

# Decision

---

## Orkney transmission project - Decision on Final Needs Case

---

Publication date: 14 July 2023

---

Contact: Lina Apostoli

---

Team: Price Control Operations - Heavy Scrutiny Projects

---

Telephone: 020 7901 7000

---

Email: [RIIOElectricityTransmission@ofgem.gov.uk](mailto:RIIOElectricityTransmission@ofgem.gov.uk)

---

Following our March 2023 minded-to consultation on the Final Needs Case (FNC), this document confirms our decision to approve the FNC for the Orkney transmission project. It also confirms our decision to assess this project under the LOTI framework.

© Crown copyright 2023

The text of this document may be reproduced (excluding logos) under and in accordance with the terms of the [Open Government Licence](#).

Without prejudice to the generality of the terms of the Open Government Licence the material that is reproduced must be acknowledged as Crown copyright and the document title of this document must be specified in that acknowledgement.

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](http://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](mailto:psi@nationalarchives.gsi.gov.uk)

## Contents

<b>Orkney transmission project - Decision on Final Needs Case .....</b>	<b>1</b>
<b>Executive Summary .....</b>	<b>4</b>
<b>1. Introduction .....</b>	<b>5</b>
Previous publications .....	5
The LOTI assessment mechanism .....	7
Our decision .....	8
<b>2. Orkney transmission project – Our minded-to position .....</b>	<b>9</b>
Background updates affecting our minded-to position .....	9
Our minded-to position .....	13
<b>3. Minded-to consultation responses and our view.....</b>	<b>18</b>
Summary of 2023 minded-to consultation responses and our view.....	18
<b>4. Our Decision and Next Steps .....</b>	<b>27</b>

## Executive Summary

In March 2018 Scottish Hydro Electric Transmission (SHE-T) submitted a Final Needs Case (FNC) to Ofgem for its proposed Orkney transmission project, a 220MW subsea cable between Orkney and the Scottish mainland.

We published a consultation on the needs case in December 2018 and in September 2019 we published a conditional decision to approve the project provided that specific conditions were met.<sup>1</sup>

Since the conditional decision, the RII0-T2 price control has come into effect meaning Strategic Wider Works (SWW) has been replaced by the Large Onshore Transmission Investment (LOTI) process, which is set out in special condition 3.13 of SHE-T's electricity transmission licence. In March 2023, we consulted on our minded-to position to revoke our 2019 conditional decision (as the conditions are no longer appropriate) and to approve the project under the LOTI delivery model instead.<sup>2</sup>

**Having considered responses to our March 2023 consultation, we are satisfied that there is sufficient evidence of a clear needs case for the Orkney project and so this document confirms the revocation of our 2019 conditional decision and our approval of the FNC for the Orkney project in accordance with special condition 3.13 of the SHE-T's electricity transmission licence.**

**We do not require a new FNC submission from SHE-T under LOTI, as we are confident that the information provided as part of their 2018 submission is sufficient to inform our final decision on the FNC.**

The next stage of our assessment will be the PA where we will be assessing the project's proposed costs and delivery plan.

---

<sup>1</sup> See [orkney\\_final\\_needs\\_case\\_consultation.pdf \(ofgem.gov.uk\)](#) and [Orkney transmission project – Conditional decision on Final Needs Case | Ofgem](#)

<sup>2</sup> See [Orkney transmission project – Minded-to consultation | Ofgem](#)

## 1. Introduction

### Section summary

This Chapter summarises the previous publications related to this decision. It provides the context for and outlines our decision.

### Previous publications

- 1.1 SHE-T submitted its FNC for the Orkney transmission project in March 2018 under the SWW funding mechanism (the '2018 FNC submission'). At that time, we reviewed the Cost Benefit Analysis (CBA) provided by SHE-T, including a subsequent additional CBA carried out at our request.
- 1.2 We published a consultation on the FNC in December 2018.<sup>3</sup> Our consultation stated that we would approve the FNC if we could be confident that GB consumers were protected from SHE-T building an underutilised transmission link to Orkney. Based on our analysis, we proposed that GB consumers would be protected if:
  - a total of at least 135MW of new generation on Orkney had to either be awarded a Contract for Difference (CfD) in the Allocation Round 3 (AR3), or;
  - the project secured planning consent and finance.
- 1.3 Further to stakeholders' feedback in response to our 2018 consultation, we reviewed the conditions set out in paragraph 1.2. In September 2019 we published our decision to conditionally approve the SWW FNC for the Orkney electricity transmission project.<sup>4</sup> We decided that the approval of the Orkney transmission project was subject to the condition that that new generation projects totalling at least 135MW generation had to be either:
  - awarded a CfD; or
  - be likely to proceed despite not being awarded a CfD.

---

<sup>3</sup> See [Orkney transmission project – Consultation on Final Needs Case and potential delivery models | Ofgem](#)

<sup>4</sup> See [Orkney transmission project – Conditional decision on Final Needs Case | Ofgem](#)

- 1.4 We decided that an independent audit was required by December 2021 to verify the second element of this condition.<sup>5</sup> We also decided that we would appoint the auditor and that the relevant generators would pay for the audit.
- 1.5 In March 2021, developers in Orkney requested a twelve-month extension to the deadline for meeting our conditions for the approval of the Orkney transmission project.<sup>6</sup> They argued that an extension would:
- i. allow certainty on planning decisions that had been delayed due to the Covid-19 pandemic;
  - ii. enable consented projects to bid for a CfD and the auction results to be published, and;
  - iii. allow for the impact of charging reforms to be considered.
- 1.6 In May 2021, we granted an extension to the deadline for meeting the conditions to 31 December 2022.
- 1.7 Since our 2019 conditional decision, circumstances have changed (these changes are set out in detail in Chapter 2), which further refined our thinking. This includes the fact that the RIIO-T2 price control has come into effect and under it SWW has been replaced by the LOTI mechanism, which is set out in special condition 3.13 of SHE-T’s electricity transmission licence.

*The March 2023 minded-to consultation*

- 1.8 In March 2023 we published our minded-to consultation to revoke the 2019 conditional decision and to instead approve the needs case for the project under LOTI. This was because we considered that the level of generation on Orkney (that had successfully gained a CfD) provided us with confidence that the link would not be under-utilised and would provide benefit to consumers. Further detail on our minded-to position is set out in Chapter 2.
- 1.9 In March 2023 we consulted on our minded-to position. We received 12 responses to it, and we have published the non-confidential responses on our website.
- 1.10 The following section gives an overview of the LOTI mechanism, to provide the context for our decision.

---

<sup>5</sup> We refer to the details of this audit in paragraph 2.16 of this document.

<sup>6</sup> [20210325\\_orkney\\_deadline\\_extension\\_request\\_2.pdf \(ofgem.gov.uk\)](#)

## **The LOTI assessment mechanism**

### *Overview of the LOTI reopener*

- 1.11 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 insufficiently 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.
- 1.12 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.<sup>7</sup>
- 1.13 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 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 will be considered for potential delivery through a late competition model.
- 1.14 The criteria 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.<sup>8</sup>

### *Stages of the assessment*

- 1.15 The LOTI assessment process is made up of three main stages:
- iv. Initial Needs Case (INC) - The usual focus of our assessment at this stage is to review the technical and/or economic requirement for projects, the

---

<sup>7</sup> 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](#)

<sup>8</sup> For details see here: [Guidance on the criteria for competition](#)

technical options under consideration, and the TO's justification for taking forward its preferred option for further development.

- v. 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 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.
- vi. 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 Orkney transmission 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 Orkney transmission project.

## **Our decision**

- 1.16 Having taken stakeholders' feedback into account, we have decided to approve the need for the Orkney transmission project in line with our minded-to position.
- 1.17 Chapter 2 covers the detailed background to our position and our view on the FNC as presented in our 2023 minded-to consultation.
- 1.18 Chapter 3 discussed the responses we received to our 2023 minded-to consultation. It discusses our views and our decision.
- 1.19 Chapter 4 of this document provides a summary of our decision and discusses next steps.



## 2. Orkney transmission project – Our minded-to position

### Section summary

This chapter provides the key information on Orkney transmission project that underpin the need for the project. It summarises our view on the FNC as presented in our March 2023 minded-to consultation.

- 2.1 In March 2018 SHE-T submitted a FNC to Ofgem for its proposed Orkney transmission project, which proposes to deliver a 220MW subsea cable between Orkney and the Scottish mainland. The Orkney transmission project did not have an INC assessment, as the INC stage was introduced into the SWW process after the project had been substantially developed.<sup>9</sup>
- 2.2 In our March 2023 minded-to consultation we set out our proposed position to:
  - i. revoke the 2019 conditional decision
  - ii. not apply any competition models to the project
  - iii. approve the FNC for the Orkney transmission project under LOTI
  - iv. confirm that we do not require a new FNC submission, as the existing information we hold is sufficient for our decision on the FNC; and
  - v. assess the efficiency and reasonability of any cost increases at the PA stage.
- 2.3 The following chapters cover the circumstances that have changed since the 2018 FNC submission and a summary of the rationale for our minded-to position, as presented in our March 2023 minded-to consultation.

### Background updates affecting our minded-to position

#### *Submission, FNC timings and the delivery model*

- 2.4 The Orkney transmission project FNC was submitted for consideration in 2018, during the RIIO-T1 period, and therefore its initial assessment was subject to the SWW assessment process.
- 2.5 In 2021, the RIIO-T1 price control came to an end and the RIIO-T2 price control started. In RIIO-T2 LOTI replaced SWW as the means by which we assess large onshore transmission investment.

---

<sup>9</sup> SWW Guidance is available here: [Strategic Wider Works guidance | Ofgem](#)

- 2.6 In our 2018 consultation, we considered three potential delivery models for the Orkney transmission project: SWW (the default delivery model under RIIO-T1), the Special Purpose Vehicle (SPV) model and the Competition Proxy Model (CPM). We set out a minded-to position to introduce competition into this project and apply the CPM.
- 2.7 In our 2019 conditional decision we stated that we would confirm our decision on the delivery model at the point at which the conditions of approval had been met.
- 2.8 Since the RIIO-T2 price control ended in March 2021, before the Orkney transmission project had fulfilled its FNC conditions, the project is now proceeding under the RIIO-2 framework. Under RIIO-2, the LOTI process replaced SWW as the funding mechanism for large transmission projects that meet the specific eligibility criteria set out above.
- 2.9 The LOTI Guidance includes provision to ensure that a project can continue between SWW and LOTI.<sup>10</sup> Paragraph 3.3 of the LOTI Guidance sets out our expectations for cases where a proposed reinforcement has already been assessed through one or more stages under the SWW RIIO-T1 mechanism. In such cases, we would expect to give approval without further submission by the licensee, unless the proposed reinforcement has changed significantly.<sup>11</sup> It also states that we expect to engage with the TO regarding the stage of the LOTI process at which our substantive assessment of the project should continue.
- 2.10 The SWW and LOTI Guidance documents set out the information the TOs are expected to submit under SWW and LOTI at each assessment stage. For the INC and FNC stages both guidance documents refer to the general categories of information required, including examples of what could be included in a submission.<sup>12</sup> The information required to make a decision on the LOTI FNC

---

<sup>10</sup> The LOTI Guidance is available here: [Large Onshore Transmission Investments \(LOTI\) Re-opener Guidance](#)

<sup>11</sup> Para 3.3 of the [LOTI Guidance](#) states: “Where a proposed reinforcement has already been assessed through one or more stages under the Strategic Wider Works (SWW) mechanism in RIIO-ET1, we would expect to relieve the TO of the requirement to obtain approval or give approval without further submission by the licensee, unless the proposed reinforcement has changed significantly. In these instances, we will engage with the TO regarding the stage of the LOTI process at which our substantive assessment of the project should continue.”

<sup>12</sup> See [SWW Guidance](#) paragraphs and [LOTI Guidance](#) paragraphs set out this information.

The general categories of information includes evidence of the technical requirement and scope of the proposed reinforcement, evidence on the options considered and the TO’s preferred solution, project timelines and the delivery strategy.

covers the same topics and themes we require to take a decision on the SWW FNC.<sup>13</sup>

- 2.11 In line with paragraphs 5.3 – 5.4 of the LOTI Guidance regarding FNC submission requirements, we liaised with SHE-T to understand whether they expected significant changes to the project’s business case, scope, and cost since the 2018 FNC submission. SHE-T confirmed that the key drivers for the project and the technical design had not changed however they noted that estimated costs had increased. Despite this, the results of the CBA for the project remained the same and the preferred solution has not changed.
- 2.12 Our minded-to position on this is explained further below.

*Existing network and the 135MW capacity threshold*

- 2.13 Orkney is connected to mainland Scotland by two 33kV subsea distribution cables. These cables, and Orkney’s on-island 33kV infrastructure, are owned and operated by Scottish Hydro Electric Power Distribution (SHEPD). The existing 33kV SHEPD cables provide a total import and export capacity in the region of 40MW.
- 2.14 In 2019, there was around 75MW of renewable generation connected at distribution level already on Orkney which is managed by SHEPD’s Active Network Management (ANM) scheme. Due to the heavy constraints that existed at the time on SHEPD’s Orkney network, SHEPD was not allowing any new generation connections on the island’s distribution network.
- 2.15 We used the CBA results to identify the level of generation that would be required to utilise the link in order for it to represent value for money to consumers.<sup>14</sup> We considered it important that the needs case for the project was justified and represented value for money, with consumers only paying for the investment if the link will be used by a sufficient volume of generation to justify the investment.

---

<sup>13</sup> The details of the LOTI and SWW assessment stages can be found in the relevant guidance documents: [Large Onshore Transmission Investments \(LOTI\) Re-opener Guidance | Ofgem](#) and [Strategic Wider Works guidance | Ofgem](#) (see pages 27-29 on the ‘Relevant information in the TO’s needs case submissions’)

<sup>14</sup> We set out the details of the CBA analysis in our 2018 consultation, see pages 20-22, here: [Orkney transmission project – Consultation on Final Needs Case and potential delivery models | Ofgem](#)

---

- 2.16 We concluded that 135MW is the midpoint between the 'break-even' point (70MW) and the 'tipping' point (199MW).<sup>15</sup> Our view was that such a level of generation would balance the need to enable renewable and low carbon generation whilst protecting GB consumers from unnecessary costs. We thought that this threshold would provide a reasonable level of confidence that the 'tipping point' of generation is likely to come forward on Orkney by 2030.
- 2.17 In our 2019 conditional decision we proposed a threshold for at least 135MW to be delivered by new generation projects; these must either have secured a CfD or were sufficiently likely to proceed despite not having secured a CfD. For those projects that had not secured a CfD, we would require an independent auditor to confirm that they were likely to proceed based upon their financial viability, the completion of a relevant grid connection agreements and the grant of planning permission.
- 2.18 As of December 2022, the status of the total Orkney onshore wind generation pipeline has exceeded the 135MW threshold set in our 2019 conditional decision. This includes projects totalling 108.2MW that have received a CfD, as well as projects that have secured planning permission, totalling 38.1MW.

*Changes in cost estimates since the 2018 FNC submission*

- 2.19 In 2018, the Orkney transmission project had estimated costs of £262m. The 2018 FNC submission was under SWW, the cost of SHE-T's proposed transmission link to Orkney and the cost of the alternative designs that were assessed through the CBA have been reviewed by Ofgem and DNV GL.<sup>16</sup>
- 2.20 Our assessment of the FNC showed that the costs for the proposal and its alternative designs were broadly appropriate for the purposes of selecting a

---

<sup>15</sup> As stated in our 2019 conditional decision, 70MW of connected generation was the estimated threshold for the 220MW link (proposed link) to 'break-even'. This meant that if 70MW of generation uses the link, the constraint costs that it relieves is equal to the cost of the link. On this basis, SHE-T has proposed that the initial 220MW link be approved by Ofgem on condition that 70MW of generation commits to connect. The 220MW link is only the most efficient option for consumers if 199MW of generation comes forward on Orkney. Therefore, below 199MW of generation a 132MW link would be the best option for consumers. We refer to the 199MW as the 'tipping point'. We had considered whether the generation threshold should be set at the level of the tipping point (i.e., 199MW). Setting the generation threshold at the tipping point would protect GB consumers from the risk of funding an underutilised link. However, the CBA showed that this tipping point value only needs to be reached by 2030, and it may be unreasonable to expect all of that generation to come forward before approving the FNC.

<sup>16</sup> We engaged DNV GL on certain aspects of the assessment of the Orkney FNC and published its report alongside our 2018 consultation. This is available here: [DNV GL Orkney Final Needs Case report](#)

preferred connection option. We did not consider that the costs used in the CBA had prejudiced its results.

- 2.21 Across the different options submitted, costs appeared to be consistently higher than we would anticipate based on relevant historic comparators, particularly regarding procurement and installation of underground cables, as well as a high provision for risk and contingency.
- 2.22 As a result, in our 2018 consultation we committed to undertake a further scrutiny of costs at the PA stage.
- 2.23 As noted above, SHE-T recently advised us that the project’s cost estimate has changed since the 2018 FNC submission.
- 2.24 We asked SHE-T to provide us with updated costs for the Orkney transmission project and supporting evidence. Our request focused on gaining a broader understanding of why and how the costs are expected to increase. We focused on understanding the likely impact on consumers and the extent to which the drivers for the potential cost increase were specific to the preferred option or likely to be applicable to all the options in the CBA.
- 2.25 SHE-T worked with the Electricity System Operator (ESO) to develop an update on their initial CBA, to capture the impact of expected cost increases on optioneering. The updated figures have not amended the overall results of the CBA, and the preferred option remains the same as per the 2018 FNC submission.
- 2.26 Based on the information provided, the costs of implementing the preferred option are expected to increase by £109m from £262m to approximately £371m (a 41% increase) in 2018/2019 prices. SHE-T has stated that this is driven by global/regional market cost pressure (including those related to the cost of commodities and increased exchange rates), cable and plant apparatus cost increases due to significant global demand and constrained supply, as well as increases in general construction costs.

### **Our minded-to position**

- 2.27 The following sections cover the details of our minded-to position, which we consulted on in March 2023.

#### *Revocation of our 2019 conditional decision*

- 2.28 In our March 2023 minded-to consultation, we considered that the conditions set in our 2019 conditional decision were no longer appropriate. We therefore

proposed that we revoke our 2019 conditional decision and approve the project as a LOTI FNC instead.

- 2.29 We settled on this view because of two main factors. Firstly, in 2021 the RIIO-T2 price control commenced, and LOTI replaced SWW as the funding mechanism for large transmission projects. As we had not made a final decision on the FNC under SWW, it followed that we would then assess the FNC and PA under the LOTI framework.
- 2.30 The second reason was the significant increase in generation that is expected to be connected on the island's network since the original submission. This has given us more confidence in the need for investment in the area and provided reassurance that the transmission link will not be underutilised, which had been a concern at the time of our 2019 conditional decision.
- 2.31 The progress in the existing network indicates that the 135MW threshold we set in our conditional decision will be exceeded. Most of this expected generation is attributed to generation projects which have been awarded a CfD, and the remaining balance of the threshold is attributable to generation projects that have been awarded planning permission. When considered together, we believe that such a level of generation is sufficient to satisfy the policy intention behind the 2019 conditional decision.
- 2.32 With this in mind, we no longer consider that an independent audit is necessary to confirm that the projects that have secured planning permission will proceed.

*Consideration of relevant delivery models*

- 2.33 In our 2018 consultation, under SWW, we stated our preliminary views on whether we thought a competition model would apply to the Orkney transmission project. In our 2019 conditional decision, we did not address the delivery model, but we stated that this would be covered in our final decision on the FNC.
- 2.34 In our March 2023 minded-to consultation, our view was to assess the Orkney transmission project under LOTI, given it meets the eligibility criteria (see 1.11). In line with our RIIO-T2 Final Determinations we explained that we had assessed the suitability of the Orkney transmission project for a 'late model' competition as well.<sup>17</sup> Our view was that the Orkney transmission project met the criteria for

---

<sup>17</sup> '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](#)

---

delivery via a late model competition. In line with our RIIO-T2 policy position, we considered in detail whether the Orkney transmission project should be delivered via a late competition model or remain within the LOTI mechanism.

*CATO Model*

- 2.35 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.
- 2.36 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 set out its intention to introduce the required legislation to enable competitive tendering but it is currently uncertain when that will be in place.<sup>18</sup>
- 2.37 In our 2023 minded-to consultation, our position on this model remained the same as in the 2018 consultation. We believed that given delays to the introduction of enabling legislation, we expected it would be unlikely that we would be able to appoint a CATO in time to deliver the Orkney transmission project to the contracted grid connection dates.
- 2.38 We therefore did not consider it feasible to apply the CATO model to the Orkney project in a manner that delivers benefits to consumers without impacting on the delivery date of the project.

*SPV Model*

- 2.39 Under the SPV model, SHE-T 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 Orkney transmission 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 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.
- 2.40 Given the additional work needed to finalise the SPV model, in our 2023 minded-to consultation we maintained our initial position set out in 2018 and we do not

---

<sup>18</sup> [Energy White Paper: Powering our Net Zero Future](#), December 2020, pages 76-77

consider that the SPV model can be applied to this project without leading to delays. For this reason, we consider that the SPV model is not an appropriate model to utilise for the Orkney transmission project.

*CPM*

- 2.41 In our 2018 consultation, we focused our assessment on the CPM relative to the SWW arrangements, and our minded-to position at the time was to apply the CPM model to deliver the Orkney transmission project. 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.
- 2.42 In the RIIO-2 Final Determinations, 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.<sup>19</sup>
- 2.43 Since our decision on Hinkley-Seabank and RIIO-2 Final Determinations in 2020, we have seen further variability in the cost of debt benchmarks used to set the financing arrangements under CPM. However, 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 counterfactual LOTI arrangements under RIIO-2.
- 2.44 There is some scope for potential market movements between now and the point at which the financing arrangements would be finalised for CPM, in parallel to the final setting of the cost allowances for the project. Notwithstanding this, as set out in our 2023 minded-to consultation our position was that we did not have sufficient confidence that the application of the CPM to the Orkney transmission project would deliver benefits to consumers.
- 2.45 Our minded-to position was that we did not consider implementing either the CATO or SPV model for the Orkney transmission project would be possible

---

<sup>19</sup> [Hinkley - Seabank: Updated decision on delivery model | Ofgem](#)



without causing delay to its delivery, and we did not have sufficient confidence in the benefits to consumers that would be delivered by applying the CPM.

- 2.46 Considering this, our 2023 minded-to consultation stated that we were minded to not apply any competition models, but instead retain the Orkney transmission project within the LOTI mechanism of the RIIO-2 framework.

*Requirement for a new FNC LOTI submission*

- 2.47 In our 2023 minded-to consultation we stated our view that we would not expect a new FNC submission from SHE-T to assess the Orkney transmission project under LOTI. The reason for this was that we believed that the 2018 needs case submission covered the pertinent points on the needs case for the project.
- 2.48 Our view was that requesting a new FNC submission under LOTI from SHE-T would not provide much further information to inform our decision process, so would only create delay and unnecessary duplication. We noted the changes in the cost of the project however and this is addressed in the next section.

*Cost estimates*

- 2.49 As noted in 2.21, in our 2018 consultation we set out our view that the initially proposed costs appeared to be consistently higher than we would expect. We therefore committed to undertaking further scrutiny of costs at the PA stage.
- 2.50 In our 2023 minded-to consultation we stated that the increase in costs, represented a significant change to the initial estimated cost of the project. We recognised and agreed that cost increases were driven by factors that would impact each of the options within the CBA in the same manner, therefore the preferred CBA option would not change.
- 2.51 In our 2023 minded-to consultation, we did not adopt a view on the reasonableness of the potential cost increases. Our view was that such an analysis and discussion should be carried out at the PA stage when we expect to determine the efficient costs for the delivery of the project and in accordance with the procedure set out in the LOTI Guidance. We noted that we would expect SHE-T to provide robust evidence to support its cost submission at that stage.
- 2.52 The responses we received further to our 2023 minded-to consultation, as well as our view on these are detailed in the next Chapter.

### 3 Minded-to consultation responses and our view

#### Section summary

This Chapter summarises the feedback that we received from stakeholders in response to our 2023 minded-to consultation. It provides the context for and outlines our decision.

#### Summary of 2023 minded-to consultation responses and our view

- 3.1 In total we received 12 responses to our consultation from various stakeholders, including members of the public.
- 3.2 The majority of stakeholders (7 out of the 12) were supportive of our minded-to position, whilst five disagreed with it. Stakeholders' feedback focused on the process of assessing the Orkney transmission process under LOTI, the change in costs, as well as other concerns like the potential environmental impact.
- 3.3 For the purposes of this document, we have considered all the feedback that is relevant to each category together and we set out views.

#### *Feedback on the general process*

- 3.4 Some stakeholders were of the opinion that we should have published a decision instead of a minded-to consultation in order to accelerate the process.
- 3.5 We understand the reasons why some stakeholders should want to progress the decision making as soon as possible, given the time that has passed since the 2018 FNC submission and our 2019 conditional decision. We believe that consulting as an aid to decision making in a regulatory environment ensures transparency and clarity for stakeholders. Effective decision making in a complicated policy area, such as transmission investment, depends upon ensuring we are aware of stakeholders' views and concerns.
- 3.6 One respondent challenged why we are using the LOTI model, since the FNC was initially submitted in 2018, and questioned whether the LOTI assessment stages, eligibility criteria and TO submission requirements have been satisfied. They also questioned how the LOTI delivery model would offer protection to existing and future interests of consumers based on section 3A(1) of the Electricity Act, which sets out our Principal Objective.<sup>20</sup>

---

<sup>20</sup> Section 3A(1) of the Electricity Act 1989

- 3.7 In relation to this objective and Section 3A(1) another respondent stated there are other more beneficial projects being developed in and around Orkney, with little or no cost to the consumer that should bring long term benefits.
- 3.8 One stakeholder challenged our decision not to carry out an audit, given that there is no certainty that the expected generation will proceed. They stated that all the consents given to projects in relation to the 'Orkney Community Windfarm' so far have not been based on economic, environmental, or financial considerations. Another stakeholder agreed that there is a strong possibility that some of these projects will not be developed and were applied for so as to achieve the generation threshold set by Ofgem.
- 3.9 In our initial 2018 consultation and subsequent 2019 conditional decision we set out conditions for approving the Orkney transmission project under SWW. Our main concern at the time was that the generation capacity on Orkney was limited, and insufficient to justify investment in the area. To address this, we stated that we expected projects to secure either a CfD or planning consent to be considered valid justification for the Orkney transmission project. In acknowledgment that even projects that had been granted planning permission retained a degree of uncertainty over their progression, we stated that additional evidence was still required. This would be compiled via an audit and would focus on the business case, financial viability and likely progression of the projects.<sup>21</sup>
- 3.10 As generation projects have secured CfDs and planning consents, the level of uncertainty around the need for investment has decreased. We believe the level of generation that has been reached is sufficient to satisfy us that the investment will deliver benefit to consumers and the transmission link will not be underutilised. Accordingly, we no longer consider that an independent audit is required. We do still consider the grant of planning permission to be an important factor because it is indicative of the increase in the level of generation in the area.
- 3.11 In our 2018 consultation under SWW, we set out our preliminary view to approve the Orkney transmission project and, provided that the conditions we set out were met, we proposed to apply the CPM to the project. Our concern was that a constraints-based CBA on a link such as Orkney, which is a radial extension to the existing transmission network, was likely to overstate the consumer detriment of

---

<sup>21</sup> The details of the audit were set out in paragraphs 1.3 and 2.16 of this document, as per our [2019 conditional decision](#).

not building a link.<sup>22</sup> We worked with SHE-T and the ESO to consider whether an additional CBA could be developed to demonstrate whether building the Orkney transmission project benefits GB consumers.

- 3.12 This resulted in a CBA methodology which compared the consumer benefits of a wholesale price reduction from connecting additional wind generation to the grid against the costs to consumers of that wind generation being awarded CfDs and building and operating the transmission link. When we analysed the updated CBA, we concluded on establishing the conditions for approving the project.
- 3.13 With regards to the assessment stages, the LOTI Guidance includes provisions to ensure that a project can transition between SWW and LOTI; this was appropriate in the case of the Orkney project because we had not previously issued an FNC decision.
- 3.14 The information that we received as part of SHE-T's 2018 FNC submission, included all the information we need to assess the project under LOTI. In line with the LOTI guidance, we sought confirmation as to whether any material changes had occurred to the project's scope or technical design. We have liaised with SHE-T extensively and are confident that there haven't been any material changes to the scope or benefits of the Orkney transmission project since the FNC submission. As noted, estimated costs have increased, however this has not resulted in any changes to the CBA outcome. Costs will be reviewed in detail at the PA stage. We therefore do not believe it would be reasonable or proportionate for us to require SHE-T to submit a new FNC.
- 3.15 As set out in paragraphs 2.33 – 2.46, we assessed whether the Orkney transmission project met the criteria for late competition. We explored the available models to gauge whether it is in the interest of consumers to assess it based upon a competition model such as the CPM (as per our 2018 view) or whether funding it via the LOTI mechanism would bring greater benefit to consumers.
- 3.16 Our conclusion was that an implementation under either the CATO or SPV model would cause delay to the project's delivery. We also did not have sufficient confidence in the benefits to consumers that would be delivered by applying the CPM. We have therefore decided not to apply any competition models to the project. Our view is that LOTI is the most suitable of the current assessment mechanisms to assess this project. The LOTI re-opener provides us with a robust

---

<sup>22</sup> See para 2.38- 2.44 of our [2018 consultation document](#).

assessment process through which we can seek to ensure that TO proposals represent value for money for present and future consumers.

- 3.17 The stakeholder noted that the interconnector will be operated by one operator, with access and pricing at their discretion. On that basis, they asked how Ofgem has fulfilled the requirement for promotion of effective competition under Section 3A(1B) of the Electricity Act 1989.<sup>23</sup>
- 3.18 Our obligation under Section 3A(1B) of the Electricity Act is to further our principal objective in the manner which we consider best, which could include promoting effective competition wherever this is considered appropriate. As set out in paragraphs 2.33 – 2.46, we have carried out an assessment of competition on the Orkney transmission project and reached our decision not to apply competition models.
- 3.19 We understand the respondent noted this in connection with the fact that the TO will be the sole operator of the asset. Ofgem sets price controls for electricity networks because they are privately owned natural monopolies; they are usually the only service provider in each geographic location. In this respect, competition is therefore not possible, so we have developed a regulatory framework that seeks to ensure that the energy network companies act in the interests of consumers through the operation of price controls. Since 2013, we have used the RIIO (Revenue = Incentives + Innovation + Outputs) framework to set the price controls across the electricity networks. LOTI is a key component of RIIO-T2, and it is through this assessment process that we seek to protect the interests of consumers.
- 3.20 Finally, the respondent questioned how our minded-to position fits under the statutory requirement of the Electricity Act 1989 section 3A(2)(B), on the basis that we have not taken a decision relating to financing a major part of the potential onshore generation in Orkney.<sup>24</sup>
- 3.21 Our obligations under section 3A(2)(B) of the Electricity Act 1989 impose a duty to have regard to the need to secure that licence holders are able to finance the activities which are subject of obligations imposed on them. This does not relate to the financing of the generation projects which sits outside of our obligations.
- 3.22 Based on this, we have decided to retain our 2023 minded-to position. Our decision is to revoke our 2019 conditional decision under SWW. We are instead

---

<sup>23</sup> Section 3A (1B) of the Electricity Act

<sup>24</sup> Section 3A (2) (b) of the Electricity Act

approving the FNC for the Orkney transmission project under LOTI, and we are not applying any competition models to the project. We confirm that we do not require a new FNC submission.

*Feedback on cost estimates*

- 3.23 One stakeholder mentioned that the reasons stated for the increases are justified due to global inflationary challenges and the impact on prices of key commodities. They agreed that the final LOTI PA stage is the most relevant point to assess costs with a view to protecting consumers. Another respondent thought that although it is reasonable that inflationary pressures and commodity price increases would contribute to this increase in costs, it would be beneficial to seek clarity on how the cost increases have been calculated.
- 3.24 One stakeholder focused on how the final costs could affect the progress of the project at PA stage. They suggested that SHE-T should progress with planning and procurement, so that the PA works can begin as early as possible to allow sufficient time for Ofgem to undertake a full review.
- 3.25 In their response, SHE-T highlighted that the updated cost estimate provided as part of the updated CBA is an early and indicative cost estimate. They clarified that these costs are not yet tendered, and the project cannot be executed on the basis of these costs being final.
- 3.26 One stakeholder thought that no proper cost benefit analysis has been published to cover the implications of this approval, nor that the full transmission grid implication of approving this interconnector have been considered, especially with regards to constraint costs. In their opinion, the approval of the interconnector could impact consumers negatively by increasing bills and creating an energy security risk due to cable vulnerability.
- 3.27 Another stakeholder stated that the expected cost increase is unreasonable. They mention that small projects have been encouraged to support the needs case for the connector due to political objectives but would not add value for money to electricity bill payers or taxpayers.
- 3.28 With regards to section 3A(1A)(c) of the Electricity Act, a respondent argued that since the expected costs are likely to increase through the years, the payback on investment will need to be well above present market expectations, meaning that

approving the project would not provide value for money and protect consumers as a whole.<sup>25</sup>

*Our view*

- 3.29 In our 2023 minded-to consultation we set out our view that the estimated cost increases were significant. We noted that the needs case is not the correct stage at which to assess the efficiency or reasonability of the cost estimates. We held that the reasons for the increases appeared valid but that we expected to see the details of the cost breakdowns at the PA stage when we will assess them in full. This assessment will also take consideration of the consultation responses received at this stage of the LOTI process.
- 3.30 Whilst we have not carried out a detailed assessment of the cost estimate for the project as part of this FNC assessment, we have looked into the drivers for these costs.
- 3.31 The causes of the cost increase provided by SHE-T are common across major transmission infrastructure projects; the global supply chain for work of this nature has been heavily constrained by demand for material and resources as countries around the world strive to achieve their own net zero goals. This has in turn driven up prices and lead times for specialist equipment. The domestic construction market is similarly experiencing very high levels of inflation and there is much greater uncertainty over cost and allocation of risk on complex infrastructure projects.
- 3.32 The estimate is still at a relatively early stage of development; it has not yet been informed by a contractor's input or the outcome of detailed design and survey work.
- 3.33 We understand that SHE-T are operating in a challenging environment and that there are currently significant cost pressures on projects of this type. We will review the estimates at the PA stage when the Orkney transmission project is at a more mature stage of development and when we expect to receive detailed breakdowns and robust justifications for these costs.
- 3.34 We considered whether the expected cost increases for the project might suggest that a review of the capacity threshold set in our 2019 conditional decision is warranted to justify the increased level of investment.

---

<sup>25</sup> Section 3A (1A) (c) of the Electricity Act

- 3.35 Given our understanding that the justification for cost increases is primarily related to the difficulties in the supply chain for subsea cable and the wider economic conditions, our understanding is that the alternative solutions considered would still be subject to similar cost increases, as they share a significant component of scope. This would be unlikely to materially change the tipping point at which a smaller or larger link would become the optimal solution if the CBA were to be run again.
- 3.36 In our previous analysis we had established the break-even point of 70MW. This meant that if 70MW of generation uses the link, the constraint costs that it relieves is equal to the cost of the link. Whilst we recognise that the break-even point of 70MW could be slightly higher based on updated cost estimates, we consider that this would not sufficiently impact the outcome and so does not undermine the robustness of the previous analysis.
- 3.37 As a result, are not proposing to review the capacity threshold as part of this decision on the FNC. Although the current estimate of costs is at an early stage of development and remains subject to change, we consider that it provides us a general indication of what to expect at PA stage.
- 3.38 The LOTI Guidance sets out the PA process in detail and provides clarity on the type of information and evidence we expect TOs to submit<sup>26</sup> It covers the cost-related information we expect to see at the point of the TO's submission, the technical summary, information on procurement and contracts, as well as delivery and risk management strategies and any other associated documents to support the submission.<sup>27</sup> The LOTI Guidance also states that we will consult on our thoughts and preliminary analysis in relation to the PA.<sup>28</sup>
- 3.39 Based on the above, we have decided to retain our minded-to position; we will assess the reasonableness of the cost increases at the PA stage.

*Feedback on environmental, economic and planning areas*

- 3.40 One stakeholder raised concerns regarding the compatibility of an approval with Section 3A (2)(c) of the Electricity Act, on the basis that brown crab stocks and the fishery economy in Orkney will be affected by electromagnetic emissions from

---

<sup>26</sup> See Chapter 6 of the LOTI Guidance, pages 26-34

<sup>27</sup> See pages 26-32 of the LOTI Guidance.

<sup>28</sup> In line with paragraph 2.19 of the LOTI Guidance.



subsea construction.<sup>29</sup> They also questioned where in Orkney we expect the TO to add the extra capacity in the future, since there is limited space available in the area.

- 3.41 Under the Electricity Act 3A (2)(c) we have an obligation when performing our duties to have regard to the need to contribute to the achievement of sustainable development. We believe an interconnector that provides extra capacity to connect renewable electricity to the grid contributes to achieving sustainable development. Therefore, this brings wider benefits for consumers in the region and across the UK. Wind turbines are important as we diversify away from traditional sources of generation to achieve the Government's Net Zero ambitions and reduce carbon emissions.
- 3.42 At the FNC stage we review the information provided by the TO in relation to how the project will impact the environment and the economy. This review focuses on ensuring that the licensees have met their obligations to cover certain aspects in the planning process, including environmental considerations. We also expect to see an evidenced appraisal of the reinforcement options covering any environmental impacts. This would include, for example, ensuring that areas of natural beauty are preserved, sensitive areas such as proximity to communities have been accounted for and that it is feasible for plans and designs to achieve planning consent.
- 3.43 We note that the design and location of generation is undertaken by generation project developers in accordance with planning requirements and in response to a variety of other signals and requirements, including government policy (such as CfDs), environmental requirements (such as emissions directives and the Government's Net Zero ambitions), wholesale market prices and network charges. Ofgem itself is not involved in the siting of generation projects.
- 3.44 The stakeholder asked how much and what part of the indigenous economy will be displaced by the expected increase in the level of generation in Orkney. They also asked how this displacement will be accommodated within the statutory requirement for promotion of efficiency and economy set out in Section 3(5)(a) of the Electricity Act.<sup>30</sup>

---

<sup>29</sup> Section 3A (2) (c) of the Electricity Act states: *(2) In performing the duties under subsections (1B) and (1C), the Secretary of State or the Authority shall have regard to (c) the need to contribute to the achievement of sustainable development.*

<sup>30</sup> Section 3A (5) (a) of the Electricity Act

---

- 3.45 Our obligations under Section 3(5)(a) refers to the promotion of efficiency and economy on the part of persons authorised by licences or exemptions in the wider electricity system, at a distribution and transmission level. We do not anticipate that the increase in generation will have a detrimental impact on the indigenous economy.
- 3.46 The respondent also questioned the alignment of our minded to position with section 5(c) of the Electricity Act.<sup>31</sup> They argued that there is no element of diversity, given that the case for the interconnector was predicated on a sufficient volume of generation being supplied by wind turbines, as per the 'Generation background' section of the 2019 conditional decision. They also argued that the 25 years limited lifespan of wind turbines means it cannot be considered a long-term investment.
- 3.47 The respondent stated that given the amount of microplastics, from blades and coatings, which are produced by wind turbines over their comparatively short productive lifespan, this would also be contrary to the statutory duty to have regards to the effect on the environment under section 5(c) of the Electricity Act.
- 3.48 Under Section 3(5)(a) our obligation is to ensure that the electricity is generated from a variety of sources, that it represents a viable long-term supply and that we have regard to the effect on the environment of activities connected to the transmission and generation of electricity. Securing a 'diverse' energy supply supports the drive towards the resilience and sustainability of the network. In terms of the operational lifetime of wind turbines, we have seen from other generation projects that a 25-year life span is the standard expectancy for wind power transmission assets and therefore compares well when considering the length of energy supply provision.

---

<sup>31</sup> Section 3A (5) (c) of the Electricity Act

## **4 Our Decision and Next Steps**

### *Our Decision*

- 4.1 This document confirms our revocation of our 2019 conditional decision and our approval of the FNC for the Orkney project in accordance with special condition 3.13 of the SHE-T's electricity transmission licence.

### *Next steps*

- 4.2 The next stage of our assessment will be the PA where we assess the project's proposed costs and delivery plan 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.