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for energy consumers

# Impact Assessment

**Impact Assessment on applying the Special Purpose Vehicle model and Competition Proxy model to future new, separable and high value projects**

| | | | |
|---|---|---|---|
| **Division:** | Systems and Networks | **Type of measure:** | Onshore Competition in Electricity Transmission |
| **Team:** | New Transmission Investment | **Type of IA:** | Qualified under Section 5A UA 2000 |
| **Associated documents:** | Update on Extending Competition in Transmission; Extending competition in electricity transmission: commercial and regulatory framework for the SPV model; Update on the Competition Proxy delivery model | **Contact for enquiries:** | NTIMailbox@ofgem.gov.uk |
| **Coverage:** | Full | | |


## Summary:

This document is an Impact Assessment (IA) that sets out our analysis of the benefits and costs to consumers and other industry parties of applying the Competition Proxy model (CPM) and Special Purpose Vehicle (SPV) model to future new, separable, and high value projects. These benefits and costs are compared against a range of potential outcomes under the counterfactual delivery through the prevailing price control by the relevant incumbent TO.

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

Ofgem's principal objective under the Electricity Act 1989 is to protect the interests of existing and future electricity consumers. As part of achieving this objective, Ofgem seeks to ensure that new large onshore electricity transmission projects that are needed are delivered as efficiently as possible. Since 2015, we have been undertaking development of policies and frameworks to introduce competition into the delivery of these projects. More recently, we have developed the Competition Proxy model (CPM) and the Special Purpose Vehicle (SPV) model.

This Impact Assessment (IA) considers the benefits and costs to consumers of applying the CPM and the SPV model, to projects that meet the criteria for competition,[1] against a counterfactual of delivery through the prevailing price control by the relevant incumbent Transmission Owner (TO).

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

Consistent with Ofgem's Strategic Outcomes and regulatory stances, the main outcome of implementing the CPM or SPV model would be to lower bills for energy consumers.

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

Option 1: Delivery of a project through the existing Strategic Wider Works mechanism (SWW) under the RIIO price control – this represents the 'status quo' or 'do nothing' option and would involve the TO receiving revenue for deliving the project in line with the prevailing price control arrangements.

Option 2: Delivery of a project through the SPV model – Both this option and option 3, the CPM, are preferred options. The decision of which one to apply will depend on the specific circumstances of the project. Under the SPV model, the incumbent TO would run a tender to appoint an SPV to finance and deliver a project on its behalf through a contract in effect for a specified revenue period. The allowed revenue for delivering a project will be set over the period of its construction and 25 years of operation.

Option 3: Delivery of a project through the CPM – Both this option and option 2, the SPV model, are preferred options. The decision of which one to apply will depend on the specific circumstances of the project. Under the CPM, Ofgem would utilise benchmarks from the OFTO and Interconnector regimes, alongside other market information, to set a project-specific financing arrangements and regulatory model that we consider could beachieved through an efficient competitive process. Ofgem will determine the allowed capital and operational costs through a cost assessment process. The allowed revenue for delivering a project under CPM will be set over the period of its construction and 25 years of operation.

[1] New, separable, and high value (>£100m capex).

# Preferred option - Monetised Impacts

| | |
|---|---|
| **Business Impact Target Qualifying Provision** | Non-qualifying (competition) |
| **Business Impact Target (EANDCB)** | Not relevant |
| **Net Benefit to GB Consumer** | See below |
| **Wider Benefits/Costs for Society** | N/A |

In summary, our analysis shows that the CPM and the SPV model can deliver financial savings for consumers, by reflecting efficient market-based costs for financing new, separable and high value projects. The SPV model has the potential to unlock additional savings for consumers, if the SPV model is implemented efficiently, by also driving additional savings in capital and operational expenditure.

Our analysis shows that the **CPM can provide benefits of 10.9-12.1%** and the **SPV model can provide benefits of 4.1-10% (in our middle scenario) and possibly 13-18.7% if implemented efficiently**, over delivery under current and future price controls.

# Preferred option - Hard to Monetise Impacts

The SPV model encourages competitive pressures in the supply chain, leading to innovation and new sources of labour and capital. It can also can help us with our determination of efficient costs for wider assets covered by our price control arrangements by providing additional benchmarks.

CPM provides similar benefits to SPV but is not subject to as much time for implementation as the SPV.

Chapters 3 and 4 of this impact assessment set out in more detail the costs and benefits of implementing the CPM and the SPV model. Chapter 6 sets out the distributional effects.

**Key Assumptions/sensitivities/risks**

Chapter 2 sets out the assumptions used in our modelling for this IA. Our external consultants, Cambridge Economics Policy Associates (CEPA)'s work with us on developing a methodology for determining the cost of capital for new assets, has informed the assumptions regarding the benefits and costs of using the SPV model and the CPM[2].

[2] https://www.ofgem.gov.uk/ofgem-publications/127844

| | |
|---|---|
| **Will the policy be reviewed?** No | **If applicable, set review date:** N/A |

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

## Summary table for all options

| Summary of options | Main effects on Consumer outcomes | Key considerations |
|---|---|---|
| Option 1: Existing SWW arrangements | No change to current outcomes. | This option represents the counterfactual of delivery through the prevailing price control by the relevant incumbent TO. |
| Option 2: SPV model | Our middle scenario shows that this option could deliver a saving of 4.1-10% on any individual project. If the model was implemented efficiently by the TO, then our estimate of the consumer saving rises to 13-18.7%. | The model would need to be implemented efficiently by the TO to capture additional consumer value through capital and operational cost savings. This option introduces a potential consumer cost risk over the use of CPM or delivery under the price control if the model is not implemented efficiently by the TO. |
| Option 3: CPM | Our middle estimate shows that this option could deliver a saving of 10.9-12.1% on any individual project. | The extent of savings for consumers are dependent on the differential between the cost of capital set for the project via CPM and the prevailing cost of capital via the price control counterfactual. |

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# 1. Introduction

1.1. In our January 2018 Competition Update, we set out our intention to consider the SPV model and CPM for all future Strategic Wider Works (SWW) projects that are subject to a needs case assessment during RIIO-T1 and that meet the criteria for competition[3].

1.2. This IA considers the benefits and costs to consumers of applying the CPM and the SPV model to projects that meet the criteria for competition, against a counterfactual of delivery through the prevailing price control by the relevant incumbent TO. **The assumptions used in this IA should not be read as any confirmation of the rates or approach applicable for RIIO-2**.

1.3. Alongside this IA we have published three documents:

1) **Update on Extending Competition in Transmision[4]** – this letter updates stakeholders on our arrangements to extend competition in onshore electricity transmission. It sets out the background to competition in electricity transmission, our approach to the future application of the CPM and SPV model, and an overview of our future programme and its links to our RIIO-2 work.

2) **Extending competition in electricity transmission: commercial and regulatory framework for the SPV model [5]** – this document sets out our views, for consultation, on the next level of detail of the SPV model.

3) **Update on the Competition Proxy delivery model [6]** – an update on how we will consider applying the CPM for future projects.

We previously undertook an impact assessment of our decision to apply CPM to the HSB project, using assumptions specifically related to implementation of the model for HSB.[7] For the avoidance of doubt this IA does not reopen or reconsider any aspect of the HSB decision on delivery model.

**Overview of the SPV model**

1.4. Under the SPV model, the incumbent TO would run a competition for the construction, financing, and operation of the project through a project-specific SPV. The SPV competition would determine an annual revenue stream for the project, reflecting the underlying capital and operational costs and weighted average cost of capital (WACC), which would be paid to the SPV by the TO. The TO would recover these costs from users of the system (and ultimately from consumers) through its transmission licence.

[3] New, separable, and high value (>£100m capex).
[4] https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission-and-impact-assessment
[5] https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-commercial-and-regulatory-framework-spv-model
[6] https://www.ofgem.gov.uk/publications-and-updates/update-competition-proxy-delivery-model

[7] https://www.ofgem.gov.uk/system/files/docs/2018/01/hsb_condoc_delivery_model.pdf

1.5. The SPV would deliver the project under the terms of a contractual arrangement (the "Delivery Agreement" (DA)) with the TO. We expect the operational period will be 25 years, but recognise that there may be circumstances in which a longer or shorter operational period is preferable. For the purposes of our analysis in this IA we have assumed a 25 year operational period.We have set out further proposals on the detail of the SPV model in our September 2018 SPV consultation published alongside this IA[8]. Interested stakeholders should respond to that consultation using the details provided on the document's covering page. In responding to that consultation, stakeholders may also comment on this IA.

1.6. The SPV model is an example of a 'late' model competition, i.e. it applies to a project that is well developed, and is close to receiving or has received planning consents. In as far as it relates to the SPV model, this IA considers the costs and benefits of a late model competition. Ofgem intends to continue to develop earlier models of competition (i.e. where an appointed party undertakes elements of early design and consenting too) in due course as part of work on the RIIO2 price control framework.

**Overview of the CPM**

1.7. Under the CPM we would set the TO's allowed revenue for a project in line with the outcome we consider would have resulted from an efficient competition for construction, financing and operation of the project. We would fix this revenue for a defined period (in general we consider an operational period of 25 years to be appropriate).

1.8. The revenue would be based on our determination of a project-specific cost of capital for the construction and operational periods of the revenue term and our determination of efficient costs for construction and operations of the project.

1.9. We have published further information on the CPM in the Hinkley-Seabank: Decision on delivery model document published in July (2018)[9] and the update on CPM published today[10].

**Structure of this document**

1.9. This document covers the following:

- Chapter 2 sets out our assumptions used in this analysis
- Chapter 3 considers the benefits of moving from a RIIO price control approach to the SPV model or CPM.
- Chapter 4 considers the costs and risks of introducing the SPV model and CPM.

[8] https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-commercial-and-regulatory-framework-spv-model

[9] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-decision-delivery-model

[10] https://www.ofgem.gov.uk/publications-and-updates/update-competition-proxy-delivery-model

- Chapter 5 sets out our overall cost benefit assessment of moving from a RIIO price control approach to the SPV model or CPM.

- Chapter 6 considers the distributional effects of the SPV model and CPM against the RIIO price control.

# 2. Assumptions used in this analysis

2.1. This chapter sets out the assumptions underlying our analysis of the potential quantitative impact of using the SPV model and CPM in the delivery of new, separable and high value transmission projects (i.e. projects which meet the criteria for competition), instead of the prevailing RIIO price control approach.

2.2. In the following sections we have set out:

- An overview of our modelling approach for this IA.
- The modelling assumptions we have made for a project delivered through the SPV model or CPM;
- The modelling assumptions we have made for a project delivered under the SWW mechanism in the RIIO-T1 period and under future price controls; and
- Different scenarios we have used in our modelling.

**Modelling assumptions**

2.3. We have modelled the Net Present Value (NPV) costs of the project delivered under an SPV model or CPM approach and through a RIIO price control counterfactual approach.

**2.4.** We have summarised in Table 1 the key parameters used in our modelling for this IA that are common to the SPV model, CPM and the RIIO counterfactual.

**Table 1: Parameters**

| Parameter area | Description |
|---|---|
| Starting financial year | We have used the next financial year, 2019/20. It therefore covers part of the current price control, RIIO-T1, which is in place from 1st April 2013 to 31st March 2021. |
| Discount rate | We have used the Social Time Preference Rate (STPR) in line with HM Treasury's Green Book recommendations[11]. This has separate rates for years 0-30, and beyond 30 years. |
| Inflation | We have used Retail Price Index (RPI) to account for inflation, consistent with the current price control. |

[11] https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

# Modelling assumptions for the SPV model and CPM

2.5. In this section, we have set out the modelling assumptions used in analysing the financial impact of applying the SPV model and CPM.

### Construction period, revenue term and depreciation period

2.6. For both the SPV model and CPM we are assuming a 25-year operational period after construction completion, in line with the models' structures outlined in Chapter 1. We have considered the impact of different construction periods (2, 3 and 5 years) as set out in the 'Project Scenario modelling' section later in this chapter. We have modelled that the project assets are fully depreciated in regulatory terms at the end of the operational period, ie the regulatory asset value is zero at the end of the 25-year operational period.

### Cost of capital

2.7. This IA uses the methodology for determining the cost of capital for new assets, that we developed with our external consultants, CEPA[12]. That methodology covers the cost of capital associated with delivery of new assets in the following areas: offshore electricity transmission, interconnectors, and onshore electricity transmission projects that meet the criteria for competition. We published that methodology alongside our 'Hinkley-Seabank project: decision on delivery model' in July 2018[13].

2.8. The cost of capital methodology produces two separate cost of capital ranges for the construction and operational phases, of onshore electricity transmission projects that meet the criteria for competition. This approach reflects the fact that material differences in risk between these two phases have an effect on estimated cost of debt, equity and gearing levels.[14]

2.9. This IA uses the most recent cost of capital ranges set out in the July 2018 cost of capital methodology referenced above, as an estimate of the cost of capital for projects delivered under either CPM or the SPV model[15]. We use this cost of capital methodology for both CPM and the SPV model as we consider that the top and the bottom ends of the range (at construction and operations) represent an appropriate upper and lower bound of the likely cost of capital resulting from competition for the construction, operation and financing (over a 25-year operational period) of new, separable and high value onshore electricity transmission projects. The CPM and the SPV model may also impact the capital and operational costs of projects relative to the price control counterfactual – we consider this further within 'Capital and operational costs' below.

2.10. Based on the cost of capital methodology, the construction and operational period financial parameters for the SPV model and CPM are set out below in Tables 2 and 3 respectively. These figures reflect our view of the rates if they had been set in September

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12 https://www.ofgem.gov.uk/system/files/docs/2018/07/cepareport_newassets_july2018_final_0.pdf

13 https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-decision-delivery-model

14 See the cost of capital methodology document for more information.

15 The rates in the cost of capital methodology were derived from September 2017 market data. As set out in the HSB decision document we will update those rates to reflect contemporary data when we set the allowed cost of capital for a project at the project assessment stage of CPM.

2017. These parameters are adjusted to account for RPI inflation and presented in real terms. The mid-point is an average of the top and bottom of the range.

2.11. For the cost of debt, the cost of capital methodology assumes that short-term debt is raised upfront to cover the construction period. It assumes that a further tranche of longer-term lower-risk debt is raised to cover the full 25-year operational period. An allowance is also included for transaction costs associated with securing the debt.

2.12. For the **cost of debt ranges during construction** described below, in line with the cost of capital methodology, we have used the observed 5-7 year non-financial corporate debt costs at the high end of the range and the 1-3 year non-financial corporate debt costs at the low end of the range. At the high end these are based on BBB-rated debt indexes within the iBoxx index to match the tenor of the debt with the duration of the construction period – plus transaction costs. At the low end these are based on a blend of A and BBB-rated debt indexes within the iBoxx index to match the tenor of the debt with the duration of the construction period – plus transaction costs.

2.13. For the **cost of debt ranges during operations** set out below, a longer-term blend of A and BBB-rated debt indexes from iBoxx[16] is used to set the cost of debt, including the associated transaction costs.

2.14. The **cost of equity range during construction** set out below is derived within the cost of capital methodology from a build-up of input assumptions from available market data. The methodology uses a combination of listed engineering and construction companies and regulated networks as comparators. Under this approach, the equity beta is combined with an estimate of overall expected equity market returns in the UK to set the cost of equity. For a short-term investment, such as for the construction period of new, separable and high value projects, the methodology considers forward-looking modelling[17], cross-checked against long-term historical trends and investor survey data of expected equity returns, more appropriate than relying solely on longer term historical average returns. As new, separable and high value projects would have specific regulatory protections as set out in the documents on the CPM and the SPV model published alongside this IA, the cost of capital methodology uses both construction companies and regulated networks to set the equity beta range for the construction period.

2.15. The **cost of equity range during operations** set out below is derived within the cost of capital methodology from the cost of equity levels observed in the second and third tender rounds of the OFTO regime and cross-checked against subsequent tender rounds. This is because we consider that the inherent level of risk faced in the operation of new, separable and high value projects under SPV and CPM is comparable to the risks faced by operators under the OFTO regime.

2.16. The **gearing level** set out below is taken from the cost of capital methodology. The methodology sets out that evidence from the OFTO regime clearly supports the view that a higher level of gearing than the 60% assumed in RIIO-T1 is achievable in the operational period of new, separable and high value projects. It sets a level of gearing during operations of between 80 to 85%. It also accounts for evidence from specific regulated infrastructure construction projects suggests that, whilst the gearing during construction is likely to be lower than during operation, a level considerably higher than 65% has been achieved in other regulated infrastructure projects. This is a significantly higher level of gearing than seen in the construction and engineering companies used in the cost of equity analysis. We conclude from the cost of capital methodology that regulatory protections

[16] 10+ year index, which has an average debt tenor that aligns well with the 25 operational period
[17] In CEPA's report, this approach is referred to as the Dividend Growth Model (DGM)

allow for a higher level of gearing to be achieved than is observed in the comparator set. We have therefore selected a point between the higher gearing levels seen in regulated projects and the observed level from the equity comparator set in order to set a level of gearing during construction of 37.5%.

**Table 2 – Construction period financial parameters (in RPI real terms)**

| Parameter group | Cost of Equity | Cost of Debt | Gearing | WACC |
|---|---|---|---|---|
| **Top of the range** | 6.24% | -0.19%[18] | 37.5% | 3.83% |
| **Mid-point of the range** | 4.48% | -0.85% | 37.5% | 2.48% |
| **Bottom of the range** | 2.71% | -1.50%[19] | 37.5% | 1.13% |

**Table 3 – Operational period financial parameters (in RPI real terms)**

| Parameter group | Cost of Equity | Cost of Debt | Gearing | WACC |
|---|---|---|---|---|
| **Top of the range** | 5.34% | 0.24% | 80% | 1.26% |
| **Mid-point of the range** | 4.41% | -0.07% | 82.5% | 0.71% |
| **Bottom of the range** | 3.48% | -0.39% | 85% | 0.19% |

**Capital and operational costs**

*Capital costs (capex)*

2.17. For the purposes of this IA, we have assumed that an efficiently implemented SPV competition could drive around 10 per cent in capex savings during the construction period relative to the price control counterfactual. Conversely, we have assumed that an inefficiently implemented SPV competition could lead to a capex increase of around 10 per cent.

2.18. For the purposes of this IA we assume that the CPM would deliver the assets at the same capex cost as under the RIIO price control arrangements. This is because we have seen no evidence that the CPM is likely to drive contracting approaches that will materially impact the overall cost of delivering the assets. We expect the incumbent TO would be likely to rely on existing contracting frameworks and adopt similar contracting and

[18] This is derived from a construction period of 5 years.
[19] This is the bottom end of the range for OFTO Interest During Construction as set out in the CEPA report. This is derived from a construction period of 1-3 years.

construction management approaches to those used under the counterfactual RIIO arrangements.

*Operational costs (opex)*

2.19. Evidence from the OFTO regime shows that competition can drive savings in opex. Such savings have been driven through competition for long-term operations and maintenance contracts.

2.20. We therefore expect that an efficiently implemented SPV model would drive opex savings for a project. As with the construction costs, our analysis recognises the importance of the competition being implemented efficiently. For the purposes of this IA, we have again assumed that an efficiently implemented SPV competition could drive around 10% in savings for a project during the operational period, whilst an inefficiently implemented SPV competition for a project could lead to a cost increase of around 10%.

2.21. Under the CPM, we have assumed that there are no changes to the opex figure compared to the RIIO counterfactual, for the same reasons set out in 2.18.

**Table 4: Summary of capital and operational cost differences between the SPV model and the CPM and RIIO counterfactual for a project**

| Scenario | Capex change | Opex change |
|---|---|---|
| Efficiently implemented SPV model | -10% | -10% |
| Inefficiently implemented SPV model | +10% | +10% |
| CPM | 0% | 0% |

## Counterfactual – RIIO price control

2.22. When considering the impact of implementing the SPV model and CPM we have used the counterfactual scenario of delivery through the prevailing price control by the incumbent TO under under the existing SWW arrangements.

As set out in paragraph 1.2, the assumptions used in this IA should not be read as any confirmation of the rates or approach applicable for RIIO-2.

**Financial assumptions**

*Cost of equity*

2.23. For our modelling of the RIIO-T1 period we have used the cost of equity for electricity transmission in RIIO-T1, which is 7% (RPI real). For all subsequent years, we have used the range in the report we published by CEPA alongside the RIIO2 framework consultation document[20]. In summary, those rates proposed a range of 3.07% to 5.08%, in RPI real terms. For the price control periods beyond RIIO2, we have assumed this same range for the cost of equity.

20 https://www.ofgem.gov.uk/system/files/docs/2018/03/cepa_report_on_baseline_allowed_returns_for_riio-2.pdf

*Cost of debt*

2.24. Our modelling uses the cost of debt structures in place for National Grid TO (Electricity) and Scottish Power Transmission (SPT)[21]. In RIIO-T1, the cost of debt for those two companies is set on a 10 year unweighted trailing average. For the purposes of this IA only, our modelling assumes this approach continues for the RIIO2 period and all subsequent price control periods[22]. We have used forecasts of the 10 year trailing average cost of debt up to and including 2039/40. We have assumed the rate in 2039/40 applies for all subsequent years. The rates are based on Ofgem's internal analysis of the forward yield curve in August 2018.

*Gearing*

2.25. In line with the CEPA report referred to in paragraph 2.23, we have assumed 50% and 65% levels of gearing for the top and bottom of the cost of capital ranges, respectively.

*Depreciation period*

2.26. For the RIIO-T1 period the prevailing depreciation period for new assets is 45 years. We have assumed that this depreciation period continues to apply for the RIIO2 period and all subsequent price control periods.

### Capital and operational costs

2.27. Capex costs are considered in line with the project scenarios set out below in Table 5. We have assumed that the default annual operational cost for each project is 0.1% of the project's capex[23].

## Project scenario modelling

### Project scenarios

2.28. Our analysis has used a series of project scenarios to test the costs and benefits of the SPV model and CPM against the RIIO price control approach. We have based these scenarios on three projects of different capex and construction period, which we have summarised in Table 5.

[21] We chose not to apply the SHE-T weighted trailing average as it is not as readily forecastable due to uncertainties on future capital expenditure.
[22] This does not represent a formal view from Ofgem that this will be the case going forward. This assumption is for the purposes of this IA only.
[23] We consider this figure to be broadly representative of a range of project types and sizes based on previous consideration of similar projects under the existing price control arrangements.

**Table 5 – The three base projects**

| Project | Capex (£m) | Construction period (years) |
|---|---|---|
| **A** | 100 | 2 |
| **B** | 500 | 3 |
| **C** | 1,000 | 5 |

2.29. We have chosen construction periods that are reflective of those we have seen in previous projects of those sizes.

2.30. As set out previously, we intend to consider the application of the CPM or the SPV model to projects that have a capex of at least £100 million[24]. We are therefore using this threshold as the minimum project capex. We have modelled this project capex with a two-year construction period, with the capex spread evenly over that period.

2.31. Due to the larger nature of a £500 million capex project, we modelled this with a three-year construction period, again with capex spread evenly over that period. The £1 billion capex project was modelled with a five-year construction period, again with capex spread evenly over that period.

[24] https://www.ofgem.gov.uk/publications-and-updates/update-competition-onshore-electricity-transmission

# 3. Benefits of moving from a counterfactual RIIO price control approach to the SPV model or CPM

## Introduction

3.1. This chapter sets out the benefits of using the SPV model or CPM, compared to a RIIO counterfactual. Compared to the counterfactual, we expect that the the SPV model and CPM will unlock savings for consumers (ie quantitative benefits) as well as qualitative benefits. Our views on the qualitative assessment of benefits are informed by our experiences of introducing competition in offshore electricity transmission and by knowledge of similar competitive regimes in different countries and across other sectors.

## Benefits common to the SPV model and CPM

### Cost of Capital

3.2. Both models will derive savings from applying more efficient project-specific financing costs applicable to a new, separable and high-value project, which we do not consider are best reflected in the rate of return applied under the RIIO price control, which considers a much larger and more diverse portfolio of assets.

3.3. Deriving and applying a project-specific cost of capital through the SPV model or CPM over the construction and 25-year operational period of a project ensures that:

- The historically low cost of debt currently available in the market is reflected in the charges consumers face;
- This low cost of debt can be locked in for the length of construction, and then the full 25-year operational period of the project. This is opposed to the regular updating of debt and equity costs based on prevailing market conditions under RIIO and the cost of historical embedded debt under RIIO.
- The allowed cost of capital during the operational period appropriately reflects the low operational rates of return that have been determined through competitive processes. Evidence from the OFTO regime has shown that long-term stable investments are attractive propositions to equity investors, which has driven the level of competition seen in the OFTO regime.
- The assumed ratio of debt to equity ("gearing") during the construction and operational periods of the project appropriately reflects the efficient levels expected to be delivered by the market for new, separable and high value projects. Evidence from the OFTO regime, interconnectors, and Private Finance Initiative (PFI)/Public-Private Partnership (PPP) projects suggest that a higher gearing (ratio of debt to equity) than the notional 60% assumed in the TOs price controls is more appropriate for new, high-value, separable infrastructure projects. As the market rates for debt are currently low and debt is normally cheaper than equity, the higher gearing would drive significant savings under CPM and SPV.

3.4. The above factors have been used to derive the cost of capital figures for the CPM and the SPV model set out in Tables 2 and 3 in Chapter 2. Comparing the figures in those tables to the RIIO counterfactual figures in paragraphs 2.22-2.27 in Chapter 2 indicates that in cost of capital terms (without yet considering capital or operational costs), there are likely to be clear quantitative consumer benefits in the SPV model or CPM relative to the price control counterfactual.

## Additional benefits specific to the SPV model

3.5. Compared to the CPM (and RIIO), our expectation is that the SPV model has the potential to unlock additional savings for consumers, if the SPV competition is implemented efficiently in line with the arrangements we've set out in our accompanying consultation on the SPV model.

### Competitive pressures in the supply chain

3.6. The SPV model exposes bidders seeking to deliver the whole project to competitive pressures and incentives that drive innovation and ultimately cost savings.

3.7. Contracting with a wider pool of eligible contractors than might otherwise be interested in participating in a multi-contract approach creates new opportunities. Opening up the supply chain to new parties allows different sources of labour and capital to enter the industry and broadens the market. It also enables efficiencies in their negotiation and management of suppliers.

3.8. Innovation can result in lower costs and better value for consumers as bidders seek to create innovative and cost-saving solutions in order to submit competitive bids. It also has wider benefits, as innovations adopted by one party may be relevant for the rest of the industry and could help drive down wider costs, leading to benefits for consumers.

### Holistic end-to-end procurement

3.9. Efficiencies can also be created through the utilisation of a different, more holistic, contracting approach that involves contracting across construction and operation (as opposed to multi-contract procurement under a framework). The SPV can also design and construct the assets with the full lifecycle in mind.

### Usage in the price control

3.10. The market-derived costs determined through the SPV model can help us with our determination of efficient costs for wider assets covered by our price control arrangements. This is because they provide a further set of benchmarks against which to compare costs and approaches proposed by monopoly providers.

### Offshore transmission experience

3.11. We have seen the savings that competition can bring to the operation and financing of electricity transmission infrastructure. The first three tender rounds of the OFTO regime are estimated to have saved consumers in the region of £700m - £1.3bn to

date on an NPV basis over 20 years[25]. Further savings are expected soon from the latest round of tenders (Tender Rounds 4 and 5).

**International experience**

3.12. We have seen examples of competition being successfully introduced into electricity transmission across North and South America, and in Australia. We note that legal and regulatory frameworks, as well as planning regimes, differ from country to country and each example differs in aspects of what is competed and how. We will continue to monitor developments in these and other markets to assess the particular benefits to their consumers from those competitions, and to use any learnings from the implementation of those models to derive benefits for consumers in GB.

## Additional benefits specific to the CPM

**Can be implemented quickly**

3.13. For projects delivered under the CPM, compared to the SPV model, similar (albeit perhaps lower) benefits can be realised, but the CPM can be implemented more quickly as the incumbent TO would be likely to rely on existing contracting frameworks and adopt similar contracting and construction management approaches to those used under the counterfactual RIIO arrangements.

[25] https://www.ofgem.gov.uk/publications-and-updates/evaluation-ofto-tender-round-2-and-3-benefits

# 4. Costs and risks of introducing and applying the SPV model and CPM

## Introduction

4.1. As both the SPV model and CPM represent a movement away from the current RIIO SWW arrangements, there will be implementation costs and risks associated with them. This chapter explores what costs and risks we expect could apply to developing and implementing the two models.

4.2. These costs and risks are based on our experience with the OFTO regime and our Extending Competition in Transmission (ECIT) project. We have treated costs as the incremental costs over the counterfactual.

## Costs of introducing and applying the models

### SPV model

4.3. Table 6 below lists the assumed costs in both a 'low cost' scenario (e.g. where similar projects have been taken forward and therefore organisations benefit from experience) and a 'high cost' scenario (perhaps where the project being competed is particularly complex).

4.4. In summary, we estimate the cost of implementing the SPV model, at least the first time it is implemented, would be from £4m plus 1% of project capex, to £6m plus 2.5% of project capex. Some costs are given in absolute terms as they relate to general development and implementation of the model, whereas others are expressed as a percentage of capex of the project being competed under the SPV model as they vary depending on the value of that project. We set out the basis for each of these costs below.

4.5. **Ofgem's model 'design' costs** involve the costs of designing the regulatory model and commercial framework, including liaising and engaging with TOs and the wider SPV market. In this IA we have included relevant costs from our development of the CATO regime, from which we have been able to apply a substantial amount of learning to the SPV model. We do not expect the model design costs to vary between a low and hig cost scenario.

4.6. The **TO's pre-tender costs** will cover the costs of them setting up an SPV tender. Under the RIIO counterfactual the TO sets up various tender processes to determine the supply chain that will deliver elements of the project. We therefore only consider here any costs that would be additionally incurred under the SPV model. As such we use £0m to represent an approach where the TO's pre-tender activities are broadly similar to what they already undertake, and £1m as an estimate of TO additional pre-tender work costs under a 'high cost' scenario.

4.7. We consider **Ofgem's tender costs** to include our consideration of the suitability of the TO's proposed tender documentation and delivery agreement, and our role in the subsequent SPV tender implementation. We estimate that these costs would range between £0.5m and £1m, depending on the extent of work required. For

example, we would need to undertake more work if the TO's initial proposed tender documentation was substantially deficient. We would also expect to reduce costs over time as the model becomes business as usual.

4.8. Our SPV consultation published today sets out the proposed role for the Independent Technical Advisor (ITA)[26]. We have estimated total **ITA costs** over the lifetime of a project to be between £0.5m and £1m, reflecting that projects may have a varying total ITA cost depending on, for example, the complexity of the project and the number of price adjustment claims made by an SPV.

4.9. We consider the **TO's tender costs** to cover the costs of running and concluding the SPV competition. As for the TO's pre-tender costs, we have only considered costs that would be additional to those the TO would already incur running tenders under the counterfactual. We have represented these costs as a percentage of project capex as we have seen from our OFTO regime (Offshore Transmission) that tender costs broadly rise in proportion to the size and capex of the project.

4.10. **Bidders will incur costs** when preparing bids, for example in engaging with the supply chain and undertaking due diligence. The successful bidder will also need to engage in the processes required ahead of taking over the project (such as further due diligence). Under the SPV model, the winning bidder would recover those costs within its bid tender revenue stream. Based on our experience of the OFTO regime we estimate the absolute total costs to the successful bidder to be included in the tender revenue stream as 2% of the capex of the project. Under the RIIO counterfactual, bidders would also incur costs when the TO tenders for delivery of the assets under its existing frameworks. These costs therefore need to be offset against the SPV model costs. We estimate that the additional costs for the SPV model in comparison to the counterfactual would be 1% of project capex at the low end. We estimate that the high end of costs would be around 2% of project capex, where the absolute costs to bidders of the SPV model would be higher than under OFTO tenders, for example due to costs of putting together bids to cover the construction period (as opposed to just the operational period). Costs to unsuccessful bidders would remain with them and would not be passed on. As set out in the cost of capital methodology, we have assumed that transaction costs associated with financing a project are covered within the financial rates.

[26] https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-commercial-and-regulatory-framework-spv-model

**Table 6: summary of the additional SPV model costs**

| | Low cost | High cost |
|---|---|---|
| **Ofgem's model 'design' costs – one off cost (£m)** | 3 | 3 |
| **TO's pre-tender costs, per project (£m)** | 0 | 1 |
| **Ofgem's tender costs, per project (£m)** | 0.5 | 1 |
| **ITA costs, per project (£m)** | 0.5 | 1 |
| **Subt-totalcosts** | **£4m** | **£6m** |
| **TO's tender costs per project (expressed as % capex of project)** | 0 | 0.5 |
| **Successful bidder costs per project (expressed as % capex of project)** | 1 | 2 |
| **Sub-total costs, expressed as % capex of project** | **1%** | **2.5%** |
| **Total costs** | **£4m + (1% of project capex)** | **£6m + (2.5% of project capex)** |

4.11. **Interface costs** are incurred where TOs, the SO and DNOs interact to operate and maintain the network. Industry codes, standards and processes are already in place to manage interfaces between multiple parties. Assuming the effectiveness of these existing processes and given that we itend only to consider the SPV model fro new, high value and separable projects, we expect the number and complexity of interfaces will be minimised. We therefore do not consider that the SPV model would inevitably lead to increased interface costs; however, we have carried out sensitivity analysis in chapter 5 to ensure this eventuality is considered. Because we consider these costs as a sensitivity, we do not include them in the table above.

**CPM**

4.12. As the CPM is more similar to the RIIO price control arrangements, we expect the additional cost to Ofgem of implementing CPM to be low, at £0.2m.

4.13. Under CPM, the TO developing a project may, or may not, pursue a project finance approach for the project in question. As explained in the accompanying update on the CPM, where a project finance approach is taken forward, our Project Assessment process will consider the additional efficient costs associated with pursuing such an approach. For the purpose of considering a 'high cost' scenario for this IA, we have therefore assumed that the "high" implementation costs under the CPM could reach up to the level of additional TO tender costs under the SPV model.

4.14. Our high implementation costs for CPM therefore amount to £1.2m plus 0.5% of capex of the project being taken forward under CPM. This is made up of the £0.2m incremental implementation cost for Ofgem, plus £1m of TO pre-tender cost plus 0.5% of project capex for TO tender costs.

4.15. The remaining aspects of the SPV model high estimate relate to Ofgem's role in the design and running of an SPV competition, and are therefore not applicable to CPM. Similarly, we do not consider that there would be a need for an ITA under CPM so have not included any associated costs. Because no different parties are involved, we also do not consider that CPM would lead to additional interface costs compared to the counterfactual.

4.16. For our low view of additional CPM costs, we assume that the TO incurs no additional costs relative to the counterfactual and so the only additional cost is Ofgem's £0.2m.

**Table 7: Additional CPM costs**

| | Low (£) | High (£) |
|---|---|---|
| **Model implementation** | 0.2m | 1.2m + 0.5% of project capex |

## Risk of project delays and non-delivery

4.17. For new high-value projects over £100m, delay or cancellations of a project could result in considerable costs. The TO may incur higher construction costs, or indeed sunk costs in the case of non-delivery. The SO may incur higher constraint costs on behalf of consumers. Where the project is required for a generator to export power, they will lose generation revenue if the transmission project is delayed beyond the contracted date and the generation project is ready. Both the TO and affected generators could incur increased financing costs where the risk profile of the project is perceived to increase.

4.18. Delay or non-delivery could occur for a number of reasons at different stages in a project's development depending on the nature of the project, independent of the delivery model used. For example, there could be unforeseen ground conditions, planning consents may be delayed, associated generation projects may fall away or be delayed, or there may be major issues with contractors (eg insolvency) or other supply chain bottlenecks (eg lack of supply). These project-specific risks are inherent in the development of new, separable and high value projects and would need to be considered under both the counterfactual and the SPV model and CPM arrangements. For the purposes of this IA we have therefore only considered delay

or non-delivery risks that are different under the CPM and SPV model from the counterfactual arrangements.

4.19. There are potentially new sources of delay or non-delivery risk due to the SPV model. These relate to pre-tender, during the tender, and post-tender activities.

- **Pre-tender**, there is the time taken to finalise general design of the SPV model and associated documentation, and the time for Ofgem to review the draft delivery agreement and tender documentation. We consider that this risk is mitigated by analysis we will carry out, for each SWW project submitted for our consideration during the RIIO-T1 period, as to whether the project should be delivered under the CPM, SPV model or counterfactual arrangements. As part of that analysis we intend to determine the risk of delay associated with the decision on delivery model on a project by project basis, considering the delivery timetable for that project and the timescales for our work.

- **During the tender**, there is the time taken to run the SPV tender, and more specifically, the time that this takes relative to the counterfactual arrangements. There is also the risk that the tender is cancelled. We will consider the time taken to run the SPV tender as part of the analysis referred to above in relation to pre-tender activities. We will mitigate the risk of a cancelled tender by reviewing the draft delivery agreement and tender documentation developed by the TO in order to ensure that these are efficient and offer an attractive proposition to the bidding market.

- **Post-tender**, there is the time taken for the SPV to deliver the project compared to the counterfactual arrangements of delivery by the incumbent TO. There is also the risk that the SPV does not deliver the project at all (eg if it walks away or becomes insolvent). We will consider the time taken for the SPV to deliver the project as part of the analysis referred to above in relation to pre-tender activities. The SPV model framework also provides strong incentives on the SPV to deliver on time (in order to secure revenue). Finally, by reviewing the draft delivery agreement and tender documentation developed by the TO we will consider whether these, if implemented efficiently, would lead to the appointment of a robust SPV entity.

4.20. We do not consider that the risk of delay under the CPM is any different from the risk under the counterfactual. This is because the general design of CPM has already been completed and our processes for additional project-specific work under CPM are aligned, although different, with the processes we apply under the counterfactual (eg needs case and project assessment). Also, under CPM there is no need for the procurement approach taken forward by the TO to change from the counterfactual arrangements and no Ofgem approval step before the procurement is run.

**Other risks**

4.21. We do not expect the risk to security of supply for consumers to be increased through projects implemented under SPV model or CPM as the projects taken forward under the SPV model or CPM would be the same as the ones taken forward under the counterfactual, ie subject to the same project identification and pre-construction arrangements, and the same Ofgem needs case approval process.

# 5. Overall cost benefit assessment of moving from a counterfactual RIIO price control approach to SPV or CPM

5.1. This chapter explores the range of quantitative benefits and costs we expect as a result of developing and implementing the CPM and SPV model in order to consider an overall cost benefit assessment.

5.2. The modelling, and results below in Tables 8 and 9, are a result of using the base assumptions set out in Chapter 2 and after considering the benefits, costs and risks outlined in Chapters 3 and 4. In Tables 8 and 9 we have sought to compare more relevant and likely scenarios of SPV model and CPM against the RIIO counterfactual. For example, where a low cost of capital is achieved through the CPM and SPV model, we have compared this to a low cost of capital in the RIIO counterfactual – and vice versa for a high cost of capital. This comparison is intended to reflect that overall financial market conditions at the time are likely to follow similar trends in the SPV model, CPM and the RIIO counterfactual.

5.3. Table 10 shows that, under our middle scenario, the SPV model delivers 4.1-10% of savings compared to the RIIO counterfactual. It shows that the larger the project the more potential for savings but that there are still benefits for smaller projects. In practice we note that it is unlikely that just a £100m project would be delivered under the SPV model, so would expect the savings to be closer to 8-10% in practice under this middle scenario. Under the more extreme scenarios, ie where an efficiently implemented SPV competition, or an inefficiently implemented SPV competition is compared to RIIO, the SPV model either delivers significant savings (13-19.9%) or additional costs (3.5-4.7%, for a £100m project) respectively. We consider that this provides a reasonable justification of why it is important to implement the SPV competition efficiently in line with the proposed arrangements we have set out in the accompanying SPV model consultation – and why it is important for Ofgem to approve the relevant tender documentation.

5.4. Table 9 shows that under a range of scenarios the CPM delivers benefits of between 10.3-13.1%, compared to the RIIO counterfactual.

5.5. In summary, we consider that the results in tables 8 and 9 show that there are potentially significant savings available for consumers from applying the CPM and SPV model.

5.6. In particular our analysis shows that the SPV model has the potential for increased savings compared to the CPM, although this is dependent on its efficient implementation. As set out in our accompanying Update on Extending Competition in Transmission[27], we therefore consider that in order to ensure the most economic and efficient outcome for consumers, TOs should use reasonable endeavours to ensure projects that may meet the criteria for competition are brought forward for

[27] https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission-and-impact-assessment

our consideration sufficiently early to allow efficient and timely implementation of the SPV model.

**Table 8: SPV model - % SPV model savings compared to RIIO**

| | Description | 1 x £100m | 1 x £500m | 1 x £1bn |
|---|---|---|---|---|
| **Efficiently implemented, 'low' SPV vs 'low' RIIO** | **SPV model:**<br>• Bottom of the range cost of capital<br>• 10% capital and operational cost savings<br>• Low cost of implementation<br>**RIIO:**<br>• Bottom of the range cost of capital | 13% | 17.9% | 19.9% |
| **Efficiently implemented, 'mid' SPV vs 'mid' RIIO** | **SPV model:**<br>• Middle of the range cost of capital<br>• 10% capital and operational cost savings<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | 13% | 17.5% | 18.7% |
| **'Mid' SPV vs 'mid' RIIO** | **SPV model:**<br>• Middle of the range cost of capital<br>• 0% capital and operational cost savings<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | 4.1% | 8.7% | 10% |
| **Inefficiently implemented, 'mid' SPV vs 'mid' RIIO** | **SPV model:**<br>• Middle of the range cost of capital<br>• 10% capital and operational cost increases<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | -4.7% | -0.1% | 1.2% |

| | | | | |
|---|---|---|---|---|
| **Inefficiently implemented, 'high' SPV vs 'high' RIIO** | **SPV model:**<br>• Top of the range cost of capital<br>• 10% capital and operational cost increases<br>• High cost of implementation<br>**RIIO:**<br>• Top of the range cost of capital | -3.5% | 0.5% | 0.9% |

**Table 9: CPM-% CPM savings compared to RIIO**

| | **Description** | **1 x £100m** | **1 x £500m** | **1 x £1bn** |
|---|---|---|---|---|
| **'Low' CPM vs 'Low' RIIO** | **CPM:**<br>• Bottom of the range cost of capital<br>• Low cost of implementation<br>**RIIO:**<br>• Bottom of the range cost of capital | 10.3% | 11.3% | 13.1% |
| **'Mid' CPM vs 'mid' RIIO** | **CPM:**<br>• Middle of the range cost of capital<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | 10.9% | 11.5% | 12.4% |
| **'High' CPM vs 'High' RIIO** | **CPM:**<br>• Top of the range cost of capital<br>• High costs of implementation<br>**RIIO:**<br>• Top of the range cost of capital | 12.3% | 12.4% | 12.4% |

**Sensitivity test on interface costs**

5.7. As set out in paragraph 4.11 in Chapter 4, although we do not expect there to be additional costs of introducing new interfaces in delivery of the SPV model, we have run a sensitivity analysis below on additional interface costs of £3m for

completeness of this IA. We consider that this represents a high cost assumption and that efficiencies in management of interfaces would be made after the first SPV tender, reducing this cost for future SPV tenders.

5.8. The results of that sensitivity analysis is presented in Table 10. In summary, we consider that this shows that, with either an efficiently implemented SPV, or in a mid-range scenario, in both cases even with a very high cost of interfacing with the existing systems, there are still significant potential benefits to consumers from applying the SPV model. We have not run a sensitivity test on interface costs for CPM because, as set out in chapter 4, we do not consider that CPM could lead to additional interface costs compared to the counterfactual.

**Table 10: sensitivity analysis on interface costs**

| | Description | 1 x £100m | 1 x £500m | 1 x £1bn |
|---|---|---|---|---|
| **Efficiently implemented, 'mid' SPV vs 'mid' RIIO** | **SPV model:**<br>• Middle of the range cost of capital<br>• 10% capital and operational cost savings<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | 9.2% | 16.6% | 18.1% |
| **'Mid' SPV vs 'mid' RIIO** | **SPV model:**<br>• Middle of the range cost of capital<br>• 0% capital and operational cost savings<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | 0.4% | 7.7% | 9.4% |
| **Inefficiently implemented, 'mid' SPV vs 'mid' RIIO** | **SPV:**<br>• Middle of the range cost of capital<br>• 10% capital and operational cost increases<br>• Middle costs of implementation<br>**RIIO:**<br>• Middle of the range cost of capital | -8.4% | -1.1% | 0.6% |

# 6. Distributional effects of the SPV model or CPM against the counterfactual RIIO price control

6.1. In this chapter, in the table below, we have considered other potential effects of the SPV model and CPM.

| | SPV model | CPM |
|---|---|---|
| **Ofgem** | Costs to set up and run an SPV process are outlined in Chapter 4. These costs fall directly on Ofgem and are passed through to transmission licensees and ultimately onto consumers through network charges on generators and suppliers. | Costs to set up and run the CPM are outlined in Chapter 4. These costs fall directly on Ofgem and are passed through to transmission licensees and ultimately onto consumers through network charges on generators and suppliers. |
| **Incumbent TO** | Any savings or additional costs from applying the SPV model to a project will be applied to the revenue the TO recovers through their licence relating to that project. In line with the findings of this IA, we consider it more likely that the SPV model will drive savings, which will therefore lead to lower levels of costs recovered by TOs.<br><br>The incumbent TO faces additional costs to carry out its activities to set-up the SPV competition, run the tender and interact with the SPV. We propose that additional efficient costs will be recovered by the TO from a combination of the SPV or via their price control funding, depending on the timing and nature of the expenditure. The additional costs under either route will ultimately be recovered from consumers through network charges.<br><br>There may be a potential impact on the remainder of the price control from developing projects so as to | Any savings or additional costs from applying the CPM to a project will be applied to the revenue the TO recovers through their licence relating to that project. In line with the findings of this IA, we consider it more likely that the CPM will drive savings, which will therefore lead to lower levels of costs recovered by TOs.<br><br>We do not consider that the CPM requires a TO to incur additional costs to the counterfactual as CPM should be deliverable within the counterfactual arrangements. However, if a TO did choose to pursue a project finance solution for a CPM project, it may have to take specific additional actions that it would not normally take under its usual approach to financing and delivering a project, and there may be costs associated with those actions (eg choosing to set up a SPV). We propose to allow any such additional efficient costs, provided that they are robustly justified, to be recovered by the TO. Any |

| | | |
|---|---|---|
| | achieve the benefits of competition, rather than under the existing arrangements. For example, this might impact on the TO's overall returns. This would vary based on the size of the project and the size of the impacted TO. | additional costs would ultimately be recovered from consumers through network charges but we consider these would be completely offset by savings overall.<br><br>There may be a potential impact on the remainder of the price control from from developing projects so as to achieve the benefits of competition, rather than under the existing arrangements. For example, this might impact on the TO's overall returns. This would vary based on the size of the project and the size of the impacted TO. |
| **System Operator** | We do not consider that there would be any material additional cost to the SO as the responsibility for delivery of the project would still lie with the licensee (the TO). | We do not consider that there would be any material additional cost to the SO as the responsibility for delivery of the project would still lie with the licensee (the TO). |
| **Bidders** | We highlighted bidder costs in Chapter 4. These remain with the bidder, unless it is successful and is appointed as the SPV, when it recovers these costs as part of its bid revenue. The SPV revenue will be collected from the TO and recovered by the TO through network charges, ultimately from consumers. | We do not consider that there would be any material cost differences for bidders from the counterfactual arrangements, unless the TO decides to deliver the project through a competitively-appointed SPV. Under the latter approach the text set out in the SPV column opposite would apply. |
| **Supply chain** | Companies and individuals supplying goods and services in the construction and operation of transmission assets may face increased costs from engaging with an increased number of parties, as they engage with bidders during the SPV tender. However, the SPV model also benefits supply chain companies by widening business opportunities. | We do not consider that there would be any material cost differences for the supply chain from the counterfactual arrangements, unless the TO decides to deliver the project through a competitively-appointed SPV. Under the latter approach the text set out in the SPV column opposite would apply. |

| | | |
|---|---|---|
| **Generators and demand users of the transmission system** | Savings or additional costs from applying the SPV model to a project will be passed to generators and demand users of the transmission system through network charges under the charging arrangements in place at the time. In line with the findings of this IA, we consider it more likely that the SPV model will drive savings, which will therefore be beneficial to generators and demand users of the transmission system. There may be potential risks to generators of project delays; however, we expect these to be mitigated through our regulatory policies as set out in Chapter 4. | Savings or additional costs from applying the CPM to a project will be passed to local and wider generators and demand users of the transmission system through network charges under the charging arrangements in place at the time. In line with the findings of this IA, we consider it more likely that the CPM will drive savings, which will therefore be beneficial to local and wider generators and demand users of the transmission system. |
| **Consumers** | Costs falling directly on Ofgem, incumbent TOs or the SO are recovered through transmission network charges on generators and suppliers, who in turn will pass these network costs on to consumers.<br><br>Savings or additional costs from applying the SPV model to a project will therefore be passed on to consumers. In line with the findings of this IA, we consider it more likely that the SPV model will drive savings, which will therefore be beneficial to consumers.<br><br>We do not foresee any additional impacts of our decisions on vulnerable consumers as a subset of GB consumers. However, consumers who have lower incomes will see greater relative improvements in the affordability of their electricity. | Costs falling directly on Ofgem, incumbent TOs or the SO are recovered through transmission network charges on generators and suppliers, who in turn will pass these network costs on to consumers.<br><br>Savings or additional costs from applying the CPM to a project will therefore be passed on to consumers. In line with the findings of this IA, we consider it more likely that the CPM will drive savings, which will therefore be beneficial to consumers.<br><br>We do not foresee any additional impacts of our decisions on vulnerable consumers as a subset of GB consumers. However, consumers who have lower incomes will see greater relative improvements in the affordability of their electricity. |

| | | |
|---|---|---|
| **Geographic distributional impact** | The SPV model does not distinguish between geographical location of a project. New, separable and high value projects across Great Britain can be taken forward under the SPV model. We cannot say at this stage which projects in which locations are likely to progress, as this is dependent on changing need and generation background. Potential future SWW projects in RIIO-T1 identified through the Network Options Assessment are listed on our website[28]. | The CPM does not distinguish between geographical location of a project. New, separable and high value projects across Great Britain can be taken forward under the CPM. We cannot say at this stage which projects in which locations are likely to progress, as this is dependent on changing need and generation background. Potential future SWW projects in RIIO-T1 identified through the Network Options Assessment are listed on our website. |
| **Intergenerational equity** | Under the SPV model the regulatory asset value of the project will be fully depreciated after the conclusion of the construction and 25 year operational period. This compares to a 45 year depreciation period under RIIO (although this may change in future). Despite expected savings from the SPV model overall on an NPV basis, there is therefore a possibility that consumers may therefore end up paying marginally more on an annual basis during the 25-year operational period of the SPV model relative to the RIIO counterfactual. Ultimately, consumers will benefit significantly overall, and will pay significantly less during the construction period, and also after the 25 year operational period. We do not consider that the limited impact on intergenerational | Under the CPM the regulatory asset value of the project will be fully depreciated after the conclusion of the construction and 25 year operational period. This compares to a 45 year depreciation period under RIIO (although this may change in future). Despite expected savings from the CPM overall on an NPV basis, there is therefore a possibility that consumers may therefore end up paying marginally more on an annual basis during the 25-year operational period of the CPM relative to the RIIO counterfactual. Ultimately, consumers will benefit significantly overall, and will pay significantly less during the construction period, and also after the 25 year operational period. We do not consider that the limited impact on intergenerational equity transfer that the CPM may have is sufficiently material to justify not |

[28] https://www.ofgem.gov.uk/electricity/transmission-networks/critical-investments/strategic-wider-works

| | | |
|---|---|---|
| | equity transfer that the SPV model may have is sufficiently material to justify not pursuing the overall level of savings available. | pursuing the overall level of savings available. |