subject to global shortages causing high degrees of volatility on delivery lead times and instability in market prices.

3.24 Applying the same rationale as discussed in paragraphs 2.19 to 2.21, we propose to reduce the amount of risk allowance from 13.6% to 7.5% of the direct cost of project.

Our draft determinations

3.25 We are satisfied that there is a need for the Constraint Management Pathfinder - LEO and OTS Modifications project, that SPT has already considered all viable options and that it has correctly rejected all options but one as explained in paragraphs 3.4 to 3.15.

3.26 We are proposing to accept the needs case and preferred option for the Constraint Management Pathfinder - LEO and OTS Modifications project, and to adjust the SPT funding request to an efficient level by taking out the indirect cost and reducing the risk allowance as shown in the table below.

Cost category	SPT request (£m)	Ofgem adjustment – cost efficiency (£m)	Ofgem adjustment – cost reclassified as indirect (£m)	Ofgem draft determination (£m)
Contractor costs	1.297	0	-0.248	1.049
Risk Allowance	0.143	-0.064	0	0.079
Total	**1.440**	**-0.064**	**-0.248**	**1.128**

4. Wishaw - Eccles - Torness - Smeaton OTS project

Questions

Q6. Do you agree with our initial view on the needs case for the Wishaw - Eccles - Torness - Smeaton OTS project?

Q7. Do you agree with our initial view on the preferred option proposed by SPT?

Q8. Do you agree with our draft determination on the efficient costs for the Wishaw - Eccles - Torness - Smeaton OTS project?

4.1 The project is to develop the Wishaw - Eccles - Torness - Smeaton OTS component of the SPT-NGET Interconnector Control Schemes (ICS) System Integrity Protect Scheme (SIPS) in response to a draft STCP 16-1 Planning Request received from National Grid Electricity System Operator (NGESO) in June 2014.

4.2 We consider this project is eligible for application under the MSIP as it is "a system operability or constraint management project that has been requested by the System Operator" and "a protection project that is needed following system studies by the System Operator or the licensee showing a need for an operational intertrip" (MSIP specified activities (f) and (i)iii under SpC 3.14.6).[20] The submitted cost of this project is £1.089m. Although this is below the Materiality Threshold of £3.36m, as specified in 3.14.9(b), in aggregate the 2023 MSIP-re-opener window projects have an estimated value of £17.688m, which exceeds the Materiality Threshold. We therefore have considered them to be eligible.

SPT's needs case submission

4.3 SPT received a draft Planning Request from NGESO in respect of the need for an OTS scheme in the East Lothian area, due to new offshore and onshore generation connections, dated 20 June 2014. The request listed the generators, circuits and operational scenarios to be considered within the scheme.

4.4 The required functionality of the scheme was subsequently formalised by SPT with NGESO via Transmission Owner Construction Agreements in respect of the Neart Na Goithe (NNG) Offshore Wind Farm and Fallago Rig 2 Onshore Wind Farm, and via Transmission Owner Reinforcement Instruction SPT-RI-204.

[20] The MSIP activities under SpC 3.14.6 are listed in Appendix 1 for reference.

4.5 Based on the required functionality of the scheme, SPT proposed the protection and control works to install the Wishaw - Eccles - Torness - Smeaton OTS, with extension of the ICS with new controllers and signalling equipment and extension of the LEO system with new equipment at Torness and Wishaw substations.

Our initial view of the needs case

4.6 We have conducted a technical review on the proposed needs case based on NGESO planning request for an OTS. We agree with the NGESO's assessment.

4.7 Our initial view is therefore that the needs case put forward by SPT is valid.

Assessment of options and justification for the preferred option

4.8 SPT has considered the following options:

1) Extension of existing ICS schemes (preferred option)
2) New operational intertrip, independent of existing ICS schemes

4.9 We have undertaken a technical review of the solutions considered by SPT and are satisfied that SPT has suitably considered all viable options. The materials we reviewed comprised of SPT's submission under the MSIP re-opener licence condition and responses to supplementary questions.

Option 1: Extension of existing ICS schemes (preferred option)

4.10 This option would involve extending the existing SPT-NGET ICS and the LEO system to incorporate Wishaw - Eccles - Torness – Smeaton OTS, with new controllers and signalling equipment. Modification works will be required at the Wishaw, Eccles, Torness, Smeaton, Strathaven, Crystal Rig and Fallago 400kV Substations.

4.11 This option was selected by SPT as the preferred option because it is the most cost-effective option at the lowest cost to achieve the benefits.

4.12 We are satisfied from technical perspective that the submission listed all sites with works required, circuit ends needed to be monitored, trip functionality as well as telecoms and signalling requirements. We agree with SPT's consideration and rationale for selecting this option as the preferred option to meet the needs case, for providing the benefits as the lowest cost.

Option 2: New OTS independent of existing ICS schemes

4.13 This solution involves the development of a completely new and standalone OTS scheme independent of the existing ICS schemes.

4.14 It was rejected by SPT because it would have a higher capital cost and provide no additional benefit compared to Option 1.

4.15 We agree with SPT's rationale for rejecting this option as it involves higher cost without additional benefit.

Cost Assessment of the preferred option

4.16 The total project cost submitted by SPT was £1.089m. SPT listed the estimated cost, procurement strategy and cost firmness for all the contracts as below.

Contract Name	Cost (£m)	Procurement Strategy	Firmness
Surveys	[Redacted]	To place contracts as required	Fixed
Engineering Procurement and Construction Contractor	[Redacted]	Competitive tender	Agreed but re-measurable
Substation Control and Information System / Human Machine Interfaces Updates	[Redacted]	Ongoing service framework contractor	Fixed
Telecoms	[Redacted]	Framework contractor	Fixed
Risk	[Redacted]		Estimate
Total	**1.089**		

4.17 We consider the disaggregated model used by SPT, within which contracts are disaggregated and tendered separately, helps to drive cost efficiencies. We consider the procurement strategy deployed by SPT, with competitive tender for the main body of works, is acceptable.

4.18 Upon our request, SPT aggregated the contract costs and further provided the breakdown of project cost according to project activities as shown below.

All Costs in 2018/19 prices (£m)	Direct Cost	Contractor Indirects	Total Project Costs
Surveys		0.001	0.001
Site Works	0.062	-	0.062
Supply, Installation and Commissioning	0.656	-	0.656
Project Management	-	0.051	0.051
Detail Design	-	0.215	0.215
Risk	0.104	-	0.104
Total	**0.822**	**0.266**	**1.089**

Closely Associated Indirect (CAI) Costs

4.19 We note that SPT included some CAI costs such as surveys, project management and detailed design costs in the project as shown in the above table. According to the RIIO-ET2 Final Determinations (FDs), these CAI costs should be funded through the Opex Escalator (OE) mechanism. Details of the OE mechanism is set out in full within FDs.[21]

4.20 Applying the same rationale as discussed in paragraphs 2.11 to 2.14, our initial proposal is to adjust the project cost in SPT's funding request by taking out the CAI costs, because surveys, project management and detailed design are CAI activities that fall under the scope of the costs covered by the OE as the appropriate funding mechanism for these costs. The costs for undertaking these CAI activities should not be included in the direct capex of the project.

Risk Allowance

4.21 We also note that SPT has included a risk allowance of £0.104m, ie 14.5% of the direct cost (£0.985m) in the cost submission. The proportion is much higher than the average risk across projects at 7.5% of the direct cost, as set out in the FDs.

4.22 In the MSIP submission, SPT provided a list of risk registers including potential extra costs in outage changes or availability, material or equipment cost, design or scope uncertainties, and various interfaces.

4.23 During our cost assessment, SPT explained that this project is characterised by high levels of technical complexity, employing industry leading technology. Its progress and timing are dependent on multiple transmission system users and

[21] RIIO-ET2 FDs – ET Annex, chapter 4, decisions on OE contained in paragraphs 4.42 – 4.48: https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determinations_et_annex_revised.pdf

other TOs. The equipment costs are dominated by microprocessor-based equipment which is subject to global shortages causing high degrees of volatility on delivery lead times and instability in market prices.

4.24 Applying the same rationale as discussed in paragraphs 2.19 to 2.21, we propose to reduce the amount of risk allowance from 14.5% to 7.5% of the direct cost of project.

Our draft determination

4.25 We are satisfied that there is a need for the Wishaw - Eccles - Torness - Smeaton OTS project, that SPT has already considered all viable options and that it has correctly rejected all options but one as explained in paragraphs 4.3 to 4.15.

4.26 We are proposing to accept the needs case and preferred option for the Wishaw - Eccles - Torness - Smeaton OTS project and to adjust the SPT funding request to an efficient level by taking out the indirect costs and reducing the risk allowance as shown in the table below.

Cost category	SPT request (£m)	Ofgem adjustment – cost efficiency (£m)	Ofgem adjustment – cost reclassified as indirect (£m)	Ofgem draft determination (£m)
Contractor costs	0.985	0	-0.266	0.718
Risk Allowance	0.104	-0.050	0	0.054
Total	**1.089**	**-0.050**	**-0.266**	**0.772**

5. Conclusion and next steps

Next steps

7.1 We welcome your responses to this consultation, both generally, and in particular on the specific questions in Chapters 2 to 4. Please send your response to: Sai.Lo@ofgem.gov.uk. The deadline for response is 6 November 2023.

7.2 We will carefully consider all consultation responses and endeavour to conclude our assessment of the three SPT's MSIP full applications with a decision by end 2023.

Appendices

Index

Appendix 1 – List of Activities under MSIP re-opener

The activities under MSIP re-opener are stipulated in SpC 3.14.6 and are listed below for reference.

(a) a Generation Connection project, including all infrastructure related to that project, the forecast costs of which are at least £4.24m more or less than the level that could be provided for under Special Condition 3.11 (Generation Connections volume driver);

(b) a Demand Connection project, including all infrastructure related to that project, the forecast costs of which are at least £4.24m more or less than the level that could be provided for under Special Condition 3.12 (Demand Connection volume driver);

(c) a Boundary Reinforcement Project that has received a NOA Proceed Signal in the most recent NOA;

(d) a Flooding Defence Project, the purpose of which is to follow:

i. updates to the Energy Networks Association's report titled 'Engineering Technical Report (ETR138)' guidance on flooding; or

ii. a request from government, or a body which has responsibility for flood prevention, to protect sites from flooding;

(e) an Electricity System Restoration Project following the establishment of an Electricity System Restoration Standard;

(f) a system operability or constraint management project that has been requested by the System Operator;

(g) projects that are needed in order to meet NETS SQSS requirements regarding security, or system operability;

(h) Harmonic Filtering projects that are needed following:

i. requests from the licensee's customers to aggregate and deliver Harmonic Filtering requirements; or

ii. system studies by the System Operator or the licensee showing a need for additional Harmonic Filtering on the National Electricity Transmission System;

(i) protection projects that are needed following:

i. system studies by the System Operator or the licensee showing a need for changes to the protection settings or replacement of protection relay with inadequate range;

ii. system studies by the System Operator or the licensee showing a need for dynamic line ratings; or

iii. system studies by the System Operator or the licensee showing a need for an operational intertrip;

(j) data transformation and improvement projects, to implement recommendations regarding specific outputs required to meet principles developed by industry data working groups; and

(k) SF6 asset interventions, where the licensee can demonstrate a well-justified SF6 Intervention Plan.

Appendix 2 – Consultation Questions

Coalburn Supergrid Transformer Number 4 (SGT4) project

Q1. Do you agree with our view to confirm our provisional decision made in 2022 on accepting the needs case and the preferred option for Coalburn SGT4 project?

Q2. Do you agree with our draft determination on the efficient costs for the Coalburn SGT4 project?

Constraint Management Pathfinder - LEO and OTS Modifications project

Q3. Do you agree with our initial view on the needs case for the Constraint Management Pathfinder - LEO and OTS Modifications project?

Q4. Do you agree with our initial view on the preferred option proposed by SPT?

Q5. Do you agree with our draft determination on the efficient costs for the Constraint Management Pathfinder - LEO and OTS Modifications project?

Wishaw - Eccles - Torness - Smeaton OTS project

Q6. Do you agree with our initial view on the needs case for the Wishaw - Eccles - Torness - Smeaton OTS project?

Q7. Do you agree with our initial view on the preferred option proposed by SPT?

Q8. Do you agree with our draft determination on the efficient costs for the Wishaw - Eccles - Torness - Smeaton OTS project?

Appendix 3 – 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".