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Decision

Hinkley-Seabank: Updated decision on delivery model

Publication date:	22 May 2020	**Contact:**	Thomas Johns, Senior Manager
		Team:	New Transmission Investment
		Tel:	020 7901 7046
		Email:	thomas.johns@ofgem.gov.uk

This decision confirms that we will fund the Hinkley-Seabank project (HSB) under the RIIO price control arrangements, rather than through the Competition Proxy Model (CPM). This is because our analysis indicates that in the case of the HSB project we no longer have sufficient confidence that applying the CPM to HSB would be in the interests of existing and future GB consumers.

Contents

Executive summary

This document sets out our decision to fund delivery of the Hinkley-Seabank (HSB) electricity transmission project through the Strategic Wider Works (SWW) mechanism under our electricity transmission price control framework (RIIO), rather than through the Competition Proxy Model (CPM) as previously decided. This is because, having updated our analysis, we no longer consider that there is sufficient certainty that the CPM will deliver a GB consumer benefit relative to funding HSB through RIIO.

The CPM is a regulatory model that seeks to replicate the benefits of competition. It does this by setting allowed financing costs of projects at the level expected to be produced by a competitive tender. A key source of benchmarks for the CPM is our Offshore Transmission Owner (OFTO) regime, through which we have been awarding licences following competition since 2009. As the CPM does not involve third party delivery, it does not provide the full range of potential cost savings and innovation we expect competition to deliver.

This decision should be read in conjunction with our separate decision (also published today) "Decision on our assessment of capital costs for the Hinkley-Seabank electricity transmission project", where we set out the proposed capital cost allowances for delivery of HSB on the basis that it is funded through the SWW mechanism under RIIO.

Previous decision

In July 2018, we decided that the CPM would be the regulatory model applied to the HSB electricity transmission project. The analysis that underpinned our decision indicated that the CPM would be likely to deliver a significant level of savings to consumers in the delivery of HSB compared to the SWW regulatory model under our RIIO price control. This analysis focused on comparing indicative allowed financing costs under the CPM for HSB to our estimate of future allowed financing costs under RIIO.

Updated analysis and consultation

We revisited the analysis which underpinned our decision to apply the CPM to HSB in our October 2019 consultation on our updated minded-to position on the delivery model for HSB. Our updated analysis suggested that the overall consumer savings range referred to in our July 2018 decision reduced as a result of a combination of factors that occurred since the decision to apply the CPM to HSB in July 2018:

1. Increase in the allowed cost of debt applicable under the CPM
2. Increase in the allowed cost of equity applicable under the CPM
3. Decrease in RIIO counterfactual cost of equity
4. Use of the detailed CPM financial model, developed by our consultants Amberside, in our analysis to identify costs of project finance.

Based on the updated analysis, we consulted on a view that when using a RIIO counterfactual cost of equity in the range of 4.3% to 4.8%[1], there is insufficient certainty that the CPM will deliver a benefit relative to funding HSB through RIIO. We therefore consulted on a minded-to position not to fund HSB through the CPM.

This decision

Following consideration of the responses to our October 2019 consultation, and further analysis using updated inputs since that consultation, we confirm our decision is to fund the HSB project through SWW under RIIO, rather than through the CPM. The table below summarises the results of our analysis on applying the CPM to the HSB project.

Table 1: Updated results of benefit case analysis for HSB project

	Consumer savings presented in July 2018 Decision		**Updated consumer savings**	
	2018 RIIO Low	*2018 RIIO High*	*Updated RIIO Low (4.3%)*	*Updated RIIO High (4.8%)*
July 2018 CPM Central Scenario[2]	£53m	£102m		
Consultation position: CPM Central scenario (Cost of Debt as per 31 Jan 19)			**-£10m**	**£3m**

[1] As referenced in the RIIO-2 Sector-specific methodology decision of May 2019 (figures are presented in real terms relative to an assumed CPIH of 2% annually)
[2] See page 49 here: https://www.ofgem.gov.uk/system/files/docs/2018/07/hinkley_seabank_project_decision_on_delivery_model.pdf#page=49

	Consumer savings presented in July 2018 Decision		Updated consumer savings	
	2018 RIIO Low	*2018 RIIO High*	*Updated RIIO Low (4.3%)*	*Updated RIIO High (4.8%)*
Updated CPM Central scenario (Cost of Debt as per 31 Jan 20)			***£0m***	***£14m***

Use of the CPM for future projects, including during RIIO-2

We remain of the view that the CPM can replicate the following key benefits of a fully competitive approach, which are relatively difficult to monetise:

- The locking in of debt and equity rates that reflect current market rates for financing a project;
- Making use of market revealed project-specific benchmarks, where appropriate (such as using observed OFTO rates for the operational period), to set efficient financing costs for a project;
- Enabling efficient financing costs for a project through a project-specific risk allocation.

We said in our May 2019 RIIO-2 Sector Specific Methodology Decision[3] that we consider it is in the interest of consumers to be able to consider applying the CPM to projects in the electricity transmission and gas sectors that are new, separable and high value. We will consider the consumer benefits position, based on the information and analysis available to us at the time, along with all other considerations relevant to the projects concerned, in determining whether to apply the CPM to the delivery of projects in future.

The final allowed cost of equity under the RIIO-2 price control settlement can be expected to impact on the level of benefits that can be delivered through the application of the CPM during RIIO-2. We will continue to monitor changes in macro-economic circumstances and forecasts as these are also likely to impact on the analysis that informs future decisions on whether to apply the CPM to relevant projects during RIIO-2, or within RIIO-T1. Having developed the CPM in advance of RIIO-2, and as an integral element of the RIIO-2 price

[3] https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-decision

control framework, we may in future decide to apply the CPM in cases where the consumer savings appear finely balanced in order to achieve the aspects of the benefits set out above that are harder to monetise.

1. Introduction

Context and related publications

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

1.2. 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 assessing the need for, and efficient cost of, large and uncertain electricity transmission reinforcement projects. This mechanism is called 'Strategic Wider Works' (SWW). The incumbent TOs are funded to complete pre-construction works through the RIIO-T1 baseline allowance. Once the need for and costs of projects have become more certain, the TOs bring forward construction proposals and seek funding for them. 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.

1.3. 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 delivery of 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 could bring value to consumers.

1.4. 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 have published a series of ECIT policy consultation and decision documents, which are available on our website.

1.5. In June 2017 we published an update on our plans to introduce competition to onshore electricity transmission, stating that we were deferring further development of the Competitively Appointed Transmission Owner (CATO) regime until the timing of the

necessary legislation was more certain. We reiterated that we continued to consider that there were significant benefits to consumers in introducing competition into the delivery of new, separable and high value onshore electricity transmission projects.

1.6. Our August 2017 consultation on the Hinkley – Seabank (HSB) electricity transmission project outlined two potential delivery models which we considered could deliver a significant proportion of the benefits of a CATO tender; the CPM and Special Purpose Vehicle (SPV) model. Having reviewed the responses to that consultation, and completed further analysis, we set out in January 2018 that, of the two models identified in our August 2017 consultation, we were minded-to implement the CPM for the HSB project. We explained why we thought this would deliver savings relative to the status quo SWW approach and set out indicative cost of capital ranges that we would allow.

1.7. In July 2018, following consultation, we determined that the CPM would be the regulatory model applied to the HSB project. This was because our analysis indicated that the CPM would be likely to deliver a significant level of saving to consumers in the delivery of these projects compared to the SWW regulatory model under our RIIO price control. This analysis focused on comparing the indicative financing costs allowed under the CPM to what was, at the time, our best estimate of future RIIO allowed rates of return.

1.8. In October 2019 we consulted on our minded-to position to revert back to using SWW under RIIO as the regulatory model that will be applied to the HSB project. This position was based on our updated analysis, which indicated that we could no longer have sufficient confidence that the specific application of the CPM to HSB would be in the interests of existing and future GB consumers.

1.9. Following consideration of responses to the October 2019 consultation, and further updates to our analysis, this decision document confirms that the HSB project will remain within the SWW RIIO funding arrangements.

Related publications

Consultation on our updated delivery model minded-to position:
https://www.ofgem.gov.uk/system/files/docs/2019/10/hsb_cpm_consultation.pdf

Update on the Competition Proxy delivery model, September 2018
https://www.ofgem.gov.uk/system/files/docs/2018/09/cpm_update_2018_final.pdf

Hinkley - Seabank: Decision on delivery model, July 2018
https://www.ofgem.gov.uk/system/files/docs/2018/07/hinkley_seabank_project_decision_on_delivery_model.pdf

Update on competition in onshore electricity transmission, January 2018
https://www.ofgem.gov.uk/publications-and-updates/update-competition-onshore-electricity-transmission

Hinkley - Seabank: Decision on the Needs Case, January 2018
https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-decision-needs-case

Hinkley - Seabank: Minded-to consultation on delivery model, January 2018
https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-minded-consultation-delivery-model

Hinkley - Seabank: Consultation on Final Needs Case and potential delivery models, August 2017
https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-final-needs-case-and-potential-delivery-models

Update on Extending Competition in Transmission, June 2017
https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission

Extending competition in electricity transmission: arrangements to introduce onshore tenders, October 2015
https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-proposed-arrangements-introduce-onshore-tenders

Criteria for onshore transmission competitive tendering, May 2015
https://www.ofgem.gov.uk/publications-and-updates/criteria-onshore-transmission-competitive-tendering

Integrated Transmission Planning and Regulation project: Final Conclusions, March 2015
https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions

Strategic Wider Works Guidance, June 2013 (updated November 2017)
https://www.ofgem.gov.uk/publications-and-updates/guidance-strategic-wider-works-arrangements-electricity-transmission-price-control-riio-t1-0

Your feedback

General 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 Thomas.johns@ofgem.gov.uk

2. Background on the HSB project and on the CPM

Section summary

This section provides summary background information on both NGET's Hinkley-Seabank project (HSB) and the Competition Proxy Model (CPM)

Background on HSB

2.1. HSB is a Strategic Wider Works (SWW) project. This is the uncertainty mechanism within RIIO-T1 that allows for large uncertain electricity transmission projects to be funded during the RIIO-T1 period. It is NGET's technical solution for connecting EDF's Hinkley Point C (HPC) nuclear power station to the GB transmission network. NGET is contracted to connect the first HPC reactor by late 2024 ahead of EDF beginning commercial operation of the power station in 2025[4]. It will be one of the largest extensions of the transmission network in recent decades. It comprises:

- 49km of 400kV overhead lines – mostly using the new 'T-Pylons' design rather than standard lattice pylons;
- 8.5km of underground cabling through the Mendip Hills Area of Outstanding Natural Beauty (AONB);
- a new substation and two reconfigured substations; and
- a reconfigured local 132kV network.

2.2. Our understanding is that NGET is currently on schedule to meet its first contracted connection date at HPC of December 2024.

2.3. We published our decision to approve the 'Final Needs Case' for HSB in January 2018, following a consultation process.[5] That decision outlined that:

[4] NGET is contracted to connect the second reactor by late 2025. EDF has recently announced updates to its delivery plans for HPC; however, these have not impacted on the contracted delivery dates for HSB.
[5] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-decision-needs-case

2.3.1. There is a clear technical need for the reinforcement. Without HSB, HPC would not be able to safely connect to the National Electricity Transmission System due to the lack of transmission capacity in the local area.

2.3.2. There is a clear economic need for the reinforcement. If HPC were unable to safely connect to the grid this could represent a significant cost to consumers. Overall, the proposed solution is likely to be in the interests of existing and future consumers.

2.4. NGET submitted its Project Assessment submission to us in November 2018. The Project Assessment stage is where we determine cost allowances for delivering a project. We have considered this submission in detail, comparing costs to relevant benchmarks where appropriate, and engaged with NGET to resolve any queries that have arisen.

2.5. In October 2019, we published our our consultation on the efficient costs for the project in the document Hinkley-Seabank: Consultation on cost assessment.[6]

2.6. Following consideration of consultation responses, today we have published the Hinkley-Seabank: Decision on cost assessment on our website. This sets out our final decision on the efficient costs for deliveringthe HSB project . It explains that we have determined an allowance of £655.7m for the delivery of the project.

Overview of the CPM

2.7. The CPM is a regulatory model that seeks to replicate the benefits of competition in the delivery of electricity transmission projects. The background to development of the CPM was set out in chapter 1. The CPM works by benchmarking the allowed financing costs of electricity transmission projects at the level expected from an equivalent project subject to a competitive tender. A key source of benchmarks is our Offshore Transmission Owner (OFTO) regime, through which we have been awarding licences following competition since 2009.

2.8. Under the CPM we set a largely project-specific set of regulatory arrangements to cover the construction period and a 25-year operational period. This 25-year operational

[6] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-cost-assessment

period is designed to reflect the length at which debt is likely to be available at favourable rates in the bank and bond markets. The financing costs element of the revenue would not be subject to further review; there would be no adjustment for changes to prevailing market rates for cost of debt or equity once these have been set.

3. Updates to our consumer savings analysis for applying the CPM to HSB

Section summary

This section summarises the analysis that supports our decision. It also explains how we have reached our decision not to apply the CPM to the HSB project.

3.1. In our October 2019 minded-to consultation, we explained that, in light of significant changes to the inputs into our analysis since 2018, we no longer intended to apply the CPM to HSB. This was due to insufficient certainty that the CPM would deliver a benefit to consumers relative to funding HSB through RIIO.

3.2. In this chapter, we set out how we have further updated our October 2019 analysis, how we have considered responses to the consultation, and explain why we have decided not to apply CPM to HSB.

Summary of analysis underpinning our decision on whether to apply CPM to HSB

3.3. The analysis supporting our decision on whether to apply CPM to HSB has focused on the indicative cost to GB consumers of the project under both the financing terms of CPM, as well as if the project were to remain under RIIO. By comparing the two outcomes on an NPV-neutral basis, we can determine which is likely to deliver the lower cost outcome to consumers.

3.4. Our analysis from July 2018 indicated that applying CPM to HSB was likely to deliver a significant saving to consumers. In our October 2019 minded-to consultation, we explained that a number of key factors had changed the outcome of our previous, 2018 analysis:

1. Updated Cost of Debt inputs into the CPM cost of capital methodology
2. Updated Cost of Equity input into the CPM cost of capital methodology
3. Updated RIIO counterfactual cost of equity
4. Use of the detailed CPM financial model, developed by our consultants Amberside, in our analysis to identify costs of project finance.

Updates to analysis since our October 2019 minded-to consultation

3.5. Respondents to our October 2019 consultation were supportive of the conclusions of our analysis. No specific concerns were raised in relation to our analytical methodology. A summary of responses to the consultation, and our consideration of these responses is contained within Appendix 3.

3.6. We have sought to ensure that the inputs into our methodology are appropriately updated to reflect contemporary market evidence.

3.7. The analysis underpinning our October 2019 minded-to consultation used financial inputs from January 2019. We included a sensitivity to capture the impact of the subsequent downward trend in the cost of debt market indices that followed through the summer of 2019. In order to ensure that our decision is robust, we have ensured that each of the inputs into our analysis that are driven by cost of debt indices have been updated to reflect market evidence on 31 January 2020. We have also updated the risk-free rate that feeds into the Cost of Equity input into the CPM cost of capital methodology for the construction period.

Updated Cost of Debt

3.8. The cost of capital methodology for the CPM includes the benchmarking of cost of debt derived from the iBoxx bond market indices. The allowed cost of debt during the construction period is benchmarked against a combination of the spot yield and one-year average rate of the iBoxx non-financial corporate debt, with the debt tenor aligned with the length of the construction period. The cost of debt under the CPM for the HSB construction period is set in line with the BBB-rated 5-7 year non-financial corporate debt yield.

3.9. The allowed cost of debt during the CPM operational period is benchmarked from the spot yield and one-year average rate of iBoxx non-financial corporate debt indices with the debt tenor aligned with the length of the operational period. For HSB, the A-rated 10+ year index yield was specified as the bottom of the range, and BBB-rated 10+ year index yield as the top of the range.

3.10. We set out in our September 2018 publication 'Update on the Competition Proxy delivery model'[7] that the relevant values for the construction period, and indicative values for the operational period would be determined for any project subject to the CPM at the same time we set the final cost allowances for the project, through the "Project Assessment". It has always been our intention to refresh the cost of capital methodology for the CPM for each project at the time of our Project Assessment with contemporary input data.

3.11. The values used for the consumer savings analysis underpinning our July 2018 decision were based on input data from September 2017. In our October 2019 consultation we used input data from January 2019 for our updated consumer savings analysis for HSB. This was sourced from our work to update the inputs into the allowed Interest During Construction (IDC)[8] to be applied during 2019/20 to offshore electricity transmission projects and electricity interconnectors granted the cap and floor regime. Since our consultation we have published updated IDC rates to be applied during 2020/21[9] and so have further updated the analysis supporting this decision with this data, which comes from 31 January 2020.

3.12. Our October 2019 consultation showed that the market yield for cost of debt benchmarked by the relevant iBoxx index for January 2019 was significantly higher than the equivalent yield derived from the same methodology using the September 2017 data. This was due to increases in the market-wide cost of debt. Our consusltation identified that such an increase in the cost of debt would increase the cost of funding a project under the CPM.

3.13. Our October 2019 consultation also noted that since January 2019, the market had observed a downward trend in the output of the relevant iBoxx indices. We captured this through a sensitivity to our analysis. This sensitivity captured what the cost of debt under the CPM would be if it was set using input data from July 2019 rather than January 2019. This showed that by changing this data alone, a notable increase in the saving from CPM relative to the RIIO counterfactual would theoretically be achieved. We did not rely on this

[7] https://www.ofgem.gov.uk/system/files/docs/2018/09/cpm_update_2018_final.pdf
[8] Decision on Interest During Construction (IDC) rates to be applied during 2019-20 to offshore transmission projects and electricity interconnectors granted the cap and floor regime: https://www.ofgem.gov.uk/system/files/docs/2019/05/2019-20_idc_decision_letter.pdf
[9] https://www.ofgem.gov.uk/publications-and-updates/decision-2020-21-interest-during-construction-idc-rates-offshore-transmission-projects-and-cap-and-floor-interconnectors

cost of debt sensitivity for the purposes of our minded-to position because the use of January 2019 cost of debt evidence aligned best with the inputs into the wider CPM financing costs and RIIO counterfactual.

Updated inputs into the CPM cost of capital methodology

3.14. The downward trend in cost of debt identified in our October 2019 consultation continued throughout the 2019/20 financial year. With the updated IDC rates for 2020/21 now available, we are now able to fully reflect this updated information as part of our fully up to date benefit case analysis for HSB. Based on updated January 2020 data, the cost of debt range during the construction period under the CPM has fallen back in line with the equivalent range referenced in our July 2018 publication, which was based on September 2017 rates.

3.15. The cost of debt range for the operational period under the CPM has fallen relative to the figures from the equivalent January 2019 input data used in the October 2019 consultation, but remains higher than the range in our July 2018 decision, which was based on rates from September 2017.

Inputs into the RIIO counterfactual

3.16. Although the allowed cost of debt under RIIO is also benchmarked from iBoxx index data, it is set based on a trailing 10-year average. This means that short-term decreases in the market-wide cost of debt flow through to the allowed cost of debt under RIIO more gradually than they do to the allowed cost of debt under the CPM. Based on the January 2020 data, this slightly improves the benefit case for CPM relative to our October 2019 consultation which was based on January 2019 data.

Updated Cost of Equity input for the CPM cost of capital methodology

3.17. In the construction period under both the CPM and the SWW mechanism under RIIO, the allowed cost of equity is built up from the following inputs:

- **Total Market Return (TMR) –** the measure of the typical return on equity observed in the market as a whole.
- **Risk free rate –** the indicative rate of return for a hypothetical investment that is risk-free. Under both the CPM and RIIO this is benchmarked against UK gilts.
- **Equity beta –** the indicative ratio of riskiness (measured in terms of volatility) of the assets in question relative to the average risk faced by the market as a whole.

3.18. These inputs are combined to estimate the cost of equity, as follows:

$$\text{Cost of Equity} = \text{Risk free rate} + \text{Equity Beta} \times (\text{TMR} - \text{Risk free rate})$$

3.19. Our October 2019 consultation explained how our TMR range under CPM has changed since our July 2018 decision. To inform our policy decisions for the RIIO-2 price controls for regulated networks, we undertook a thorough review of TMR and published our proposed methodology and range in May 2019, as part of the Finance Annex to the RIIO-2 Sector Specific Methodology. This range was determined using a wide pool of evidence, including both historical averages and forward-looking measures, and following an extensive consultation exercise. The findings of this review were not available to us when we set the cost of capital methodology for the CPM in 2018.

3.20. Given the complexity in estimating TMR, and the significant work undertaken for RIIO-2, we have concluded that it is appropriate to align our approaches, and use the same TMR range to set the allowed cost of capital for regulated networks and the IDC rates applying to new assets. Therefore, we have decided that this range is the most appropriate to use to set TMR during the construction period of projects funded through the CPM.

3.21. The aligning of the TMR for the construction period under the CPM with the TMR for setting the allowed cost of capital for regulated networks and the IDC rates for new assets has effectively increased the financing cost of funding a project through the CPM. As set out in the October 2019 consultation the RIIO counterfactual TMR has remained unchanged. We do not consider that the consultation responses raised any new evidence of information to make any amendments to this aspect of the CPM cost of capital methodology we consulted on in October 2019. As a result, the consumer savings range for the CPM which we identified in our October 2019 consultation remains reduced incomparison to our July 2018 decision.

Updated RIIO counterfactual Cost of Equity

3.22. The RIIO counterfactual Cost of Equity has not changed from our October consultation.

3.23. For the purposes of the consumer savings analysis underpinning our July 2018 decision, we used the RIIO-2 indicative cost of equity range, published in the RIIO-2 framework consultation on 7 March 2018, as the basis for the RIIO counterfactual. This included a high end of the potential RIIO range of 6% (CPI-real). The Finance Annex of the

RIIO-2 Sector Specific Methodology Decision published on 24 May 2019 identified 4.8% as our expectation for the return on equity during the RIIO-2 period. We also identified evidence of the potential for systematic outperformance within the price control and estimated that this could be worth up to 0.5% in equity returns. We therefore used, as a working assumption, a 'baseline' return on equity of 4.3% (4.8% minus the 0.5% relating to outperformance) in the analysis supporting our October 2019 consultation position.

3.24. Our updated analysis continues to compare the expected financing costs under the CPM to two versions of the RIIO counterfactual.

3.24.1. The first, referred to in this document as "RIIO Low", uses the baseline RIIO-2 equity return of 4.3%. This represents an estimation of the baseline return to equity investors during RIIO-2 excluding the outperformance of RIIO-2 financial incentives.

3.24.2. The second, referred to as "RIIO High" in this document, uses the expected RIIO-2 equity return of 4.8%. This represents an estimation of the total return to equity investors during RIIO-2 including the outperformance of RIIO-2 financial incentives.

3.25. We recognise that ultimately under both of these counterfactuals, the expected return that would be funded by consumers would be 4.8%. However, just using 4.8% within the counterfactual would not appropriately capture circumstances under which an equivalent level of outperformance can also be achieved within the CPM. Under these circumstances, a direct comparison between the baseline returns, rather than the expected returns, is appropriate.

3.26. As the CPM represents a new regulatory model, we do not consider it appropriate to make an assumption around the likely level of equity return from outperformance relative to under a RIIO price control at this time. However, as the CPM shares certain key incentives properties of the RIIO price control, including the sharing with consumers of cost efficiencies and protections from cost over-runs, we do not consider it appropriate to rule out such a level of outperformance being possible.

3.27. The updated RIIO High counterfactual effectively means that the high end of the RIIO counterfactual range within our updated analysis has reduced from 6% in our July 2018 analysis, to 4.8% now. This has the effect of reducing the maximum cost of funding

projects under the RIIO counterfactual. As a result the consumer savings range for the CPM which we identified in our July 2018 decision has reduced.

Use of the detailed CPM Financial Model in our analysis to identify costs of project finance

3.28. Our July 2018 decision referenced that we used a financial model developed by our consultants, Amberside, to cross check whether the financing costs, combined with assumptions around capital and operational costs based on data provided by NGET, can deliver a viable investment that meets the required ratios that are expected in project finance. We also specified that we would use this financial model to ensure that the annual revenue allowance would be the most efficient for consumers, if NGET confirmed that it intended to fund HSB through a project finance approach.

3.29. After our July 2018 decision, we worked with the Transmission Owners (TOs) to develop the licence drafting to implement the CPM into their electricity transmission licenses in RIIO-T1, and have started discussing the equivalent licence arrangements for RIIO-2. We worked on drafting which would use a financial model to capture the detailed financing structure of the project. In the absence of alternative models proposed by the TOs, we concluded that the model developed by Amberside should be the model that is used to set project revenues under the CPM for HSB. The capturing of the detailed financing structure of the project within the Amberside model provides a more accurate quantification of the likely costs to consumers of pursuing a project finance type approach. Therefore, we have used the Amberside model to generate the revenue under the CPM that feeds into our updated consumer saving analysis set out in this consultation.

<u>Normalising adjustments and assumptions</u>

3.30. In order to incorporate the revenue generated by the Amberside model into our analysis we have had to make some normalising adjustments and assumptions to ensure the output of the Amberside model is appropriately comparable to the output of the RAV-based RIIO model. These normalisations include capturing the differences in how tax allowances would be set under the CPM and RIIO. We have also had to make some assumptions around how our adjustments to NGET's requested costs for HSB, are profiled within both models.

Effect on consumer savings of using the Amberside model

3.31. The October 2019 consultation explained that our analysis suggests that the use of the Amberside model as the source of the CPM project revenue drives an increase in the cost of delivering the project under the CPM relative to the modelling underpinning our July 2018 decision. This is because the Amberside model provides a more detailed representation of the timing of project costs and incomes, whilst also capturing the present value cost of securing an investment grade credit rating. The additional costs for this include costs for the securing of certain reserve accounts and meeting certain financial metrics, such as an annual debt service coverage ratio of 1.2, which are critical to ensuring that the benchmarked cost of debt and equity under the CPM can be achieved. The capital and operational cost inputs have also been updated relative to the information available at the time we made our July 2018 decision.

Results of consumer savings analysis

3.32. In the table below we summarise the updated results of our consumer savings analysis covering the application of the CPM to the HSB project. This uses the updated inputs referred to earlier in this chapter.

Table 1: Updated results of benefit case analysis for HSB project

	Consumer savings presented in July 2018 Decision		**Updated consumer savings**	
	2018 RIIO Low	*2018 RIIO High*	*Updated RIIO Low (4.3%)*	*Updated RIIO High (4.8%)*
July 2018 CPM Central Scenario[10]	£53m	£102m		
Consultation position: CPM Central scenario (Cost of Debt as per 31 Jan 19)			**-£10m**	**£3m**

[10] See page 49 here: https://www.ofgem.gov.uk/system/files/docs/2018/07/hinkley_seabank_project_decision_on_delivery_model.pdf#page=49

	Consumer savings presented in July 2018 Decision		Updated consumer savings	
	2018 RIIO Low	*2018 RIIO High*	*Updated RIIO Low (4.3%)*	*Updated RIIO High (4.8%)*
Updated CPM Central scenario (Cost of Debt as per 31 Jan 20)			***£0m***	***£14m***

Figure 1: Changes in benefit case analysis: CPM vs. RIIO Low by contributing factor since October 2019 consultation

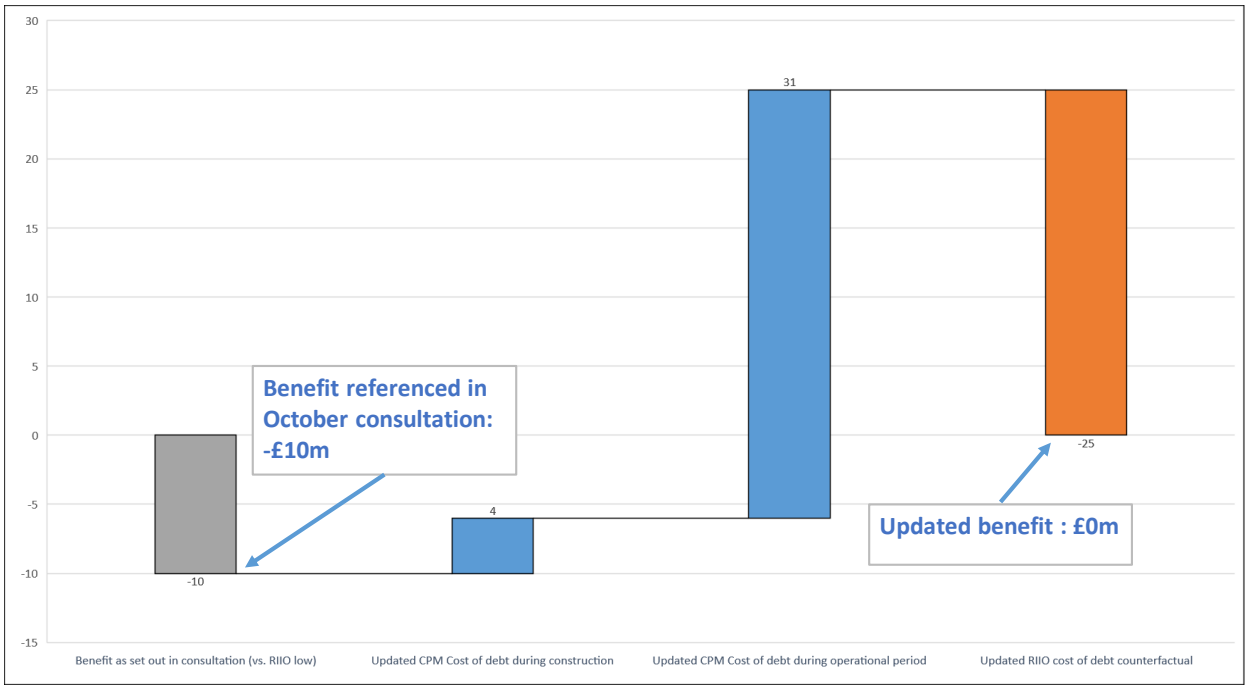
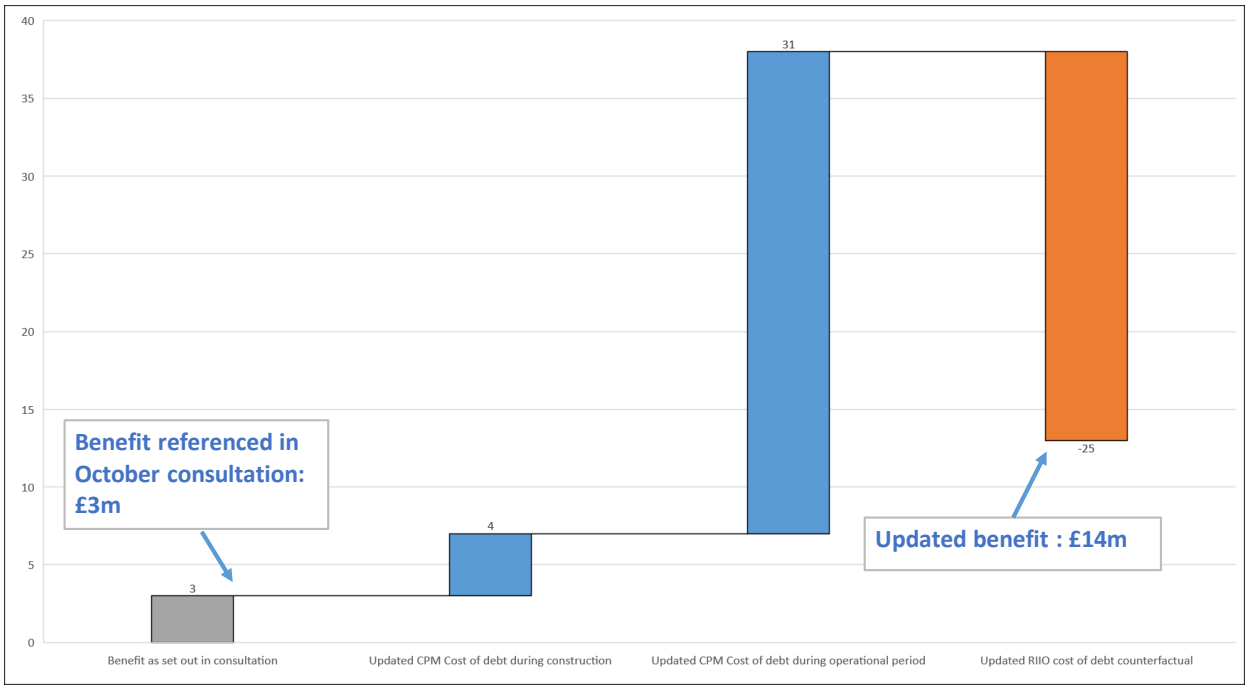


Figure 2: Changes in benefit case analysis: CPM vs. RIIO High by contributing factor since October 2019 consultation



3.33. The updated range for the CPM financing costs that has fed into this analysis is provided in Appendix 1 of this document.

Other considerations

Harder to Monetise potential benefits of applying CPM

3.34. We consider that there are potential benefits to applying the CPM to HSB that are difficult to capture within our analysis. Below we consider several key potential impacts that are harder to monetise within our analysis.

The benefits of locking in cost of debt and equity rates that reflect current market rates for financing a project

3.35. One of the key potential benefits of the CPM is that it allows for current rates to be locked in for the length of the regulatory regime under the CPM (the length of construction and 25 years operation). In contrast, under the RIIO counterfactual, rates are set every 5 years based on prevailing market evidence and macro-economic factors over a 45 year depreciation period (with the last costs being recovered from consumers 45 years after the final expenditure on the project). Against the future uncertainty of this RIIO counterfactual, it is not possible to robustly monetise up front, the benefit of locking in current rates.

3.36. For this reason, we remain of the view that relying on the RIIO-2 cost of equity range to set the RIIO counterfactual for future RIIO price controls (RIIO-2, RIIO-3, and beyond) could be considered a conservatively low counterfactual. Using a counterfactual cost of equity which reflects recent low rates without anticipating future increases may understate this key potential benefit of the CPM. However, based on the current available evidence it is difficult to identify an alternative quantitative estimate of future RIIO cost of equity ranges on which to base our counterfactual.

3.37. One useful source of evidence is the long-term forecast of UK gilts, which can be used to derive a long-term forecast of the risk-free rate over time. This evidence has allowed us to include a long-term forecast of the risk-free rate to capture a forecast of future movements in the cost of equity within the RIIO counterfactuals beyond the end of the RIIO-2 period. However, there is a limit to how reliable this is as a long-term measure of the future UK risk free rate. In recent times, the market has observed falls in forecast UK Gilt returns which may have reflected investors seeking to use gilts to hedge against broader market uncertainty in the short term, rather than a longer-term expectation that returns on UK gilts will necessarily remain low.

3.38. It is possible that over the long-term, market rates will move back towards average historical levels, rather than remain at the current historically low rates. However, if rates do revert back towards average historical levels, it is almost impossible to forecast how long such a reversion might take, nor whether rates will reduce further first.

3.39. Ultimately, we think our analysis may undervalue the benefit of enabling rates to be locked in for the long term, but there is a limit to the range of useful evidence that can be relied upon to make long-term macro-economic predictions, and predications about their impact on future allowed cost of equity under RIIO.

Making use of market-revealed project-specific benchmarks, where appropriate, to set efficient financing costs for a project

3.40. The CPM uses market-derived evidence from the OFTO regime as a direct benchmark for the project's allowed cost of equity during the operational period. The use of such benchmarks, derived directly from competitive bids, in setting the financing costs of monopoly network company projects, could ensure that consumers ultimately pay less than they do from the administrated financing cost allowance calculated as part of each RIIO price control. Again, it is difficult to monetise this potential benefit. Both the financing costs

under the CPM for future projects, and future RIIO price controls are uncertain, and the relationship between the two over time is likely to remain dynamic and difficult to estimate.

Our decision

3.41. Our updated analysis shows that, relative to the analysis supporting our October 2019 consultation, the consumer impact of funding HSB through CPM has improved relative to the RIIO counterfactual.

3.42. We continue to consider this decision to be finely balanced particularly in view of prevailing market uncertainty and the sensitivity of the decision to assumptions about the final RIIO-2 settlement. Nevertheless, we do not consider that there is sufficient evidence to move away from the position set out in our minded-to consultation.

3.43. Having considered the information and analysis currently available to us, and all other relevant considerations, we do not consider that there is sufficient evidence that applying the CPM to HSB (and therefore departing from the existing SWW arrangements under RIIO) would be in the interests of existing and future consumers. We have therefore decided in this case not to apply the CPM to the HSB transmission project.

4. Next steps

Next steps for HSB

4.1. Alongside this decision we have published the final cost allowances for HSB, in the Decision on our project assessment for the Hinkley-Seabank electricity transmission project publication[11].

4.2. HSB will be funded through the SWW process. Under the SWW process, NGET's licence will be amended to insert the annual cost allowance for the project into the SWW licence condition along with the required output of the project and the required delivery date. We will shortly publish a consultation on the proposed modifications to NGET's licence to reflect the cost allowances for HSB under SWW.

4.3. Both the delivery date of the project and several years of expenditure will fall within the RIIO-T2 period. The RIIO-T2 arrangements, including the allowed cost of equity, financial treatment and wider arrangements set out in the sector-specific methodology decision (and the future development of these arrangements into the final RIIO-T2 settlement) will be applicable from 1 April 2021.

Next steps for the CPM

4.4. We continue to consider that the CPM can replicate the following key benefits of a fully competitive approach:

- The locking in of debt and equity rates that reflect current market rates for financing a project;
- Making use of market revealed project-specific benchmarks, where appropriate (such as using observed OFTO rates for the operational period), to set efficient financing costs for a project;
- Enabling efficient financing costs for a project through a project-specific risk allocation.

[11] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-cost-assessment

4.5. We said in our May 2019 RIIO-2 Sector Specific Methodology Decision that we consider it is in the interest of consumers to be able to apply the CPM to projects in the electricity transmission and gas sectors that qualify as new, separable and high value. We will consider the consumer savings position, based on the information and analysis available to us at the time, along with all other considerations relevant to the projects concerned, in considering whether to apply the CPM to the delivery of projects.

4.6. The final allowed cost of equity under the RIIO-2 price control settlement can be expected to impact on the level of benefits that can be delivered through the application of the CPM during RIIO-2. We will continue to monitor changes in macro-economic circumstances and forecasts as these are likely to impact on the analysis that informs future decisions on whether to apply the CPM to projects during RIIO-2, or relevant qualifying projects within RIIO-T1. Having developed the CPM during RIIO1 in the absence of alternative competitive models, and as an integral element of the RIIO-2 price control framework, we may in future decide to apply the CPM in cases where the consumer savings appear finely balanced in order to achieve the hard to monetise benefits set out above.

Appendices

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Appendix 1 – Updated Cost of Capital ranges under CPM

Updated Cost of Capital ranges under CPM – Construction

1.1. The table below shows Cost of Capital ranges for the 5-7 year HSB construction period, as calculated using the CPM cost of capital methodology. They are shown in CPIH real terms for comparison to the RIIO counterfactual which will be set on a CPIH basis.

Table A1: CPM Construction Cost of Capital inputs for HSB (Rates from Jan 2020)

	Updated rates used this decision (rates from Jan 2020)	
Construction:	Low	High
Gearing	37.50%	37.50%
Cost of Debt (CPIH real)	0.49%	0.59%
Post tax Cost of Equity (CPIH real)[12]	4.07%	7.07%
CPIH real WACC (vanilla)	**2.73%**	**4.64%**

Updated Cost of Capital ranges under CPM – Operational period

1.2. The table below shows the Cost of Capital ranges for HSB's 25 year operational period under the CPM, as calculated using the CPM cost of capital methodology. They are shown in CPIH real terms for comparison to the RIIO counterfactual which will be set on a CPIH basis.

[12] This is comparable to the RIIO Counterfactual Equity allowance of 4.3% - 4.8%

Table A2: CPM Operational Cost of Capital inputs for HSB (Rates from Jan 2020)

	Updated rates for this decision (rates from Jan 2020)	
Operations:	Low	High
Gearing	85%	80%
Cost of Debt (CPIH real)	1.28%	1.41%
Post tax Cost of Equity (CPIH real)	4.90%	6.37%
CPIH real WACC (vanilla)	**1.83%**	**2.40%**

Appendix 2 – Impact Assessment Template

Impact Assessment

Updated Impact Assessment template

Division:	Wholesale Markets and Commercial	**Type of measure:**	Price control and Competition measures
Team:	New Transmission Investment team	**Type of IA:**	Qualified under Section 5A UA 2000
Associated documents:	N/A	**Contact for enquiries:**	NTImailbox@ofgem.gov.uk
Coverage:	Full coverage. This IA considers the full range of factors considered in our minded to position to fund the Hinkley-Seabank project (HSB) through the Strategic Wider Works mechanism within RIIO		

Summary: Intervention and Options

The Ofgem Impact Assessment (IA) template is used to present the information and analysis that underpins our decisions in a consistent format. It outlines the benefits and potential costs of retaining the HSB project within SWW under RIIO, relative to our previous decision to apply the CPM as the delivery model for the project.

As outlined in Chapter 3 of the main document, having considered the information and analysis currently available to us, and all other relevant considerations, we do not consider we have sufficient confidence that applying the CPM to HSB (and therefore departing from the existing SWW arrangements under RIIO) would be in the interests of existing and future consumers.

What is the problem under consideration? Why is Ofgem intervention necessary?

In July 2018 we published our decision to apply the CPM as the delivery model for NGET's HSB project. This included the use of the Ofgem Impact Assessment (IA) template to present the information and analysis that underpinned that decision in a consistent format. As explained in the consultation document and this decision, due to factors that have changed since our decision, our analysis no longer supports the implementation of the CPM to the HSB project.

This IA outlines our updated analysis of the potential consumer savings from applying the CPM to the HSB project rather than retaining it within SWW under RIIO. The IA is consistent with the IA that formed part of the 2018 decision, but uses updated inputs to reflect the aspects, identified in section 3 of the main document, that have changed since that decision.

This IA does not revisit the use of the SPV model, which featured in the July 2018 analysis.

What are the policy objectives and intended effects including the effect on Ofgem's Strategic Outcomes

Ofgem's principal objective is to protect the interests of existing and future consumers. Consistent with Ofgem's Strategic Outcomes and regulatory stances, the central consideration in our decision on whether to implement the CPM for HSB, or revert to SWW, is which approach is more likely to lead to lower bills for energy consumers. In light of the changes to market conditions identified in section 3 of the main document, and uncertainty around the impacts that are hard to monetise, we no longer consider that the available evidence at this time provides sufficient certainty that the CPM will reduce consumer bills relative to the project remaining under the RIIO SWW mechanism.

What are the policy options that have been considered, including any alternatives to regulation?

Option 1: SWW - This represents the 'status quo' or 'do nothing' option and would involve NGET receiving revenue for delivering HSB under the prevailing RIIO arrangements over 45 years.

Option 2: CPM - Ofgem utilises benchmarks from the OFTO and Interconnector regimes, alongside other market information, to set an HSB-specific cost of capital that we consider

could have been achieved through an efficient competition. Capital and operational costs are confirmed following a post construction review. These are combined to determine an allowed revenue for delivering HSB over the period of its construction and 25 years of operation.

On the basis of our updated analysis, we expect that applying the CPM delivery model to the HSB project, would not save consumers £53m to £102m as originally anticipated. Our updated analysis indicates that the outcome for consumers of applying the CPM to HSB ranges from a consumer saving of £14m, to no consumer saving.

Reassessment of Preferred Option for July 2018 decision to apply the CPM – Monetised Impacts (£M)

Business Impact Target Qualifying Provision	Non-qualifying (Competition)
Business Impact Target (EANDCB)	Not relevant
Net Benefit to GB Consumer	**Updated analysis:** Our updated analysis indicates that the outcome for consumers of applying the CPM to HSB ranges from a consumer saving of £14m, to no consumer saving.
Wider Benefits/Costs for Society	N/A
Explain how was the Net Benefit monetised, NPV or other We carried out updated NPV comparisons of the revenue allowances under the specified Option 1 and Option 2 using the Green Book specified 3.5% and 3%[13] discount rates. NPV is calculated in 2017/18 prices covering the period 2017 – 2071. The base date for discounting was 2017/18.	

[13] Under the Treasury Greenbook, the annual discount rate reduces to 3% after 30 years

Harder to Monetise Considerations

There are potential benefits to applying the CPM to HSB that are difficult to capture within our analysis. Below we consider several key impacts of not applying the CPM to HSB that are difficult to monetise:

1- The benefits of locking in current market rates

One of the key potential benefits of the CPM is that it allows for current market rates to be locked in for the length of the regulatory regime under the CPM (the length of construction and 25 years operation). In contrast, under the RIIO counterfactual, rates are set every 5 years based on prevailing market evidence and macro-economic factors over a 45 year depreciation period (with the last costs being recovered from consumers 45 years after the final expenditure on the project). Against the future uncertainty of this RIIO counterfactual, it is not possible to robustly monetise the benefit of locking in current rates.

It is possible that over the long-term, market rates will move back towards average historical levels, rather than remain at the current historically low rates. However, if rates do revert back towards average historical levels, it is almost impossible to forecast how long such a reversion might take, nor whether rates will reduce further first. In our updated analysis for this consultation we have modelled long-term expectations of the risk-free rate, which will be indexed under RIIO-2, in order to try and capture current evidence on how Cost of Equity might change over the long-term. To do this we have tracked long-term UK Gilt returns. There is a limit to how reliable this is as a measure of long-term risk free rate due to uncertainty over how other, short-term factors are contributing to the current historically low rates.

Ultimately, we think our analysis may undervalue the benefit of enabling rates to be locked in for the long term, but there is a severe limit to the range of useful evidence that can be relied upon to make long-term macro-economic predictions, and their impact on future allowed cost of equity under RIIO.

Making use of market revealed project-specific benchmarks, where appropriate (such as using observed OFTO rates for the operational period), to set efficient financing costs for a project

The CPM uses market-derived evidence from the OFTO regime as a direct benchmark for the project's allowed cost of equity during the operational period. Establishing the use of such benchmarks, derived directly from competitive bids, in setting the financing costs of

monopoly network company projects, could ensure that consumers ultimately pay less than they do from the administrated financing cost allowance calculated as part of each RIIO price control. Again, it is difficult to credibly monetise this potential benefit. Both the financing costs under the CPM for future projects, and future RIIO price controls are uncertain, and the relationship between the two over time is likely to remain dynamic and difficult to estimate.

Key Assumptions/sensitivities/risks

Assumptions

Our analysis compares the revenue allowance derived from NGET's proposed costs to deliver HSB under the CPM and the RIIO counterfactual. The RIIO counterfactual is modelled based on a 45-year depreciation (ie: assuming that the last costs being recovered from consumers 45 years after the final expenditure on the project) with the assumption that the future allowance for cost of equity remains based on the indicative RIIO-2 rates of 4.3% to 4.8% with the risk-free rate adjustment referenced in the hard to monetise impact section of this IA and paragraph 3.31 of the main consultation. In terms of modelling the project costs under the CPM, we have utilised the CPM Financial Model with the full costs recovered within the 25-year operational period (after completion of construction).

Risks

As referenced in the section on hard to monetise impacts and section 3.34 to 3.40 of the main document, there is a clear risk that due to changes to the RIIO counterfactual over time, a decision to apply the CPM to the HSB project would have led to a significant saving for consumers.

Will the policy be reviewed? No	**If applicable, set review date: month/Year**

Is this proposal in scope of the Public Sector Equality Duty?	**No**

Appendix 3 – Summary of views raised in October 2019 consultation and key Ofgem responses

Question 1: Do you agree with the findings of our analysis?

All of the respondents to the consultation agreed with the findings of our analysis.

NGET agreed that the factors referenced would harm the benefit case for CPM, but also argued that the volatility within the CPM methodology means that the benefit case for CPM will always be uncertain, and therefore any decision to apply CPM would be a gamble for consumers. It also argued that the benefit case analysis does not sufficiently capture the costs associated with the novel nature of the CPM regime.

We do not agree that, in general, CPM represents a risk to consumers relative to the RIIO counterfactual. In terms of the analytical comparison between CPM and the RIIO counterfactual, any decision to apply CPM or to apply the RIIO counterfactual would be made in the context of an equivalent level of uncertainty. The CPM is made up of a number of established energy sector market principles and approaches. We do not consider any evidence has been presented to demonstrate that CPM would incur any additional cost to consumers as a result of it being novel.

SP Transmission agreed with our minded-to position, but did not agree with our intention to continue considering CPM as part of our RIIO-2 assessment, and during the RIIO-2 period. It argued that RIIO will deliver lower rates for cost of debt than CPM, that it continues to consider OFTO benchmarks inappropriate for projects subject to the SWW process, and that higher gearing assumptions will not drive lower cost of capital.

We consider that the evidence from the iBoxx debt indices does not support the argument that during RIIO-2, the RIIO counterfactual will always deliver a benefit to consumers. We consider that the CPM cost of capital methodology as set out in our July 2018 decision clearly sets out our rationale for the OFTO benchmarks it uses. No additional evidence has been presented to change our view. We have also set out in our July 2018 decision why we consider that higher gearing assumptions can drive lower cost of capital under CPM.

SHE Trasmission agreed with our minded-to position, but reiterated previous concerns with the CPM cost of capital methodology and argued that the benefit case analysis failed to capture the consumer cost of reopening of the RIIO-T1 price control.

As referred to in our July 2018 decision[14], we do not agree that the application of CPM would constitute an inappropriate reopening of the RIIO-T1 price control that would negatively impact on consumers. We therefore do not consider there would be additional costs associated with any perceived additional market uncertainty.

EDF was supportive of our minded-to position. It wants to ensure that the network costs of connection are driven to the most efficient level. As our position was based on analysis of the consumer impact, EDF was happy for this to drive our decision.

Question 2: Are there any additional factors that we should consider as part of our analysis and/or decision on whether to apply the CPM or SWW as the delivery model for HSB?

The three incumbent TOs raised concerns around the CPM cost of capital methodology. We have considered these concerns. We have considered these points. We considered such points in coming to the policy position set out in our July 2018 decision.

[14] Paragraph 2.10 of https://www.ofgem.gov.uk/system/files/docs/2018/07/hinkley_seabank_project_decision_on_delivery_model.pdf