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# Consultation

## Isle of Skye project - Initial Needs Case consultation

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| **Publication date:** | 16th Dec 2021 | **Contact:** | James Norman, Head of Electricity Transmission Development |
| | | **Team:** | RIIO Electricity Transmission Development |
| **Response deadline:** | 21st Jan 2022 | **Email:** | RIIOElectricityTransmission@ofgem.gov.uk |

We are consulting on our assessment of the Initial Needs Case for the reinforcement of Scottish & Southern Electricity Networks' proposed Isle of Skye ("Skye") 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 Skye project, stakeholders interested in the costs of electricity transmission infrastructure and the electricity 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 will publish the non-confidential responses we receive alongside a decision on next steps on our website at **Ofgem.gov.uk/consultations**.

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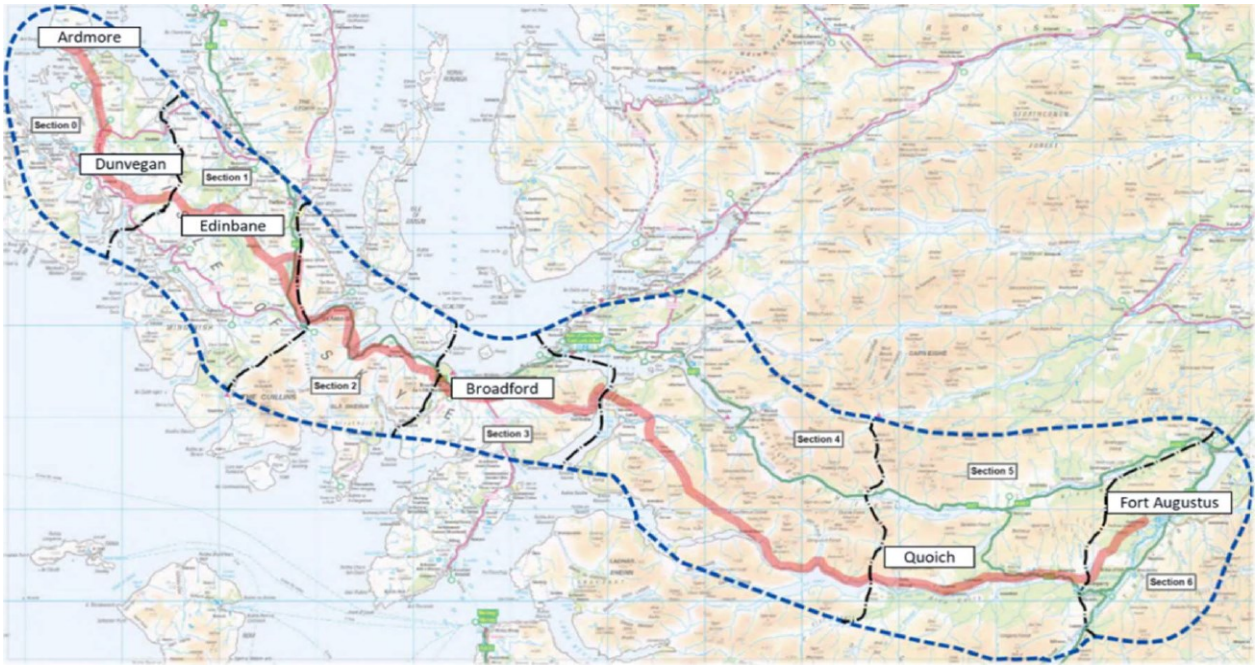
# Contents

# Executive summary

## Isle of Skye project and what this document covers

In July 2021 we received an Initial Needs Case (INC) submission from Scottish & Southern Electricity Networks (trading as Scottish Hydro Electric Transmission plc) (SHET), who own and operate the transmission network in the north of Scotland, regarding the proposed 'Skye 132kV Reinforcement' (Skye) project. 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 the Fort Augustus 400kV substation on the mainland to Ardmore on the Isle of Skye. The Skye 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[1] to the OHL to enable future additional renewable generation (load related intervention) in the Skye area to be connected. SHET estimates that the Skye project will cost around £400m and will be completed[2] by 2026.

**Figure 1: The Skye 132kV transmission line**




[1] The existing Skye 132kV transmission circuit has a summer rating of 67MVA. It is a single circuit construction consisting of a steel lattice tower and wood poles. The proposed upgrade, a double circuit steel lattice construction, will increase the summer rating to 348MVA per circuit from Fort Augustus to Edinbane. Cable sections identified on the route will match the OHL ratings. The section between Edibane and Ardmore, a single circuit wood pole design, will have a summer rating of 176MVA

[2] See Appendix 1 for project milestones

In accordance with our RIIO-2 price control arrangements, we have assessed the need for the proposed project under our Large Onshore Transmission Investment (LOTI) re-opener mechanism[3] and its suitability for delivery through a competition model.

This consultation seeks stakeholder views on our assessment of the INC for the Skye project. The INC stage is intended to provide clarity for SHET and wider stakeholders on our view of the progress of the Skye project to-date and what the focus of our assessment will be at the next stage of assessment, the Final Needs Case (FNC). It also sets out our initial thoughts on the suitability of applying a late competition model to the Skye project.

## LOTI Initial Needs Case assessment

We consider that there is sufficient evidence of a clear needs case for the Skye project. SHET has made the case that asset intervention is required, and that replacement rather than refurbishment is the most cost-effective solution for the Skye project. SHET has also been proactive and provided a view of potential renewable generation that could be sufficient to warrant additional investment to add capacity to the 'Skye circuit' (the circuit).

We consider that the cost benefit analysis (CBA) undertaken by SHET as part of the INC submission is robust and supports the need for the Skye project. We are also satisfied that the CBA has considered the most relevant technical options.

We agree that at this point the preferred option put forward by SHET is reasonable and is likely to provide the optimal solution given the background generation assumptions that underpin the CBA. However, given the sensitivity of the CBA to background generation assumptions, we cannot at this stage disregard another option (option 1b) which addresses both the condition of the assets and provides increased capacity for additional future generation, albeit at a lower level of capacity than the preferred option put forward by SHET.

We expect SHET to update its generation and demand forecast at the FNC stage based on the latest developments, particularly with regards to the progress of locally proposed generation. We also expect SHET to monitor development of the Holistic Network Design (under the 'Pathway to 2030' workstream of the Offshore Transmission Network Review) and carefully

[3] Special Condition 3.13 of the Electricity Transmission Licence

consider any interactions or implications for the Skye project in order to ensure that the local network is designed efficiently.

## Assessment of suitability for late competition models

As the Skye project is being considered under the LOTI mechanism as part of the RIIO-2 price control, we have, in line with our Final Determinations for the RIIO-2 period, 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].

Given the uncertainty in the timing of the legislation required to support the Competitively Appointed Transmission Owner (CATO) model and the potential impact on timely delivery of the Skye project, we propose to defer our competition decision until nearer the start of the invitation to tender stage of SHET's proposed procurement of the supply chain for delivery of the Skye project, which is currently scheduled for September 2022.

## 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.

We will set our minded to position on which large project delay mechanism(s) to apply to the Skye project as part of the FNC. We welcome early engagement with SHET on the matter.

## Next Steps

We welcome responses to this consultation, both generally and on the specific questions we have included in Chapters 2 and 3. If you would like to respond to this document, please send your response to: RIIOElectricityTransmission@ofgem.gov.uk. The deadline for responses is 21st January 2022. We expect to publish our final views on the INC for Skye in April 2022.

[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, Core Document (REVISED), chapter 9

[5] The criteria are new, separable, and high value (£100m or above)

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

# 1. Introduction

## What are we consulting on?

1.1. This document sets out our initial view on the need for a proposed electricity transmission project to replace aging assets and to bring additional renewable generation onto the National Electricity Transmission System (NETS) in northwest Scotland, on and near the Isle of Skye.

1.2. Chapter 2 summarises the proposed findings and conclusions of our initial needs case assessment.

1.3. Chapter 3 summarises our proposed position regarding whether the Skye project meets the criteria for late competition and when we intend to decide whether it should be delivered through one of the late models of competition as set out in the RIIO-2 Final Determinations.

1.4. Chapter 4 summarises our position on large project delivery.

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

## Context

1.6. The 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 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 1 April 2021 and will run for 5 years. Under this price control, we developed a reopener mechanism for assessing the need for, and efficient cost of, large and uncertain electricity transmission reinforcement projects: the 'Large Onshore Transmission Investments' (LOTI) reopener. Once the need for and costs of projects have become more certain, the TOs bring forward construction proposals and seek funding for them. As explained in Chapter 9 of our RIIO-2 Final proposals – Core document, all projects that come forward for assessment

via the LOTI reopener 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)[7], and the Network Options Assessment (NOA)[8], which are developed and published annually by the Electricity System Operator (ESO)[9]. A key focus of the FES is the inclusion of the legally binding[10] UK Government Net Zero targets, 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.

## Overview of the Large Onshore Transmission Investments (LOTI) reopener mechanism

1.9. 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 us with a robust assessment process through which we can ensure that TO proposals represent value for money for present and future consumers.

1.10. To qualify for the LOTI mechanism TO proposals must meet the following criteria:

a) are expected to cost £100m or more of capital expenditure; and
b) are, in whole or in part, either;
    i. load related; or
    ii. related to a shared-use or sole-use generator connection project[11].

[7] The FES is the ESO's representation of a range of different, credible ways to decarbonise the energy system to strive towards the 2050 target
[8] The NOA is the ESO's recommendation for which reinforcement projects should receive investment during the coming year
[9] In April 2019 National Grid ESO became a legally separate business within National Grid plc
[10] The Climate Change Act 2008 (2050 Target Amendment) Order 2019
[11] As a result of a licence modification, which came into effect on 24 July 2021, the part of the criteria relating to "shared-use or sole-use generator connection project" 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

1.11. We are satisfied that the Skye project meets these criteria and is therefore eligible as a LOTI project. We are therefore assessing the Skye project in accordance with the LOTI process, as detailed in the LOTI Guidance[12].

**Stages of our LOTI assessment**

1.12. Following the approval of eligibility, our LOTI assessment process 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 requirement for the Skye project, the technical options under consideration, and the TO's 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 Skye 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 need for the Skye project, by checking that there have been no material changes in technical and/or economic drivers that were established at INC.

3. **Project Assessment (PA)** – If the FNC is approved, the TO will then need to apply for a Project Assessment 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 Skye project, with a view to potentially specifying in the TO's 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 Skye project.

1.13. SHET submitted the INC for the Skye project in July 2021. Chapter 2 of this consultation covers our assessment of the INC submission for the Skye project and explains our initial findings.

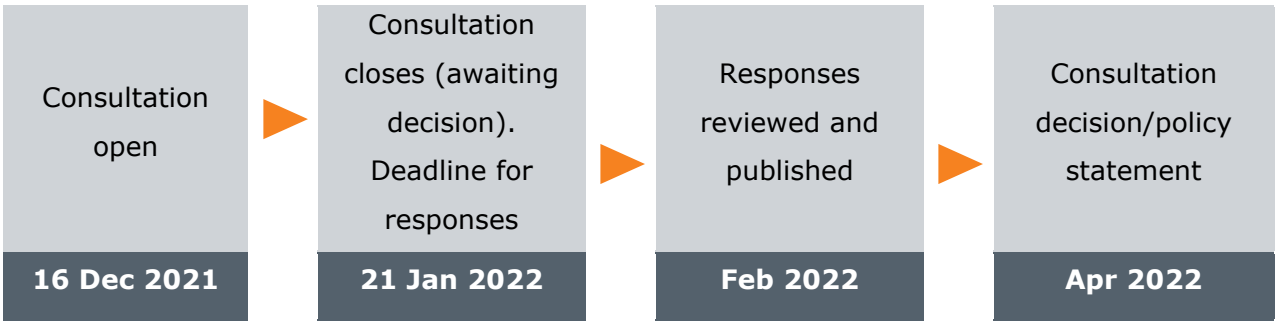
[12] Large Onshore Transmission Investments (LOTI) Re-opener Guidance

## Related publications

1.14. RIIO-2 Final Determinations: Ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

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

## Consultation stages




## 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. 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.

1.19. We will publish non-confidential responses on our website at Ofgem.gov.uk/consultations.

**Your response, data, and confidentiality**

1.20. 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.

1.21. 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.

1.22. 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, see Appendix 5.

1.23. 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

1.24. 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?

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

## How to track the progress of the consultation

1.26. You can track the progress of a consultation (consultation stages for the Skye project) using the 'notify me' function on a consultation page when published on our website Ofgem.gov.uk/consultations.

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

# 2. Overview and our initial views on the Initial Needs Case for the Skye project

**Section summary**

This chapter sets out the key design choices SHET has made to date on the Skye project and the cost benefit analysis underpinning the need for, and design of, the Skye project. It then sets out our initial views on the consideration of technical options by SHET to reach the preferred solution.

**Questions**

Question 1: Do you agree with the technical need for investment on the transmission network?

Question 2: Do you agree with our initial conclusions on the three drivers for the Skye project?

Question 3: Do you agree with our initial conclusions on the technical options considered?

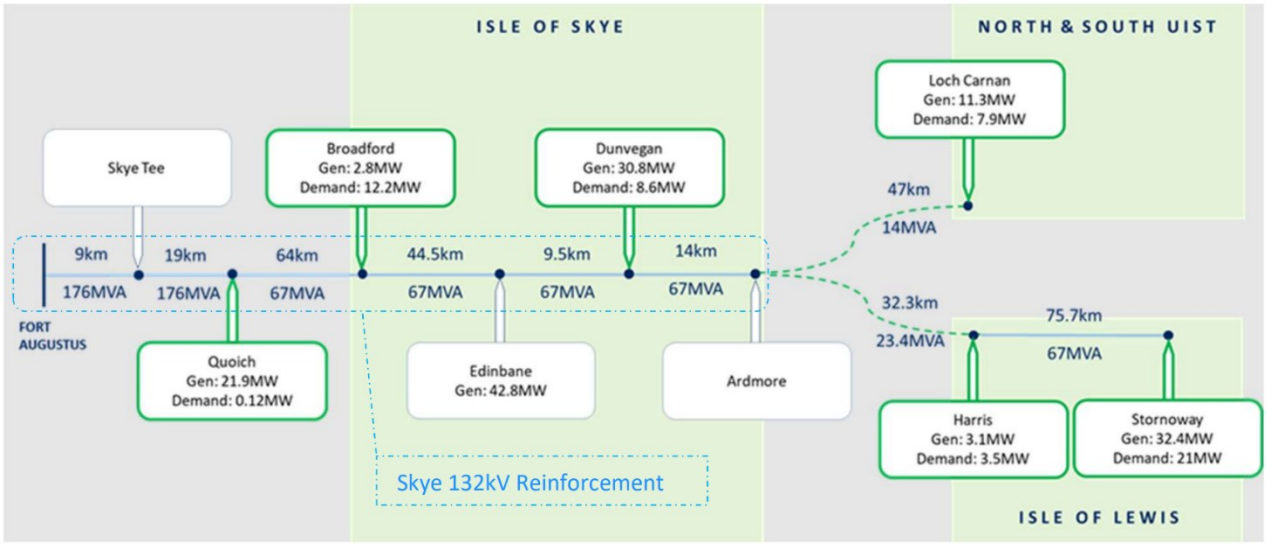
Question 4: Do you agree with our initial conclusions on the cost benefit analysis and the appropriateness of the option taken forward?

Question 5: Are there any additional factors that we should consider as part of our Initial Needs Case assessment?

## Overview of SHET's proposal

2.1. The current existing Skye 132kV transmission network and surrounding area network is as per figure 2 below, with the proposed Skye 132kV reinforcement shown in the dotted blue box.

**Figure 2: Existing Skye 132kV Transmission Network and proposed reinforcement[13]**




2.2. The existing transmission network is a single circuit operating at 132kV, starting at the Fort Augustus substation on the Scottish mainland before crossing west over onto the Isle of Skye. The circuit continues northwest onto Ardmore substation. The OHL utilises steel lattice towers and wood pole designs throughout its length. Fort Augustus to Skye Tee (9km) is rated at 176MVA[14], Skye Tee to Quoich (19km) is rated at 176MVA, and Quoich to Ardmore (132km) is rated at 67MVA.

**Why the Skye project has been brought forward**

2.3. SHET detailed three key drivers for the Skye project in its INC submission:

i. Asset condition (non-load related driver);
ii. Need for additional capacity to allow new generation to connect (load related driver); and
iii. Security of supply to maintain normal electrical supply to the residents of Skye and the Western Isles.

[13] Green boxes signify points where generation comes on and demand is taken off the OHL
[14] MVA is Mega Volt Amperes (MVA) power which is a unit used for measuring the total current and voltage in an electrical circuit. Mega = 1,000,000

*(i) Non-load related driver*

2.4. The existing Skye 132kV OHL is fast approaching the end of its economic and operational life as most of it was built in the late 1970s. The locality, challenging terrain, and severity of environmental exposure has led to faster than normal asset deterioration (see Appendix 2). For example, steel towers with the greatest environment exposure have suffered a near complete loss of galvanisation and the presence of white rot fungi on wood poles have been identified, which is a form of wood decay that results in significant structural strength loss. Some sections were replaced in recent years to reduce the risk of potential OHL failure. SHET's continued assessment of asset health has highlighted what it considers to be the need to urgently intervene to continue to safely operate the OHL.

2.5. Components requiring intervention include fittings, earth-wires, tower steelwork, wood pole replacement, and the replacement of phase conductors. This intervention is needed across most of the circuit.

2.6. A 9km section of 132kV OHL single circuit trident wood pole construction from Fort Augustus to the Skye Tee point was replaced and completed in June 2017. There is no asset health driver for this section of the OHL; intervention would be driven by the load element.

2.7. A 19km section of 132kV OHL single circuit trident wood pole construction from Skye Tee to Quoich was replaced and completed in 2021. This section replaced what was originally single circuit steel lattice towers strung with a single circuit 132kV conductor, constructed in the 1950s. There is no asset health driver for this section of the OHL; intervention would be driven by the load element.

2.8. A 64km section of double circuit consisting of steel lattice towers, strung with a single circuit 132kV OHL, from Quoich to Broadford was constructed between 1979 and 1980. This section would require intervention due to asset health.

2.9. A final 68km section of 132kV OHL single circuit trident wood pole from Broadford to Ardmore was constructed in 1989. This section would require intervention due to asset health.

*(ii) Load related driver*

2.10. SHET has set out that the load related driver is anticipatory investment to allow the connection of future renewable generation onto the Skye network, and to avoid the need for

future upgrades or reinforcements requiring major construction works in the Skye area given its natural beauty and challenging terrain.

2.11. SHET identified 1,071MW of potential new generation in the Skye area via stakeholder engagement involving an online questionnaire and webinar event for developers plus an online presentation and discussion with the Highland Council to seek their views. This led to the identification of twenty-five potential generation projects (i.e. developer proposals to bring renewable generation onto the Skye network) that are at varying stages of development. Seven of these projects (c.418MW) have agreements in place with the ESO for connection to the network by c.2025 (see Appendix 3).

2.12. SHET contracted Gutteridge Haskins & Davey Limited (GHD) to develop a 'probability of generation assessment tool' (PGAT) to evaluate these twenty-five projects in order to determine how much generation would be likely to ultimately come forward (i.e. be built). The PGAT "scored" these potential generation projects using six criteria (see Appendix 4) that were weighted differently to determine a project's development potential. In addition, the PGAT provided each project with a 'probabilistic' capacity based on how it scored across the criteria.

2.13. A project's PGAT score was then used to identify which of four renewable generation scenarios (S4 to S1) the project's generation value (MW) would fall within, as per table 1. Note that a project could fall within more than one scenario depending on its score, i.e. the more certainty of a project's generation being realised, the higher the project scored, and the more scenarios that project's generation would fall into. An example is if a project had 40MW of generation and scored highly enough, its 40MW would be added to each of the four scenarios from S4 through to S1; however, if the project did not score well, 40MW of generation may only be added to scenarios S4 and S3.

2.14. GHD aimed to broadly align its four scenarios with the ESO's FES[15], namely Leading the Way (LW) aligned to S4, Consumer Transformation (CT) to S3, System Transformation (ST) to S2, and Steady Progression (SP) to S1.

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

**Table 1: New renewable generation to 2050 across four scenarios**

| New renewable generation to 2050 | S4 | S3 | S2 | S1 |
|---|---|---|---|---|
| GHD analysis of 25 projects | 724MW | 539MW | 388MW | 273MW |

2.15. The OHL is currently oversubscribed with a total of 137MW of generation connected on the Isle of Skye and the Western Isles against a peak demand of 53MW. To enable the connection of more generation to the Skye network as identified in any of the four scenarios in table 1, reinforcement of the line is required.

*(iii) Security of Supply*

2.16. The security of supply on Skye and the Western Isles is dependent on the Skye circuit as it is the only connection to the main GB electricity grid. To enhance supply security on the Western Isles, there are Scottish Hydro Electric Power Distribution plc (SHEPD – the local Distribution Network Owner) owned backup diesel generators at Battery Point power station and Arnish (both connected at Stornoway) to support the Isle of Lewis and Harris, and diesel generators at Loch Carnan and Barra to support the Isle of Uist. The diesel generation located on the Western Isles is used as standby generation in the event of a single circuit fault on the transmission system. Additionally, SHEPD use mobile backup diesel generation to secure supply on Skye. Therefore, in the event of a fault on the main OHL, customer supplies are solely reliant on ageing backup generators which impact the environment due to the production of greenhouse gas emissions.

2.17. From a non-load perspective, the existing OHL is reaching the end of its operational life and requires replacement in order to help maintain security of supply for over 32,000 homes and businesses on the Isle of Skye and the Western Isles.

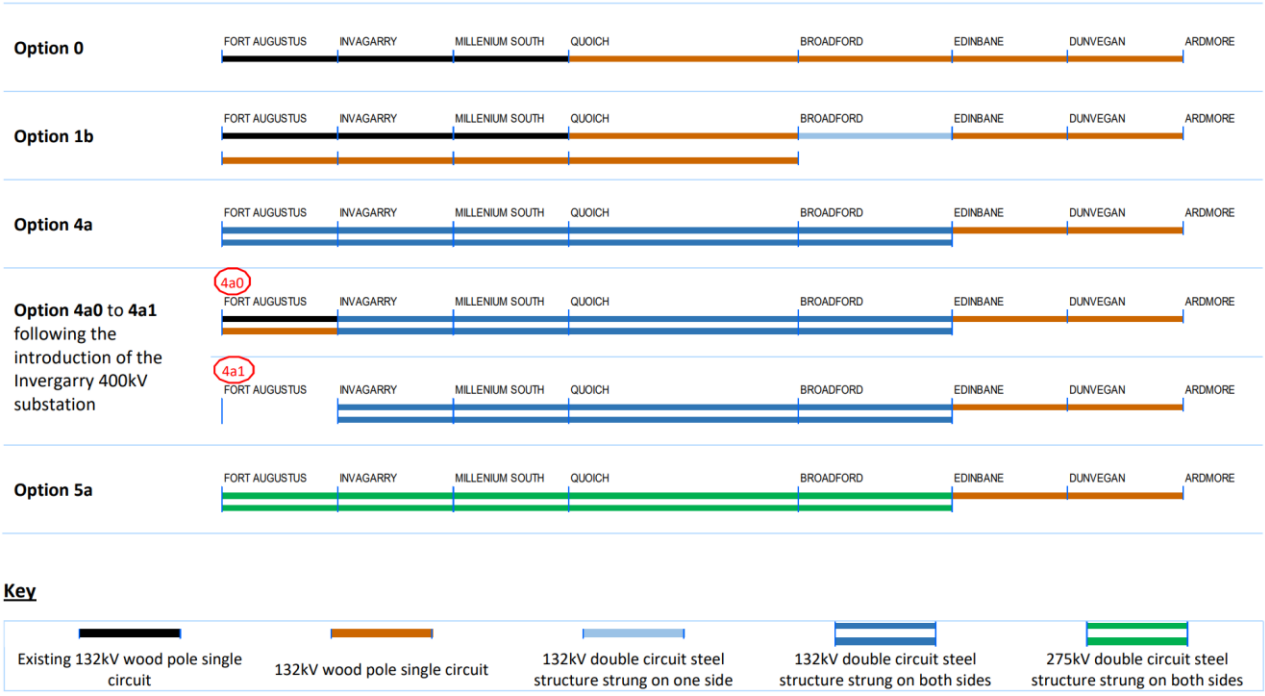
2.18. From a load perspective, there is a need to increase the capacity of the circuit in order to accommodate additional renewable generation. Any reinforcement works must deliver improved security of transmission access from a generator's perspective by increasing the reliability of the circuit and introducing a level of redundancy to meet the System Security and Quality of Supply Standards (SQSS)[16].

[16] The National Electricity Transmission SQSS sets out the criteria and methodology for planning and operating the GB transmission system

## Options considered

2.19. SHET initially considered nineteen reinforcement options for the Skye project to address some, or all, of the key drivers referred to above. These consisted of a range of standalone and phased[17] solutions. Filtering these options based on strategic, technical, and stakeholder input resulted in SHET shortlisting five options as per figure 3, with further detail in table 2.

**Figure 3: Five shortlisted options**




[17] Phased solution (e.g. option 4a01) is when a solution has another better solution attached but this better solution is dependent on the outcome of another investment decision. The initial solution would be built as it is beneficial but if the better solution proved viable once more information became available, it would be developed by adapting the initial solution. Most of these phased solutions are completed in different years

**Table 2: Five shortlisted options**

| Option | Description | Estimated Cost (£m) | EISD[18] |
|---|---|---|---|
| **0** | Base Case – 132kV wood pole single circuit from Fort Augustus to Ardmore. | 195 | 2025 |
| **1b** | Two 132kV wood pole single circuits from Fort Augustus to Broadford, a 132kV single circuit on steel structure from Broadford to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore. The single circuit between Broadford and Edinbane will be supported by double circuit steel structures. | 300 | 2025 |
| **4a** | 132kV steel tower double circuit from Fort Augustus to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore. | 400 | 2025 |
| **4a01** | Option combines 4a0 and 4a1 into 4a01. | 420 (*385+35*) | 2025 & 2030 |
| **(4a0)** | Two 132kV wood pole single circuits from Fort Augustus to Invergarry[19], 132kV steel tower double circuit from Invergarry to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore. | *385* | *2025* |
| **(4a1)** | As above: if the Invergarry 400kV substation progresses, the OHL will connect to the new 400/132kV Invergarry substation and the Fort Augustus to Invergarry 132kV OHL will be dismantled. | *35* | *2030* |
| **5a** | 275kV steel tower double circuit from Fort Augustus to Edinbane and a 132kV wood pole single circuit from Edinbane to Ardmore. | 520 | 2027 |

2.20. Option 0 replaces the existing single circuit with a new modernised single circuit on a like for like basis, and due to advances in transmission technologies the modern design provides additional capacity when compared to the existing circuit rating. This option only

[18] Earliest In Service Date
[19] Invergarry is between Fort Augustus and Quoich

addresses the non-load related driver. All five options would add transfer capability to the OHL and differ by the level of additional capacity offered (option 0 offers the least additional capacity and option 5a offers the most), and therefore the amount of generation that can connect to the Skye network. Barring option 0, all the other options improve security of transmission access from a generator's perspective due to their double circuit construction. By improving transmission access, the consumer will benefit as risk of system constraints will be reduced enabling increased usage of clean renewable energy.

2.21. As described later in this chapter, CBA modelling carried out by SHET and the ESO resulted in the preferred option either being 4a or 4a01 (given the minimal difference in result), although option 4a is SHET's favoured option. Both options (4a and 4a01) address the need to replace the current assets due to their condition and the need to upgrade the assets to allow for additional generation.

**CBA process and methodology**

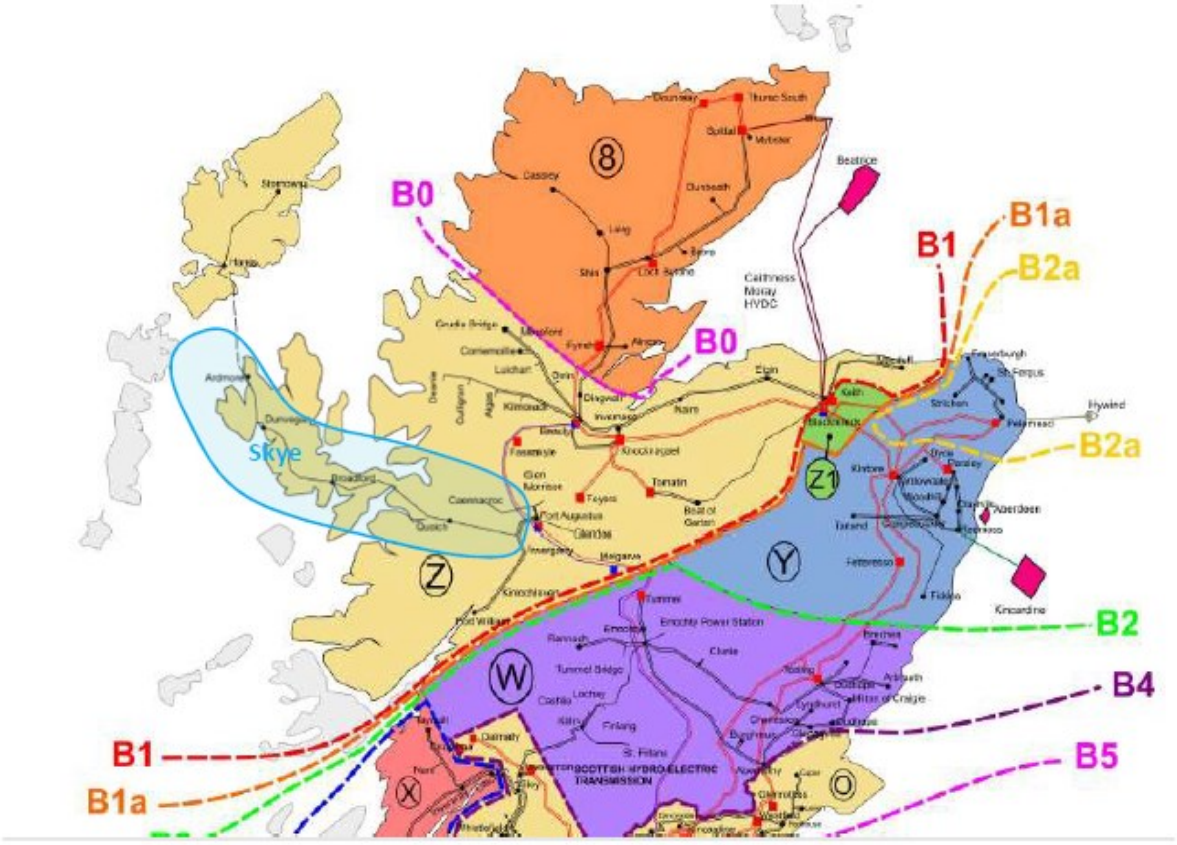
2.22. In general, the relevant TO (in this case SHET) works with the ESO to develop and run a CBA to assess the performance of each shortlisted network design option in order to inform the INC submission and satisfy the ESO's obligation to carry out a CBA as per the LOTI guidance. The ESO is involved in this process as it has visibility about the impact of local electricity transmission network designs on the rest of the GB electricity transmission network. As set out in chapter 1, the ESO also develops the FES that helps model potential future supply and demand across GB, including to meet Net Zero targets.

2.23. The reinforcement of the Skye network presents some challenges to the ESO's standard CBA modelling approach adopted to date. The Skye network is relatively small, whereas the ESO considers larger GB network zones within its CBA model. The ESO's model determines the balance of supply and demand within each zone on the GB network and evaluates the net power flows across the transmission boundaries[20]. The location of the Skye network is wholly contained within a single zone (Zone Z, between transmission boundaries B0 and B1) as per figure 4. Thus, the existing boundaries cannot capture the transmission constraints in the Skye region nor the impact of different Skye reinforcement solutions. This

[20] Transmission boundaries split the electricity transmission system into two parts which represent pinch points on the network. This split crosses critical circuit paths that carry power between the areas where power flow limitations may be encountered. Zones are areas within boundaries and do not cross critical circuit paths. For more information on boundaries, see the ESO's Electricity Ten Year Statement 2020

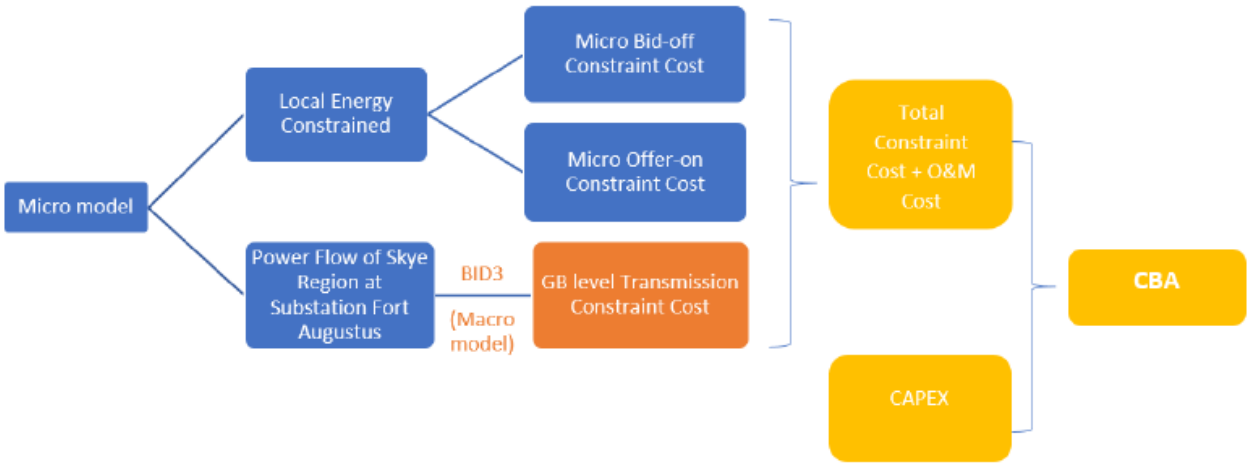
inability to capture transmission constraints within boundaries is also why the Skye project is not included in the ESO's NOA.

**Figure 4: Map showing transmission boundaries and zones within the ESO's model**




2.24. To overcome the within boundary issue and show an overall view of the impact of the different options for the Skye reinforcement to the GB consumer, SHET produced a detailed model of the Skye transmission network in order to evaluate power flows and the alternative reinforcement options across the Skye network. This view was then aligned with the existing FES allowing the ESO to fully represent the needs of the Skye network when modelling the wider GB transmission system to produce a combined CBA. This two-step CBA approach adopted by SHET and the ESO – i.e. a combined localised (micro) model and a GB wide (macro) model – is shown in figure 5.

**Figure 5: Combined CBA**




2.25. The CBA for the Skye project compares the likely benefits (in terms of reductions in future constraint costs[21]) across four generation scenarios versus the costs (in terms of estimated capital costs) of the shortlisted investment options.

**CBA results**

2.26. The CBA was undertaken using the published FES 2020. GHD aligned their four generation scenarios to the FES 2020 (as described in paragraph 2.14, the ESO's LW, CT, ST, and SP scenarios align to GHD's S4, S3, S2, and S1 respectively) as this was the most up-to-date version at the time. The FES 2021 was not published until July 2021, which was too late for the Skye project INC.

2.27. Table 3 shows the CBA results for the five shortlisted options that were tested. The Least Worst Regret[22] (LWR) option is option 4a. It should be noted that option 4a01 is not

[21] Constraint costs are payments made to generators by the ESO to stop generators producing electricity. It will make these payments when the electricity transmission network in a particular area does not have the capacity to safely transport all of the electricity that is being produced in that area. Such action from the ESO ultimately feeds into consumer bills which is why it is beneficial to reduce constraints costs

[22] 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

significantly different to warrant discounting it. Given this, either option 4a or 4a01 are recommended as the preferred option by the ESO.

**Table 3: Results for the CBA**

| Location | PV of Micro & Macro Constraint Cost+ / Constraint Saving- (£m) | | | | CAPEX | NPV (£m) | | | | Regret | | | | Worst Regret |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LW | CT | ST | SP | TO | LW | CT | ST | SP | LW | CT | ST | SP | |
| Skye_0 | 0 | 0 | 0 | 0 | 153 | 153 | 153 | 153 | 153 | 573 | 216 | 161 | 0 | 573 |
| Skye_1b | -434 | -276 | -242 | -24 | 235 | -200 | -42 | -8 | 211 | 220 | 20 | 0 | 57 | 220 |
| Skye_4a | -737 | -379 | -264 | -21 | 317 | -420 | -62 | 53 | 296 | 0 | 0 | 61 | 143 | 143 |
| Skye_4a01 | -736 | -375 | -265 | -21 | 332 | -404 | -43 | 67 | 311 | 16 | 19 | 74 | 158 | 158 |
| Skye_5a | -737 | -384 | -268 | -23 | 405 | -332 | 21 | 137 | 382 | 88 | 83 | 144 | 228 | 228 |

2.28. 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 |
|---|---|
| **Generation background sensitivity**: stress test the impact of decreases to the lowest or increases to the highest generation scenarios[23]. | Preferred (LWR) options remain 4a or 4a01. |
| **Capex:** variance of +/- 10% and 20% for all the shortlisted options. | Varying capex by +/- 10% or 20% for all options simultaneously does not alter the LWR rankings, with option 4a or 4a01 remaining the preferred (LWR) options. |
| **Capex:** possibility of underground cabling for a section of the line was tested. Capex increased between 10% and 17% across all shortlisted options. | Underground cabling for a section of the line for all the options does not alter the LWR rankings, with option 4a or 4a01 remaining the preferred (LWR) options. |

2.29. We engaged with SHET on a sensitivity analysis using lower assumptions for MW for each of the four scenarios (S1 to S4). This was to test the impact of less generation coming forward than suggested by the initial PGAT model. In practice this was done by adjusting the weightings in the PGAT model to place a greater weighting on securing planning consent. The

[23] Under the low sensitivity S1 was changed to 205MW whereas S2 to S4 stayed the same. Under the high sensitivity S4 was changed to 840MW (to reflect the potential to allow some generation from the Western Isles to connect and export via the Skye transmission link) whereas S1 to S3 stayed the same.

changes to the PGAT model resulted in the following generation capacities S1: 205MW, S2: 331MW, S3: 448MW, S4: 561MW. The result of this sensitivity analysis was that the preferred LWR option changed from 4a or 4a01 to 1b.

## Our views on the Skye project

**Non-load, load, and security of supply drivers**

*Non-load related driver*

2.30. We agree with SHET that the Skye project has several clear asset health drivers requiring intervention. The evidence presented within the INC, along with further questioning and viewing the assets in person, has clearly established the need for asset intervention.

*Load related driver*

2.31. We agree with SHET that additional capacity is likely to be needed to allow new generation to connect to the Skye network. However, we note that at this stage of initial needs case assessment there is still uncertainty over the level of generation that will end up connecting to the transmission network.

*Security of Supply*

2.32. We do not entirely agree with the security of supply driver put forward by SHET.

2.33. From a demand perspective, Skye is currently secured by several diesel generator sets and from the distribution network. When the existing Skye 132kV circuit is on outage or faults, the demand is collectively met by the distribution system and the embedded diesel generators. The diesel generation located on the Western Isles is used as standby generation in the event of a single circuit fault on the transmission system. As there are no plans to remove any of the diesel generator sets from the distribution network, regardless of which Skye option is selected, the demand is currently secure. However, we recognise that in the case of a fault or outage, there are higher costs both financially and environmentally with the

operation of diesel generators, although this alone does not justify the Skye project as a fault or outage is likely to occur occasionally rather than daily[24].

2.34. From a load or transmission access perspective, the existing Skye OHL is oversubscribed with a total of 137MW of generation connected on Skye and the Western Isles against peak demand of 53MW. A derogation is in place to address this non-compliance with the SQSS. To enable connection of more generation to the Skye network, reinforcement of the line is required, following which the derogation will fall away.

**Technical options considered**

2.35. We deem 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 SQSS compliant solution. Throughout the optioneering process several designs were considered and rejected. We reviewed the technical solutions presented and found them to be appropriate. We recognise that the current costs are indicative but consider these costs to provide an appropriate basis under which to robustly compare the options at this stage. Overall, we are comfortable with the options taken forward for assessment in terms of their technical solution.

2.36. We enquired with SHET about a refurbishment-only option that would primarily involve restoring and maintaining the existing assets to full working order, thereby negating the need for full asset replacement. SHET's response was that it was not shortlisted for consideration because the existing sections that require intervention, e.g. the steel tower OHL between Quoich and Broadford, would require a temporary diversion resulting in an extended period of roughly six months disruption coupled with the associated costs and environmental damage from the need to run backup diesel generators. Running these generators has been estimated to cost the consumer £100k per day. This would result in a refurbishment cost exceeding c.£18m. We agree that refurbishment does not offer value to consumers particularly as refurbishment would not negate the need for replacement in the medium to long term. We are therefore content that refurbishment was not shortlisted as an option.

[24] Cost of diesel generation per day estimated at £100k. Ten days of outage (i.e. an extreme circumstance) would lead to a cost of £1m

2.37. Option 0 is a single circuit trident 132kV wood pole and represents the cheapest option. Although this option does increase the overall intact rating over the existing Skye 132kV circuit, we agree that it does not provide enough electrical transfer capability when considering potential future generation wishing to connect to the Skye network. Furthermore, this option does not improve transmission access or resilience as this is a single circuit design.

2.38. Option 1b is a combination of double and single circuit sections. The transmission access or resilience is improved in comparison to option 0 for the sections between Fort Augustus and Broadford; however, a single circuit outage on the double circuit section may still not provide enough electrical transfer capability as this would depend on the level of potential generation that comes forward.

2.39. Option 4a would address both the non-load and load drivers. Furthermore, based on stakeholder feedback gathered by SHET, this design represents the maximum environmental impact stakeholders, including the planning authorities, may be willing to accept on Skye. This is mainly a problem where steel towers will replace wood poles: 132kV steel towers are 40-50m in height whereas wood poles are 10-14m, with stakeholders noting that steel tower structures would have a detrimental visual impact on the picturesque surroundings and possibly affect the local wildlife. Engagement with statutory consultees, landowners, and others highlighted the sensitivity and potential risk of gaining planning consent.

2.40. Option 4a01 is, from a design perspective, similar to option 4a and can provide the same power transfer capability albeit at an increased cost to the consumer.

2.41. Option 5a, the 275kV design solution, would address both the non-load and load drivers. The capacity of the design by virtue of the increased conductor rating exceeds the level of generation that is currently contracted. However, if significant future levels of generation come forward beyond those levels currently contracted, then option 5a would enable an amount of higher generation transfer scenarios to be met. This option would however exacerbate both technical and planning consent challenges. Technical challenges relate to the construction phase as access in some areas is extremely challenging. In terms of consent, as stated above, where steel towers replace wooden poles there is an elevated risk of not receiving planning consents. Finally, this option would incur the most cost to the consumer when compared to the other options and would also extend the delivery date by a further two years leading to longer time frames before any additional generation could connect to the Skye network.

2.42. We note that there is a project that SHET proposed in 2019 to construct a 600MW high voltage direct current (HVDC) subsea transmission link to take generation from the Western Isles to the Scottish mainland. Given the proximity of Skye to the Western Isles, we asked SHET if the need for the Western Isles subsea transmission link could be negated if all the generation from the Western Isles was to be delivered via the Skye OHL.

2.43. SHET explained that this would require enhancing the OHL rating across the entire Skye circuit and upgrading the OHL to the Isles of Lewis and Harris on the Western Isles. This is technically possible; however, there are several issues:

i. Securing planning consent for 275kV OHL towers across the entire length of Skye and across the Western Isles given the scenic backdrop and visual amenity impact would be extremely challenging;
ii. Building these 275kV OHL towers would be costly due to accessibility difficulties given the remote location and construction challenges because of the harsh terrain; and
iii. Managing the network would also raise problems in terms of trying to control the voltage of a 275kV OHL that spans across Skye and the Western Isles.

2.44. Stakeholder feedback on an initial version of option 4a proposed by SHET highlighted concerns regarding SHET's proposed 132kV OHL solution, and although SHET took on board and actioned the stakeholder feedback to arrive at a revised Skye proposal (current version of option 4a), this does reinforce SHET's concerns about building an even larger 275kV OHL. We therefore agree with SHET that it would not be economic and efficient to accommodate future potential generation from the Western Isles through the Skye network, if such comes forward.

**CBA methodology**

2.45. Given that the location of the Skye network is wholly within a single zone, we agree with the proactive approach that SHET took to capture the transmission constraints in the Skye region and feed this into the ESO's GB wide (macro) CBA model.

2.46. Overall, we are comfortable with the methodology used for the CBA.

**Overall view**

2.47. 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 with the assumptions that underpin LOTI re-openers.

2.48. Overall, we consider that the preferred option put forward by SHET (option 4a or 4a01) is reasonable and 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.

2.49. We agree with SHET that options 0 and 5a are not likely to deliver the best outcomes to consumers. Option 0 does not allow the connection of any additional generation which, given the levels of potential renewable generation coming forward, would not seem an appropriate outcome for consumers. It would also not support the contribution that the generation would make towards delivering Net Zero and would risk the need for reinforcement at a later date. Option 5 would allow the network to accommodate more additional local generation and avoid the need for future reinforcement; however, this must be considered against the potential planning consent and visual impact considerations including the additional time required for delivery. Furthermore, there would be technical difficulties involving construction (e.g. 40km of the Skye circuit has no accessibility by road), installation challenges due to heavy tower types and larger footprints, and additional substation works to meet the higher voltage rating requirements of the 275kV OHL (e.g. circuit breaker, busbar, transformer). It is also possible, given the generation scenarios considered, that the spare capacity on the circuit may never be utilised thereby adding costs to consumers without receiving the benefits of additional generation coming forward in a timely manner.

2.50. With regards to option 1b, the sensitivity analysis using lower generation assumptions as described in paragraph 2.29 shows how option 1b could be the most appropriate solution if less generation comes forward. The CBA shows that, where no more than 561MW of generation comes forward, then option 1b would be the preferred LWR solution. Although this may not represent potential renewable capacity growth for the Skye area over the upcoming decades, it cannot be ruled out at this stage, particularly as the criteria weightings used in the PGAT do have an element of subjectivity to them which can lead to a different set of generation scenarios. Given the sensitivity of the CBA to these weightings, we therefore

cannot disregard option 1b at this stage given that it addresses both the condition of the assets and provides additional capacity for future generation, albeit at a lower level of capacity than the preferred option put forward by SHET.

2.51. We expect SHET to update its generation and demand forecast at the FNC stage based on the latest developments, particularly with regards to the progress of locally proposed generation.

2.52. We also expect SHET to monitor development of the Holistic Network Design (under the 'Pathway to 2030' workstream of the Offshore Transmission Network Review) and to carefully consider any interactions or implications for the Skye project in order to ensure that the local network is designed efficiently. As such we expect SHET to set out how they have considered and managed any interactions or implications between the Skye project and the Offshore Transmission Network Review in their FNC submission.

# 3. Competition model considerations

**Section summary**

This chapter summarises our assessment of whether the Skye project meets the criteria for competition and explains our proposal to defer the decision on whether to apply a late competition model to the Skye project. We intend to reach a decision before the invitation to tender stage of SHET's proposed procurement of the supply chain for delivery of the Skye project, which is currently scheduled for September 2022.

**Questions**

Question 6: Do you agree with our proposal to make a decision on use of the CATO model before the invitation to tender stage of SHET's proposed procurement of the supply chain for delivery of the Skye project? If not, do you have views on an alternative appropriate timing for that decision?

Question 7: Do you have a view on the consumer impact of delay to delivery of the Skye project and how any detriment could be quantified?

## Background

3.1. Competition in the design and delivery of energy networks is a central aspect of our RIIO-2 price controls. 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[25] 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[26] will be considered for potential delivery through a late competition model.

[25] RIIO-2 Final Determinations, Core Document (REVISED), chapter 9
[26] Large Onshore Transmission Investments (LOTI) Re-opener Guidance, pages 09-11

3.2. This chapter considers the extent to which the Skye project meets the criteria for competition, and our view on whether it should be delivered via one of our late models for competition.

## Does the Skye project meet the criteria for competition?

3.3. Our criteria for a project to qualify for late model competition[27] are as follows:

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

3.4. We consider that the current preferred option (4a or 4a01) for the Skye project meets all of the criteria above.

## Delivery model considerations

3.5. 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 Skye 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

3.6. The late competition models that are available for consideration for the Skye project are:

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

3.7. Below we set out details of each of these models and our initial views on how applicable each might be for the Skye project.

[27] Guidance on the criteria for competition

*CATO model*

3.8. Under the CATO model a competitive tender would be run for the financing, construction, and operation of the Skye project with a transmission licence provided to the winning bidder setting out the outputs, obligations and incentives associated with delivering the Skye project. The CATO model requires legislative changes to allow for new parties to be able to be awarded a transmission licence following a competitive tender

3.9. The high-level delivery plan for the Skye project presented by SHET in its submission indicates an expectation that construction will need to commence by September 2023 to meet the required delivery dates. The government has set out its intention to introduce the required legislation[28] but it is currently uncertain when that will be in place and whether this would support timely delivery of the Skye project by a CATO. This is because we do not currently know when the CATO regime will be in place, or whether there will be delays to the construction dates currently proposed by SHET for the Skye project (e.g. due to technical design or planning consent challenges).

3.10. We appreciate that timings are important for large onshore transmission projects, and we also recognise that the non-load related driver for the Skye project highlights the need for asset replacement. To reach a decision on CATO (and to inform our Large Project Delivery mechanism as set out in chapter 5), it will be important to get an understanding of the consumer impact of delay to delivery of the Skye project.

3.11. At this stage, we do not consider it appropriate to rule out the use of the CATO model for the Skye project. We intend to reach a decision on use of the CATO model before SHET's invitation to tender stage, which is currently scheduled for September 2022.

*SPV model*

3.12. Under the SPV model, the incumbent network licensee would run a tender to appoint an 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 Skye 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 originally

[28] Energy White Paper: Powering our Net Zero Future, December 2020, pages 76-77

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.

3.13. Given that we are not ruling out the CATO model at this point and since the indication from Government is that it intends to bring forward the legislation required for the CATO model, we do not consider it proportionate to progress the work required to allow the SPV model to be applied to the Skye project in a manner that delivers benefits to consumers without impacting on the delivery dates of the Skye project.

*CPM*

3.14. 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.

3.15. Importantly, the Skye project would remain delivered by SHET under CPM. This means that there is not the requirement to allow for the running of a full tender for delivery of the Skye project in the same way as the CATO or SPV models. We therefore consider, if we decide not to use the CATO model, that it is beneficial for consumers and SHET to reach a decision on the CPM at FNC stage.

**Timing of the decision**

3.16. The LOTI Guidance explains that, wherever possible, we intend to decide whether to apply a late competition model to a project at the INC stage of our assessment. It also explains that we may, at the INC stage, give an initial view before confirming our view at the FNC stage of our assessment.

3.17. The approach explained in the LOTI Guidance reflects our recognition that deciding to apply a competition model as early as possible is the best way to ensure that the consumer benefits associated with competition can be achieved without compromising on the timely delivery of key infrastructure that is expected to be critical in the meeting of Net Zero targets.

3.18. In the case of the Skye project, we intend to reach a decision on use of the CATO model before the invitation to tender stage of SHET's proposed procurement of the supply

chain for delivery of the Skye project, which is currently scheduled for September 2022. If we decide not to apply the CATO model, then we will reach a decision on whether to apply the CPM at the FNC stage and would consult on its application at that point.

# 4. Large project delivery

**Section summary**

This chapter sets out our large project delivery options for the Skye project, i.e. the arrangements we might put in place should SHET deliver the Skye project late.

## Background

4.1. In our RIIO-2 Final Determinations[29] we set out our approach to late delivery of large projects (>£100m) by TOs. We said that we will ensure TOs will not benefit from delay to delivery of those projects by using one of the following options:

i. If a project is delivered late, we will re-profile the allowances to reflect actual expenditure to avoid the network company benefitting from the time value of money; or
ii. Milestone-Based Approach - we will set project allowances based on the delivery of specific, pre-agreed, milestones. The allowances would only be granted following confirmation that a milestone had been delivered.

4.2. We also said that we will ensure consumers are protected from delay in delivery. We said we may therefore set a pre agreed Project Delivery Charge (PDC) for each day a project is delivered late.

4.3. We will consider which mechanism is best suited for this project as well as the level of any PDC at the FNC stage for the Skye project. We welcome early engagement with SHET on the matter. In setting the level of the PDC we will be looking to understand what the impact of any delay would be in terms of costs to consumers.

[29] 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 of the Skye project under the LOTI mechanism, particularly the specific areas of focus for the FNC.

5.1. Our consultation on the positions set out within this document will close on 21st January 2022. Following the consultation, we expect to publish our decision on the INC for the Skye project in April 2022.

5.2. The next stage of our assessment will be the FNC, which we understand SHET expects to submit during Q2 2022. Normally we receive a FNC submission once planning consent is in place but in the case of the Skye project, we are comfortable that it is in the interests of consumers to allow some flexibility to the LOTI process to help the Skye project meet its required delivery dates. We will consider the FNC submission date suggested by SHET; however, for the avoidance of doubt, although we are open to receiving the FNC submission before the decision on major planning consents, we do not intend to publish our final decision on the FNC until after the planning consent decision as this decision is critical to the design of (and need for) the Skye project.

5.3. As part of the FNC submission we expect to receive further evidence from SHET demonstrating the continued progression towards renewable generation certainty on the Isle of Skye as described in paragraph 2.51 and an updated CBA to reflect up-to-date information. Our FNC assessment is expected to focus on ensuring a robust delivery plan is in place to deliver the Skye project on time. We will also seek to ensure that any material changes in technical scope, design, or cost relative to the INC are fully understood and justified. As part of the FNC stage we will also carry out a more detailed assessment of the cost assumptions associated with SHET's proposed option.

5.4. As set out in Chapter 3, we propose to reach a decision on use of the CATO model before the invitation to tender stage of SHET's proposed procurement of the supply chain for delivery of the Skye project, which is currently scheduled for September 2022.

5.5. As set out in chapter 4, we will also consider during the FNC stage which LPD mechanism is best suited for the Skye project and how it will be applied.

# Appendices

## Appendix 1 – SHET's proposed Skye project milestones

| Milestone | Estimated Completion |
|---|---|
| Initial Needs Case submission | Jul 2021 |
| Environmental impact final report | Jul 2022 |
| Final Needs Case submission | Q2 2022 |
| Invitation to tender (preparation) | Aug 2022 |
| Invitation to tender (tender period) | Feb 2023 |
| Material planning consents secured | Jul 2023 |
| Contract awarded | Jul 2023 |
| Project assessment submission | Jul 2023 |
| Construction starts | Sep 2023 |
| Energisation | Dec 2025 |
| Construction completed (inc. decommissioning works) | Jul 2026 |

## Appendix 2 – Asset health condition (non-load)

### Steel tower

Middle phase shackle failure

Shackle showing extreme wear

### Wood pole

Wood pole failure

Wood pole decay

## Appendix 3 – Contracted generation

**c.418MW contracted generation, of which c.108MW currently has planning consent**

| Project* | Capacity | Connection date | Distribution / Transmission connected | Consent status |
|---|---|---|---|---|
| A | 40.8 | 2026 | D | Consented |
| B | 2.0 | 2025 | D | Consented |
| C | 25.0 | 2027 | D | Scoping |
| D | 6.1 | 2026 | D | Consented |
| E | 9.2 | 2025 | D | Consented |
| F | 49.5 | 2025 | T | Consented |
| G | 45.0 | 2026 | D | Scoping |
| H | 240.0 | 2026 | T | Scoping |
| **Total** | **417.6** | | | |

* Projects have been anonymised due to confidentiality

## Appendix 4 – PGAT criteria

**Each project was scored on the following criteria**

| Criterion | Meaning | Weighting (%) |
|---|---|---|
| Network Contractual Status | Each project will need to go through a formal connection application process in order to connect to either the distribution or transmission networks. | **12.5** |
| Project Planning Status | Each project will need to go through the formal planning process. As a minimum, smaller projects can take months to prepare and submit a planning application followed by months for the Council to make a decision. Larger projects typically take years. | **32.5** |
| Ownership / Financial Considerations | The speed at which a project can be brought forward. Its ultimate viability can be dictated partly by the nature of the owner. | **10** |
| Distribution or Transmission | Currently, Use of System charges favour development of Distributed Generation over transmission-connected projects, although Ofgem has advised that it intends to harmonise charging before 2030. | **10** |
| Economies of scale | Economies of scale can have an important bearing on project viability. Benefits can be gained by spreading fixed CAPEX costs over a larger MW total installed capacity. Also, larger turbines may have lower costs per MW and/or have higher capacity factors than smaller turbines. | **10** |
| Distance to Connection | Connection costs are an important factor in project attractiveness. Costs will include fixed and variable costs of connecting to the network depending on distance between the development site and the nearest part of the network with sufficient capacity to accept the generation. | **25** |
| **TOTAL** | | **100** |

## Appendix 5 – Privacy notice on consultations

**Personal data**

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

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

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

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

**2. Why we are collecting your personal data**

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

**3. Our legal basis for processing your personal data**

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

**3. With whom we will be sharing your personal data**

N/A.

**4. 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 Skye project is closed.

**5. 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.

**6. Your personal data will not be sent overseas.**

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

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

**9. More information**

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