Consultation

ofgem
Making a positive difference for energy consumers

Isle of Skye – Consultation on the project's Final Needs Case

Publication date:	12 May 2023
Response deadline:	09 June 2023
Contact:	James Santos-Mansur
Team:	Price Control Operations - Heavy scrutiny projects
Telephone:	020 7901 7000
Email:	RIIOElectricityTransmission@ofgem.gov.uk

We are consulting on our views on the Isle of Skye reinforcement project. We would like views from people with an interest in new transmission infrastructure, meeting the net zero challenge, and competition in onshore transmission networks. We particularly welcome responses from consumer groups, stakeholders impacted by the project, stakeholders with an interest in the costs of electricity transmission infrastructure, and transmission owners. We would also welcome responses from other stakeholders and the public.

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

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

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

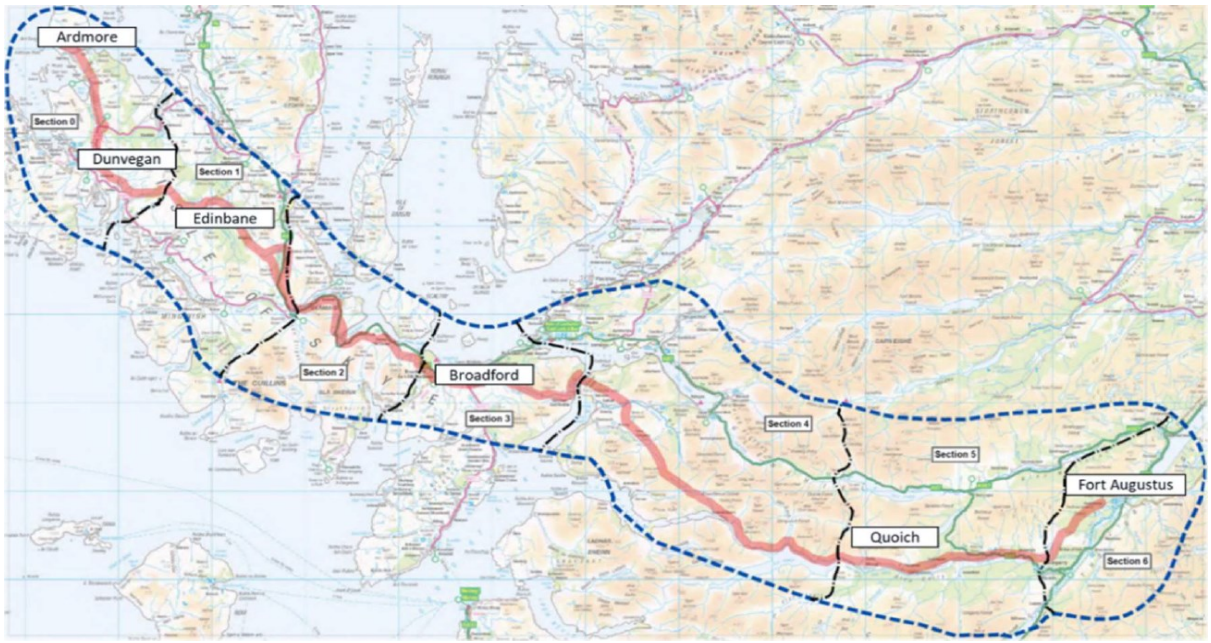
Contents

Executive summary

Isle of Skye project

In December 2022 we issued a direction[1] to allow Scottish & Southern Electricity Networks (trading as Scottish Hydro Electric Transmission plc) (SHET), who own and operate the transmission network in the north of Scotland, to submit a final needs case (FNC) regarding the proposed 'Skye 132kV Reinforcement' (Skye) project which we subsequently received. The Skye project is an electricity transmission infrastructure project that proposes to replace the existing single 132kV overhead line (OHL), as per figure 1, spanning across 160km between Fort Augustus 400kV substation on the mainland to Ardmore on the Isle of Skye.

Figure 1: The Skye 132kV transmission line



The project is mainly driven by the need to address the condition of current assets (non-load related intervention); however, the proposed designs include an upgrade to the OHL and new underground cabling to enable future additional renewable generation (load related intervention) in the Skye area to be connected. The new line will consist of:

- 110km of new build 132kV double circuit OHL between Fort Augustus and Edinbane substations;

[1] Isle of Skye project: Direction to allow Final Needs Case submission

- 24km of new build 132kV double circuit underground cables between Fort Augustus and Edinbane substations, and associated sealing end compounds at the cable remote ends;
- 24km of new build 132kV single circuit OHL between Edinbane and Ardmore substations;
- Establishing a new 132kV Gas Insulated Switchgear (GIS) switching station at the existing Broadford substation to connect to the current and planned additional 132kV Grid Supply Points (GSPs) and required reactive equipment as part of underground cable works; and
- A 132kV GIS switching station at the existing Edinbane substation to connect to the current and planned additional 132kV infrastructure and required reactive compensation equipment.

SHET estimates that the project will be completed by October 2026 at a cost of £488m. This is an increase of £88m since the initial needs case (INC) submission and is primarily due to the addition of underground cabling discussed at paragraph 2.7.

In accordance with our RIIO-2 price control arrangements, we have been assessing the project's need under our Large Onshore Transmission Investment (LOTI) re-opener mechanism[2] and on the suitability of applying a late competition model to the project.

This consultation seeks stakeholder views on our FNC assessment of the Skye project. The FNC stage is intended to provide clarity for SHET and wider stakeholders on our view of the project's progress to-date and the viability of applying a late competition model.

Final Needs Case assessment

SHET has provided sufficient evidence of a clear needs case for the Skye project. We consider that the need for asset intervention is well evidenced and that both current and new generation has shown enough progress to warrant adding additional capacity to the Skye circuit. We are content that the addition of specific underground cabling will address stakeholder concerns by mitigating the visual impact of passing through a national scenic area and, by doing so, may also help to secure the planning consent required for the project.

[2] Special condition 3.13 of the Electricity Transmission licence and the LOTI Guidance

We consider that the cost benefit analysis (CBA) submission is robust and supports the project need. We are also satisfied that the CBA has considered the most relevant technical options and that the results show that option 4a is the optimal option.

We agree that SHET's preferred option, option 4a, is reasonable and likely to provide the optimal solution given the background generation assumptions that underpin the CBA.

We note from the timeline presented by SHET that the decision on all material planning consents is not due until November 2023, which is after the planned publication date for our FNC decision. If we decide to approve the FNC for the project our **FNC decision will be made conditional on SHET securing all material planning consents required for the project to proceed to the Project Assessment stage in accordance with the LOTI Guidance[3].**

Delivery via a competition model

The Skye project is being considered under the LOTI mechanism as part of the RIIO-2 price control; accordingly and in line with our Final Determinations for RIIO-2 we have assessed the suitability of the Skye project for 'late model' competition[4]. Our view is that the Skye project would meet the criteria for delivery via a late model competition[5].

However, from our assessment, we do not envisage being able to implement either the Competitively Appointed Transmission Owner (CATO) or the Special Purpose Vehicle (SPV) model for this project without causing significant delay to delivery. In addition, we do not have sufficient confidence in the benefits that would be delivered to consumers by applying the Competition Proxy Model (CPM). Given this, we propose to retain the Skye project within the LOTI mechanism as part of the RIIO-2 price control.

Large project delivery

In our RIIO-2 Final Determinations[6] we set out our approach to late delivery of large projects (>£100m) with the aim to ensure companies do not benefit from the delay and to protect consumers from the impact of such a delay.

---

[3] Large Onshore Transmission Investments (LOTI) Re-opener Guidance, paragraph 6.5
[4] 'Late model' competition refers to the late models of competition (i.e. run for delivery once a project is sufficiently developed) identified for consideration for LOTI projects within the RIIO-2 Period (the Competitively Appointed Transmission Owner (CATO) model, the Special Purpose Vehicle (SPV) model, and the Competition Proxy Model (CPM)). For further information, see RIIO-2 Final Determinations
[5] The criteria are new, separable, and high value (£100m or above)
[6] RIIO-2 Final Determinations, ET Annex (REVISED), page 32 onwards

We will set our minded-to decision on which large project delay mechanism(s) to apply to the Skye project as part of the Project Assessment (PA) stage. We welcome early engagement with SHET on the matter.

Next steps

We welcome responses to our consultation on the specific questions we have included in Chapters 2, 3, and 4. If you would like to respond to this document then please send your responses to: RIIOElectricityTransmission@ofgem.gov.uk. The deadline for responses is 09 June 2023. We plan to publish our decision on the FNC for Skye in Summer 2023.

1. Introduction

What are we consulting on?

1.1 As set out in the LOTI guidance, the purpose of the FNC stage is to review the progress and changes to the project since the INC stage and reach a final view on whether the project proposed by SHET is needed.

Chapter 2: Skye Final Needs Case assessment

1.2 Chapter 2 summarises our findings on the FNC for this project, the conclusions of our assessment, and our proposed position. Our questions are:

- Q1: Do you agree with the need for investment on the transmission network?
- Q2: Do you agree with our conclusions on the technical options considered?
- Q3: Do you agree with our conclusions on the CBA?

Chapter 3: Delivery via a competition model

1.3 Chapter 3 summarises our proposed position on whether the project meets the criteria for late competition and whether it should be funded through a late competition model.

- Q4: Do you agree with our minded-to proposal to retain the Skye project within the LOTI arrangements under RIIO-2?

Chapter 4: Large project delivery

1.4 Chapter 4 summarises the Large Project Delivery (LPD) funding mechanism and our proposed view of its applicability to the project.

- Q5: Do you agree with our proposed approach to LPD for the Skye project?

Chapter 5: Next steps

1.5 Chapter 5 summarises our expectation for the next stages of assessment.

Context

1.6 Great Britain's (GB) onshore electricity transmission network is currently planned, constructed, owned, and operated by three Transmission Owners (TOs): National Grid Electricity Transmission (NGET) in England and Wales, Scottish Power Transmission (SPT) in the south of Scotland, and Scottish Hydro Electric Transmission (SHET) in the north of Scotland. We regulate these TOs through the RIIO (Revenue = Incentives + Innovation + Outputs) price control framework. For offshore transmission, we appoint Offshore Transmission Owners (OFTOs) using competitive tenders.

1.7 The incumbent onshore TOs are currently regulated under the RIIO-2 price control which started on 01 April 2021 and will run for 5 years. Under this price control we developed a mechanism for assessing the need for, and efficient cost of, large and uncertain electricity transmission reinforcement projects. This mechanism is called 'Large Onshore Transmission Investment' (LOTI). Once the need for and the costs of projects have become more certain, the TOs will submit construction proposals and seek funding for them. As explained in chapter 9 of the RIIO-2 Final proposals – Core Document[7] (REVISED), all projects that come forward for assessment via the LOTI re-opener mechanism during the RIIO-2 period will be considered for their suitability for delivery through one of the late competition models.

1.8 Network investment is informed by the Future Energy Scenarios (FES)[8] and the Network Options Assessment (NOA)[9] which are developed and published annually by the Electricity System Operator (ESO). A key focus of the FES 2020 is the inclusion of the legally binding[10] UK Government Net Zero targets which are to be achieved by 2050. The transition to a Net Zero economy will see increased demand on transmission boundary capability which will need to be facilitated by critical network reinforcements.

1.9 Our assessment and proposed position set out in this document is subject to consultation and we invite stakeholders to respond using the contact details set

[7] RIIO-2 Final Determinations, Core Document (REVISED), chapter 9
[8] ESO Future Energy Scenarios (FES)
[9] ESO Network Option Assessment (NOA)
[10] The Climate Change Act 2008 (2050 Target Amendment) Order 2019

out on the front of this document. We have indicated questions for stakeholders at the start of each chapter where relevant.

Overview of LOTI re-opener mechanism

1.10 The LOTI re-opener mechanism provides TOs with a route to apply for funding for large investment projects that can be shown to deliver benefits to consumers, but that were uncertain or not sufficiently developed at the time we set costs and outputs for the RIIO-2 price control period. The LOTI mechanism provides a robust assessment process through which we can ensure that TO proposals represent value for money for existing and future consumers.

1.11 To qualify for the LOTI mechanism, TO proposals must meet the following criteria:

a) be expected to cost £100m or more of capital expenditure; and
b) be, in whole or in part, load related[11].

1.12 We are satisfied that the Skye project meets the criteria and is eligible[12] as a LOTI project. We are therefore assessing the Skye project in accordance with the LOTI mechanism as detailed in the LOTI Guidance[13].

Stages of our LOTI assessment

1.13 Following the approval of eligibility, our LOTI mechanism is made up of three main stages:

1. **Initial Needs Case (INC)** – The usual focus of our assessment at this stage is to review the technical and/or economic need for the project, the technical options under consideration, and the TOs justification for taking forward its preferred option for further development.

2. **Final Needs Case (FNC)** – Following the securing of all material planning consents for the project, the TO will then need to submit a FNC (unless we specify alternative timing). The focus of our assessment at this stage is to confirm the

[11] Part (b) of this criterion used to be either "wholly or partly load related" or "shared-use or sole-use generator connection project related". As a result of a licence modification, which came into effect on 24 July 2021, the "shared-use or sole-use generator connection project" criterion no longer applies. However, this does not impact the project as this is in part a load related project. For further information on the licence modification, see the Decision on the proposed modifications to the RIIO-2 Transmission, Gas Distribution and Electricity System Operator licence conditions
[12] RIIO-2 Final Determinations, NGET Annex (REVISED), section 3.60
[13] Large Onshore Transmission Investments (LOTI) Re-opener Guidance

need for the project by checking that there have been no material changes in technical and/or economic drivers that were established in the INC.

3. **Project Assessment (PA) –** If the FNC is approved, the TO will then need to apply for a PA direction. The focus of our assessment at this stage is the assessment of the proposed costs and delivery plan that the TO has in place for the project, with a view to potentially specifying in the TOs licence a new LOTI Output, a LOTI Delivery date, and setting the efficient cost allowances that can be recovered from consumers for delivery of the project.

Related publications

1.14 RIIO-2 Final Determinations – Core Document and NGET Annex – both REVISED: Ofgem.gov.uk/publications-and-updates/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

1.15 LOTI Re-opener Guidance document: Ofgem.gov.uk/publications-and-updates/large-onshore-transmission-investments-loti-re-opener-guidance

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
12/05/2023	09/06/2023	06/2023	07/2023

How to respond

1.16 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.

1.17 We have asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

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

Your response, data and confidentiality

1.19 You can ask us to keep your response, or parts of your response, confidential. We will respect this, subject to obligations to disclose information such as 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 do so. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.20 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 will 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.

1.21 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 Gas and Electricity Markets 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 contained within appendix 1.

1.22 If you wish to respond confidentially, we will keep your response confidential but we will publish the number (but not the names) of confidential responses we receive. We will not 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

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

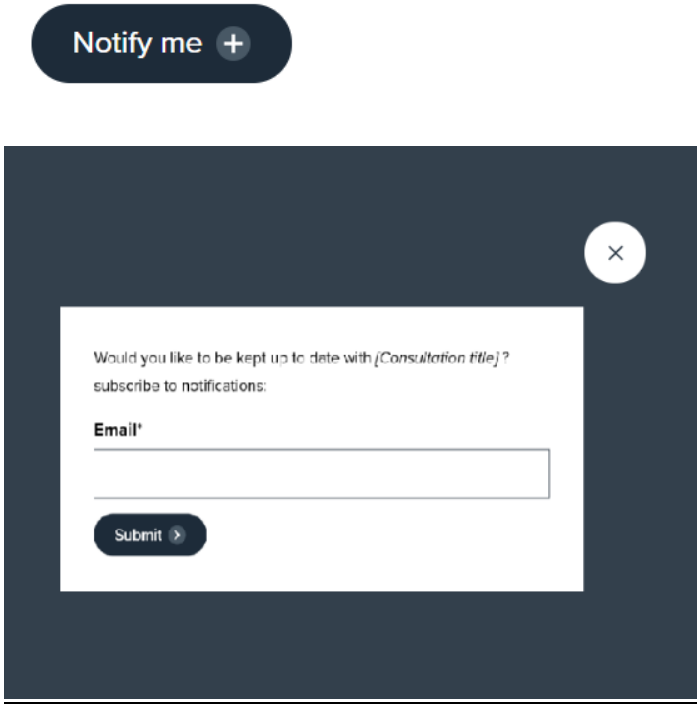
1) Do you have any comments about the overall process of this consultation?
2) Do you have any comments about its tone and content?
3) Was it easy to read and understand? Or could it have been written better?
4) Were its conclusions balanced?

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

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

How to track the progress of the consultation

1.25 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



1.26 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:

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

2. Isle of Skye Final Needs Case assessment

Section summary

This chapter sets out the key decisions SHET has made to date on the project. It then explains our findings on the technical need, options, and CBA.

Questions

Q1. Do you agree with the need for investment on the transmission network?
Q2. Do you agree with our conclusions on the technical options considered?
Q3. Do you agree with our conclusions on the CBA?

Overview of SHET's proposal

2.1 In December 2021, we consulted[14] on SHET's INC regarding the Skye project. Chapter 2 of that document laid out SHET's proposal, the options considered, and the CBA approach that SHET took. This chapter will focus on changes to the project proposed by SHET since that submission and our views on those changes.

2.2 The Skye project proposes to replace the existing single 132kV OHL which spans across 160km between Fort Augustus on the mainland to Ardmore on the Isle of Skye. The project is mainly driven by the need to address the condition of current assets (non-load related intervention); however, the proposed designs include an upgrade to the OHL and new underground cabling to enable future additional renewable generation (load related intervention) in the Skye area to connect.

Why the project has been brought forward

2.3 The three key drivers for the project remain:

- Asset health condition;
- Need for additional capacity to allow new generation to connect; and
- Security of supply to maintain normal electrical supply to the residents of Skye and the Western Isles.

[14] Isle of Skye project – Initial Needs Case consultation

2.4 Since the INC, SHET has identified an additional c.38% of total generation potential which is an increase from 1071MW to 1481MW. Furthermore, there has been generation developments since the original set of generation scenarios were developed. The main movements are:

- 5.7MW increase in contracted capacity;
- 56.6MW increase in submitted applications;
- 285MW of generation has progressed through the consenting process; and
- 600MW+ of pre-application stage generation potential has been identified.

2.5 SHET has updated its generation scenarios[15] as per table 1. The scenarios S1-S4 broadly align the four scenarios within the ESO's FES[16], namely Leading the Way (LW) aligned to S4, Consumer Transformation (CT) to S3, System Transformation (ST) to S2, and Steady Progression (SP) to S1.

Table 1: New generation capacity by 2050

	S4	**S3**	**S2**	**S1**
Updated	850MW	612MW	379MW	268MW
Original: (paragraph 2.29 in INC)	561MW	448MW	331MW	205MW

2.6 The original INC MW numbers in table 1 were derived by adjusting the weightings in the PGAT model to place a greater emphasis on securing planning consent. This same approach was taken in the FNC to derive the updated MW numbers.

Options considered

2.7 At the INC stage, SHET flagged that underground cabling may be required to mitigate visual impacts and help secure planning consent. Ongoing stakeholder engagement has confirmed that this will be required. The first section is 9km from Fort Augustus to Quoich, and the second section is 15km within Cuillin Hills National Scenic area. These works triggered project component updates.

[15] SHET hired Gutteridge Haskins & Davey Limited (GHD) to conduct an evaluation using a 'probability of generation assessment tool' (PGAT) to determine how much generation would be likely to ultimately come forward in totality as well as within each generation scenario, S1 to S4

[16] ESO's FES scenario framework showing how the four scenarios move towards decarbonation given differing levels of societal change

2.8 SHET's original options scope is presented in figure 2, the updated options scope is in figure 3, and the options descriptions plus FNC scope updates is in table 2.

Figure 2: Original scope for options

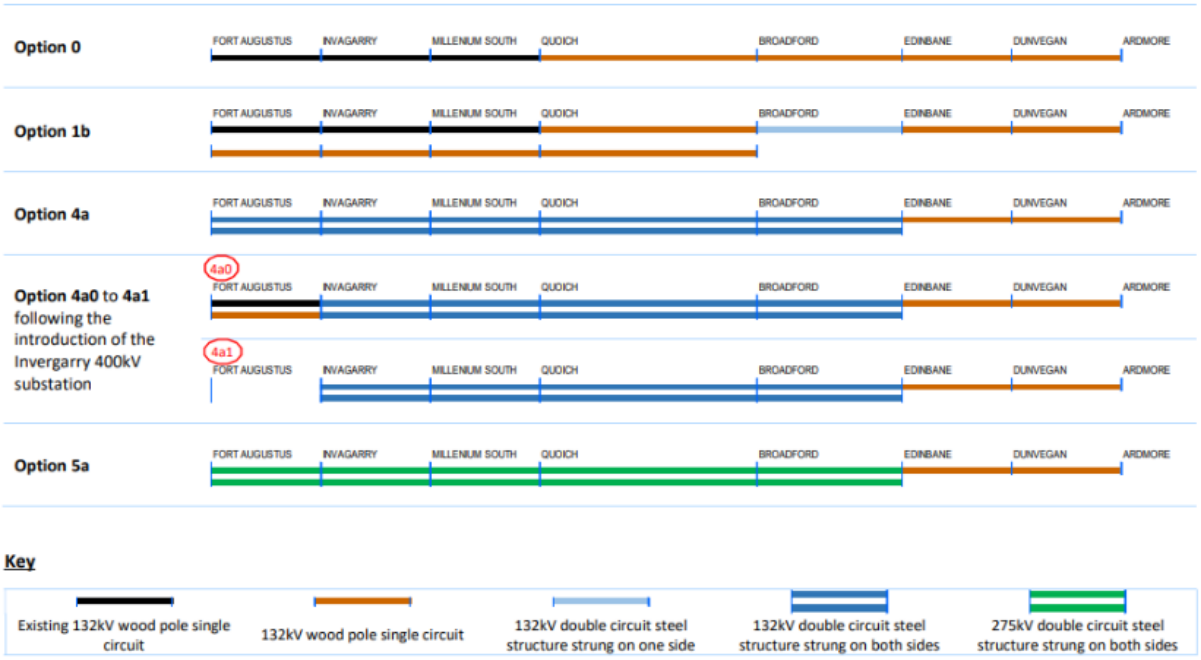


Figure 3: Updated scope for options

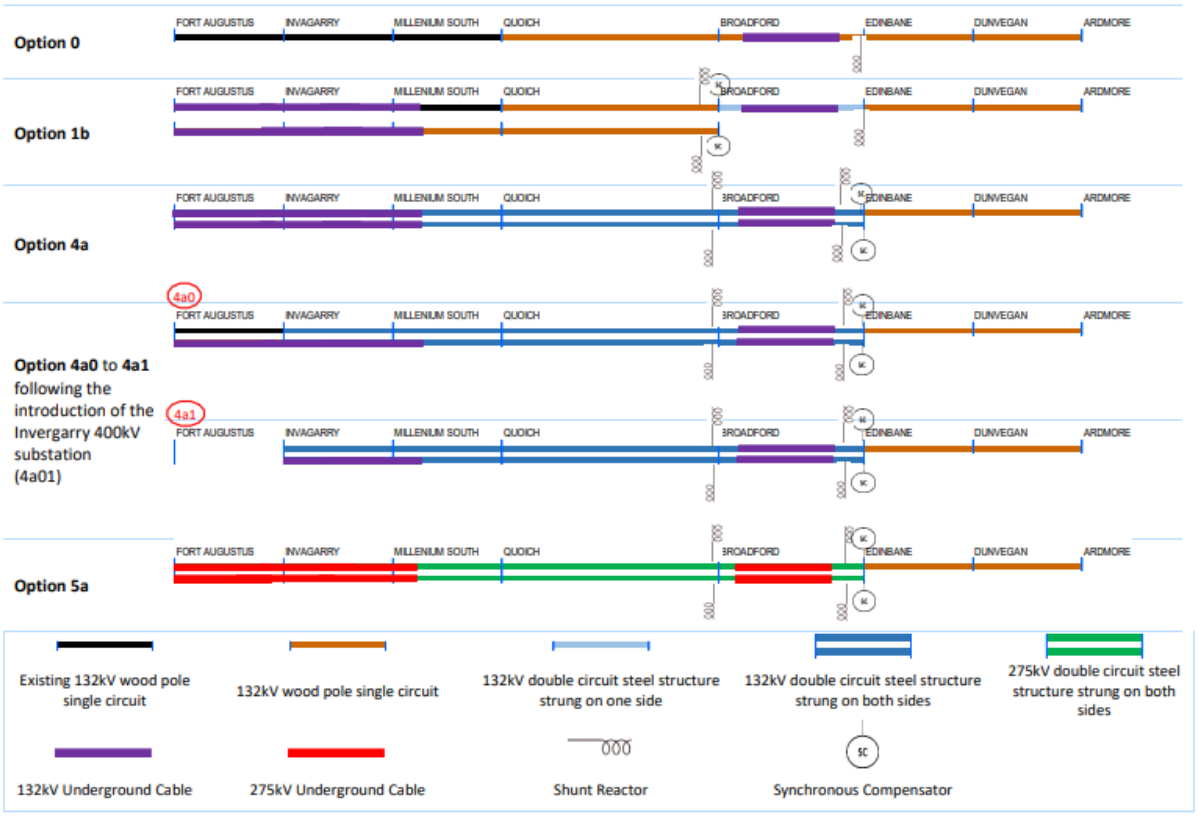


Table 2: Original scope plus FNC scope updates for each option

Option	Description	Estimated Cost INC (£m)	Estimated Cost FNC (£m)
0	Baseline (minimum option) – Single Circuit Trident 132kV wood pole from Fort Augustus to Ardmore. FNC scope update: 15km section of 132kV single circuit cable in the Cuillins NSA on Skye and associated line end reactor at Edinbane (dynamic reactive compensation potentially required but would require detailed design to ascertain).	193	236
1b	Two 132kV wood pole single circuits from Fort Augustus to Broadford, 132kV double circuit steel structure strung on one side from Broadford to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore. FNC scope update: 9km section of 132kV single circuit cable out of Fort Augustus and 15km section of 132kV double circuit cable in the Cuillins NSA on Skye and associated line end reactors at Broadford and Edinbane, and two synchronous condensers at Broadford	298	363
4a	132kV steel tower double circuit from Fort Augustus to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore FNC scope update: 9km section of 132kV double circuit cable out of Fort Augustus and 15km section of 132kV double circuit cable in the Cuillins NSA on Skye and associated line end reactors at Broadford and Edinbane, and two synchronous condensers at Edinbane.	400	488
4a01	Option combines (4a0) and (4a1). FNC scope update: 9km section of 132kV double circuit cable out of Fort Augustus and 15km section of 132kV double circuit cable in the Cuillins NSA on Skye and associated line end reactors at Broadford and Edinbane, and two synchronous condensers at Edinbane.	423 (*386+37*)	516 (*471+45*)
(4a0)	Two 132 kV wood pole single circuits from Fort Augustus to Invergarry, 132 kV double circuit steel tower strung both sides from Invergarry to Edinbane then single circuit wood pole to Ardmore.	*386*	*471*
(4a1)	If the Invergarry 400 kV substation progresses, the Fort Augustus to Invergarry section will be dismantled and the line turned into the new substation.	*37*	*45*
5a	Double Circuit 275 kV from Fort Augustus to Edinbane with single trident 132kV to Ardmore. FNC scope update: 9km section of 275kV double circuit cable out of Fort Augustus and 15km section of 275kV double circuit cable in the Cuillins NSA on Skye and associated line end reactors at Broadford and Edinbane, and two synchronous condensers at Edinbane	520	634

2.9 SHET notes that following further development work on option 4a01, the original proposed location of the 400kV substation near Invergarry to accommodate Coire Glas pumped storage scheme is now proposed at a new location approximately 2km away. Given this, the system design would now result in a non-compliant solution in respect of the loss of infeed criteria specified in section 2.6 of the National Electricity Transmission System (NETS) Security and Quality of Supply Standard (SQSS)[17]. Considering this, SHET states option 4a01 is no longer viable.

2.10 The overall project for SHET's preferred option, 4a, now consists of the following:

- 110km of new build 132kV double circuit OHL between Fort Augustus and Edinbane substations;
- 24km of new build 132kV double circuit underground cables between Fort Augustus and Edinbane substations, and associated sealing end compounds at the cable remote ends;
- 24km of new build 132kV single circuit OHL between Edinbane and Ardmore substations;
- Establishing a new 132kV Gas Insulated Switchgear (GIS) switching station at the existing Broadford substation to connect to the current and planned additional 132kV Grid Supply Points (GSPs) and required reactive equipment as part of underground cable works; and
- A 132kV GIS switching station at the existing Edinbane substation to connect to the current and planned additional 132kV infrastructure and required reactive compensation equipment.

CBA process

2.11 At the INC stage, we agreed with the proactive approach that SHET took to capture the transmission constraints in the Skye region and to feed this into the ESO's GB wide CBA model. The CBA showed that the Least Worst Regret[18] (LWR) option is option 4a. In fact, options 4a and 4a01 were both similar in terms of

[17] The National Electricity Transmission System (NETS) Security and Quality of Supply Standards (SQSS) sets out the criteria and methodology for planning and operating the GB transmission system in a compliant manner

[18] LWR is a decision-making tool that makes recommendations based on which options/strategy produce the least 'regret' across all analysed scenarios. We are aware of some limitations of the LWR analysis in practice. LWR results are determined by the balance between the least and most onerous case for development which could lead to spurious investment recommendations if scenarios are not 'credible'. To minimise this risk, the ESO's NOA results are reviewed by the NOA committee who use the latest market intelligence to test the plausibility of the results, and sensitivity analysis is undertaken to look at how robust recommendations are to scenario changes

design and regret. The ESO also undertook a capital expenditure (CAPEX) sensitivity analysis where, in particular, capex was tested at a 20% increase for all shortlisted options with option 4a remaining the LWR.

2.12 Since the INC, there have been two developments in terms of options:

- Option 4a01 has not been progressed further due to design changes; and
- Capex has increased by 22% due to underground cabling. This cabling requires reactive compensation equipment to control significant charging current and voltage profiles on the line.

2.13 Option 4a is the only option that has been fully developed to the current level due to the complexity of the cable design. Given this, the capex of options 0, 1b, 4a01, and 5a have been updated based on the assumption that the requirement for reactive compensation would exist for all the options if the cables are required in all options. With the need for compensation proportionate to the number and capacity of the circuits, a cost uplift of 22% compared to the original INC capex as per table 2 has been applied to all options. This is not far off the capex sensitivity increase carried out in the INC CBA as per paragraph 2.11 above.

2.14 The ESO carried out a CBA for the FNC using the updated capex costs which include the underground cabling and reactive compensation equipment in order to re-evaluate the LWR option. Table 3 shows the results of this CBA. The LWR option remains option 4a.

Table 3: Results of the CBA

Location	PV of Micro & Macro Constraint Cost+ / Constraint Saving- (£m)				CAPEX PV	NPV (£m)				Worst regret				Least Worst Regret
	LW	CT	ST	SP	TO	LW	CT	ST	SP	LW	CT	ST	SP	
Skye_0	0	0	0	0	187	187	187	187	187	537	180	143	0	537
Skye_1b	-434	-276	-242	-24	286	-148	10	44	262	202	2	0	75	202
Skye_4a	-737	-379	-264	-21	386	-350	7	123	366	0	0	79	179	179
Skye_4a1	-736	-375	-265	-21	405	-331	30	140	384	19	23	96	197	197
Skye_5a	-737	-384	-268	-23	494	-243	110	226	471	107	103	182	284	284

2.15 In addition to the CBA, various sensitivity analyses were carried out by the ESO. The summary of these results is highlighted below in table 4.

Table 4: CBA sensitivity analysis summary

Sensitivity	Result
Detailed reactive compensation: Re-assigned the reactive compensation scheme cost to each option to reflect the number of works in each option assuming the same reactive compensation scheme specification across all options	LWR remains as option 4a.
Bid/offer price spread: Analysed the impact of bid price and/or offer-on price increases on the investment decision.	Options 4a and 4a01 continue to be the most favourable options. Given option 4a01's discontinuation, option 4a is thus the preferred option.

2.16 SHET also produced two bespoke reports examining the wider benefits to society, namely the socioeconomic and carbon benefits associated with pursuing either option 1b or 4a. Their analysis outlined that their investment would create over £300m and £1.2bn socioeconomic value to the local and UK economies respectively over the lifetime of the asset, with option 1b delivering less value. The whole life carbon profile analysis outlined £160m of net benefit to society, with option 1b again delivering less value.

Our views on the Skye project

Non-load, load, and security of supply drivers

2.17 Our position remains as per our INC decision[19] with respect to the non-load and security of supply drivers; namely that we agree SHET has clearly demonstrated the need for asset intervention and that security of supply from a transmission access perspective requires reinforcement of the Skye network.

2.18 We agree with SHET regarding the load driver in that the level of generation wanting to connect to the transmission network has shown progress since the INC stage. We also agree that this supports SHET's stance that additional capacity is likely required to allow new generation to connect to the Skye network.

[19] Isle of Skye - Decision on the project's Initial Needs Case and on its suitability for competition

Options considered

2.19 As per the INC, we deemed that an appropriate range of options were considered to address the non-load and load related drivers for the Skye project, noting that all options provide a NETS SQSS compliant solution. We also agreed with SHET that options 0 and 5a are not likely to deliver the best outcomes for consumers.

2.20 Our INC decision noted that option 1b could not be ruled out as it may be the most appropriate solution if less generation was to come forward. It also noted that we expect SHET to update its generation and demand forecast in their FNC submission. SHET has shown that 285MW of generation has progressed through the consenting process with a further 600MW+ of potential generation identified. Given that option 1b can only accommodate an additional capacity of c.50MW and non-firm capacity of up to 160MW and coupled with the generation movements SHET has demonstrated between the INC and FNC, we agree that pursuing option 1b would result in an oversubscribed asset that would not be able to accommodate half of the current 428MW of contracted generation or any potential future generation.

2.21 Options 4a and 4a01 are both similar in design and can provide the same power transfer capability, albeit with option 4a01 being costlier. SHET updated their position since the INC on option 4a01 stating that it is no longer viable given its non-compliance with SQSS. We agree that a non-compliant SQSS design solution should be discounted from consideration. Furthermore, given the similarities between option 4a and 4a01, most of the solution is still available via option 4a and at a more competitive investment cost.

2.22 SHET flagged at the INC stage that underground cabling may be required to mitigate the landscape and visual impacts of the project and aid the grant of planning consent. Following ongoing stakeholder engagement with statutory consultees, landowners, and others, SHET has confirmed that 24km of underground cabling will be required. We agree that the proposed underground cabling is needed to address the visual amenity impact of the project given that part of the OHL passes through a national scenic area. We also accept that the need to mitigate the impact of the project on visual amenity grounds will be a relevant consideration in the grant of planning permission.

CBA results

2.23 Our view is that the CBA supports the need for investment and SHET's preferred reinforcement option, option 4a.

2.24 One of the challenges when making investment decisions is the level of uncertainty over the generation and demand driving the need for any new transmission assets. This translates into risk that consumers will pay for assets that are significantly undersized (and therefore need to be replaced or more assets built) or significantly oversized (and therefore not fully utilised). Given this, we need to be comfortable that the assumptions made about generation and demand which underpin LOTI re-openers are reasonable.

2.25 Overall we consider that option 4, the preferred option put forward by SHET, is likely to provide the optimal solution given the combination of non-load and load related drivers, and the background generation assumptions that underpin the CBA.

3. Delivery via a competition model

Section summary

This chapter sets out whether the project meets the criteria for competition. It also explains our minded-to decision on whether to apply a late competition model.

Questions

Q4. Do you agree with our minded-to proposal to retain the Skye project within the LOTI arrangements under RIIO-2?

Background

3.1 Competition in the design and delivery of energy networks is a central aspect of the RIIO-2 price control. Competition has a key role to play in driving innovative solutions and efficient delivery that can help meet the decarbonisation targets at the lowest cost to consumers. We set out in our Final Determinations[20] for RIIO-2 that during the RIIO-2 period, all projects that meet the criteria for competition and are brought forward under an uncertainty mechanism[21] will be considered for potential delivery through a late competition model.

Does the Skye project meet the criteria for competition?

3.2 The criteria[22] for a project to qualify for late model competition is as follows:

i. New
ii. Separable
iii. High value – projects of £100m or greater expected capital expenditure

3.3 We consider that the Skye project meets all the criteria above.

Delivery model considerations

3.4 Since we consider that the Skye project meets the criteria for late model competition, we have considered whether it is in the interest of consumers for the

[20] RIIO-2 Final Determinations, Core Document (REVISED), chapter 9
[21] Large Onshore Transmission Investments (LOTI) Re-opener Guidance, pages 9-11
[22] Guidance on the criteria for competition

project to be delivered through a late model of competition rather than via the prevailing LOTI mechanism under the RIIO-2 arrangements.

Relevant consideration of models

3.5 The late competition models that are available for consideration are:

i. Competitively Appointed Transmission Owner (CATO) Model
ii. Special Purpose Vehicle (SPV) Model
iii. Competition Proxy Model (CPM)

3.6 Below we set out details of each of these models and our initial views on how suitable it would be to apply the model to the Skye project.

CATO

3.7 Under the CATO model, a competitive tender would be run for the financing, construction, and operation of the proposed assets that make up the project, with a transmission licence provided to the winning bidder setting out the outputs, obligations, and incentives associated with delivering the project.

3.8 The CATO model requires legislative changes to allow for new parties to be able to be awarded a transmission licence following a competitive tender. The government has recently introduced a Bill[23] to enable competitive tendering but it is currently uncertain when it will be passed into law. The required delivery date proposed for the project is October 2026 and it is not clear at present whether the legislative changes required to implement the CATO model will be enacted in time to allow it to deliver benefit to consumers without causing significant delay to the project. For that reason we do not think it would be appropriate to apply the CATO model to the project.

SPV

3.9 Under the SPV model, SHET would run a tender to appoint a SPV to finance, deliver, and operate a new, separable, and high value project on the licensee's behalf through a contract for a specified revenue period. The allowed revenue for delivering the project would be set over the period of its construction and a long-term operational period (currently expected to be 25 years). The SPV model was

[23] Energy Security Bill - GOV.UK

originally developed for consideration for projects where the CATO model had been discounted due to a clear expectation that underpinning legislation would not be in place in time to allow the delivery of specific projects.

3.10 Given the additional work needed to finalise the SPV model and that SHET's tender process has already commenced, we do not consider that the SPV model can be applied to this project without leading to significant delays. For this reason, we consider that the SPV model is not an appropriate model for this project.

CPM

3.11 The CPM involves setting a largely project specific set of regulatory arrangements to cover the construction period and a 25-year operational period for an asset (in contrast with setting arrangements for a portfolio of assets under a price control settlement). It is intended to replicate the efficient project finance structure that tends to be used in competitive tender bids for the delivery and operation of infrastructure projects.

3.12 Importantly, the licensee would retain delivery of the project under CPM. This means that there is not the requirement to allow for the running of a full tender for delivery of the project in the same way as the CATO or SPV models, and the CPM assessment stages follow the same process as the LOTI mechanism.

3.13 In the RIIO-2 Final Determinations[24], we explained that due to recent market conditions and our allowed financing arrangements for RIIO-2, we may not have sufficient confidence that the application of the CPM to projects that need to start construction at the start of the RIIO-2 period would deliver benefits to consumers. This position was informed by our decision on the Hinkley-Seabank project in May 2020[25].

3.14 Since our decision on Hinkley-Seabank, and our RIIO-2 Final Determinations in 2020, we have seen some variability in the cost of debt benchmarks used to set the financing arrangements under CPM. There is some scope for potential market movements between now and the point at which the financing arrangements

[24] RIIO-2 Final Determinations, Core Document (REVISED), Chapter 9, section 9.8
[25] Hinkley - Seabank: Updated decision on delivery model

would be finalised for CPM, in parallel to the final setting of the cost allowances for the project.

3.15 At this stage, we have not seen movements that give us confidence that CPM is likely to deliver a benefit to consumers relative to the financing arrangements under the counterfactual LOTI arrangements under RIIO.

Our view

3.16 We do not consider that implementing either the CATO or SPV models for the Skye project is possible without causing significant delay to project delivery, and we do not have sufficient confidence in the benefits to consumers that could be delivered by applying the CPM. Given this, we propose to retain the Skye project within the LOTI mechanism as part of the RIIO-2 price control.

4. Large project delivery

Section summary

This chapter sets out the large project delivery options and our minded-to decision.

Questions

Q5. Do you agree with our proposed approach to LPD for the Skye project?

Background

4.1 In the RIIO-2 Final Determinations[26] we set out our approach to late delivery of large projects (i.e. >£100m). The aim of this approach is to ensure that a licensee does not benefit financially from a delay to project delivery.

4.2 We also aim to ensure that consumers are protected from any delay in delivery. To this end, we consider setting a Project Delivery Charge (PDC) for each day a project is delivered late.

Our view

4.3 We will consider the appropriate project delivery mechanism and PDC level for the Skye project at the PA stage. In setting the PDC level we will look to understand the impact of any delay in terms of costs to consumers.

[26] RIIO-2 Final Determinations, ET Annex (REVISED), page 32 onwards

5. Next steps

Section summary

This chapter sets out the next steps in our assessment under the LOTI mechanism.

5.1 Our consultation on the positions set out within this document will close on 09 June 2023. We currently anticipate publishing our FNC decision in Summer 2023.

5.2 If our FNC decision is to approve the project, we will then proceed to the PA stage of the LOTI mechanism[27].

[27] Large Onshore Transmission Investments (LOTI) Re-opener Guidance, chapter 6

Appendices

Appendix 1 - 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). It does not refer to 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 ("Ofgem" for ease of reference). 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

N/A.

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

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

6. Your rights

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

- know how we use your personal data,
- access your personal data,
- have your personal data corrected if it is inaccurate or incomplete,
- ask us to delete your personal data when we no longer need it,
- ask us to restrict how we process your personal data,
- get your personal data from us and re-use it across other services,
- object to certain ways we use your personal data,
- be safeguarded against risks where decisions based on your personal data are taken entirely automatically,
- tell us if we can share your personal information with 3rd parties,
- tell us your preferred frequency, content and format of our communications with you,
- lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your personal 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 "Ofgem privacy promise".