

# Consultation

## Western Isles transmission project: Consultation on Final Needs Case and Delivery Model

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We are consulting on 19/03/2019. We would like views from people with an interest by 31/05/2019. We particularly welcome responses from generators and local stakeholders on the Western Isles. We would also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at [Ofgem.gov.uk/consultations](http://Ofgem.gov.uk/consultations). If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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## Executive summary

In August 2018 Scottish Hydro Electric Transmission (SHE-T) submitted a Final Needs Case submission to Ofgem for its proposed Western Isles project – a 600MW electricity transmission project to connect the Western Isles to mainland Scotland by October 2023.<sup>1</sup> SHE-T's Final Needs Case proposes that Ofgem approve funding for the Western Isles transmission project, on the condition that both onshore windfarm projects currently being developed by Lewis Wind Power<sup>2</sup> (which could be up to 369MW in total) are successfully awarded a Contract for Difference (CfD) in the 2019 allocation round.

This consultation sets out that we are minded to reject the Final Needs Case submission from SHE-T. Based on the analysis presented by SHE-T, we do not consider that approving the proposed 600MW link, on the condition that the two Lewis Wind Power projects secure CfDs in the 2019 CfD auction, represents long term value for money for existing and future electricity consumers. This is due to uncertainty regarding whether sufficient generation in addition to the Lewis Wind Power projects will come forward in the future to justify the large size (and subsequent additional cost) of the 600MW link. We would be willing to consider alternative proposals for an electricity transmission link to the Western Isles that more appropriately protect consumers from the risk of funding an oversized transmission link.

## Needs case for the Western Isles transmission project

The Final Needs Case is a stage under the Strategic Wider Works (SWW) process implemented during the RIIO-T1 price control period for Transmission Owners to seek confirmation from Ofgem that large new transmission projects are needed and that an appropriate connection option has been selected. The value of any revenue allowance to deliver the project would be determined by Ofgem at a later point.

In its Final Needs Case submission, SHE-T outlines that there is significant renewable generation potential on the Western Isles, particularly onshore wind, and stresses that this potential generation can only be realised if a new transmission link to the Western Isles is constructed (as without a link no new generation can connect to the network on the Western Isles).

We consider that there is renewable generation potential on the Western Isles. We also agree that the current network on the Western Isles is unable to accommodate any new generation, meaning that reinforcements to the network on and around the Western Isles would be required to connect any new generation there.

However, we are not satisfied, on the basis of the information that we have seen, that SHE-T's Final Needs Case represents long term value for money for existing and future consumers. This is because:

1. The cost benefit analysis produced by the Electricity System Operator shows that a 450MW link would be the most beneficial option for GB consumers if only the two Lewis Wind Power projects are built;

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<sup>1</sup> The capital cost for the 600MW transmission project was originally presented in the Final Needs Case by SHE-T as £662.9m. This has since been reduced by SHE-T to £623.8m as a result of further ongoing tender exercises for the 600MW link.

<sup>2</sup> Lewis Wind Power is a joint venture between EDF Renewables and Wood.

2. There is significant uncertainty that the high levels of generation (530MW and above)<sup>3</sup>, needed to make a 600MW link the most beneficial option for GB consumers, would be built on the Western Isles even if a 600MW link was constructed; and
3. We have not received assurances that GB consumers will be protected from the risk of funding the additional costs of a 600MW link in the event that less than 530MW of generation is built.

As such we set out the following positions in this consultation relating to the Needs Case submission:

We are minded to reject SHE-T's Final Needs Case submission for a 600MW HVDC transmission link to the Western Isles based on only the two Lewis Wind Power projects being successfully awarded a CfD in the 2019 allocation round.

Subject to no material changes to the information we have reviewed during our assessment, we would approve a resubmitted proposal for a 450MW transmission link to the Western Isles based on the two Lewis Wind Power projects being successfully awarded a CfD in the 2019 allocation round.

We would consider the case for a 600MW transmission link to the Western Isles if consumers were more appropriately protected from the additional costs of funding a potentially significantly oversized link.

## Assessment of potential delivery models for the Western Isles transmission project

If we were to ultimately approve a Needs Case, we would need to determine the most appropriate delivery model for the Western Isles transmission project. In order to provide regulatory clarity and to mitigate against potential project delays, we have considered which delivery model is likely to deliver the best outcome for consumers in the event that we ultimately approve a Needs Case for the Western Isles transmission project.

We confirmed in our January 2018 and September 2018 updates on competition in onshore transmission<sup>4</sup> that we intend to consider the Competition Proxy Model (CPM) and Special Purpose Vehicle (SPV) delivery models for all future SWW projects that are subject to a needs case assessment during RIIO-T1. We confirmed that we will do so only where a project meets the criteria for competition (new, separable and high value), and that we will also consider SWW, the default delivery model under RIIO-T1, alongside the CPM and SPV models.

We consider that the Western Isles project meets the criteria for competition and therefore may be suitable for delivery through either the CPM or SPV delivery models. Consistent with the pause to our development of the CATO regime,<sup>5</sup> we are not proposing that the Western Isles transmission project should be delivered under our CATO framework. Given delays to the introduction of enabling legislation, we expect it would be unlikely that we would be able to appoint a CATO in time to deliver the Western Isles transmission project to the contracted

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<sup>3</sup> This figure is the 'tipping point' specified by the Electricity System Operator where the 600MW link is the most beneficial option for GB consumers.

<sup>4</sup> January: <https://www.ofgem.gov.uk/publications-and-updates/update-competition-onshore-electricity-transmission>  
September: <https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission-and-impact-assessment>

<sup>5</sup> <https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission>

grid connection dates. If the delivery date for the Western Isles project were to change, we may review our position on the use of the CATO framework.

Our analysis suggests that the SPV model could deliver savings to consumers relative to the SWW RIIO delivery arrangements. We consider however that the implementation time associated with the SPV model could, in this case, risk delay to the current delivery dates for the Western Isles project. As such, we do not propose to apply the SPV model to delivery of the Western Isles transmission project, although if delivery dates on the Western Isles project were to change, we may review our position on the use of the SPV model.

Our analysis indicates that the CPM would deliver consumer benefits for either a 450MW or 600MW link. Our analysis suggests that the application of the CPM to the Western Isles project could deliver savings to consumers in the region of £22m - £47m, relative to delivery under the SWW RIIO delivery arrangements. We do not consider that the CPM would risk delay to the delivery of the Western Isles project to its currently stated delivery dates.

Should we ultimately approve a Needs Case for the Western Isles project, we will consider the most appropriate delivery model at that time. On the basis of the information that we have seen, we currently consider that delivery of the Western Isles transmission project under the CPM would deliver savings for consumers, whether considering a link size of 450MW or 600MW.

## **Next steps**

Subject to the outcome of this consultation, we expect to publish a decision on the Final Needs Case for the Western Isles transmission project in summer 2019. We expect this to include our view on whether to approve or reject the Final Needs Case for the project including, if relevant, any associated conditions for final approval. Depending on our views on the Final Needs Case, we may confirm our minded-to decision on the delivery model at the same time.

# 1. Introduction

## What are we consulting on?

1.1. This consultation document sets out our minded-to position on the Final Needs Case and views on the delivery model for the Western Isles transmission project, a 600MW electricity transmission connection that Scottish Hydro Electric Transmission (SHE-T) is proposing to construct between the Western Isles and the Scottish mainland by October 2023. SHE-T currently estimates the capital cost of the 600MW connection at c.£624m.<sup>6</sup>

1.2. We have also published, today, a separate consultation document setting out our minded-to position and proposals on the Final Needs Case for the Shetland transmission project.

### Scope of this document

1.3. This document covers two broad areas:

- **Our assessment and minded-to position on the Final Needs Case for the Western Isles transmission project:** This includes a consideration of the technical design and costs of the proposed link, the potential generation on the Western Isles driving the need for the project, and our views on the cost benefit analysis for different link options.
- **Our assessment of potential delivery models for the Western Isles transmission project:** This covers our assessment of the project against the new, separable and high value criteria for competition and our view on the delivery model, which we consider would deliver best value for GB consumers should we ultimately approve a Needs Case for the project.

1.4. The minded-to position set out in this document is for consultation, and we invite stakeholders to respond using the contact details set out on the front of this document. We have provided questions for stakeholders on particular areas at the start of each chapter, but stakeholders should not feel constrained by those questions in their responses.

## Context

### Final Needs Case

#### Strategic Wider Works

1.5. The GB onshore electricity transmission network is 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 (SHE-T) in the north of Scotland. We regulate these TOs

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<sup>6</sup> The capital cost for the 600MW transmission project was originally presented in the Final Needs Case by SHE-T as £662.9m. This cost has since been reduced by SHE-T to £623.8m as a result of further ongoing tender exercises for the 600MW link.

through the RIIO (Revenue = Incentives + Innovation + Outputs) price control framework. For offshore transmission, we appoint TOs using competitive tenders.

1.6. The incumbent onshore TOs are currently regulated under the RIIO-T1 price control, which runs for eight years, until 2021. Under this price control, we developed a mechanism for managing the assessment of large and uncertain projects called 'Strategic Wider Works' (SWW). The incumbent TOs are funded to complete pre-construction works, and then subsequently follow up with applications for construction funding when the need and costs for the project become more certain. The value of any revenue allowance would be determined at a later point. Detail on the SWW arrangements can be found in our SWW Guidance document.<sup>7</sup>

1.7. We are currently assessing SHE-T's Final Needs Case. Our SWW assessment process consists of three main stages:

- **Initial Needs Case** – Our opportunity to identify, at an early stage, any concerns we have with how the TO has selected the option it intends to seek planning approval for.
- **Final Needs Case** – Our process for taking a final decision on whether there is a confirmed need for the transmission project. This process includes a robust review of the TO's cost-benefit analysis (CBA) for the project.
- **Project Assessment** – Our assessment of the detailed cost estimates and delivery plan in order to set allowed expenditure and required deliverables for the transmission project. This stage sets cost allowances for the relevant project which will ultimately be passed on to consumers.

1.8. The Western Isles transmission project did not have an Initial Needs Case assessment as the project had already been substantially developed by the time we introduced the Initial Needs Case stage into the SWW process.

1.9. A Needs Case was previously submitted in 2013 for the Western Isles, but was returned to SHE-T due to uncertainty regarding the eligibility of Western Isles generators for UK Government subsidies.<sup>8</sup>

1.10. Scottish Hydro Electric Power Distribution (SHEPD) has also submitted a proposal to contribute, on behalf of demand consumers, towards the cost of transmission links. SHEPD has proposed this contribution to reflect the avoided cost of replacing existing back-up generation on the Western Isles in future. We are considering the SHEPD proposal and we will shortly be publishing a separate document outlining our views on the SHEPD proposal.

#### Interactions with the planning regime

1.11. We do not design new transmission projects, plan how they should be built, or decide which routes they should take. This is the responsibility of the developing TO and the relevant planning authorities. For this reason, we do not look at the detailed location of individual lines

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<sup>7</sup> [https://www.ofgem.gov.uk/system/files/docs/2017/11/sww\\_guidance\\_version\\_2.pdf](https://www.ofgem.gov.uk/system/files/docs/2017/11/sww_guidance_version_2.pdf)

<sup>8</sup> <https://www.ofgem.gov.uk/publications-and-updates/strategic-wider-works-she-transmission%E2%80%99s-submission-western-isles-proposal>



and pylons nor take a view on what additional visual mitigation measures might be required. Our role is to review the TO's justifications for such decisions where these affect the cost of the project to consumers.

### Contracts for Difference

1.12. In October 2017 the Department for Business, Energy and Industrial Strategy (BEIS) confirmed that it would be running a Contracts for Difference (CfD) allocation round in Spring 2019.

1.13. In December 2017 BEIS published a consultation<sup>9</sup> on, amongst other things, differentiating Remote Island Wind (RIW) from other onshore wind projects to enable RIW to compete for a CfD in Pot 2 alongside other 'less established' technologies. In July 2018 BEIS confirmed its decision to allow projects on remote islands (which includes Orkney, Shetland and the Western Isles) to compete for a CfD in Pot 2 in the third CfD allocation round. BEIS' decision to allow RIW to bid in to Pot 2 was partially driven by the fact that RIW generators face significantly higher costs than other onshore wind of connecting to, and using, the transmission system, due to their distance from the mainland.

1.14. In November 2018 BEIS set out further information<sup>10</sup> on the third CfD allocation round, including the draft budget that would be allocated to the round. In January 2019 BEIS published the draft allocation framework for the 2019 round.<sup>11</sup>

1.15. The inclusion of RIW in the CfD allocation rounds has relevance for our assessment of the Western Isles project because we anticipate that prospective generators on the Western Isles may view the rounds as an opportunity to secure a route to market for their projects, i.e. it is possible that considerable levels of generation on the Western Isles may not proceed without a CfD.

### **Competition in onshore transmission**

1.16. As part of our decision on the RIIO-T1 price control, we set out that projects brought to us under the SWW regime could be subject to competition. Following our decision on the RIIO-T1 price control, we undertook the Integrated Transmission Planning and Regulation (ITPR) project, which reviewed the arrangements for planning and delivering the onshore, offshore and cross-border electricity transmission networks in GB. Through this project we decided, among other decisions, to increase the role of competition where it can bring value to consumers.

1.17. Following the ITPR project, we set up the Extending Competition in Transmission (ECIT) project in early 2015 to introduce additional competition in the delivery of new, separable and high value onshore electricity transmission investment. We published a series of ECIT policy consultation and decision documents, which are available on our website. In December 2016 we published our first combined SWW and competition consultation for the

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<sup>9</sup> [www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme](http://www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme)

<sup>10</sup> <https://www.gov.uk/government/publications/contracts-for-difference-cfd-draft-budget-notice-for-the-third-allocation-round>

<sup>11</sup> <https://www.gov.uk/government/publications/contracts-for-difference-allocation-framework-for-the-third-allocation-round-2019>

North West Coast Connections project, and published an update to that consultation in July 2017.

1.18. In June 2017 we published an update on our plans to introduce competition to onshore electricity transmission, stating that we are deferring further development of the Competitively Appointed Transmission Owner (CATO) regime until the timing of enabling legislation is more certain. We reiterated that we continue to consider that there are significant benefits to consumers in introducing competition into the delivery of new, separable and high value onshore electricity transmission projects.

1.19. Our August 2017 consultation on the Hinkley–Seabank (HSB) project outlined two potential delivery models (the Special Purpose Vehicle (SPV) model and the Competition Proxy Model (CPM)) which we considered could deliver a significant proportion of the benefits of a CATO tender. In January 2018 we published a consultation stating that we were minded-to apply the CPM for HSB. We explained why we thought this would deliver savings relative to the SWW approach and set out indicative cost of capital ranges that we would allow. Following that consultation, in July 2018 we published our decision to apply the CPM to the HSB project.

1.20. Alongside our January-2018 minded-to consultation on the delivery model for HSB, we published an “Update on competition in onshore electricity transmission” (January 2018 Update) which:

- 1.20.1. provided an update on the SPV model and CPM, taking into account the stakeholder responses received in relation to our August 2017 consultation, and set out the indicative process for applying the criteria for competition to identify projects for delivery through these models;
- 1.20.2. explained our decision to consider the application of the SPV model and the CPM for all future SWW projects that meet the criteria for competition and are subject to a Needs Case assessment during RIIO-T1.

1.21. In September 2018 we published a set of documents providing our view of the development and application of the CPM and the SPV model exclusively for future projects beyond HSB. These included:

- 1.21.1. A consultation on the commercial and regulatory framework for the SPV model;
- 1.21.2. an update of how we expect the CPM, developed in the context of the Hinkley-Seabank project, will be applied to future electricity transmission projects that meet the criteria for competition; and
- 1.21.3. an Impact Assessment (IA) setting out our analysis of the general benefits and costs to consumers of applying the SPV model and the CPM to projects that meet the criteria for competition.

1.22. These September 2018 documents reaffirmed our previously stated position that we would consider the use of the SPV model and CPM on all new, high-value and separable electricity transmission projects brought forward by TOs during RIIO-T1. They also outlined the decision-making process we intend to use for future projects submitted to us through the SWW licence mechanism.

1.23. In December 2018 we published our minded-to decision to apply the CPM to the Orkney Transmission project, should we ultimately approve the Needs Case for the project. We explained why we thought the CPM is likely to deliver savings for consumers relative to the SWW approach.

### **How to respond**

1.24. 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 by no later than 31<sup>st</sup> May 2019.

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

1.26. We will publish non-confidential responses on our website at [www.ofgem.gov.uk/consultations](http://www.ofgem.gov.uk/consultations).

## **Your response, data and confidentiality**

1.27. 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.

1.28. 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.

1.29. If the information you give in your response contains personal data under the General Data Protection Regulation 2016/379 (GDPR) and domestic legislation on data protection, 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.

1.30. 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**

1.31. 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?

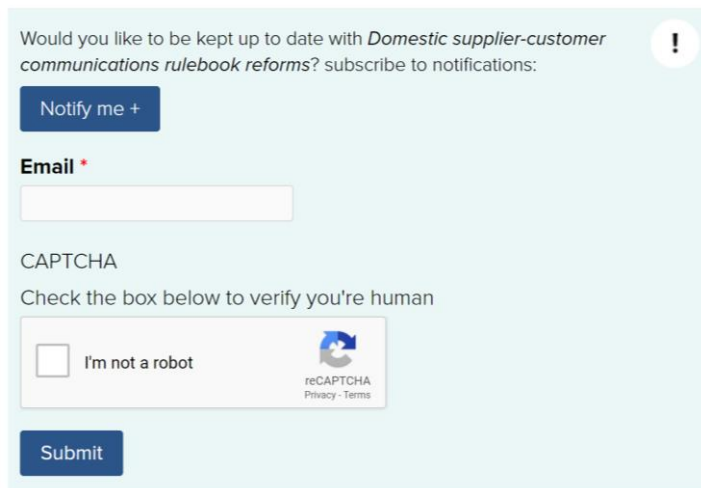
1.32. Please send any general feedback comments to [stakeholders@ofgem.gov.uk](mailto:stakeholders@ofgem.gov.uk)

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## 2. Final Needs Case assessment

### Section summary

This chapter covers our assessment of SHE-T's Final Needs Case submission for the Western Isles project, including:

- An overview of the current electricity network on the Western Isles;
- An evaluation of the generation scenarios presented by SHE-T;
- A review of the CBA methodology and results submitted by SHE-T;
- Our high level views on the technical design of the project and its costs; and
- Our concerns with the needs case as presented and our minded-to position for addressing those concerns.

### Questions

**Question 1:** Do you agree that the current network on the Western Isles needs reinforcing in order to connect additional generation?

**Question 2:** What are your views on the generation scenarios developed by SHE-T? We are particularly interested in views on the likelihood of wind generation on the Western Isles developing to the levels predicted by SHE-T's scenarios.

**Question 3:** What are your views on SHE-T's approach to optioneering, specifically relating to the routes and link capacities considered, and are there other options that SHE-T could have considered?

**Question 4:** What are your views on the CBA put forward by the ESO, particularly in relation to the results it produces?

**Question 5:** What are your views on the technical design and costs of the proposed Western Isles link?

**Question 6:** What are your views on the following points:

- i. Do you agree with our minded-to position to reject the 600MW link conditional on only the two Lewis Wind Power projects securing CfDs?
- ii. What are your views on our analysis of the information, which suggests a 450MW link would represent the best outcome for existing and future consumers if only the two LWP projects secure CfDs?
- iii. Do you consider that consumers could be appropriately protected from the costs of funding a potentially significantly oversized link if we were to approve the needs case for a 600MW link? If so, how could this be achieved?

## Introduction

2.1. SHE-T submitted its Final Needs Case for the Western Isles transmission project in August 2018 under the RIIO SWW mechanism. The Final Needs Case proposes construction of a 600MW High Voltage Direct Current (HVDC) subsea transmission link between mainland Scotland and the Western Isles, to be delivered by October 2023. SHE-T has made its

proposal contingent on both the Lewis Wind Power<sup>12</sup> (LWP) projects (Stornoway and Uisenis wind farms) being awarded CfDs in the 2019 allocation round.

2.2. We set out in this chapter our assessment of SHE-T's Final Needs Case submission, including our assessment of the proposed technical design and costs of the project and our assessment of the CBA for the project. We also set out our concerns with SHE-T's Final Needs Case and our minded-to position for addressing those concerns.

## Existing network on the Western Isles

2.3. The Western Isles are currently connected to mainland Scotland by a 33kV subsea distribution cable from Harris to Ardmore (on Skye) and then onwards along a 132KV single circuit overhead line to Fort Augustus.<sup>13</sup> This cable, which is owned and operated by SHEPD, connects SHE-T's 132kV infrastructure on Skye and the main islands of Harris and Lewis. The 132kV infrastructure provides the spine of a network across the islands of Harris and Lewis which supplies the SHEPD distribution network.

2.4. There is currently approximately 80MW of generation (mostly wind) connected on the Western Isles. The connected generation capacity on the Western Isles is capped,<sup>14</sup> resulting in new generation being unable to connect to either the distribution or transmission networks without new infrastructure between the Western Isles and mainland Scotland.

2.5. In addition to the network constraints, potential generation projects that would connect into the transmission system have historically not been able to develop into financially viable projects. This is due to the unusually high Transmission Network Use of System charges (TNUoS) that would apply on the Western Isles. These high charges result from the distance of these generation projects from the main transmission system, on mainland Scotland. The changes to the CfD regime referenced in paragraphs 1.12 – 1.15 have been introduced, in part, as a result of this.

## Future Western Isles generation scenarios used in SHE-T's analysis

2.6. SHE-T's Western Isles Final Needs Case submission assumes that a significant level of wind generation on the Western Isles would progress to full operation by 2032 (the date used in the generation scenarios) if a transmission link to the mainland were to be built.

2.7. In support of this, SHE-T presents various generation scenarios that it has developed with the assistance of its consultants, Gutteridge, Haskins & Davey (GHD). SHE-T also presents the Future Energy Scenarios (FES – developed in 2017 by National Grid in its role as Electricity System Operator (ESO))<sup>15</sup> as they pertain to generation on the Western Isles.

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<sup>12</sup> Lewis Wind Power (LWP) is a joint venture between EDF Renewables and Wood. LWP is currently seeking a Mod App to increase the combined capacity to 369MW from 342MW.

<sup>13</sup> 'Western Isles' in this context is referring only to the island of Harris and Lewis, there is a second 33kV cable connected from Loch Carnan on South Uist to Ardmore (on Skye).

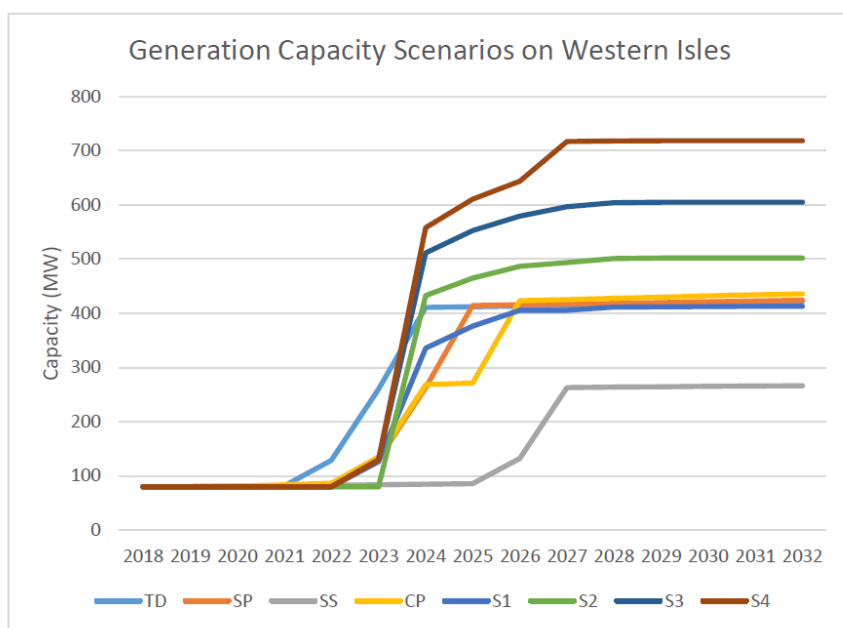
<sup>14</sup> This is under the terms of the July 2010 derogation decision granted by GEMA and the principles of Connect and Manage.

<sup>15</sup> The four Future Energy Scenarios (FES) presented by the ESO in 2017 were Steady State (SS), Consumer Power (CP), Slow Progression (SP) and Two Degrees (TD).

Table 1 and Figure 1 below summarise the scenarios SHE-T originally developed with GHD and the FES.

Generation scenario	FES - SS	GHD - S1	FES - SP, CP & TD	GHD - S2	GHD - S3	GHD - S4
Total new generation connected on the Western Isles (MW)	222	338	384	422	511	638

**Table 1: GHD scenarios and FES 2017 generation scenarios up to 2032**



**Figure 1: Deployment of generation on the Western Isles by 2032 according to the FES 2017 and scenarios developed by GHD (image provided by GHD)**

2.8. As shown in Table 1, SHE-T’s generation scenarios assume between 222MW and 638MW of wind generation may connect on the Western Isles by 2032 for the following reasons;

- 2.8.1. SHE-T has issued contracts via the ESO for 418.9MW<sup>16</sup> of generation capacity; and
- 2.8.2. SHE-T has also received notes of interest for distribution connected renewable generation schemes totalling 212.2MW.<sup>17</sup>

2.9. The generation scenarios shown in Figure 1 were used in the cost benefit analysis (CBA) undertaken by the ESO, which was submitted alongside SHE-T’s Final Needs Case in August 2018. The ESO’s CBA is discussed further in paragraphs 2.20 – 2.22.

<sup>16</sup> Figure as at February 2019 – including ongoing Mod Apps.

<sup>17</sup> Figure as at July 2018.

2.10. It can be seen from Figure 1, that the generation scenarios assume limited new generation beyond 2027. All of the scenarios are primarily comprised of combinations of known generation projects presented in Table 2, below. Every generation scenario apart from Steady State (SS) assumes that both LWP projects proceed.

Generation category	Detail
Transmission-connected contracted	LWP – Uisenis (162MW) <sup>18</sup> LWP – Stornoway (176MW-180MW) <sup>18</sup> Druim Leathann wind farm (Tolsta) (46-50MW) <sup>19</sup>
Distribution-connected contracted	Various (0-14MW <sup>20</sup> maximum)
Distribution-connected potential	Various (0-167MW <sup>21</sup> maximum)

**Table 2: Breakdown of generation projects used in the CBA analysis**

2.11. However, based on the information we have reviewed, we consider that there are several factors that may raise doubts about the timing and scale of future wind generation on the Western Isles, as explained below:

- 2.11.1. Only the three potential transmission level wind projects on the Western Isles detailed in Table 2, have contracted connection agreements in place with the ESO – this currently equates to just under 420MW of generation. The progression of these projects is, we understand, dependent on success in the 2019 CfD allocation round;
- 2.11.2. There is currently only 6MW of distribution contracted connection agreements in place with SHEPD for distribution level wind projects;
- 2.11.3. Other than the three transmission projects mentioned above, no further Western Isles wind generators have planning consent secured or grid connections in place. This makes it highly unlikely that further generators on the Western Isles will bid into the 2019 CfD allocation round. However, we note that another CfD round is currently planned for 2021,<sup>22</sup> so there may be an opportunity for more projects on the Western Isles to participate in that auction, if it takes place. SHE-T has also argued that some Western Isles wind projects may be viable without CfD support, though we have seen limited evidence to support this claim. In response to our recent consultation on the Needs Case for a proposed link to Orkney we received several responses referring to the potential for onshore wind to secure a route to market via a long-term corporate Power Purchase Agreement. However, this is a new and developing market. Therefore, at this time, we are unable to place significant weight on such agreements as an established route to market in

<sup>18</sup> LWP is currently seeking a Mod App to increase the combined capacity to 369MW.

<sup>19</sup> The range of 46-50MW is used in the CBA analysis, Tolsta is registered as 49.9MW in the Transmission Entry Capacity (TEC) register.

<sup>20</sup> Since submission of the Final Needs Case this has reduced to 6MW, as per paragraph 2.19.2

<sup>21</sup> In July 2018 SHE-T received notes of interest from potential distribution connected developers on the Western Isles totalling 212MW, the CBA analysis uses a range of distribution connected potential across the different scenarios.

<sup>22</sup> <https://www.gov.uk/government/publications/contract-for-difference-and-capacity-market-scheme-update-2018>



particular given the high network charges that would be incurred by generation projects on Western Isles; and

- 2.11.4. As outlined in Ofgem’s December 2018 decision on the scope of the Electricity Network Access and Forward-looking Charges Significant Code Review (SCR) <sup>23</sup>, we are reviewing whether distribution-connected generation should face the same transmission forward-looking charging arrangements as transmission-connected generation, in order to promote a “level playing field” between different forms of generation.<sup>24</sup> This would mean that it is possible that distribution-connected generators may pay some form of transmission charge in the future if they connect in high cost areas – given the high transmission charges on the islands, this may impact the financeability of distribution connected wind projects on the Western Isles.

### Overall observations – Future generation on the Western Isles

2.12. We acknowledge that the Western Isles are an area of significant wind potential, however, we consider that the future of generation on the Western Isles beyond the LWP projects may be significantly more uncertain than outlined by SHE-T in its submission.

2.13. As such, whilst we accept that the weather conditions on the Western Isles are favourable for wind generation projects, and acknowledge the level of interest expressed in developing projects at this early stage, we consider that even if a link is built **there is significant uncertainty at this stage around how much generation will progress to full commissioning by 2023** (the year by which SHE-T propose the link would be completed) **or by 2032**.

2.14. In reaching our minded-to position, we have had to consider the uncertainty around future generation levels on Western Isles when determining the appropriate balance of risk between generators on the Western Isles and local and GB consumers. For example, approving a large link, based on little certainty of significant additional generation coming forward beyond the two LWP projects, risks consumers paying for a significantly underutilised link. Equally, rejecting the need for a link or approving a smaller link without any opportunity for additional generation to connect, risks preventing potentially significant levels of wind generation on the Western Isles coming forward later in the 2020s, or risks consumers paying for an additional cable to connect that generation.

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<sup>23</sup> <https://www.ofgem.gov.uk/publications-and-updates/electricity-network-access-and-forward-looking-charging-review-significant-code-review-launch-and-wider-decision>

<sup>24</sup> In particular, we are reviewing; applying the wider locational transmission charges to small distribution-connected generation (those with capacity less than 100MW) which would mean that small distribution-connected generation would receive transmission credits in zones where they are expected to reduce long term transmission costs, and pay transmission charges in zones where they are expected to increase long term costs; and applying the local asset transmission charges to small and large distribution-connected generation, as currently only transmission-connected generation face these charges.

## Options considered by SHE-T

2.15. SHE-T’s Final Needs Case submission considered 48 link options across 9 geographical corridors using a range of AC and DC technology. An outline of these different routes can be found in Appendix 2.

2.16. The 48 options were assessed after the application of the three optioneering filters evaluating capacity, programme and cost. The application of these three filters presented only two options, the 600MW and 450MW HVDC links, to be taken forward for consideration in the CBA studies. However, to provide a wider range of CBA testing a third alternative option was included in the form of a 220kV AC option. This option is seen as the AC alternative with a construction programme closest to the 2023/24 delivery year and at a viable lower capacity in the event of reduced export requirement for comparison purposes in the CBA. Three further AC options were also passed by SHE-T to the ESO to test lower capacity requirements.

2.17. The options in Table 3 were submitted by SHE-T to the ESO and assessed in the CBA. The option proposed by SHE-T is option 2, the 600MW link from Arnish to Beaully. All of the transmission project options follow the same route, which has been identified by SHE-T as the route deemed most feasible.

2.18. We are comfortable that SHE-T has considered an appropriate range of technical options.

Option	Description	Capacity (MW)	EISD	PV of CAPEX
1	450MW HVDC Arnish – Dundonnell – Beaully Single Circuit	450	2023	£616.9m
2	600MW HVDC Arnish – Dundonnell – Beaully Single Circuit	600	2023	£663.0m
3	237MW HVAC Arnish – Dundonnell – Beaully Single Circuit 220kV	237	2024	£458.7m
4	237MW HVAC Arnish - Dundonnell (SSC) - Dundonnell - Beaully Single Circuit Composite Pole 220kV	237	2025	£409.8m
5	138MW HVAC Arnish - Dundonnell SSC - Dundonnell - Beaully Single Circuit 132kV	138	2024	£349.9m
6	138MW HVAC Arnish - Dundonnell (SSC) - Dundonnell - Beaully Single Circuit Trident H Pole 132kV	138	2025	£274.8m

Table 3: Connection options used in CBA analysis<sup>25</sup>

2.19. The transmission project options have different completion dates due to the progress made to date on each option. The proposed 450MW and 600MW options (options 1 and 2 in the table above) have the earliest completion dates due to SHE-T having developed these further than the lower capacity options.

<sup>25</sup> The capital cost for the 450MW and 600MW are the figures originally presented in the Final Needs Case by SHE-T and are used in the CBA. These costs have since been reduced by SHE-T to £596.47m and £623.8m, for the 450MW and 600MW respectively, as a result of further ongoing tender exercises for the 600MW link.

## Cost Benefit Analysis

2.20. Two CBAs were initially provided as part of SHE-T's Final Needs Case submission, one produced by GHD, SHE-T's consultants, and one produced by the ESO. Our assessment has considered both CBAs, which both follow a broadly consistent constraints based methodology. Our analysis in this section focuses on the ESO's CBA, which was produced in line with its licence obligation to support the assessment of SWW proposals by carrying out a cost benefit analysis of reinforcement options identified by a TO. We have focused predominately on the ESO's CBA as this analysis considers the Western Isles in a GB context taking account of boundary capabilities throughout the wider transmission network, whereas the GHD CBA focuses on the Western Isles as a regional assessment taking account of local constraints.

2.21. The methodology used in the ESO's CBA is consistent with that which has been used on previous SWW projects and with that which is used each year when the ESO undertakes the Network Options Assessment (NOA). This methodology offsets the construction and operational costs of various different transmission project options against the constraint costs<sup>26</sup> that each of these options relieve under a variety of generation scenarios (in this case, the scenarios presented in Table 1 and Figure 1) to determine a Net Present Value (NPV) of the link.

2.22. The ESO's CBA determines the preferred option based on a Least Worst Regret (LWR) approach. The regret of each option is determined by the difference between its NPV and the option with the highest NPV value. The option with the smallest regret across all generation scenarios is then determined as the option with the LWR.

### CBA results as presented in the Final Needs Case Submission

2.23. The LWR option produced by the ESO's CBA presented in the Final Needs Case submission is a 450MW transmission link to the Western Isles to be delivered by 2023. This result is reflective of the level of generation assumed to progress under each scenario as outlined in Table 1 and shown in Table 4, below. Table 4 shows that the LWR option under the 'standard' approach (blue rows), where the widest range of generation scenarios is considered, is the 450MW transmission link. The 450MW link performs £36m better than the 600MW link under that standard approach.<sup>27</sup>

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<sup>26</sup> 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.

<sup>27</sup> Table 4 shows that on a normal run of the CBA with all of the generation scenarios included the least worst regret option is the 450MW HVDC link with a worst regret of £179m.

CBA Run	Option	Description	TD (£m)	SP (£m)	SS (£m)	CP (£m)	S1 (£m)	S2 (£m)	S3 (£m)	S4 (£m)	Worst Regret (£m)	LWR
Standard	1	450MW HVDC	£43	£39	£179	£4	£47	£0	£6	£90	£179	Yes
	2	600MW HVDC	£84	£80	£215	£44	£87	£44	£0	£0	£215	No
	3	237MW HVAC	£0	£0	£0	£0	£0	£120	£303	£510	£510	No
No SS	1	450MW HVDC	£43	£39		£4	£47	£0	£6	£90	£90	No
	2	600MW HVDC	£84	£80		£44	£87	£44	£0	£0	£87	Yes
	3	237MW HVAC	£0	£0		£0	£0	£120	£303	£510	£510	No
No SS or S4	1	450MW HVDC	£43	£39		£4	£47	£0	£6		£47	Yes
	2	600MW HVDC	£84	£80		£44	£87	£44	£0		£87	No
	3	237MW HVAC	£0	£0		£0	£0	£120	£303		£303	No

Table 4: Least Worst Regrets (LWR) Summary – showing best performing CBA options

2.24. The CBA results show that the 600MW connection option is the best value for GB consumers only under the most ambitious generation scenarios (S3 & S4), where over 500MW of generation comes forward by 2030. However, as explained in paragraph 2.11, there is uncertainty associated with the higher generation scenarios and the likelihood of generation progressing to the levels predicted.

#### Inclusion of the Steady State generation scenario

2.25. SHE-T argues that the Steady State (SS) generation scenario should be removed from the CBA, as its Final Needs Case proposes that construction of its proposed Western Isles link be conditional on both Lewis Wind Power projects (up to 369MW) being successful in the CfD auction in 2019.<sup>28</sup> The SS scenario assumes only 222MW of generation on Western Isles by 2032. The effect of removing SS, as shown by the green rows in Table 4, is that the 600MW link becomes the LWR option, by a marginal amount; £3m on an NPV (Net Present Value) basis (difference between £90m and £87m).

2.26. We ran a sensitivity analysis of the effect of also removing the highest generation scenario (S4 – as shown by the orange rows in Table 4) as well as the SS generation scenario. The effect of removing S4 (638MW by 2032) and the SS scenario is that the 450MW link once again becomes the option of LWR, on an NPV basis over 40 years.

2.27. We do not agree with removing any of the generation scenarios from the CBA. The SS scenario is a plausible outcome in general and is one of the standard generation scenarios used by the ESO in LWR analysis. Removing plausible scenarios from any CBA makes the methodology less robust. Generation scenarios used in the CBA are intended to reflect a broad range of possible generation outcomes to enable us to understand the consumer impact of each possible outcome. This is intended to allow us to understand the option which

<sup>28</sup> The SS scenario assumes only 222MW of generation progresses by 2032 and as such it does not allow for the two LWP projects to progress, which have a combined capacity of up to 369MW.

exposes consumers to the least risk. SHE-T has provided no evidence that generation scenario S4 is any more likely to occur than SS.

2.28. Furthermore, SHE-T's proposal to remove the lowest generation scenario from the CBA risks creating unhelpful precedents that are not robust and/or are subject to gaming. For example, it could encourage future Needs Case submissions that propose conditions for approval that are marginally above the level of generation predicted by the lowest generation scenario. The effect of removing that lowest generation scenario from the CBA would be to disproportionately favour larger link sizes.

2.29. In practice, we consider that the CBA should be first run with a reasonably broad range of plausible generation scenarios (both low and high) to determine which size of link is optimal in general. Once that CBA has been run, it is then more appropriate to consider what levels of generation coming forward would appropriately justify a particular size of link. As part of its work on the CBA, the ESO also carried out analysis to understand the level of generation at which the 600MW link becomes the most efficient option. This shows that if 530MW or above of new wind generation comes forward on the Western Isles<sup>29</sup> the 600MW connection option would be the optimum size link for consumers, i.e. below 530MW of new generation on the Western Isles by 2032, a 450MW link is always the best option for consumers.

#### Further analysis

2.30. SHE-T and the ESO provided Ofgem with further analysis in January 2019. This analysis focused on a narrower range of generation, to try and focus in on the tipping point between the 450MW and 600MW option, i.e. the level of generation required to come forward by 2030 for the 600MW option to perform better for consumers than the 450MW option. It also considered the timing at which this further generation volume could come forward. The analysis also takes into account updates to the NOA<sup>30</sup> background and the FES 2018 scenarios.<sup>31</sup>

2.31. The resubmitted analysis aligns with the ESO's original tipping point analysis that, the 450MW option will be optimal for consumers unless significant levels of generation come forward (over 530MW of generation).

#### Probability Analysis

2.32. SHE-T has also developed an approach to assess the probability of future generation being built on the Western Isles with the intention of reducing the uncertainty associated with the possible generation scenarios.

2.33. SHE-T provided a scoring tool that scores projects against a given set of development criteria, for example assessing the status of planning consent or estimated grid connection costs. The output of the scoring tool is then used by the probability tool to assess all possible

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<sup>29</sup> Assuming a load factor of 43%.

<sup>30</sup> The NOA recommends which options and when a TO should invest in them so their transmission networks can manage risk in an uncertain world. NOA 2019/19 was published in January 2019 using the FES 2018.

<sup>31</sup> FES 2018 were launched in July 2018, the analysis for the Final Needs Case submission in August 2018 was carried out prior to these being released.

combinations of projects to calculate the overall probability of achieving levels of additional generation.

2.34. The results of SHE-T's analysis indicates that by 2030 there is a 66% probability that at least 160MW of generation in addition to the two LWP projects will come forward.<sup>32</sup>

2.35. Whilst this tool has provided an alternative methodology to assess the likelihood of further generation and is intended to provide a more objective assessment of the wider project pipeline, we are not comfortable that the analysis provided is robust enough to form the basis of our decision making. This is because the tool could be highly sensitive to subjective assumptions (such as assumptions made around uncertain connection costs or around potential economies of scale). As such we do not consider that the probability analysis should be used to inform our position on the Needs Case.

#### Testing the CBA results using alternative approaches

2.36. We have also considered other methods of assessing which of the transmission options is optimal for consumers. We considered an 'expected NPV' approach with an assumption of uniform probability across the scenarios, i.e. each generation scenario is given the same probability weighting. This approach does not change the optimal option for consumers of a 450MW link.

2.37. We also considered how 'probable' the highest generation scenario would need to be to change the 450MW option to a 600MW option. If the weighting of the most extreme high generation scenario (S4) is raised to 27% and the probabilities of the other generation scenarios are lowered accordingly, the optimal link changes from 450MW to SHE-T's preferred 600MW option. Based on our analysis of the generation scenarios, we do not consider that there would be any justification to assign a materially higher probability to the highest generation scenario, above that of the other generation scenarios.

2.38. In December 2018, we published a consultation on the Final Needs Case and Delivery Model for the Orkney transmission project.<sup>33</sup> Our consultation included reference to further work carried out with SHE-T and the ESO to consider an additional CBA to demonstrate whether building the Orkney transmission project benefits GB consumers.

2.39. This analysis has not been included in this consultation on the Western Isles Final Needs Case as the Orkney 'additional CBA' was primarily developed in the context of assessing the consumer benefit associated with building any link to Orkney, given the higher levels of uncertainty on what generation (if any) might come forward on Orkney and the lower levels of overall generation predicted on Orkney. In the case of Western Isles, given the relatively large generation capacity of the two LWP projects we are confident that building a link to connect those projects to the mainland will be in the interests of consumers. The more relevant question for Western Isles is what size of link would deliver the most benefit for consumers, for which purpose the constraints based CBA as described earlier in this chapter, is more suited.

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<sup>32</sup> 160MW is used as the number of reference because this represents the amount of generation required to take you from the potential 369MW of LWP projects to the 530MW of generation (tipping point identified by the ESO) where the 600MW link represents best value for consumers.

<sup>33</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/12/orkney\\_final\\_needs\\_case\\_consultation.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/12/orkney_final_needs_case_consultation.pdf)

## Technical design and costs

### Technical design

2.40. The technical design of SHE-T's proposed transmission link to the Western Isles has been reviewed by Ofgem.

2.41. We are comfortable with the technical design of both the proposed 600MW HVDC link and the 450MW HVDC link, and that the technical design of both would meet the export requirements that SHE-T has identified for the Western Isles in the early 2020s. We agree that a derogation from Section 2 of the Security and Quality of Supply Standard (SQSS) would be required to allow the project to proceed on a single cable basis.

2.42. We are comfortable that SHE-T has considered an appropriate range of technical options.

### Costs

2.43. The capital costs for the Western Isles transmission project are estimated by SHE-T to be £623.8m for the 600MW connection option and £596.4m for the 450MW option.<sup>34</sup> The capital costs originally included as part of SHE-T's Final Needs Case submission and updated at a later stage appear to be significantly higher than the costs we might expect. Our analysis is based on costs we have observed and determined through our regulatory arrangements for comparable transmission assets in other areas – specifically offshore transmission and interconnector assets.

2.44. Applying our benchmarking analysis for offshore transmission and interconnector assets, we would expect the capital costs for the Western Isles project to be significantly lower, in the range of £360m to £409m for the 600MW link and £317m to £361m for the 450MW link.

2.45. We are confident that the above concerns do not materially affect the needs case assessment of the options for the size of the link, as we have considered the costs of each option and our concerns about high estimated capital costs apply similarly to each option. We have also run sensitives to the ESO's CBA where different costs are considered and these do not change the option for the size of link recommended by the CBA.

2.46. We have also specifically considered the cost difference between the 450MW and 600MW connection options. SHE-T's initial analysis identified a cost difference of c.£46m between the options, which was used in the original CBA and is broadly in line with our expectations. In January 2019 SHE-T reduced this difference to £27m but our own benchmarking indicates that this cost difference may not be accurate. As shown in paragraph 2.44, we would expect the cost differential to be broadly £43m - £48m.

2.47. If we were ultimately to approve the Needs Case for the Western Isles project, our decision would confirm that SHE-T would be funded for the efficient delivery of the Western Isles transmission project under the delivery model we ultimately selected. This funding

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<sup>34</sup> The capital cost for the 450MW and 600MW was originally presented in the Final Needs Case by SHE-T as £616.8m and £662.9m, respectively. These costs have since been reduced by SHE-T to £596.47m and £623.8m as a result of further ongoing tender exercises for the 600MW link.

would not include any areas of cost that we did not consider to be efficient or appropriate to fund following our Project Assessment.

## **Our view on the needs case, including proposed conditionality**

2.48. Consistent with the Final Needs Case submitted, we consider that there is potential for the development of additional renewable generation on the Western Isles, that such potential generation cannot be realised without a new transmission link to the islands, and that the connection of additional renewable generation on the Western Isles could be beneficial to GB consumers.

2.49. Also consistent with the Final Needs Case proposal, we consider that, given uncertainty surrounding the generation background, it would be appropriate at this stage to make any approval of the project conditional on an appropriate level of generation coming forward.

2.50. However, based on our analysis of the CBA and the uncertainty surrounding the progression of generation projects, we do not consider that it would be in consumer's interests to approve a 600MW transmission link to the Western Isles based only on SHE-T's proposed conditionality that both LWP projects secure CfDs in the 2019 CfD auction. We consider that the Final Needs Case put forward by SHE-T risks consumers paying for a significantly underutilised link and thus may not represent the most beneficial option, (in terms of long term value for money), for current and future GB consumers. This is because:

- 2.50.1. The CBA submitted by the ESO shows that a 450MW link would be the most beneficial option for GB consumers if only the two LWP projects are built;
- 2.50.2. As indicated by the ESO's tipping point analysis, only if 530MW or more of generation progresses does the 600MW link become the optimal option for consumers;
- 2.50.3. There is little certainty that enough additional generation (beyond the LWP projects) would be built on the Western Isles to make a 600MW link the most beneficial option for GB consumers;
- 2.50.4. We asked SHE-T if they could provide greater assurances that consumers would be protected from the risk of funding a significantly oversized asset, for example by proposing an alternative level of conditional generation which could be used to justify a 600MW link, or by protecting consumers more directly from additional costs. However, following engagement with SHE-T, we have not received assurances that GB consumers will be protected from the risk of funding the additional costs of a 600MW link in the event that less than 530MW of generation is built; and
- 2.50.5. We have also considered scenarios whereby generators terminate their connection agreements and the assurances that can be sought from current financial liability arrangements for reinforcement. We have concerns that the standard arrangements on liabilities would not adequately protect consumers from the risk of funding a link that is significantly oversized relative to the levels of generation with a connection agreement. The standard arrangements tie the size of the liabilities faced by generators to their share of the costs of the



reinforcement, where 'their share' is determined based on the capacity specified within the generator's connection. As such, under those arrangements, any costs associated with capacity for the link that is not covered by connection agreements,<sup>35</sup> will be recovered more broadly from other users of the system (i.e. socialised) rather than from local generators.

2.51. In order to reasonably address the above concerns, while providing an enabling regulatory framework that allows for the appropriate size link based on plausible generation scenarios on the Western Isles, we propose the following positions in this consultation relating to the Needs Case submission:

We are minded to reject SHE-T's Final Needs Case submission for a 600MW HVDC transmission link to the Western Isles based on only the two LWP projects being successfully awarded a CfD in the 2019 allocation round.

Subject to no material changes to the information we have reviewed during our assessment, we would approve a resubmitted proposal for a 450MW transmission link to the Western Isles based on the two LWP projects being successfully awarded a CfD in the 2019 allocation round.

We would consider the case for a 600MW transmission link to the Western Isles if consumers were more appropriately protected from the additional costs of funding a potentially significantly oversized link.

### **Reasons for proposed position**

2.52. We are proposing the above positions based on our consideration of the following factors:

- 2.52.1. We do not consider that the LWP conditionality proposed by SHE-T is robust. It does not represent the point at which the 600MW option is the optimum size link for consumers. Whilst we recognise the potential to allow for some anticipatory investment to account for the potential for future generation to progress, the difference between the potential top end of 369MW of 'confirmed' generation and the level of generation required to make the 600MW link the best choice for consumers (530MW) is high;
- 2.52.2. Based on the CBA results, and subject to no material changes to the information we have reviewed during our assessment, we are confident that if 369MW of generation came forward, a 450MW link would represent the most beneficial solution for consumers;
- 2.52.3. We consider that this approach protects consumers from the risk of overpaying for an underutilised link, whilst allowing consumers and local stakeholders/generators to benefit from the connection of significant generation if the LWP projects come forward. This is because a 450MW option provides headroom for

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<sup>35</sup> As detailed in paragraph 2.11 this currently equates to just under 420MW of generation for Western Isles.

future generation to come forward in addition to the two LWP projects e.g. generators intending to bid into the 2021 CfD round; and

2.52.4. We recognise that wind farm generation output varies significantly depending on wind conditions and on average is significantly below full connected capacity, meaning the total capacity of generation connected can significantly exceed the 450MW capacity of the link without necessarily incurring constraint payments. As such, it can be more cost effective to constrain off small amounts of generation using a 450MW link, rather than spending additional money to build a larger 600MW link. Furthermore, it is possible that in practice significantly more generation will be able to utilise the link due to the intermittency of wind and the potential to use Active Network Management (ANM) and it is possible that in the 2020s cost effective and technically robust solutions are available to allow further additional generation to connect via the development of electricity storage solutions.

2.53. We nevertheless recognise that if significantly more generation comes forward on the Western Isles than can be efficiently connected using a 450MW link, there is a risk that this would lead to additional costs for consumers. These could be direct costs associated with constraint costs for generation on Western Isles, or associated with approval of the need for an additional subsea link to connect Western Isles to mainland Scotland. There could also be missed opportunity costs for not connecting additional renewable generation.

2.54. Furthermore, we have been informed that the approval of a smaller (i.e. 450MW) transmission link may impact the competitiveness of the LWP projects in the 2019 CfD auction. This is because of the higher TNUoS charges they would face. This might ultimately result in the projects failing to secure CfDs, which in turn would mean that the conditions for approval of the Needs Case would not be met.<sup>36</sup>

2.55. To mitigate against these potential risks, we would also consider a case from SHE-T for a 600MW transmission link to the Western Isles if consumers were more appropriately protected from the additional costs of funding a potentially significantly oversized link.

2.56. We welcome stakeholders' views on how consumers could be more appropriately protected from the additional costs of funding a potentially significantly oversized link if we approved a 600MW link.

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<sup>36</sup> As referenced in paragraph 2.5, TNUoS charges are already significantly higher on the Western Isles than mainland Scotland due to the distance from the main transmission network, but TNUoS charges for generators are also a reflection of the proportion of the capacity of the asset the generator would use. For example, a 100MW project using a 200MW transmission link would be responsible for 50% of the TNUoS charges whereas a 100MW project using a 400MW transmission link would only be responsible for 25% of the TNUoS charges.

## 3. Delivery model

### Section summary

In this chapter we set out our findings from an assessment of the Western Isles transmission project against the criteria for competition and conclude that the project meets the criteria. We consider potential delivery models for the Western Isles project. We set out a current preference to fund delivery of the Western Isles transmission project under the Competition Proxy model, should we ultimately approve a Needs Case for the project.

### Questions

**Question 7:** Do you agree with our assessment of the Western Isles project against the criteria for competition?

**Question 8:** Do you agree with our proposal not to competitively tender the Western Isles project using the SPV model or under our CATO framework unless there are significant delays to the delivery timelines?

**Question 9:** Do you agree that the Competition Proxy Model would deliver a favourable outcome for consumers relative to the existing SWW delivery arrangements?

**Question 10:** What are your views on the way in which we have applied project specific updates to the Competition Proxy Model methodology to account for the specific characteristics of the Western Isles project?

## Assessment of the Western Isles project against the competition criteria

3.1. As set out in the previous chapter, we are minded-to reject the current Needs Case proposal for the Western Isles transmission project.

3.2. However, in order to provide regulatory clarity and to mitigate against potential project delays, we have considered which delivery model is likely to deliver the best outcome for consumers in the event that we ultimately approve a Needs Case for the Western Isles transmission project.

### Overview of the criteria

3.3. We confirmed in our January 2018 and September 2018 updates on extending competition in transmission that we intend to consider the Special Purpose Vehicle (SPV) delivery model and the Competition Proxy Model (CPM) (alongside the SWW delivery arrangements, the default delivery model under RIIO-T1) for all future SWW projects that meet the criteria for competition and are subject to a needs case assessment during RIIO-T1.

3.4. The criteria for competition are:

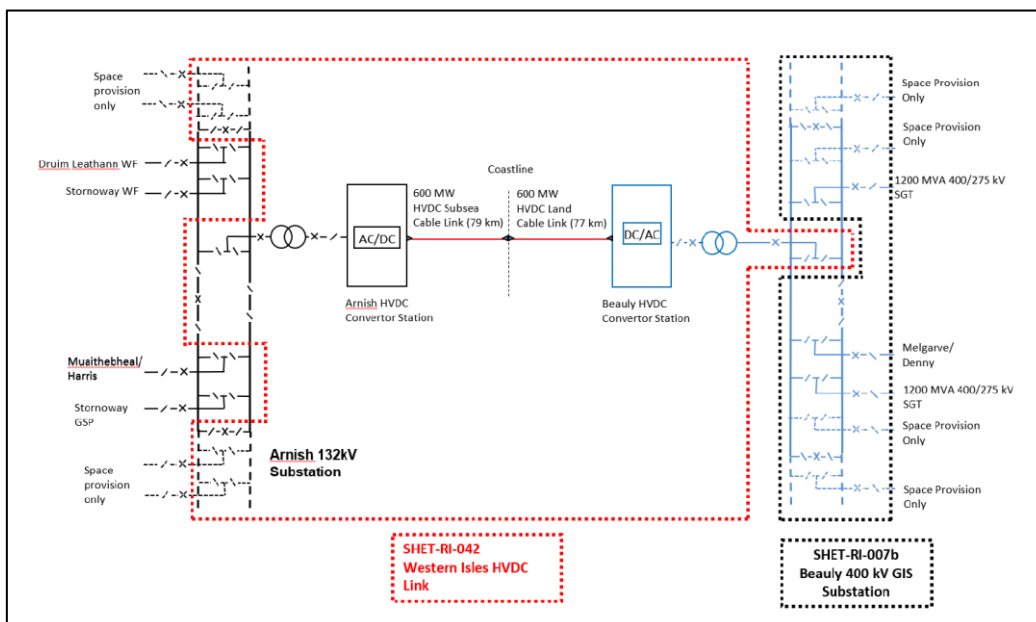
- 3.4.1. New – a completely new transmission asset or a complete replacement of an existing transmission asset.
- 3.4.2. Separable – the boundaries of ownership between the competed assets and other (existing) assets can be clearly delineated.
- 3.4.3. High value – a fixed threshold set at £100m of expected capital expenditure of a project at the point of our initial assessment of whether to tender the project.

3.5. We have also set out that we would consider other factors such as deliverability, transferability, and any project-specific considerations that impact the overall consumer benefits case.

### Criteria assessment

3.6. All of the works proposed by SHE-T in relation to the Western Isles transmission project are shown in the dashed red box in the detailed schematic diagram below. This includes a new 132/320kV substation and AC/DC converter station at Arnish, a new 320/400kV AC substation at Beauly, c.79km of subsea cabling and c.77km of onshore underground cabling. Our assessment of the Western Isles transmission project against the new, separable and high value criteria is summarised in the paragraphs below. We consider deliverability, transferability and any other project-specific considerations later in the chapter when we consider the consumer impact of potential delivery models.

Figure 2: Schematic diagram of the Western Isles transmission project



### New

3.7. Our view is that all of the Western Isles project as currently proposed by SHE-T (shown within the dashed red box in Figure 2), meets the new criterion.

### Separable

3.8. Our view is that all of the Western Isles project, as currently proposed by SHE-T, meets the separable criterion. We consider that project interfaces are clearly separable points (for example, substations), and therefore clearly manageable under existing industry arrangements.

### High Value

3.9. Our view is that the Western Isles project, as currently proposed by SHE-T, meets the high value criterion. The expected cost of the project, as detailed in paragraphs 2.43 – 2.47, significantly exceeds the £100m capex threshold.

## **Delivery models for the Western Isles transmission project**

3.10. As the project meets the criteria for competition, we consider below the SPV model and the CPM for the delivery of the Western Isles transmission project alongside the SWW delivery model, the default delivery model under RIIO-T1. Further detail on these models can be found on our website, including why we consider, in general, that they would deliver significant savings for consumers.<sup>37</sup> This Chapter considers the models as they might apply to the Western Isles transmission project.

3.11. We are not proposing that the Western Isles transmission project should be delivered under our CATO framework. Given delays to the introduction of enabling legislation, we expect it would be unlikely that we would be able to appoint a CATO in time to deliver the Western Isles transmission project to the contracted grid connection dates. If the delivery date for the Western Isles project were to change, we may review our position on the use of the CATO framework.

3.12. Our analysis, as outlined in our September 2018 Impact Assessment (IA), indicates that delivery of the Western Isles project through the SPV model could, in principle, represent the best overall value for GB consumers.<sup>38</sup> We expect that both the SPV model and the CPM could achieve financing savings relative to the SWW default delivery model under RIIO-T1. Compared to the CPM (and default delivery model under RIIO-T1), our expectation is that the SPV model has the potential to unlock additional savings for consumers due to competitive pressures in the supply chain, holistic end-to-end procurement and usage in the price control.

3.13. However, having reviewed the project's delivery schedule against our expectations of the time it would take to design and run an efficient SPV tender process for the Western Isles project, we have concerns as to whether the SPV model would be able meet the required October 2023 energisation date of the Western Isles link. This is because in order to align with the current delivery timescales, the SPV tender would need to have been completed by late 2019 or early 2020. If the delivery date for the Western Isles transmission project were to change, we may review our position on the use of the SPV model.

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<sup>37</sup> <https://www.ofgem.gov.uk/electricity/transmission-networks/competition-onshore-transmission>

<sup>38</sup> <https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission-and-impact-assessment>

3.14. Because of these deliverability challenges, **we do not propose that the SPV model should be used for the Western Isles transmission project.**

3.15. Given our position regarding the SPV model our assessment below focuses on the CPM relative to the SWW arrangements.

## **Potential application of the CPM to delivery of the Western Isles transmission project**

### Background

3.16. In January 2018 we published a report from our consultants Cambridge Economic Policy Associates (CEPA) on the rate of return for projects delivering new transmission assets (the CEPA report was published alongside our minded-to consultation on the delivery model for the Hinkley–Seabank (HSB) project).<sup>39</sup> A revised CEPA report was subsequently published in July 2018, alongside our HSB decision to reflect responses received to our January consultation on HSB.<sup>40</sup> The CEPA reports detail our methodology for setting the allowed returns for new, large and separable onshore projects, as well as for the construction of new offshore wind connections and interconnectors.

3.17. We decided to apply the CPM to HSB in the July 2018 Decision. Chapter 2 of that Decision addressed key challenges raised in relation to the CPM for HSB. Some of those points are also relevant to application of the CPM in general to other projects, including the Western Isles. This consultation on the Western Isles transmission project does not cover challenges raised previously on CPM where we consider that our views are appropriately represented in the July 2018 Decision.

3.18. In December 2018 we published our Consultation on the Final Needs Case and potential delivery models for the Orkney transmission project<sup>41</sup> where we set out our minded-to position to apply CPM to Orkney, should we approve the Needs Case. We also set out how the CPM would apply to the Orkney project. In Appendix 1 we set out our consideration of the additional points raised in response to the Orkney consultation which would also relate to any decision on the delivery model for the Western Isles transmission project.

3.19. The Update on the Competition Proxy delivery model (“CPM Update”)<sup>42</sup> sets out how we expect to apply the CEPA cost of capital methodology to projects that are subject to the CPM, and the extent to which we expect to consider project-specific adjustments.

### Application to the Western Isles

3.20. Below we set out how we have reached our indicative cost of capital range for the Western Isles project under the CPM, set out in Table 5.

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<sup>39</sup> <https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-minded-consultation-delivery-model>

<sup>40</sup> <https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-decision-delivery-model>

<sup>41</sup> <https://www.ofgem.gov.uk/publications-and-updates/orkney-tranmission-project-consultation-final-needs-case-and-potential-delivery-models>

<sup>42</sup> <https://www.ofgem.gov.uk/publications-and-updates/update-competition-proxy-delivery-model>

3.21. We are proposing to set the CPM parameters to be used in our assessment of the delivery model for the Western Isles project in a way which is consistent with the approach to that we used to set the indicative rates for Orkney and Hinkley-Seabank, except that we are proposing a minor adjustment in the low end of the estimated construction period cost of capital (the estimated operational period cost of capital remains the same for the Western Isles as for Orkney). This adjustment is due to the longer construction period of the Western Isles project relative to Orkney (4 years, relative to 3 years for Orkney). As a result, we consider that an iBoxx BBB-rated 3-5 year non-financial corporate debt index represents an appropriate top end of the range for the Western Isles project's cost of debt, with the iBoxx A-rated 3-5 year non-financial corporate debt index being used at the low end of the range. These parameters are outlined in full in Appendix 4.

3.22. We haven't included as part of this consultation a separate impact assessment (IA) document in relation to the application of the CPM specifically to the Western Isles transmission project. This is because we consider that;

3.22.1. Our analysis of the consumer benefits of using CPM, as outlined in this chapter, acts as an assessment of the impacts of the model; and

3.22.2. The September 2018 IA assessed the impacts of the SPV model and CPM across a range of different scenarios.

3.23. Table 5 below, details our assumptions regarding the financial parameters used for the purposes of our assessment of the potential benefits of the CPM for the Western Isles project. We have determined these financial parameters based on the project-specific updates to the CPM summarised in paragraph 3.21 (and set out more comprehensively in Appendix 4) and using the cost of capital methodology referred to above.

3.24. The RIIO counterfactual used in our analysis utilises rates from our December 2018 RIIO-2 consultation.<sup>43</sup> For the purposes of our modelling we have used the cost of equity range presented in the December 2018 consultation, forecasts of the 10-year trailing debt index,<sup>44</sup> and the proposed RIIO-2 levels of gearing (60%). More detail on this counterfactual can be found in Appendix 3 to this consultation.

3.25. The CPM rates specified are based on September 2017 market rates. We expect to publish later in March an annual update to the "Decision on the calculation of Interest During Construction (IDC) and the IDC rate to apply during 2019/20 for offshore transmission and future cap and floor interconnectors". We expect that update will also include revised rates for CPM, based on contemporary market rates. If we conditionally approve the need for the Western Isles project, we will re-run the methodology for setting the cost of capital for the Western Isles project under CPM to adjust for contemporary market rates. Ultimately, if we decide to apply the CPM, we would consult on the final point within the cost of capital range that we set for the Western Isles project through the Project Assessment process.

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<sup>43</sup> [https://www.ofgem.gov.uk/system/files/docs/2019/01/riio-2\\_sector\\_methodology\\_0.pdf](https://www.ofgem.gov.uk/system/files/docs/2019/01/riio-2_sector_methodology_0.pdf)

<sup>44</sup> Based on current ten-year trailing average adjusted for forecast movements in Government gilts

<b>Financial parameter</b>	<b>Construction cost of capital Low</b>	<b>Construction cost of capital High</b>	<b>Operations cost of capital Low</b>	<b>Operations cost of capital High</b>
<b>Cost of debt (nominal)</b>	1.85%	2.35%	3.00%	3.25%
<b>Gearing</b>	37.50%	37.50%	85.00%	80.00%
<b>Post-tax cost of equity (nominal)</b>	5.79%	9.43%	7.00%	8.50%
<b>Vanilla nominal WACC</b>	4.31%	6.78%	3.60%	4.30%
<b>Vanilla RPI-real WACC<sup>45</sup></b>	1.27%	3.67%	0.19%	1.26%
<b>Vanilla CPI-real WACC<sup>46</sup></b>	2.27%	4.68%	1.57%	2.25%

**Table 5: CPM Financial Parameters**

3.26. In order to obtain a robust estimate of the likely consumer savings produced by the CPM, we first modelled the likely revenue estimates of applying various cost of capital rates within the above range to the forecast Western Isles project costs through a project finance model. The project costs assumed are capital costs of £596.47m and £623.8m, for the 450MW and 600MW option respectively, and operational expenditure profile of £2.09m per annum for 450MW, and £2.18m per annum for the 600MW.<sup>47</sup> These figures are taken from SHE-T’s Final Needs Case submission, according to which construction would begin in 2020 and end in October 2023. In line with our published parameters for the CPM we assume full regulatory depreciation of the Western Isles project over a 25-year operational period.

3.27. We then compared these revenue estimates to those derived through applying the RIIO counterfactual referred to in paragraph 3.24 above. To robustly estimate benefits in this way required us to estimate the future levels of rates of return under the RIIO counterfactual.

<sup>45</sup> RPI is assumed to be 3%, other than at the low end of the operations cost of capital range, where is assumed to be 3.4%

<sup>46</sup> CPI is assumed to be 2%

<sup>47</sup> As highlighted in para 2.46, there is still some uncertainty surrounding the costs provided by SHE-T. The savings associated with CPM would change as a result of a CAPEX reduction and would be nearer to £11m - £24m for the 450MW and £15m to £31m for the 600MW connection option (based on CAPEX assumptions of £360m for the 450MW and £409m for the 600MW option).



3.28. Table 6 compares the total costs on a Net Present Value (NPV) basis under CPM and a RIIO counterfactual – using the high and low ends of both ranges based on CPM rates and rates for RIIO.

Connection Option		RIIO (SWW) Counterfactual	Competition Proxy
<b>450MW</b>	NPV of total cost	£544m - £572m	£499m - £550m
	Benefit of CPM	£22m - £45m	
<b>600MW</b>	NPV of total cost	£568m - £598m	£522m - £575m
	Benefit of CPM	£23m - £47m	

**Table 6: Benefits of CPM**

3.29. Based on this approach, using the financial parameters outlined in Table 5, our analysis of both the 450MW and 600MW link option indicates that we expect that CPM could deliver a saving in the region of £22m - £45m<sup>48</sup> (4% - 8% of NPV of the default delivery model under RIIO) for the 450MW link and £23m - £47m<sup>48</sup> (4% - 8%) for the 600MW link relative to delivery under the RIIO counterfactual. This range is derived based on considering the high and low ends of the RIIO counterfactual against the high and low end of our CPM range, shown above.

3.30. Comparing the mid-point of the CPM range to the high and low RIIO counterfactuals broadens the benefits to £21m - £51m for the 600MW option and £20m - £49m for the 450MW option. We consider that it is likely that the CPM will deliver savings greater than this on the Western Isles transmission project because;

- 3.30.1. The low end of the RIIO counterfactual assumes that the cost of equity remains at the very bottom of the RIIO-2 range indefinitely. We consider that this represents a relatively conservative (i.e. low value) view of cost of capital under future RIIO periods beyond RIIO-T2.
- 3.30.2. We do not consider that it is likely that a scenario would occur where we selected a point at the high or mid area of the CPM range whilst the rates under RIIO remain at the low end of our counterfactual. This situation would be likely to require us to set an operational cost of equity for the Western Isles project that is, and remains higher than the rest of SHE-T’s price controls over the same period. Given the comparative risk profiles between the operational period of the Western Isles project, and SHE-T’s wider portfolio of assets under the price control arrangements, we do not consider it logical to assume that this is likely to happen

3.31. We recognise that there is a possibility that GB consumers may pay marginally more, on average c.£1.6m for the 450MW and c.£1.7m for the 600MW, on an annual basis during the 25-year operational period of the CPM relative to the 45 year RIIO counterfactual. However, we consider that consumers will benefit overall by paying significantly less (on average c.£4m for the 450MW and c.£4.2m for the 600MW) annually beyond the 25-year operational period of CPM. We do not accept that the limited impact on intergenerational

<sup>48</sup> Figures are presented in NPV CPI-real terms.

equity transfer that the CPM may have is sufficiently material to justify not pursuing the overall level of savings available.

3.32. Under the CPM, the TO developing a project may, or may not, choose to pursue a project finance approach for the project in question. As explained in our September 2018 CPM Update, where a project finance approach is taken forward, our Project Assessment process will consider the additional efficient costs associated with pursuing such an approach. For the purpose of considering a scenario for CPM where implementation costs are high, we have assumed that the “high” additional implementation costs under the CPM could reach up to £1.2m plus 0.5% of capex of the project being taken forward under CPM. In the case of the Western Isles project that amounts to an NPV of c.£4.2m for the 450MW or c.£4.3m for the 600MW option (using SHE-T’s estimates for capital costs). We do not consider that these costs would undermine our benefits case for using the CPM on the Western Isles project for the reasons set out in paragraph 3.30.

3.33. Finally, we don’t anticipate that the CPM would result in any delays to project delivery. There is no requirement under the CPM for SHE-T to carry out materially different project delivery work in addition to that which it would undertake if the project were delivered under SWW.

3.34. Should we ultimately approve a Needs Case for the Western Isles project, we will consider the most appropriate delivery model at that time.

3.35. Nevertheless, we welcome views on our analysis above which suggests, on the basis of the information that we have seen, that delivery of the Western Isles transmission project under the CPM delivery model would deliver savings for consumers, whether considering a link size of 450MW or 600MW.

## 4. Next steps

### Section summary

This chapter briefly outlines our expected decision making timeline for the Western Isles transmission project.

- 4.1 Following the close of this consultation on 31<sup>st</sup> May 2019, and subject to consideration of responses to the consultation, we expect to publish further views on the Final Needs Case for the Western Isles transmission project in summer 2019. Depending on our views, we would expect to:
  - 4.1.1 either publish a decision or consult on a minded-to position on the Final Needs Case at that time (including if relevant any conditions we propose for final approval of the Final Needs Case); and
  - 4.1.2 confirm our minded-to decision on the delivery model that we intend to be used to fund delivery of the Western Isles transmission project, in the event that final approval of project need is confirmed. We may also confirm the next steps for the project that would apply depending on the delivery model chosen.

## Appendices

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## Appendix 1 – Consideration of points raised in response to consultation on the Orkney transmission project

1.1. Below we set out our consideration of the additional points raised in response to our statutory Consultation on the Final Needs Case and potential delivery models for the Orkney transmission project<sup>49</sup> which would also relate to the decision on the delivery model for Western Isles.

1.2. Within its response to the Orkney consultation, SHE-T emphasised the importance of ensuring that our analysis compares the indicative CPM cost of capital against the most up to date view of the RIIO counterfactual. We agree that this is the appropriate approach. For the analysis that supports this consultation, as referenced in Chapter 3, paragraph 3.24, we have used the updated rates referenced in the RIIO-2 Sector Specific Methodology.<sup>50</sup> As this information was not available at the time the Orkney consultation was published, we were not able to include it in that publication.

1.3. SHE-T's response also cautioned that forecast data suggests that over the likely period of construction for the three proposed Scottish island links, the cost of debt rate used under RIIO is likely to reduce further. In contrast it states that the equivalent cost of debt spot rate that informs the operational period cost of debt under CPM is expected to increase by 39-30<sup>51</sup> basis points (bps). It argued that this, along with the other concerns it has previously raised, significantly reduces the materiality of the likely savings that are likely to be achieved through CPM in comparison to RIIO for these projects.

1.4. As specified in this document, and also in our previous publications on CPM, the benefits case modelling is used purely to determine an indicative level of potential benefit. This indicative benefit is derived from rates for both CPM and RIIO that are liable to change over time. We do not consider that the materiality of the potential change is as material as referenced by SHE Transmission in their response.

1.5. However, as referenced in Chapter 3, paragraph 3.25, we will be updating the relevant analysis that feeds into the CPM rates to ensure alignment of timing with the prevailing RIIO rates. We propose, as part of this process, for our analysis to also consider how the rates specified for the operational period may change over the duration of the construction period.

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<sup>49</sup> <https://www.ofgem.gov.uk/publications-and-updates/orkney-tranmission-project-consultation-final-needs-case-and-potential-delivery-models>

<sup>50</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/12/riio-2\\_finance\\_annex.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/12/riio-2_finance_annex.pdf)

<sup>51</sup> 39bps at the low end of the Cost of Debt range, 30bps at the high end.

## Appendix 2 – Reinforcement Corridors

SHE-T's Final Needs Case submission considered 48 link options across 9 geographical corridors using a range of AC and DC technology. Gravir – Dundonnell – Beaully: This route formed the basis of the 2012 and 2013 Needs Case submissions when contracted generation was located mainly in the south of Lewis. The route comprises 80 km subsea between Gravir – Dundonnell and 77 km onshore between Dundonnell and Beaully; a combined total length of 157 km.

- Arnish – Dundonnell – Beaully: Same as corridor 1, but instead of connecting at Gravir in the south the route connects in the north at Arnish near Stornoway. The route comprises 79 km subsea between Arnish – Dundonnell and 77 km onshore between Dundonnell and Beaully; a combined total length of 156 km.
- Gravir – Dounreay – Spittal: The route comprises 197 km subsea between Gravir – Dounreay and 27 km onshore between Dounreay – Spittal; a combined total length of 224 km.
- Gravir – Hunterston: The route comprises 487 km subsea between Gravir – Hunterston and 5km onshore at Hunterston; a combined total length of 492 km.
- Gravir – Deeside: The route comprises 700 km subsea between Gravir – Deeside and 35km onshore at Deeside; a combined total length of 735 km.
- Arnish – Cassley – Beaully: The route comprises 87 km subsea between Arnish – Cassley and 133 km onshore between Cassley – Beaully; a combined total length of 223 km.
- Stornoway – Ardmore – Fort Augustus: The route comprises 31km subsea between Harris – Ardmore and 218 km onshore between Stornoway – Harris and Ardmore – Fort Augustus; a combined total length of 249 km.
- Arnish – Cassley – Lairg: The route comprises 87 km subsea between Arnish – Cassley and 60km onshore between Cassley – Lairg; a combined total length of 147 km.
- Stornoway (subsea bypass of Skye) – Fort Augustus: The route comprises 130 km subsea between Stornoway – Kyle of Lochalsh and 80 km onshore between Kyle of Lochalsh – Fort Augustus; a combined total length of 210 km.

## Appendix 3 – RIIO Counterfactual

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3.1 The benefits case for using the CPM has been established considering the Net Present Value (NPV) impact of the Western Isles project if delivered under the CPM against a counterfactual of the project being delivered under SWW and the prevailing cost of capital under RIIO.

3.2 For the counterfactual cost of debt under RIIO we have used the latest relevant input data from the latest Price Control Financial Model (PCFM) for the RIIO-T1 period. For the RIIO-T2 period and beyond we have applied a forward looking forecast of the 10-year trailing average cost of debt index that currently feeds into NGET and SPT's RIIO-T1 price controls out across the full length of the 45-year RIIO depreciation period. We have used forecasts of the 10 year trailing average cost of debt up to and including 2039/40. We have assumed the rate in 2039/40 applies for all subsequent years. The rates are based on Ofgem's internal analysis of the forward yield curve in August 2018.

3.3 Our modelling of the RIIO counterfactual does not estimate the future rates using the current SHE-T cost of debt index. The current SHE-T index applies an average cost of debt over a 10-year trailing average period that is weighted based on additions to SHE-T's Regulatory Asset Value in each of the 10 years. This would require us to estimate SHE-T's investment programme over the next 45 years (assuming the current weighted average approach continued to be applied after RIIO-T1). We do not consider that this approach would provide more credible estimates of future rates for the purposes of this analysis.

3.4 Currently, SHE-T's Cost of Debt index tracks marginally below the one used for NGET and SPT. We have applied this reduction to the remaining years of RIIO-T1. In the longer term beyond RIIO-T1 we consider it appropriate to assume, for the purpose of this indicative estimate, that the two indexes will average out to comparable levels.

3.5 For the counterfactual cost of equity under RIIO, we have used the latest relevant input data from the latest Price Control Financial Model (PCFM) for the RIIO-T1 period, 7.00%.<sup>52</sup> As the cost of equity for the RIIO-2 period is yet to be determined, we have run our analysis with both the top and bottom of the indicative RIIO-2 equity range applied during the years of RIIO-T2 (2021/22 to 2025/26) which was consulted on in December 2018 as part of the RIIO-2 framework consultation. These figures are 5.00%<sup>53</sup> and 4.00%<sup>53</sup> respectively.

3.6 Our updated analysis also includes a counterfactual cost of equity view of future RIIO price controls beyond RIIO-2. During this period, for cost of equity our analysis has been run assuming that the cost of equity could remain at the top or bottom of the indicative RIIO-2 range. In practice we might expect that the current low observed market costs of equity (and debt) may increase over time (or at least fluctuate significantly over time), leading to a potential upwards adjustment of the RIIO cost of capital at some point in the future. However, at this point in time, there is limited evidence to suggest that it will not remain in line with the RIIO-2 range in the long-term.

3.7 These RIIO counterfactual figures should not be read as any confirmation of the rates applicable for RIIO-2 (or subsequent RIIO periods) – we have used them solely as a means of ensuring that our benefits case is sufficiently conservative to give comfort that the

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<sup>52</sup> Figures are presented in RPI-real terms

<sup>53</sup> Figures are presented in CPI-real terms

implementation of the CPM is likely to provide benefits for consumers once the final cost of capital is determined.



## Appendix 4 – Further detail on CPM

### Project specific updates to CPM

4.1 The CPM involves setting a largely project-specific set of regulatory arrangements to cover the construction period and a 25-year operational period (rather than for a portfolio of assets under a price control settlement).

4.2 The CPM assumes that the full construction debt is raised upfront and then drawn down upon as expenditure is incurred on the project. The allowed cost of capital is applied to the annual allowed expenditure during construction. This allowed expenditure is determined through our detailed assessment of the project costs, which is referred to as the Project Assessment process. By the end of the construction period, the full construction period capital costs allowance will be uplifted by the annual construction cost of capital to determine a total capital cost value at the end of construction. This capital cost value, minus any allowed revenue recovered during construction, will be recovered by the TO over the following 25-year operational period with the operational cost of capital applied.

4.3 An annual operating cost allowance will apply during the operational period. We intend to add this annual allowance to the annual recovery of the construction capital cost value across the full 25-year revenue term. The annual revenue allowance during the operational period will be based on this total amount including returns distributed evenly on an NPV neutral basis across the full revenue term.

### Setting the cost of capital under CPM for the Western Isles project

4.4 We consider that it is most appropriate to fix the allowed construction cost of capital at Project Assessment (see 'Cost assessment and treatment') but only set an indicative cost of capital for the operational period at that time. We will then fix the cost of capital for the operational period at the completion of construction.

4.5 We determine the level of cost of capital that TOs are able to recover from consumers during the construction and operational phases of the project. However, we do not mandate that the assumed capital structure within that methodology is followed in the delivery of the project. For example, if a TO wishes to implement a higher project gearing during construction, and allow for a higher return on equity, this would be permitted, as long as it does not result in any consumer detriment relative to the structure assumed within our cost of capital methodology.

### Cost of debt during construction

4.6 Under the CPM we will set the cost of debt during the construction period based on the iBoxx non-financial corporate debt indexes cross-checked against the GB infrastructure index. As explained in the CPM Update, we will use the index covering the debt tenor that best aligns with the construction period of the project. SHE-T has indicated that it anticipates a construction period of just under 4 years for the Western Isles project. The available iBoxx indexes allow us to consider a 3-5 year debt tenor.

4.7 The CPM Update explains that our central assumption is that the BBB-rated debt is the appropriate benchmark for projects that meet the criteria for competition. We therefore consider that the iBoxx BBB-rated 3-5 year non-financial corporate debt index represents an appropriate top end of the range for the Western Isles project.

4.8 Our cost of capital framework for new assets includes an allowed cost of debt for the construction of new interconnector links. The lower end of this range is benchmarked at the iBoxx A-rated 3-5 year non-financial corporate debt index. Given the similarity in technology and construction challenges between the Western Isles project and interconnector links, we consider that this represents a suitable benchmark for the bottom end of the range for the Western Isles project.

**Table A4.1: Cost of debt during construction**

	<b>Low</b>	<b>High</b>
Index used:	A-rated 3-5 year non-financial corporate	BBB-rated 3-5 year non-financial corporate
Indicative value (nominal):	1.60%	1.85%
Transaction costs:	0.25%	0.50%
Cost of debt (nominal):	1.85%	2.35%
Cost of debt (CPI-real):	-0.15%	0.34%

**Cost of equity during construction**

4.9 We propose that the cost of equity during the construction period under the CPM for the Western Isles project will follow the framework set out in the CPM Update. Under this approach, the cost of equity is derived from benchmarks of the following building blocks of the cost of equity during construction:

- Risk-Free Rate
- Total Market Returns
- Equity beta ( $E\beta$ )

### Risk-free rate (RFR)

4.10 RFR is a measure of the market-derived level of expected return for an investment that faces no risk. In line with the CPM Update, we propose that the RFR for the Western Isles project construction period will be benchmarked at the 10-year trailing average of the 10-year UK gilt rate. We consider that using the 10-year gilt rate provides sufficient protection from potentially more volatile shorter terms rates.

4.11 The RFR used in our analysis of the Western Isles project is 0.50% at the low end, and 0.75% at the high end.

### Total Market Returns (TMR)

4.12 TMR is a measure of the average expected equity return within the market. We propose that for the Western Isles project, this will, in line with our CPM Update, be set using a Dividend Growth Model (DGM). This approach is based on prevailing returns on the London stock market (FTSE) all-share index at the point the final allowances are set for the project. Estimated growth rates are then used to derive the extent to which these returns may change over the duration of the construction period.

4.13 This approach is used on the Western Isles project to reflect that current market expectations at the point the cost of capital is determined will be more relevant for a one-off transaction to cover the construction period than a longer-term average that has been traditionally used in the past for price control cost of capital that applies to a wider portfolio of assets.

4.14 The nominal TMR used in our analysis is 7.85% at the low end, and 8.50% at the high end.

### Equity Beta (E $\beta$ )

4.15 E $\beta$  is a measure of how much the specific assets under consideration are expected to vary from the TMR. In the case of the Western Isles project, the low end of the range is derived from the E $\beta$  benchmark used in the setting of the cost of capital for SHE-T's RIIO-T1 price control determination. The high end of the E $\beta$  range is derived from analysis of how construction companies, as a comparator to the delivery of construction projects such as the Western Isles project, compare to the expected return in the FTSE All-share index.

4.16 The high end of the E $\beta$  range for the Western Isles project we apply is consistent with that applied to offshore transmission to reflect the specific construction risks relating to subsea working (this represents a small uplift relative to the Hinkley - Seabank project).

4.17 The E $\beta$  used in our analysis is 0.72 at the low end, and 1.12 at the high end.

## Overall cost of equity during construction

Table A4.2: Overall cost of equity during construction

	Low	High
Total Market Returns (TMR)	7.85%	8.50%
Risk-free rate (RFR)	0.50%	0.75%
Equity risk premium (TMR – RFR)	7.35%	7.75%
Equity $\beta$ :	0.72	1.12
Nominal post-tax Cost of Equity ((Equity risk premium $\times$ Equity $\beta$ ) + RFR)	5.79%	9.43%
Cost of Equity (CPI – real)	3.72%	7.28%

## Gearing during construction

4.18 Evidence from specific regulated infrastructure construction projects suggests that, whilst the gearing during construction is likely to be lower than during operation, a level far beyond 65% has been achieved in other regulated infrastructure projects. This is a significantly higher level of gearing than seen in the construction and engineering companies used in the cost of equity analysis. Regulatory protections allow for a higher level of gearing to be achieved than is observed in the comparator set. Therefore, a point between the higher gearing levels seen in regulated projects and the observed level from the equity comparator set has been selected to set a level of gearing during construction of 37.5%.

## Cost of debt during the operational period

4.19 The cost of debt range for the operational period of the Western Isles project is derived from the average across the iBoxx 10-year plus index at A-rating and the same index at BBB-rating. This is the same methodology that we will apply to HSB and as outlined in the Orkney consultation.

	Low	High
Cost of Debt (Nominal)	3.00%	3.25%
Cost of Debt (CPI –real)	0.98%	1.23%

**Table A4.3: Cost of debt during the operational period**

### Cost of equity during the operational period

4.20 The initial cost of equity range for the operational period of the Western Isles project is based on the rates observed in the winning bids under the OFTO regime in Tender Rounds 2 and 3.

	Low	High
Post-tax Cost of Equity (Nominal)	7.00%	8.50%
Post-tax Cost of Equity (CPI real)	4.90%	6.37%

**Table A4.4: Cost of equity during the operational period**

### Gearing during the operational period

4.21 Evidence from the OFTO regime supports the view that a higher level of gearing than the 55% assumed in RIIO-T1 for SHE-T is achievable in the operating period of the Western Isles project. The operations period gearing used in our analysis is 85% at the low end of the WACC range, and 80% at the high end.

### Adjustments to the arrangements to facilitate a Project Finance approach

4.22 The cost of equity benchmarks from the OFTO regime reflect the project finance approach that is generally followed under that regime. Whilst we do not consider that the cost of capital ranges for either the construction or operational periods under the CPM specifically require a project finance approach being taken, we are open to funding the efficient costs of securing a project finance approach.

4.23 Specifically, our Project Assessment will consider any costs associated with setting up an SPV for the project, and any necessary reserve accounts or other guarantees required to implement such an approach. Efficient, evidenced costs will be allowed for in the project revenue allowance rather than through the project’s cost of capital. Any such decision will be on a project-by-project basis and will only be considered where the developing TO specifically confirms its intention to pursue a project finance approach.

### Allowed revenue during the construction period

4.24 Evidence from our previous work developing the SPV model and the CATO regime suggested that there can be consumer benefits in allowing revenue during construction for larger projects with extended construction periods. These benefits come from reducing the cost of capital by reducing the cash-flow limitations on the developer. For this reason, for

projects under the CPM that we consider require a construction period of over 4 years (excluding pre-construction activities), the CPM will allow for revenue during construction. As the construction period of the Western Isles project is expected to last c.4 years, we currently consider that it is not appropriate to allow for revenue to be recovered during the construction period of the Western Isles project. However, we set out in our recent SPV model consultation that we would consider the case for revenue during construction where 'the risk profile is such that investors may require a return during the construction period in order to bid efficient financing costs', so would welcome views as to whether the risk profile for the construction period of the Western Isles project merits revenue during construction.

### **Adjustments for inflation**

4.25 Consistent with the principles under RIIO-T1 and under the OFTO regime, the revenue allowance for the Western Isles project under the CPM would be adjusted for inflation. In RIIO-T1 and in OFTOs to date the inflationary adjustment is tied to the Retail Price Index (RPI). Since the Government now uses the Consumer Price Index (CPI or CPI-H) to measure inflation, other regulators, such as Ofwat, have proposed future shifts (or partial shifts) towards the use of a version of CPI to track future adjustments for inflation. For the Western Isles project, we propose to align the approach taken for the project with the wider approach that is ultimately taken forward for RIIO-T2. We propose to confirm the use of CPI, CPI-H or RPI as part of our Project Assessment process for the Western Isles project.

## **Wider regulatory arrangements under the CPM**

### **Assessment of efficient costs**

4.26 The cost assessment process under the CPM will have three stages. It will consist of:

- a Project Assessment before construction begins,
- annual reporting during the construction period, and
- a Post-Construction Review when construction is completed.

4.27 This section outlines the detail of each of those stages and provides information on how the sharing factor will be applied.

#### Project Assessment (PA)

4.28 Under the CPM we intend to formally review and set cost allowances at PA. Capital cost allowances will be finalised at the PA, subject to the outcome of the annual reporting process and Post-Construction Review (PCR), which are explained later in this chapter. Provisional allowances for operating costs will also be set at the PA, before being finalised at the PCR. We currently expect SHE-T to present their PA submission to Ofgem only when the conditions of approval have been met.

4.29 Capital costs will be formed of controllable firm costs that have been agreed (either incurred or forecasted), and risk and contingency costs that are estimates.

4.30 We will also determine the exact value of the sharing factor at the PA. This will be contingent on the risk costs that SHE-T submits as part of the PA. Paragraphs 4.46 – 4.48 of this Appendix outline how we intend to apply the sharing factor.

4.31 Our assessment of the firm capital costs will include the following elements:

- consideration of the suitability of the tender processes and subsequent award of contracts;
- use of benchmarking, where applicable, as a signpost exercise to establish the efficiency of the costs; and
- detailed review of the submitted firm capital costs on an overall and component basis.

4.32 As part of annual reporting and the PCR, we will assess the actual spend in relation to firm costs to ensure that actual spend is in line with the cost allowances set at PA.

4.33 We expect that the Western Isles project will have areas of cost uncertainty relating to both risk-related expenditure or contingency costs. The uncertain nature of these cost areas is one of the reasons why the capital allowance set at the PA will be reviewed annually and at the PCR.

4.34 At PA we will also identify risk costs which we do not consider should be funded up front. This could include risks that are unlikely to occur, but that would be likely to have a large impact, if they did occur. It could also include other risks that are difficult or inefficient to quantify up front. These “qualifying risks” will be treated as part of the PCR.

4.35 As part of annual reporting and the PCR, we will assess the actual spend in relation to these costs and update the allowances accordingly.

4.36 We propose to set an indicative operational cost allowance at PA based on an efficiency assessment of SHE-T’s proposals. This will provide SHE-T with a degree of confidence as to what cost allowance to expect during the operational period. This will include an assessment of SHE-T’s proposed inspection and maintenance strategy for the assets once built. We propose to finalise the operational cost allowance at the PCR unless we determine from evidence provided by SHE-T that those costs can be clearly and accurately determined at the PA.

#### Annual Reporting

4.37 We propose that SHE-T will submit annual reports during the construction phase. The annual submission will include evidence of the expenditure during construction and detail about any costs that have varied from the allowances set at the PA. These costs will need to be well-evidenced and well-documented in the same reporting year in which they occur.

4.38 We expect SHE-T’s annual report submission to be evidence-based. SHE-T will be responsible for demonstrating that decisions taken in response to such cost variations were efficient.

4.39 Furthermore, the link between these cost variations and the risk profile changes should be noted within the annual report submission.

#### Post-Construction Review (PCR)

4.40 The PCR will serve three main functions:

- assess whether any qualifying risks from the PA have eventuated, and, if so, establish the efficient level of funding under the terms of the CPM (the costs associated with these risks will not be subject to the sharing factor);
- reconcile all of the remaining actual costs incurred during construction, which will have been reviewed by Ofgem during the annual reporting, against the allowances set at PA (the sharing factor referred to in paragraphs 4.46 – 4.48 will be applied to underspends and overspends on each individual cost item); and
- finalise the ongoing operational costs for the project.

4.41 We consider that this approach to setting cost allowances for the project will ensure that SHE-T is appropriately incentivised to minimise costs of the kind it can control, whilst avoiding SHE-T receiving windfall gains or suffering losses from risks it cannot control.

4.42 The result of the PCR would be an update to cost allowances in SHE-T's licence, which will represent the values for the 25-year operational period of the Western Isles project.

4.43 We would expect to start the PCR process at the earlier of:

- 90-95% spend committed;
- one year after the delivery date for the Western Isles project set out in SHE-T's licence; or
- at any point during construction when it becomes apparent that the Western Isles project will be materially delayed due to factors which are beyond SHE-T's control.

4.44 If qualifying risks eventuate after PCR submission by SHE-T but before we reach a decision, we might allow inclusion of the associated cost impacts into the PCR up to a certain cut off point. This cut off point will be specified as part of the PA, to ensure that there is no unreasonable delay to the PCR process.

4.45 It is possible that some of the remaining construction works might be exposed to certain risks beyond the conclusion of the PCR. We would consider providing an ex-ante allowance for managing these risks as part of the PCR, but only where SHE-T is able to provide sufficient evidence that a material level of risk remains, and that it remains outside of its control.

### **Sharing Factor**

4.46 We propose that SHE-T will share underspend or efficient overspend of the cost allowances that we set at PA with consumers. The sharing factor on these costs will be applicable to each specific cost item as opposed to the total risk pot, and will be assessed on a case-by-case basis. This will retain the incentive on SHE-T to drive down the construction costs. Under CPM, SHE-T would not face the same natural commercial pressure to limit its cost exposure as offshore windfarm or interconnector developers.

4.47 No sharing factor will be applicable to expenditure associated with the qualifying risk costs set out in paragraph 4.34 of this Appendix. For those events SHE-T will receive full



funding for the costs providing that those events are eligible for funding under the PCR and the costs are efficiently incurred.

4.48 We propose that the exact calibration of the sharing factor will be determined at the PA. Whilst our starting expectation is that it will be set at a similar level to currently in place under RIIO-T1, broadly 50%, the final calibration will be contingent on the proportion of the total costs that SHE-T submits as part of the PA that we determine should only be funded through the PCR rather than via an ex-ante allowance.

### **Treatment of late delivery**

4.49 SHE-T's licence will include a specified date by which the Western Isles project must be delivered. If SHE-T does not deliver the Western Isles project by this date, in line with our usual processes, we would consider whether any late delivery against this date constituted a breach of the licence condition and whether to consider enforcement action. In considering whether this is the case or not, we would follow our usual processes and policies for enforcement.<sup>54</sup>

4.50 Irrespective of whether any delay is treated as a breach of licence requirements, we propose that additional costs incurred during a delay will not be reflected in the revenue allowance during construction. Subject to the arrangements set out in the preceding section, only unavoidable costs incurred during delays will be reflected in the revenue stream and recovered over the 25-year operational period. Where it can be evidenced by SHE-T that a construction delay was unavoidable and outside of its control, SHE-T would be able to earn the allowed construction cost of capital during the length of the delay.

4.51 The latest point at which the PCR will be triggered is one year following the delivery date for the Western Isles project set out in SHE-T's licence. This will provide an opportunity to assess the impact of any delays and ensure that where delays have not been caused by SHE-T, that it remains no better or worse off as a result of the delay.

4.52 Our proposed treatment of late delivery is directly comparable to the approach undertaken in the Cap and Floor Interconnector regime.

### **Incentives – operational period**

4.53 Of the current incentives in place under RIIO, we expect that the following would be applicable to the operational period of the Western Isles project, as follows:

- Reliability incentive (Energy Not Supplied)
- Stakeholder satisfaction output
- Incentive in respect of SF6

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<sup>54</sup> A copy of the guidelines can be found here:  
[https://www.ofgem.gov.uk/system/files/docs/2016/12/enforcement\\_guidelines.pdf](https://www.ofgem.gov.uk/system/files/docs/2016/12/enforcement_guidelines.pdf)

- Network Innovation Allowance
- Network Innovation Competition

4.54 Under SWW the Western Isles project assets are likely to contribute towards SHE-T's overall performance across their portfolio of assets, against the first three incentives above. These three incentives in combination reflect a comparable balance of risk/reward with the operational incentives that apply to OFTOs. We therefore consider that under the CPM it would be appropriate for the Western Isles project assets to contribute towards the first three incentives above.

4.55 Under those arrangements the annual revenue allowances for the Western Isles project would be included in the calculation of maximum up and downside exposure to these incentives during the operational period of the Western Isles project. Performance against these incentives would be reported and rewarded or penalised as part of SHE-T's overall price control arrangements. It is possible that there may be material changes to the RIIO incentives that apply to the Western Isles project before we finalise the operational cost of capital and cost allowances for the Western Isles project at the end of construction. If this happens, we will make adjustments at the PCR to how those incentives apply to the Western Isles project to ensure they continue to reflect a comparable balance of risk/reward with the operational incentives that apply to OFTOs.

4.56 Under standard project finance arrangements projects are typically subject to specific operational period performance incentives that can be directly measured for that project. As set out in paragraph 3.29 of the main document, if SHE-T finances the Western Isles project through project finance, it may request a licence modification for the Western Isles project to allow the application of project-specific operational period performance incentives for the Western Isles project. This might include for example a project-specific availability incentive for the Western Isles project. In considering any such request, we would want to ensure that any project-specific incentives for the Western Isles project were directly measurable and reflected a comparable balance of risk/reward with the operational incentives that apply to OFTOs.

### **Cost reopeners – operational period**

4.57 Similar to OFTOs and Interconnectors, the CPM will include a cost reopener mechanism to compensate SHE-T for low probability, high impact events that SHE-T cannot control (e.g force majeure events) that trigger a sufficient increase in opex costs. The exact threshold we set for reopening the opex costs will depend upon the quantum and nature of the opex costs identified at PA, and will likely be proportionate to the threshold set under the OFTO regime. SHE-T would be able to make a claim for any efficiently incurred additional costs beyond the relevant threshold where a qualifying event occurs during the operational period.

4.58 In addition, in line with the OFTO regime, the CPM for the Western Isles project will provide protection against certain unanticipated changes in law. Under these arrangements SHE-T would be able to claim for material increases in costs associated with specific changes in law that impact directly on the cost it incurs on the Western Isles project.

### **Additional capex requirements – operational period**

4.59 During the revenue term it is possible that the Western Isles project assets in place will need to be upgraded to accommodate additional capacity or connections. Where any upgrade is demonstrated to be needed, and the upgrade is forecast to meet the competition

criteria (i.e. the upgrade is new, separable and high value), we expect the regulatory treatment will mirror the prevailing arrangements in place at the time. This could mean the CATO, SPV model or the CPM are implemented to deliver the upgrade.

4.60 Where such a network upgrade is demonstrated to be needed but does not meet the criteria for competition, we propose setting a cost allowance for the work based on prevailing RIIO arrangements and market conditions at the time the cost allowance is set.

#### **Identifying the Western Isles project costs – operational period**

4.61 It will be important to ensure that costs associated with the Western Isles project assets incurred during the construction and operational periods are identifiable as separate from the remainder of RIIO-T1 and any future price controls. This will ensure that costs are appropriately captured as relating to the Western Isles project, rather than the wider RIIO portfolio. Where it is efficient to fund the Western Isles project-specific operational costs through an allocation of cost from a wider recorded cost covering work within RIIO, we will expect SHE-T to propose and adhere to a clear and consistent allocation approach.

## Appendix 5 - Privacy notice on consultations

**Delete this box when producing your document.**

**Instructions:** Please edit the content of the generic privacy notice provided below to take account of the specifics of your consultation.

Contact the Data Protection Officer [dpo@ofgem.gov.uk](mailto:dpo@ofgem.gov.uk) if you are unsure about any of the information to be provided to those responding to your consultation.

### 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](mailto: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

***(Include here all organisations outside Ofgem who will be given all or some of the data. There is no need to include organisations that will only receive anonymised data. If different organisations see different set of data then make this clear. Be a specific as possible.)***

#### 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 ***(be as clear as possible but allow room for changes to programmes or policy. It is acceptable to give a relative time e.g. 'six months after the 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 3<sup>rd</sup> 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** (Note that this cannot be claimed if using Survey Monkey for the consultation as their servers are in the US. In that case use “the Data you provide directly will be stored by Survey Monkey on their servers in the United States. We have taken all necessary precautions to ensure that your rights in term of data protection will not be compromised by this”.

**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.** (If using a third party system such as Survey Monkey to gather the data, you will need to state clearly at which point the data will be moved from there to our internal systems.)

**9. More information** For more information on how Ofgem processes your data, click on the link to our [“Ofgem privacy promise”](#).