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Decision

Decision on our project assessment for the Hinkley-Seabank electricity transmission project

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This document confirms our decision on our project assessment of the Hinkley-Seabank electricity transmission project. In particular, it sets out our final determination of the efficient capital costs that we will allow National Grid Electricity Transmission (NGET) to recover for the delivery of the project.

Alongside this decision, we have also published our decision on the delivery model for the project.

Contents

Executive summary

Summary of this decision

This document confirms our decision to provide National Grid Electricity Transmission (NGET) with a total capital cost allowance of £655.7m for the delivery of the Hinkley-Seabank (HSB) project.[1]

This is a reduction of £60.0m on the costs submitted by NGET for the project. The reduction comprises:

- a £34.0m reduction in the up-front contingency allowance for the project;
- a £12.3m reduction in relation to HSB's overhead line works, specifically associated with the construction and installation of T-Pylons;
- a £8.2m reduction in NGET's project management costs;
- a £3.2m reduction in costs associated with works that will be undertaken by the local Distribution Network Operator (DNO);
- a £2.2m reduction in NGET's assumptions regarding land compensation and legal fees; and
- a £0.1m reduction that relates to an unlet telecommunications contract.

Background

Following our approval of the needs case for the HSB project in January 2018,[2] our October 2019 project assessment consultation focused on our views on the economic and efficient capital costs for delivering the project.[3]

As part of that consultation, we proposed a £79.8m reduction on the costs submitted to us by NGET.

Nearly all respondents to that consultation provided views on our position on T-Pylons, the majority of whom did not agree with the views that we set out within the consultation, particularly in relation to NGET's planning process and the way in which it made decisions on the use of T-Pylons for the project.

[1] Unless otherwise stated, all costs reported within this document are in 2017/18 prices.
[2] Hinkley - Seabank: Decision on the Needs Case
[3] Hinkley - Seabank: Consultation on cost assessment

A number of respondents provided comments on our proposed reduction in the up-front contingency allowance for the project, with particular focus on the threshold that we proposed for HSB's Cost and Output Adjusting Event (COAE) mechanism. Some respondents also noted their disagreement with our proposed cost adjustments to HSB's project management costs and the costs associated with the project's DNO managed works.

NGET's response included a detailed explanation of why it disagreed with our views on T-Pylons and why it disagreed with our views on contingency costs for the project. NGET also provided further explanation and evidence that it considered supported its view that all of the submitted project costs had been incurred, or estimated, efficiently.

Overview of final position

Table 1 summarises the costs submitted by NGET and the allowances that we have determined for the HSB project.

Table 1 - Overview of final position on costs

Asset / activity	Submitted cost (£m)	Adjustment (£m)	Allowance (£m)
Tendered costs	376.9	-12.3	364.6
Untendered costs	28.7	-0.1	28.6
DNO managed works	68.0	-3.2	64.8
Project Management	50.7*	-8.2	42.5
Land, DCO, safety	74.4	-2.2	72.2
Spend-to-date	44.0	0.0	44.0
Contingency	73.0	-34.0	39.0
Total	***715.7***	***-60.0***	***655.7***

** This value was incorrectly stated as £51.8m in our October 2019 Consultation*

We are providing NGET with an additional £18.7m of funding, when compared to our consultation position.

We maintain our £12.3m deduction to NGET's T-Pylon construction and installation costs. Having considered consultation responses, we remain of the view that NGET gave insufficient consideration to the costs and benefits that T-Pylons might provide along all or parts of the HSB route and to the risks of not using T-Pylons, or of ways such risks might have been mitigated.

Our contingency allowance of £39.0m reflects what we consider to be an efficient level of up-front funding for risks. This allowance does not include funding for high impact, low probability (HILP) risks, which will be treated separately.

Western Power Distribution (WPD), the local DNO, will undertake some of the HSB works on behalf of NGET because these works relate to amendments and additions to WPD's existing network in the area. We maintain our £3.2m reduction in these costs as we have received insufficient justification for the high costs associated with these works.

Our £42.5m allowance for HSB's project management reflects what we consider to be an efficient level of resource to deliver this project. We have updated our view on this cost since the consultation.

Interactions with delivery model consultation

Today we have published a separate decision on the regulatory delivery model for the HSB project. In light of relevant considerations including updated analysis, we have decided to apply the existing Strategic Wider Works (SWW) arrangements under RIIO-T1 for the delivery of HSB. The assessment and capital cost allowances referred to in this decision are on the basis of HSB being delivered under RIIO (SWW).

Next steps

The relevant output and final allowances, described within this decision, will be implemented into NGET's electricity transmission licence through a licence modification. Our proposed licence modification will be set out in a consultation that we will publish shortly.

1. Introduction and background

Context and project overview

1.1. Hinkley-Seabank (HSB) is a Strategic Wider Works (SWW) project, being developed by the Transmission Owner (TO) for England and Wales, NGET.[4] HSB is NGET's technical solution for connecting EDF's Hinkley Point C (HPC) nuclear power station to the GB transmission network. It will be one of the largest extensions of the transmission network in recent decades. It comprises:

1.1.1. 49 km of 400 kV overhead lines – mostly using T-Pylons rather than traditional lattice towers;

1.1.2. 8.5 km of underground cabling through the Mendip Hills Area of Outstanding Natural Beauty (AONB);

1.1.3. construction of a new substation and a reconfiguration of two existing substations; and

1.1.4. a reconfiguration of the local 132 kV network.

This document

1.2. Following our approval of the needs case for the HSB project, we consulted on our cost assessment of the economic and efficient capital costs for the delivery of the project (October 2019 Consultation).

1.3. This document includes a summary of the responses to our October 2019 Consultation and sets out our decision on the NGET's capital costs allowance for the HSB project.

1.4. The relevant output and final allowances set out in this decision will be implemented into NGET's electricity transmission licence through a licence modification. Our proposed

[4] The SWW mechanism allows TOs to bring forward large investment projects where funding has not been awarded as part of the RIIO price control settlement. Our consultation on the capital costs for HSB (see footnote 3) provides further information on the SWW mechanism and the history of the HSB project within this mechanism.

licence modification will be set out in a consultation that we will publish shortly. To implement our decisions, set out in this decision, in relation to Cost and Output Adjusting Events (COAEs) for the HSB project,[5] our proposed licence modification will include amendments to the COAE provision of NGET's licence.

1.5. Figure 1 provides an overview of the decision-making stages that we have followed.

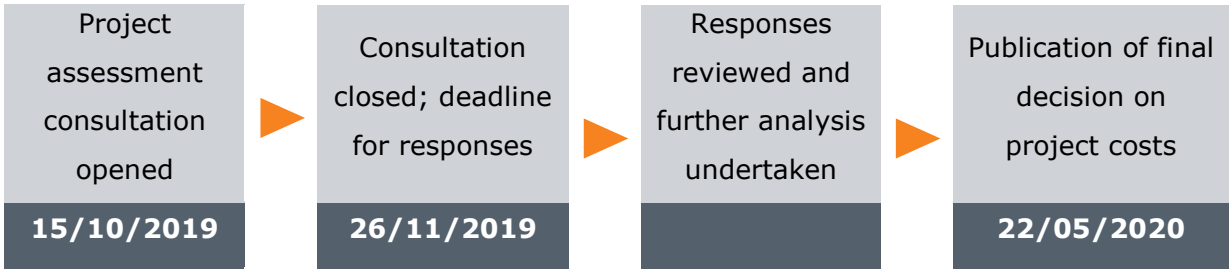

Figure 1 - Decision-making stages

1.6. This document consists of four chapters and is set out as follows:

1.6.1. Chapter 1: Introduction and background – this chapter;

1.6.2. Chapter 2: Overview of our October 2019 Consultation – this details the key outputs from our October 2019 Consultation and highlights some of the key responses from our stakeholders;

1.6.3. Chapter 3: Our decision – this discusses the main points that were raised in the October 2019 Consultation responses and how we considered these before coming to our decision; and

1.6.4. Chapter 4: Next steps – we detail the next steps associated with this decision.

[5] NGET's licence includes a COAE provision within the SWW condition that allows it to recover costs associated with some high impact, low probability risks for a SWW project.

Interactions with delivery model decision

1.7. Today we have published a separate decision on the regulatory delivery model for the HSB project.[6] This follows our consultation on this subject in October 2019.[7]

1.8. The decision confirms that we will apply the SWW arrangements under RIIO-T1 for the delivery of HSB. We have factored this decision into our assessment of capital cost allowances for HSB, which is addressed in this decision.

1.9. Our decision to apply SWW for delivery of HSB is not discussed further in this decision.

Related publications

Hinkley - Seabank: Consultation on cost assessment (October 2019)
Hinkley - Seabank: Consultation on Final Needs Case and potential delivery models (August 2017)
Strategic Wider Works Guidance (June 2013; updated November 2017)

Your feedback

1.10. We believe that consultation is at the heart of good policy development. We are keen to receive your comments about this report. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall quality of this document?
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. Are its conclusions balanced?
5. Did it make reasoned recommendations?
6. Any further comments?

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

[6] Hinkley-Seabank: Updated decision on delivery model
[7] Hinkley - Seabank: Consultation on our updated delivery model minded-to position

2. Overview of our October 2019 Consultation

Section Summary

This section outlines the key points that we set out in our October 2019 Consultation, as well as an overview of the responses that we received to that consultation.

Our consultation position

2.1. In our October 2019 Consultation, we presented our minded-to position of allowing NGET capital costs of £637.0m for the delivery of the HSB project, a £78.7m reduction from the costs that NGET had submitted to us.[8]

2.2. Table 2 presents the adjustments that we proposed in our October 2019 Consultation.

Table 2 - Our consultation position on efficient costs

Asset / activity	Submitted cost (£m)	Adjustment (£m)	Allowance (£m)
Tendered costs	376.9	-12.3	364.6
Untendered costs	28.7	-0.1	28.6
DNO managed works	68.0	-3.2	64.8
Project Management	50.7*	-9.8	40.9
Land, DCO, safety	74.4	-2.2	72.2
Spend-to-date	44.0	-11.3	32.7
Contingency	73.0	-39.8	33.2
Total	***715.7***	***-78.7***	***637.0***

** This value was incorrectly stated as £51.8m in our October 2019 Consultation*

2.3. In our October 2019 Consultation we proposed a total deduction of £23.6m in NGET's submitted costs for T-Pylons. £12.3m of this deduction was in relation to the T-Pylons construction and installation costs, because we did not consider that NGET had given

[8] The October 2019 Consultation presented a £79.8m cost reduction. The value presented in this document is different as we have corrected an error in the values for project management that we set out in our consultation. This also explains why the figure for NGET's submitted costs is different to the figure in our October 2019 Consultation.

sufficient consideration to the costs and benefits that T-Pylons might provide along all or parts of the HSB route, or had carried out a sufficient assessment of the risks of not using T-Pylons, or of ways such risks might have been mitigated.

2.4. £11.3m of the proposed deduction in T-Pylon costs was in relation to T-Pylon 'development' costs, which we considered to be ineligible for funding under the SWW mechanism.

2.5. In our October 2019 Consultation we proposed a £39.8m reduction in the contingency costs submitted by NGET. This proposed adjustment reflected areas where we had identified ineligible risks and included a proposal to disallow costs associated with High Impact, Low Probability (HILP) risks. We proposed addressing these risks through the SWW Cost and Output Adjusting Event (COAE) mechanism.

2.6. In our October 2019 Consultation we proposed a £3.2m reduction in NGET's submitted costs for the works to be carried out by the local Distribution Network Owner (Western Power Distribution, WPD), based on our benchmarking analysis.

2.7. Our October 2019 Consultation proposed an allowance of £40.9m for NGET's project management costs for the HSB project (a reduction of £9.8m from the costs submitted by NGET).

2.8. In our October 2019 Consultation we also proposed reductions in NGET's submitted costs of £2.2m in relation to land compensation and legal fees and £0.1m in relation to an unlet telecommunications contract.

Consultation responses

2.9. We received 11 responses to our October 2019 Consultation. These came from a mixture of electricity network companies, local authorities and other interested parties.

2.10. The majority of these respondents provided views on our minded-to position on T-Pylon costs and the associated cost adjustments that we proposed. Six respondents disagreed with our views that the costs associated with the construction and installation of T-Pylons had not been sufficiently well justified and that allowing the full submitted costs would not represent long-term value for money for existing and future consumers. Four respondents also disagreed with our proposal to disallow £11.3m worth of T-Pylon development costs.

2.11. Four respondents provided comments on our proposed risk allowance for the project, with particular focus on the threshold that we proposed for the COAE mechanism in NGET's licence in relation to HSB. Two respondents also disagreed with our proposed cost reductions in relation to HSB's submitted project management costs and the costs associated with the works to be carried out by WPD.

2.12. NGET responded to all of the questions in our October 2019 Consultation. This included a detailed explanation of why it disagreed with our views on T-Pylons and why it disagreed with our views on risk costs for the project. NGET also provided further explanation and evidence that it considered supported its view that all of the submitted project costs had been incurred, or estimated, efficiently.

2.13. We have included a summary of all consultation responses in Appendix 1 and we have set out our views on key consultation responses in Chapter 3.

3. Our decisions

Section summary

This section sets out our cost decisions, including highlighting any key changes from our minded-to position (as described in our October 2019 Consultation), following consideration of consultation responses. It also provides a summary of our cost assessment process.

Overview of our decisions

3.1. Following the close of our October 2019 Consultation, we considered all of the responses that we received. We also engaged with the project developer, NGET on aspects of its response.

3.2. Where necessary, we undertook further analysis to ensure that the final position, which we set out in this decision, is robust and provides value for money for consumers.

3.3. We have come to a final position on what we consider to be the economic and efficient capital costs of delivering the HSB project. In total, we have decided to provide NGET with a capital cost allowance of £655.7m (£18.7m more than proposed in our October 2019 Consultation).

3.4. Table 3 summarises the costs submitted by NGET and the capital cost allowances we have determined for the HSB project. The table also shows any changes in allowances since our October 2019 Consultation. A brief overview of the reasons for these changes is included beneath the table. This chapter provides further detail on our determinations, including where relevant, how we have considered consultation responses or carried out additional analysis.

Table 3 - Final cost allowance compared to consultation position

Asset / activity	Submitted cost (£m)	Adjustment (£m)	Allowance (£m)	Comparison with consultation position (£m)
Tendered costs	376.9	-12.3	364.6	
Untendered costs	28.7	-0.1	28.6	
DNO managed works	68.0	-3.2	64.8	
Project Management	50.7*	-8.2	42.5	+1.6

Land, DCO, safety	74.4	-2.2	72.2	
Spend-to-date	44.0	0.0	44.0	+11.3
Contingency	73.0	-34.0	39.0	+5.8
Total	***715.7***	***-60.0***	***655.7***	***+18.7***

** This value was incorrectly stated as £51.8m in our October 2019 Consultation*

Overview of allowances compared to consultation position

3.5. We will allow £42.5m for project management for HSB (£1.6m more than proposed in our October 2019 Consultation). We believe that this represents an efficient allowance for HSB's project management.

3.6. Following receipt and consideration of additional information from NGET, we believe that the £11.3m cost for T-Pylon development is eligible and will allow this cost.

3.7. We will allow £39.0m of up-front contingency (£5.8m more than proposed in our October 2019 Consultation). We have also updated our view on the risks that will be covered by the COAE mechanism.

T-Pylons

3.8. HSB will involve the construction of 49 km of overhead lines. The majority (38 km) of the route will use T-Pylons (rather than traditional lattice towers), in accordance with NGET's planning consent for HSB. NGET considers, and we recognise, that the use of T-Pylons increases the cost of the project by approximately £35.9m, relative to if only lattice towers were used. This value includes costs associated with the development of T-Pylons, as well as the costs of constructing and installing T-Pylons.

Development costs

3.9. In its project assessment submission, NGET included £11.3m of costs relating to the development of T-Pylons. As part of our October 2019 Consultation, we said we were minded to disallow the entirety of this £11.3m cost, based on two key grounds:

3.9.1. NGET could have sought funding for these costs under the RIIO-T1 mechanisms aimed at delivering innovation; and

3.9.2. We believed it was inappropriate to use project-specific allowances to fund innovation that may be utilised elsewhere on the network (in relation to this point, see para. 3.13 below).

3.10. As explained further below, after reviewing consultation responses and following further analysis, we now consider that it is appropriate to fund these £11.3m costs as part of the HSB allowance.

3.11. Firstly, we are satisfied that NGET explored all funding mechanisms and options available to it for these costs. These include the innovation funding available through RIIO, as well as the RIIO SWW pre-construction mechanism.

3.12. In addition, NGET has demonstrated to us that the £11.3m solely relates to HSB-specific activities (specifically that the costs are categorised as HSB construction costs) and does not relate to wider activities not related to the HSB SWW project.

3.13. A number of respondents to our October 2019 Consultation interpreted the statement in para. 2.4 of that consultation (which is referred to in para. 3.9.2 above) as meaning that we were taking a position on HSB that was contrary to Ofgem's wider desire to support innovation. That is not our position. We support and encourage innovation where it brings benefits, or has a strong potential to bring benefits. This includes funding innovation through SWW, provided all relevant funding routes have been explored and that costs have been incurred efficiently. We do not consider it appropriate to fund innovation through the SWW mechanism if such innovation was not related to the relevant SWW project. One of the reasons for this is that the RIIO price control more widely incentivises companies to innovate and find more efficient ways of operating the network, and provides ring-fenced innovation funding for companies to trial wider network innovation activities.

Construction and installation costs

Overview

3.14. Within our October 2019 Consultation, we proposed a £12.3m disallowance for the costs of construction and installation of T-Pylons. This was based on the fact that we believed NGET:

3.14.1. gave insufficient consideration to the costs and benefits that T-Pylons might provide along all or parts of the HSB route; and

3.14.2. carried out insufficient assessment of the risks of not using T-Pylons, or of ways such risks might have been mitigated (such as putting forward alternative proposals in the planning application and prior to consultation).

3.15. Ofgem assesses the costs of SWW projects, such as HSB, to decide whether the needs case, technical scope and timing of delivery are sufficiently well justified and represent long-term value for money for existing and future customers. In this context, we must be satisfied that NGET has balanced its duties to achieve what may be environmentally desirable and what is in the interests of consumers in providing an efficient network. Having considered consultation responses, we remain of the view that the information we have seen does not provide us with sufficient confidence that the full additional costs of T-Pylons on HSB have been sufficiently well justified. We have therefore decided to apply a deduction of £12.3m to NGET's costs, informed by willingness to pay (WTP) research undertaken by NGET. As we discuss in this section, we consider that the funding we are allowing for T-Pylon costs is appropriate, as it balances additional costs between NGET and consumers.

3.16. The explanation for our decision is provided in the following sections. Some respondents were concerned that our consultation position indicated that we would require that T-Pylons would be used for less of HSB's route. For the avoidance of doubt, we reiterate that we are not suggesting amendments to the design of the HSB project. Our decision relates solely to the efficient capital costs we will provide to NGET in relation to the delivery of HSB.

Consideration of costs and benefits

3.17. Having considered consultation responses, we remain of the view that NGET has not provided us with robust analysis of the costs and benefits that T-Pylons might provide relative to lattice towers along the HSB route. NGET has also failed to demonstrate that such an assessment occurred either prior to or during the planning consent submission. We have not seen evidence of sufficient balancing of additional costs for T-Pylons against improvements in visual impact.

3.18. We noted in the October 2019 Consultation that NGET's 2013 Pylon Design Options Report (PDOR) set out that there was no significant difference in cost estimates between the T-Pylon and lattice tower design options. The PDOR included an estimate that T-Pylons would bring £0.3m/km of additional costs, when compared to lattice towers. The recommendations made in the PDOR, drawing on the early cost estimate, informed the

statutory planning consultation for HSB. The conclusions from the statutory consultation then informed the project's Development Consent Order (DCO) application. The conclusions and recommendations from the PDOR had a significant impact on the DCO application and hence the final DCO granted for the project.

3.19. NGET's estimate of the cost differential between T-Pylons and lattice towers had increased significantly by the time of the DCO application. At that point, NGET estimated that T-Pylons would bring £1.3m/km of additional costs, when compared to lattice towers; an increase of £1.0m/km compared to its estimate at the time of the PDOR. The current cost differential is £0.9m/km, which is much closer to NGET's revised estimate at the time of the DCO application compared to its estimate at the time of the PDOR.

3.20. In our view, sufficient analysis was not undertaken prior to the PDOR to robustly estimate the potential cost of T-Pylons. NGET stated in its response to the October 2019 Consultation that the cost differential included within the PDOR was subject to intense scrutiny from stakeholders. However, NGET has not detailed the processes and procedures that it followed to determine those costs estimates. NGET has not provided us with a robust explanation of the basis for its assumption that the costs of T-Pylons (a new design) would be just £0.3m/km higher than the cost of standard lattice towers (a very mature technology). We have not been provided with sufficient information to explain the work and analysis that went into deriving these initial cost estimates. There has also not been an appropriate explanation of how key issues such as cost escalation risks or optimism bias were taken into account.

3.21. We have not seen sufficient evidence that the significant increased cost of T-Pylons relative to lattice towers was considered by NGET in the context of the benefits of T-Pylons that it estimated in its proposals to use T-Pylons for the HSB route.

Consideration of costs and risks, and ways such risks might have been managed

3.22. As referred to in our October 2019 Consultation, we acknowledge that NGET's actions in proposing that HSB be constructed using T-Pylons for the majority of the route may be expected to have reduced the risk of planning refusal. It is of course possible to remove or reduce the risk of objection and refusal by offering greater mitigation. However, in accordance with its duties, we consider that it would have been reasonable for NGET to consider whether costs could be reduced without putting at risk delivery of HSB to an unacceptable extent.

3.23. As part of its PDOR and subsequent consultation, NGET proposed a combination of T-Pylons and lattice towers to be used for the HSB route. After reviewing consultation responses, NGET made one slight change to the proposed route design,[9] with this conclusion then informing the DCO application. As flagged in our October 2019 Consultation, NGET proposed utilising T-Pylons for a significant majority of the project overhead line (OHL) route.

3.24. We have not seen evidence that sufficient consideration was given to potential alternative options to NGET's final option for the route. The statutory consultation, that followed the PDOR did not provide stakeholders with alternative proposals for use of T-Pylons along the route (and nor did the subsequent DCO application). For example, stakeholders were not provided with one or more options where T-Pylons were used on substantively less of the OHL route. We believe that NGET could have proposed more than one option for stakeholders to consider in relation to the combination of technologies that would be used along the route. We have also not seen information from NGET to satisfy us that, at the time, it considered whether it could potentially mitigate any risks of not using T-Pylons by, for example, putting forward alternative proposals. This would have provided us with more confidence that various options had been explored by NGET, and the project's stakeholders, prior to concluding that the eventual proposal was the most economic and efficient option.

3.25. In our October 2019 Consultation, we also queried whether NGET had fully explored the possibility of submitting more than one route design option as part of its DCO application. We acknowledge that securing planning consent can be challenging, and that licensees are subject to requirements to mitigate visual impacts.

3.26. One of NGET's responsibilities is to seek to reduce costs to consumers to the extent possible without jeopardising the project to an unacceptable extent, or breaching the environmental requirements to which it is subject. We continue to consider that there is a lack of information to show that NGET properly assessed the risk of planning refusal if lattice pylons were used along parts of the route where T-Pylons are to be used or that NGET gave proper consideration to how any such risk could be managed.

[9] Following feedback from consultees, NGET changed the route design for Section A (Puriton Ridge) of the route from steel lattice pylons to T-Pylons.

T-Pylon willingness to pay (WTP)

3.27. As set out earlier, NGET recognises that using T-Pylons for the majority of the OHL route incurred £35.9m of additional costs, compared to if standard lattice towers had been used for the entire route. This includes £11.3m of T-Pylon development costs, as well as the £24.6m of additional construction and installation costs.

3.28. In its consultation response, NGET said that the additional costs of T-Pylons can be justified based on WTP and acceptability studies that it had commissioned. NGET has presented us with various reports and studies on this topic. Our views on these are provided below.

3.29. Our October 2019 Consultation position of a proposed £12.3m disallowance in relation to the construction and installation of T-Pylons takes into consideration a WTP study that NGET submitted to us at the Final Needs Case (FNC) stage for HSB (undertaken by its consultants PwC). This used a study of undergrounding in the Cairngorms National Park in Scotland as well as a general study about the value of T-Pylons and extrapolated the results to apply them to HSB.

3.30. This study estimated a WTP range of £12m - £40m for the T-Pylons at HSB. As referred to in our FNC decision, we agreed with the views of our consultants at the time (TNEI), that "*the upper bound figure appears to be high*" and that "*more robust evidence could be provided in future*". We still have insufficient confidence in the upper end of this range, despite NGET's response to our October 2019 Consultation, in which it claimed that the higher value provided a more accurate representation of consumers' WTP.

3.31. The top end of the range in the study features assumptions such as consumers valuing the area that T-Pylons are used in as much as they do the Cairngorms National Park. We do not believe that this has been justified to us. This was highlighted in our FNC consultation and decision. However, despite our concerns with this study, we believe that it provides evidence that there is some WTP for the T-Pylons along the HSB route, albeit not at the high end of the cost range referred to above.

3.32. The above study is HSB-specific (albeit, its results are extrapolated from other studies). It is the most robust study we have seen for estimating consumer WTP for T-Pylons specifically along the HSB route.

3.33. As part of its response to the October 2019 Consultation, NGET included an 'acceptability study' by its consultants (Accent) which included a question to respondents as to whether they would be willing to accept the annual bill impact that would result from the additional cost of T-Pylons being used on HSB.

3.34. As set out in our October 2019 Consultation, we have specific concerns around the information presented in that study. For example, the study repeatedly conflated use of T-Pylons on HSB with mitigation of visual impact in National Parks and AONBs. In addition, we also have concerns that some of the reasons for approval provided by respondents were not accurate, such as T-Pylons being better for the environment or using less steel than lattice towers. Our concerns were highlighted to NGET and mentioned in our October 2019 Consultation.

3.35. In addition, we have concerns around the validity of this acceptance study to justify the additional costs of T-Pylons. The study only uncovers the percentage of participants willing to accept the cost presented. This does not take into account respondents who are willing to spend more, less or those who would need to be compensated. Those who do not prefer the appearance of T-Pylons may have a negative willingness to pay value. Since only a slight majority of those surveyed preferred the appearance of the T-Pylon design this could have a large impact on WTP. Even if this value may be balanced out by those willing to accept more than the proposed bill impact, the study does not uncover this information.

3.36. In its response to our October 2019 Consultation, NGET queried why we had not taken into consideration the WTP studies that it had issued to Ofgem as part of its RIIO-T1 and RIIO-T2 business plan submissions. We have reviewed these documents. However, neither of these reports were written with the HSB project specifically in mind. We have considered the results from this research, and although it may serve its purpose in informing the RIIO price controls on a general basis (ie across a wide portfolio of assets), it does not provide us with sufficient relevant information to be able to justify the significant additional costs that we have seen for T-Pylons for the HSB project.

Conclusion

3.37. In conclusion, we consider that, despite the deficiencies in NGET's processes and decisions referred to in paragraph 3.14, consumer WTP is likely to cover some additional costs for T-Pylons on parts of the HSB route. We have used the original PwC report referred to in paragraph 3.29 as the basis for determining the efficient additional cost allowance for

NGET as it is the most relevant tool we have been provided with for factoring in consumer WTP for T-Pylons.

3.38. As set out in paragraph 3.30, we consider that the upper bound of the figure from the PwC report does not robustly reflect consumer WTP for T-Pylons along the HSB route. However, it is also possible that the lower end of the figure from the PwC report underestimates consumer WTP for T-Pylons along the HSB route. To reflect this, we consider that an additional allowance for T-Pylons, close to the middle of the estimated WTP range presented in the PwC report, balances risk between consumers and NGET. Factoring in our decision to allow the £11.3m of T-Pylon development costs, we consider that it is appropriate to maintain our previously proposed position to disallow £12.3m of costs for construction and installation of T-Pylons, thereby allowing a total of £23.6m of additional costs in relation to T-Pylons.

3.39. Table 4 displays the evolution of our position on the additional costs associated with T-Pylons, taking into account our decisions on development costs and construction and installation costs.

Table 4 – Our view on the additional costs associated with T-Pylons

Activity	Submitted cost (£m)	Consultation adjustment (£m)	Decision adjustment (£m)	Decision allowance (£m)
T-Pylon Development	11.3	-11.3	0.0	**11.3**
Additional construction and installation costs	24.6	-12.3	-12.3	**12.3**
Total	***35.9***	***-23.6***	***-12.3***	***23.6***

Project risks and the COAE mechanism

Overview

3.40. NGET originally sought funding of £73.0m to cover project risks during construction. Our decision, further to consultation, is to significantly reduce the funding sought for the project's up-front cost allowances for risk to deliver a fair outcome for consumers.

Our consultation position and consultation responses

3.41. During our project assessment, we reviewed a detailed project risk register, submitted to us by NGET. This risk register set out each of the individual risks that NGET had identified in relation to the project construction. The total P50 value of the risks was £73.0m.[10] Following our review, we divided the risks into three categories: eligible for inclusion in up-front cost allowances, ineligible and eligible for the Cost and Output Adjusting Event (COAE) mechanism.

3.42. As part of our October 2019 Consultation, we proposed providing NGET with an up-front allowance for risk contingency of £33.2m, a reduction of £39.8m from the requested £73.0m.

3.43. The risks that are eligible for the COAE mechanism refer to High Impact Low Probability (HILP) risks that we considered to be unlikely to occur, but would have a high cost impact if they did, or risks that are difficult to quantify up-front. Instead of providing an up-front allowance for these, we noted in our October 2019 Consultation that, where eligible, they should be considered for potential funding through a specific and targeted cost reopener mechanism. This approach serves two purposes:

3.43.1. It prevents consumers unnecessarily paying for risks which are highly unlikely to eventuate or are difficult to robustly quantify before they occur; and

3.43.2. It provides NGET with comfort that if a high cost risk, that is beyond NGET's control, occurs, it would be funded for the efficient costs that it incurs relating to that risk (so long as costs are above a minimum threshold). We proposed a threshold value of 10% of total allowed project capex (ie the cost value at which the provision can be used).[11]

3.44. Some respondents to our October 2019 Consultation raised concerns with the proposed level of the COAE threshold, arguing that it should be set at a lower level, or that there should be no threshold. Those respondents also questioned some of the risks that

[10] P50 is the statistical confidence level for the risk cost estimates submitted by NGET. It indicates that, as part of the project's risk analysis, 50% of estimates exceed this P50 value and 50% are less than this value.
[11] A 10% COAE threshold was set on a previous NGET project (Western HVDC). The current default level of the threshold is 20%

were being considered as eligible for the COAE mechanism, and argued that some of them should be funded up-front. Our views on these points and the rationale for our decision is set out below.

Our decision

HILP risks and the COAE provision

3.45. As part of our decision, we are maintaining our view on treating HILP risks in the manner that we set out within our October 2019 Consultation. We are also maintaining our view on the 10% threshold for the COAE provision within this decision.

3.46. To implement this approach, we intend to modify NGET's licence, specifically the COAE provision of the SWW condition, which was originally inserted into NGET's licence at the start of RIIO-T1. Our intended modifications to the COAE provision, which will be set out in our upcoming consultation on NGET's licence, will cover the following:

3.46.1. In addition to risks which the COAE provision already covers, such as extreme weather, the modified COAE provision includes other specific 'qualifying' risks we have identified for HSB that it would be inefficient to set allowances for now. We list these risks in paragraph 3.52.

3.46.2. Because some of the risks we are proposing to include within the scope of the modified COAE are likely to be of a lower value than the risks that were envisaged when the COAE provision was drafted, we also intend to modify the provision to reduce the COAE threshold from 20% of total allowed project capex, to 10%.

3.47. This would mean that if one or more relevant qualifying risks occurs during the construction period, and the total cumulative cost impact was above 10% of total project capex allowance, NGET would receive full funding for its efficient costs in relation to addressing those risks. If the risks occurred but the cost threshold was not met, NGET would need to use its up-front risk allowance to cover the risk costs, and any overspend would be treated through the standard RIIO sharing factor (i.e. split between NGET and consumers).

3.48. We have set the level of the COAE threshold and the risk events that are eligible for this mechanism based on factors including past SWW decisions and project-specific aspects of HSB as well as responses to our October 2019 Consultation. In so doing we have

attempted to strike an appropriate balance between maintaining an appropriate level of consistency between RIIO1 SWW projects, and ensuring that projects are delivered as efficiently as possible. We consider that setting the threshold at 10% of total project capex allowance protects NGET from the costs of high impact risks where these are material to delivery of HSB, whilst balancing the cost impact of lower materiality risks between NGET and consumers in line with the principles of our price controls.

3.49. Based on additional information we have received as part of NGET's response to our October 2019 Consultation, we have decided to update the list of risk items that we believe should be included as eligible for the COAE mechanism.

3.50. This list no longer includes risks in relation to costs associated with archaeological findings. Based on additional information provided by NGET, we have deemed these risks to be eligible for up-front funding at their P50 value of c. £0.6m. This is mainly because the likelihood of this risk occurring has increased since NGET first submitted its risk register to us and we therefore consider it more efficient to provide up-front funding (as these risks are effectively no longer HILP).

3.51. We also confirm that costs associated with the delay or cancellation of the Hinkley Point C (HPC) project will not be included within the COAE mechanism. If there was a significant delay, or cancellation, to the HPC project, any costs associated with that delay in relation to HSB would be considered separately to the COAE mechanism.

3.52. In line with our decision, the following risk items will be added to NGET's list of events that are eligible for the COAE mechanism for HSB:

3.52.1. Delivery delays, legislative issues, regulatory issues, VAT issues and foreign exchange movement that are directly attributable to the United Kingdom's withdrawal from the European Union;

3.52.2. A livestock epizootic;

3.52.3. A project contractor, supplier or manufacturer enters into liquidation during the project delivery phase;

3.52.4. Significant protestor action (resulting in greater than 14 days of delays in each instance);

3.52.5. A legal challenge to the procurement process by a prospective contractor;

3.52.6. A terrorist attack; and

3.52.7. Extreme weather and/or widespread flooding (meaning a worse than 1 in 10 probability).

3.53. The consultation on our proposed modifications to NGET's electricity transmission licence will set out further information on how we propose to implement these changes to the COAE mechanism within NGET's licence.

Up-front funded risks and ineligible risks

3.54. We are not allowing costs associated with what we consider to be ineligible risks. We will not provide the P50 up-front funding requested by NGET for these risks, nor will they be included as COAE-eligible risks, as described above.

3.55. Generally, these are risks which are either covered elsewhere in the baseline cost allowances (ie included in contracts) or risks which relate to NGET or contractor error, which we do not consider consumers should fund.

3.56. Our position on these ineligible risks remains similar to what we presented as part of our October 2019 Consultation. The main difference is that we have decided to move £3.5m worth of costs from our list of ineligible risks to our list of eligible risks. This is the P50 value in relation to uncertainty regarding NGET's contracts with WPD. More specifically, it relates to a potential change in quantities and rates under these contracts.

3.57. Previously, we had considered these costs to be ineligible as we believed that there was as much of a chance of these costs decreasing (due to a change in quantities or rates) as there was of the costs increasing. However, NGET provided us with additional information on how the P50 value had been calculated, including confirming that the possibility of these quantities or rates decreasing had been considered as part of its analysis. We are now satisfied that this risk item has been estimated in a robust manner and that it is eligible for up-front funding. We consider funding this risk up-front to be in the interests of consumers.

3.58. Based on our adjustments to the COAE-eligible risks and ineligible risks, our proposed up-front allowance for NGET's risk contingency is £39.0m. This is the total value

for what we have deemed to be eligible P50 risks. This is an increase of £5.8m compared to our October 2019 Consultation position.

DNO managed works

Background

3.59. WPD will undertake some of the HSB works on behalf of NGET because these works relate to amendments and additions to WPD's existing network in the area. In 2011, WPD and NGET entered into a contractual arrangement under which NGET would ensure that WPD was funded to complete the works. NGET submitted, in its project assessment submission, costs of £68m in relation to works that WPD will complete on its behalf on HSB.

3.60. In our October 2019 Consultation we noted that there are two reasons why we considered it difficult to fully fund these submitted costs through up-front allowances:

3.60.1. Some of the works had not yet been tendered, because they will not begin until some years into the overall schedule, and the scope remains relatively uncertain; and

3.60.2. Because WPD is completing the works, and has agreed with NGET that it will be fully funded for all its associated costs, NGET may have a limited ability to influence WPD's behaviour (ie keep costs down).

3.61. As part of our October 2019 Consultation, we stated that we were minded to disallow £3.2m of the costs submitted by NGET in its project assessment submission for costs associated with the WPD works (this is in addition to the £3.5m of risk costs referred to in paragraph 3.56). This reduction was derived from benchmarking analysis focussed on the 132 kV underground cable costs. We did not propose adjustments to any other aspects of the schemes.

3.62. By 'benchmarking' we mean comparison of costs in the project under consideration (in this case HSB) against costs observed in other relevant projects (including cost allowances set out in RIIO-1). This comparison was carried out on the basis of cost areas or categories. The specific analysis that we undertook in relation to HSB's 132 kV underground cable works indicated that HSB's costs for these works were significantly greater than what we would expect.

3.63. Prior to our October 2019 Consultation, we were in regular communication with NGET on this topic and explained our analysis and concerns. Initially we were minded to make a £5.4m disallowance to the £68m cost, due to the high costs for the 132 kV works. After receiving additional information from NGET on the technical specifications of the works, and updating our analysis to reflect this, our proposed disallowance was reduced to £3.2m – the value that was used in our October 2019 Consultation.

3.64. Within its response to our October 2019 Consultation, NGET claimed that our benchmarking disallowance was based on using scaling factors to adjust the costs that we had for historical projects. We confirm that this is not the case. Scaling factors were considered as part of our analysis, but these were not used for our proposed disallowance of £3.2m. We reviewed the analysis that we had undertaken using scaling factors, and concluded that this would not be the most accurate use of the data that was available to us. The £3.2m adjustment is based on comparing HSB's proposed costs for the 132 kV underground works with relevant costs and benchmarks, taking into consideration aspects such as cable sizes and ratings. We are confident that the benchmarks that we used are appropriate and provide us with robust grounds for this adjustment.

3.65. Our disallowance of £3.2m considers the additional information that NGET supplied to us, including the updated tendered costs for the WPD works. The updated tendered costs, as well as other technical comments, were one of the factors that we considered when we adjusted our disallowance from £5.4m to £3.2m.

Our decision

3.66. We have not been provided with sufficient explanation of why NGET's estimates for these works are significantly more expensive than what we would expect for such works. We are therefore maintaining our October 2019 Consultation position and have decided not to allow £3.2m of NGET's proposed costs.

Project Management

3.67. As part of its project assessment, NGET submitted an estimate of £51.8m for project management costs for the HSB project. The estimate consisted of direct costs, related to NGET staff working on HSB, and indirect costs, related to additional resources from NGET's central function, expenses and taxation and its regulatory team.

3.68. We proposed a £10.9m deduction to these project management costs as part of our October 2019 Consultation. This is because NGET's total project management costs appeared much higher than anticipated based on our historical data. We also identified what we considered to be various inefficiencies in NGET's proposed resource profile. The rationale behind our deductions was set out in our October 2019 Consultation document.

Our decision

3.69. Following consultation, including further discussion with NGET and additional information that it has provided to us, we have made a slight revision to our allowance for these costs.

3.70. Firstly, we recognise that our values for NGET's 'submitted' cost for project management included within our October 2019 Consultation were not an accurate representation of the requested allowance. We identified that there had been some duplication of costs within the £51.8m value included in our October 2019 Consultation. We have updated these costs to reflect the value of £50.7m that NGET requested for project management costs.

3.71. Secondly, we have amended our proposed disallowance for NGET's project management costs, based on additional information that we have received and reviewed. As an example, we have decided to allow an additional £0.4m for NGET's construction planners for the project, compared to our October 2019 Consultation position. This is based on justification provided to us by NGET in its response to our October 2019 Consultation. We have also decided to allow NGET an additional £1m in relation to its indirect project management costs. The information that we received from NGET demonstrated the need for these additional costs, including the costs of staff required to enable the delivery of the project.

3.72. Further to consultation, including updates from NGET, we have decided to provide NGET with an allowance of £42.5m for project management, a reduction of £8.2m from the submitted request of £50.7m. This results in a project management allowance that is more in line with our expectations, based on our analysis, including data from historical projects.

4. Next steps

Section summary

This section sets out the next steps associated with this decision.

4.1. To implement this decision on our capital cost allowances for the HSB project, we will modify Special Condition 6I (Specification of Baseline Wider Works Outputs and Strategic Wider Works Outputs and Assessment of Allowed Expenditure) in NGET's electricity transmission licence.

4.2. Our proposed licence modification will be set out in a consultation that we will publish shortly.

4.3. As set out in our October 2019 Consultation, the prevailing regulatory arrangements (eg incentives, cost of capital etc) under each price control (eg RIIO-1, RIIO-2, RIIO-3 etc) will apply to each SWW project.

Appendices

Index

Appendix 1 – Summary of responses to our October 2019 Consultation

In October 2019, we published a consultation on our assessment of capital costs for the HSB electricity transmission project. That consultation set out our minded-to position on the allowable costs for the HSB project.

We received 11 consultation responses in total. These came from a mixture of stakeholders, including electricity network companies, local authorities, as well as planning and advisory groups.

All of the non-confidential responses to our October 2019 Consultation have been published on our website.[12]

Below is a summary of responses to our October 2019 Consultation.

Question 1 (a)

Regarding T-Pylons, do you agree with our initial views in relation to NGET's approach to proposing T-Pylons in its planning application?

Over half of the respondents provided comments in relation to this question, with the majority of these stating that they believe that NGET's planning process had been satisfactory and followed the relevant legislation and guidance.

Some respondents said that we had effectively re-determined the outcome of a consenting process and that it was not appropriate for us to. These respondents said that full consideration had been given to the use of T-Pylons or lattice towers along the project's overhead line (OHL) route.

Respondents also stated that comments from relevant stakeholders had been taken into consideration by NGET during the consenting process. Some respondents said that it is very important to engage with local stakeholders and that these stakeholders have an essential role in the consenting process.

[12] Hinkley - Seabank: Consultation on cost assessment, including consultation responses

In its response, NGET stated that it strongly disagreed with the views that we presented in our consultation in relation to question 1(a). It argued that it had undertaken an efficient and diligent planning and consenting process, and that the use of T-Pylons mitigated the risk associated with the refusal of planning permission. NGET provided information on key milestones of the planning process and the steps that it said it had taken leading up to each of these to ensure the effective delivery of the HSB project.

Some respondents were concerned that our consultation position indicated that we would require that T-Pylons would be used for less of the OHL route.

Question 1 (b)

Regarding T-Pylons, do you agree with our initial views in relation to disallowing £11.3m of T-Pylon 'development costs'?

A number of respondents provided specific comments in relation to this question. Most of these respondents disagreed with the view that we set out in the consultation that it was inappropriate to use the SWW mechanism to fund innovation. The respondents stated that innovation is one of the cornerstones of the RIIO price control and that network companies such as NGET should be allowed to recover efficient costs in relation to innovation through SWW funding.

Another respondent stated that it believed that the work covered by these development costs had a significant impact in reducing the wider construction and installation costs associated with the T-Pylons. The respondent said that this development work was a key part in ensuring the effective delivery of the HSB project.

NGET stated that the approach that we followed to come to our minded-to position was flawed. As part of its response, NGET detailed the various funding mechanisms that it explored for HSB's costs and explained why it believed it to be appropriate to fund this £11.3m through the SWW mechanism. NGET also provided information on the specific works that were covered by these costs and which it said showed that these costs were solely in relation to HSB and not in relation to the wider development of T-Pylons.

Question 1 (c)

Regarding T-Pylons, do you agree with our initial views in relation to allowing £12.3m of additional costs for T-Pylons along the route?

Despite receiving a high number of responses in relation to T-Pylons, we received a limited number of responses with specific comments on the cost allowance that we proposed for the construction and installation of T-Pylons.

Some respondents used their response to question 1(a) to inform their response to this question and their view that NGET had followed a satisfactory process and that it should receive full funding for the T-Pylon costs.

Two respondents disagreed with our views on the willingness to pay for T-Pylons. One of these respondents argued that research generally shows that consumers are willing to pay for additional costs, such as those associated with T-Pylons. One respondent also said that using the lower end of the willingness to pay range, presented in our consultation, was a conservative approach.

In its response, NGET stated that it strongly disagreed with the views that we presented in our consultation in relation to this question. It argued that all of the necessary steps had been undertaken in its decision-making process in relation to T-Pylons and that these had been undertaken effectively. NGET provided a detailed explanation of why it disagreed with each of the points we set out in our consultation position. NGET said that all of the costs which it submitted associated with T-Pylons were economic and efficient. NGET also provided information in relation to consumers' willingness to pay for T-Pylons, which NGET said justified the additional costs associated with T-Pylons.

Question 2

Do you agree with our proposals on how to treat high impact, low probability and difficult to quantify risks?

Over a third of stakeholders responded specifically to this question.

One respondent said that our proposal should be clearer in relation to the materiality threshold for the COAE mechanism in relation to HSB because of the potential impact the respondent said this threshold may have on the delivery of the project.

Two respondents raised concerns with the 10% materiality threshold that was proposed for the COAE mechanism and the list of risk events that we proposed to include within this mechanism. They stated that NGET would need a significant overspend to trigger this threshold and that NGET would have to carry a significant financial burden if this threshold was not met. These respondents agreed that the COAE mechanism should be used to potentially fund high impact low probability (HILP) risks, but said that the risks that we listed in in our consultation did not necessarily appear to be HILP risks. One of the respondents stated that it believed that our proposals were changing the purpose of the COAE mechanism and that they would result in the COAE mechanism being used on a repeated basis.

NGET also raised concerns with our proposal in relation to the COAE mechanism. It stated that it believed that some of the risks that were included in our list of risks to be included under the COAE provision should be allocated appropriate up-front funding, as they were relatively likely to occur. It also stated that it would be exposed to an unacceptable degree of risk due to our proposals in relation to the COAE mechanism. It stated that there was a high chance that a number of the COAE risks would materialise during the delivery of the project, but they would not bring with them costs that would trigger the COAE mechanism. It stated that this would be an unacceptable approach and proposed alternative solutions for us to consider.

Question 3

Do you have any views on our proposed treatment of other costs not covered in questions 1 and 2?

Three respondents provided a specific response to this question.

One respondent disagreed with our proposed reductions in relation to NGET's project management costs for HSB. The respondent stated that NGET would be experienced in delivering such a large project and that it was not for us to suggest a reduction to these costs. The respondent also stated that our reasoning was unclear for some of our other proposed cost reductions. The respondent said, in relation to any of our proposed costs reductions that were linked to our benchmarking analysis, that they believed that our benchmarking analysis had been flawed in the past.

Another respondent provided a response in relation to our proposed disallowance of £3.2m of the costs associated with the Western Power Distribution (WPD) works and the

adjustment that we proposed to the contingency that NGET has estimated for these works. The respondent stated that the WPD work would be delivered in the most efficient way possible and that it disagreed with the proposed £3.2m disallowance. The respondent also stated that some of these works remain estimates at this stage and that it was appropriate to include an appropriate amount of contingency for the works, as it believed NGET had done.

Within its response to this question, NGET raised concerns and stated its disagreement with a number of cost adjustments that we had proposed. Similarly to the points raised above, it stated that the proposed adjustments to the WPD costs were not appropriate and that such adjustments were based on flawed benchmarking analysis. NGET also raised concerns with various risk items which we did not propose to fund up-front, including the WPD contingency, about which it raised particular concerns. NGET also responded to our proposed project management cost adjustments, stating that it believed that we had not provided evidence to justify our position. It stated that these project management costs were appropriate and should be funded in full.