



**TransGrid**

# Project EnergyConnect | Contingent Project Application – Model changes

Final Contingent Project Application for Project  
EnergyConnect

30 September 2020



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# 1. Purpose, structure and scope of this document

## 1.1 Purpose of this document

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On 29 June 2020, we provided the Australian Energy Regulator (AER) with our Contingent Project Application (Application) for Project EnergyConnect (the Project or PEC), which included our expenditure and revenue forecasts for the Project based on the first phase of our procurement process - Request for Tender (RFT) Phase A.

We committed to providing the AER with revised expenditure and revenue forecasts once we obtained further tender outcomes in the second half of 2020, to ensure that our forecast capex for the Project, and therefore our adjusted revenues and prices, reflects the best available view of the market-tested costs.

The purpose of this document is to:

- > describe and explain changes made to models and spreadsheets that form part of our Application to calculate the revised expenditure and revenue forecasts based on the final stage of our tender process, being the Best and Final Offer (BAFO) stage
- > describe and explain how the Post-Tax Revenue Model containing the BAFO outcome (BAFO Outcome PTRM) was modified to depreciate PEC Capex when incurred and to not adjust it for inflation indexation (as explained in Appendix B of the Principal Application document).

This document forms part of our Application to the AER for PEC and should be read in conjunction with our Principal Application document and other supporting documents.

## 1.2 Scope of this document

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This document describes the changes to the following models and spreadsheets:

- > A.3A - TransGrid - PEC - Post-tax Revenue Model - BAFO Outcome
- > A.3B - TransGrid - PEC - Post-tax Revenue Model - Financeability Rule Change
- > A.3C - TransGrid - PEC - Post-tax Revenue Model - Revenue Adjustment
- > A.6 - TransGrid - PEC - Capex Forecast Model
- > A.8 - TransGrid - PEC - Corporate and Network Overheads Forecast
- > A.13 - TransGrid - PEC - Opex Forecast Model, and
- > A.15 - TransGrid - PEC - Demand Forecast Model.

Importantly, the document does not do any of the following:

- > explain or justify changes to the expenditure assumptions or inputs, which are separately covered in the Opex Forecasting Methodology, Capex Forecasting Methodology, Supplementary Capex Forecasting Methodology, Corporate and Network Overhead Forecast Document, and the Principal Application document, and
- > describe changes to spreadsheets used to generate inputs to the Submission Models.

### 1.3 Structure of this document

The remainder of this document is structured as follows:

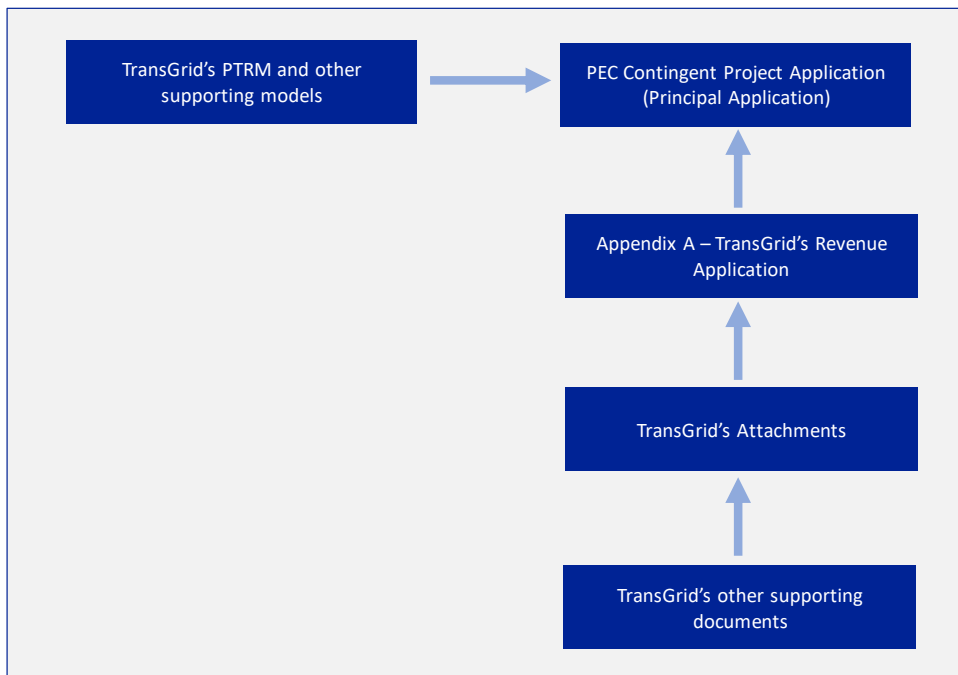
- > section 2 summarises changes made to the Submission Models
- > section 3 explains the changes made to the Capex Forecast Model
- > section 4 explains the changes made to the Corporate and Network Overhead Forecast Model
- > section 5 describes and explains how the Financeability Rule Change PTRM and Revenue Adjustments were developed.

### 1.4 Structure of PEC Final Contingent Project Application Documents and Models

There are a number of other attachments and models that support, and form part of, our Final Application for PEC. This document references these attachments, models and other supporting documents for further detail and should be read in conjunction with them.

Our Final Application is structured as illustrated in Figure 1-1 to be as clear and accessible as possible to the AER, customers and other stakeholders.

Figure 1-1: PEC Application document structure



## 2. Overview of Model Changes

### 2.1 Summary

The Submission Models were updated to:

- > revise the capex forecast to reflect the outcome of the competitive tender process and other related changes to property and corporate and network overheads
- > incorporate actual corporate and network overhead costs up to 31 July 2020 (previously only actual costs up to 31 March 2020 were included)
- > incorporate updates to inflation for the year to June 2020
- > flow those updates through to the BAFO Outcome PTRM
- > develop a modified version of the PTRM (Financeability Rule Change PTRM) to illustrate the impact of depreciating PEC capex when incurred and to not adjust depreciation for inflation indexation and a further version of the PTRM (Revenue Adjustment PTRM) that gives the same revenue outcome as the Financeability Rule Change PTRM.

The next describes the changes made to each Submission Model.

### 2.2 Description of changes

Table 2.1 describes the changes made to the Submission Models. We have ignored minor changes such as those made to the cover sheet, labels or headings. Further detail on changes made to the Capex Forecast Model, Corporate and Network Overhead Forecast Model, Financeability Rule Change PTRM, and Revenue Adjustment PTRM are contained in the following sections.

**Table 2.1: Model changes**

Model	Input / assumption changes	Calculation / structural changes
Capex Forecast Model	<ul style="list-style-type: none"> <li>&gt; Forecast inflation to June 2020 was replaced with actual inflation published by the Australian Bureau of Statistics</li> <li>&gt; Tender price inputs and other construction cost inputs updated to reflect the outcome from the competitive tender process</li> <li>&gt; Property cost inputs updated to reflect new information</li> <li>&gt; Indirect cost inputs updated to reflect changes to the Corporate and Network Overhead Forecast Model (described below)</li> </ul>	<ul style="list-style-type: none"> <li>&gt;</li> <li>&gt; Tables and figure structure updated to align with the Supplementary Capex Forecasting Methodology Document and the Principal Application document</li> </ul> <p>See section 3 for further description of these updates</p>

Model	Input / assumption changes	Calculation / structural changes
	<ul style="list-style-type: none"> <li>&gt; Risk cost input updated to reflect new information</li> <li>&gt; Capex from the PACR and the Initial Application included to allow comparison</li> </ul> <p>See section 3 for further description of these updates</p>	
Corporate and Network Overhead Forecast Model	<ul style="list-style-type: none"> <li>&gt; Actual corporate and network overhead expenditure to 31 July 2020 added to the <i>s2. Historical Indirect Capex</i> sheet</li> <li>&gt; Forecast expenditure and resource requirements from 1 August 2020 reprofiled in the <i>Works Delivery Res Cost, Works Delivery Res Cost, PD-Labour(&amp;related), PD-NonLabour, L&amp;E-Labour(&amp;related), L&amp;E-NonLabour, SHC-Labour(&amp;related), and SHC-NonLabour</i> sheets</li> <li>&gt; Updated the consultant cost inputs to the <i>PD-NonLabour</i> sheet</li> <li>&gt; Updated the insurance cost inputs to the <i>s8 Insurance</i> sheet</li> </ul> <p>See section 4 for description of these updates</p>	<ul style="list-style-type: none"> <li>&gt; Updated the structure of the <i>s2. Historical Indirect Capex</i> sheet to allow for costs in the 2020-21 financial year (i.e. July 2020)</li> <li>&gt; Updated the structure of sheets containing forecast data to only include costs from August 2020 onwards</li> </ul> <p>See section 4 for description of these updates</p>
Opex Forecast Model	<ul style="list-style-type: none"> <li>&gt; Forecast inflation to June 2020 (at cell J15 of the <i>Inputs</i> sheet) was replaced with actual inflation</li> <li>&gt; Updated the debt raising cost inputs (at cells I90:M90 of the <i>Inputs</i> sheet) from the PTRM to reflect updates to that model</li> </ul>	<ul style="list-style-type: none"> <li>&gt; New table inserted to the <i>Outputs</i> sheet to compare the Opex forecast for the BAFO to that for RFT Phase A to align with the Opex Forecasting Methodology</li> </ul>
Demand Forecast Model	No updates	No changes
BAFO Outcome PTRM	<ul style="list-style-type: none"> <li>&gt; Updated the PEC Capex forecast inputs in the <i>Inputs</i> sheet to reflect updates to the Capex Forecast Model (described above)</li> </ul>	No changes

Model	Input / assumption changes	Calculation / structural changes
	<ul style="list-style-type: none"> <li>&gt; Updated the PEC Opex forecast inputs in the <i>Inputs</i> sheet to reflect minor updates to the Opex Forecast Model (described above)</li> <li>&gt; Updated the X factor for the 2022-23 financial year in the <i>X factors</i> sheet to negative 6% (up from negative 7%)</li> <li>&gt; Resolved the X factor for the 2021-22 financial year and allowed equity raising costs using the 'Set X4' macro in the <i>X factors</i> sheet</li> </ul>	
Financeability Rule Change PTRM	Same as for the BAFO Outcome PTRM	<ul style="list-style-type: none"> <li>&gt; Separated treatment of PEC Capex from other Capex included in the BAFO Outcome PTRM</li> <li>&gt; Straight line depreciation of PEC capex adjusted to apply from the year after it is incurred and to not be adjusted for inflation indexation</li> <li>&gt; Changes only made to the <i>Assets</i> sheet</li> </ul> <p>See discussion in section 5</p>
Revenue Adjustment PTRM	<p>Same inputs and assumptions as for the BAFO Outcome PTRM, except that:</p> <ul style="list-style-type: none"> <li>&gt; A revenue adjustment is added at row 402 of the <i>PTRM input</i> sheet such that the Revenue Adjustment PTRM gives the same total building block revenue forecast as the Financeability Rule Change PTRM</li> </ul> <p>See discussion in section 5</p>	No changes

# 3. Capex Forecast Model

## 3.1 Summary

The Capex Forecast Model was updated to:

- > reflect updates to cost inputs, including for tendered works, other construction costs, property costs, corporate and network overhead costs, and risk costs
- > include inputs needed to compare the Capex forecast to earlier forecasts in the PACR and the Initial Application
- > align the table and figure outputs to those included in the Supplementary Forecasting Methodology Document and Principal Application document
- > make consequential changes to the model structure.

The next section describes the changes made to the model.

## 3.2 Description of changes

Table 3.1 describes the changes made to the Capex Forecast Model. We have ignored minor changes such as those made to the cover sheet, labels or headings.

**Table 3.1: Capex Forecast Model changes**

Model sheet	Input / assumption changes	Calculation / structural changes
<i>Inputs sheet</i>	<ul style="list-style-type: none"> <li>&gt; Forecast inflation to June 2020 (at cell L15) was replaced with actual inflation published by the Australian Bureau of Statistics</li> <li>&gt; The RFT Phase A tendered works costs (being the average of tenderer responses) were replaced by the BAFO tendered works responses for bidders 1 and 2 (at rows 30:60)</li> <li>&gt; The other construction costs (at rows 61:90) were updated to reflect the outcome of the competitive tender process</li> <li>&gt; Property cost inputs (at rows 122:175) were updated to reflect updated cost estimates from JLL and WSP</li> <li>&gt; TransGrid direct labour and indirect cost inputs (at rows 176:260) were updated to reflect changes to the</li> </ul>	<ul style="list-style-type: none"> <li>&gt; The structure of tendered works costs section was updated to:               <ul style="list-style-type: none"> <li>– remove the labour and non-labour split as the BAFO tender responses were in outturn (i.e. nominal) costs, including any escalation</li> <li>– allow for costs out to the 2023-24 financial year to be input</li> <li>– add ‘Adopted costs’ subsection that picks up the tendered works and other construction costs from the selected (or adopted) bidder</li> </ul> </li> <li>&gt; The structure of the property and easements costs section was updated to:               <ul style="list-style-type: none"> <li>– include property assumptions and cost inputs, which were</li> </ul> </li> </ul>



Model sheet	Input / assumption changes	Calculation / structural changes
	<p>Corporate and Network Overhead Forecast Model (described below)</p> <ul style="list-style-type: none"> <li>&gt; Risk cost inputs (at rows 261:275) were updated to reflect updated cost estimates from WSP</li> <li>&gt; Equity raising costs (at row 281) were updated to reflect the revised allowance calculated in the PTRM</li> <li>&gt; Capex from the PACR and the Initial Application was added (at rows 285:358) to allow comparison</li> </ul>	<p>previously included in a separate spreadsheet</p> <ul style="list-style-type: none"> <li>– calculate the labour and non-labour components</li> <li>&gt; The structure of the TransGrid direct labour and indirect costs section was updated to include a summary of the changes made and to identify non-validated components</li> <li>&gt; The structure of the risk costs section was updated to separate the calculation of the environmental risk cost into its components</li> <li>&gt; The comparison data section was added</li> </ul>
<i>Calculations sheet</i>	<ul style="list-style-type: none"> <li>&gt; No update to inputs or assumptions beyond those in the <i>Inputs</i> sheet</li> </ul>	<ul style="list-style-type: none"> <li>&gt; The calculations importing the tendered works costs and property and easement costs were updated to reflect changes to the structure of data in the <i>Inputs</i> sheet</li> </ul>
<i>Outputs sheet</i>	<ul style="list-style-type: none"> <li>&gt; No update to inputs or assumptions beyond those in the <i>Inputs</i> sheet</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Tables and figure structure updated to align with the Supplementary Capex Forecasting Methodology Document and the Principal Application document</li> </ul>

# 4. Corporate and Network Overhead Forecast Model

## 4.1 Summary

As described in Corporate and Network Overhead Forecast document, we updated the Corporate and Network Overhead Forecast Model to:

- > include actual costs to 31 July 2020 (previously only actuals up to 31 March 2020 were included)
- > revise and rephase forecasts to reflect the update for actuals
- > update for actual inflation to June 2020, and
- > update insurance costs to reflect the latest estimate provided by the third party insurer.

The next section describes the changes made to the model.

## 4.2 Description of changes

Table 4.1 describes the changes made to the Corporate and Network Overhead Forecast Model. We have ignored minor changes such as those made to the cover sheet, labels or headings.

**Table 4.1: Corporate and Network Overhead Forecast Model changes**

Model sheet	Input / assumption changes	Calculation / structural changes
<i>Key assumptions sheet</i>	> CPI inflation at cell E51 updated to reflect that for the year to June 2020	No changes
<i>Historical Indirect Capex sheet</i>	> Actual costs updated to include expenditure up to 31 July 2020 in cells C6:F20	> Extra columns added to include actual expenditure in the 2020-21 year (i.e. for July 2020)
<i>Works Delivery Res Costs</i>	No changes	> Forecasts removed for the period up to 31 July 2020 from columns F:1
<i>WD Resource Schedule</i>	No changes	> Forecasts removed for the period up to 31 July 2020
<i>PD Labour (&amp;related)</i>	No changes	> Forecasts removed for the period up to 31 July 2020 from columns Y:AB
<i>PD NonLabour</i>	> Forecast legal fees, consulting fees, and geotechnical costs revised and rephased in cells O6:BJ16	> Forecasts removed for the period up to 31 July 2020 from columns P:S

<b>Model sheet</b>	<b>Input / assumption changes</b>	<b>Calculation / structural changes</b>
<i>L&amp;E - Labour(&amp;related)</i>	No changes	> Forecasts removed for the period up to 31 July 2020 from columns Y:AB
<i>L&amp;E-NonLabour</i>	> Forecast land and environment costs revised and rephased in cells T6:AN12	> Forecasts removed for the period up to 31 July 2020 from columns P:S
<i>SHC- Labour(&amp;related)</i>	No changes	> Forecasts removed for the period up to 31 July 2020 from columns Y:AB
<i>SHC-NonLabour</i>	> Forecast community engagement costs revised and rephased in cells X8:BR8 > Forecast community improvement costs revised and rephased in cells X6:BR7	> Forecasts removed for the period up to 31 July 2020 from columns T:W
<i>s8 Insurance</i>	> Forecast insurance costs revised and rephased in cells W4:BQ4	> Forecasts removed for the period up to 31 July 2020 from cells S4:V4
<i>s9 BidderPmts</i>	> Forecast bidder payments revised and rephased in cells N6:BH7	> Forecasts removed for the period up to 31 July 2020 from cells J4:M4

# 5. Financeability Rule Change PTRM and Revenue Adjustment PTRM

## 5.1 Summary

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As described in Appendix B to the Principal Application document, we have developed a Financeability Rule Change PTRM that adjusts the way that PEC Capex is depreciated to:

- > apply straight-line depreciation to as incurred Capex rather than as commission capex, which means that depreciation occurs earlier
- > not apply inflation indexation, which means that PEC Capex included in the regulatory asset base is not increased each year of inflation and the return of capital building block is not reduced by inflation applied to PEC Capex.

The next section describes how the Financeability Rule Change PTRM was developed by making changes to the PTRM. We also developed an alternative version of the PTRM – the Revenue Adjustment PTRM – that gives the same revenue outcome as the Financeability Rule Change PTRM by adding a revenue adjustment to the *PTRM input* sheet.

## 5.2 Description of model development

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The Financeability Rule Change PTRM was developed by making specific changes to the *Assets* sheet of PTRM. No other changes were made to the model.

The changes made to the *Assets* sheet involved splitting the regulatory asset base into:

- > an indexed component – this includes the opening asset base at the start of the 2018–23 period and all allowed capex over that period, except capex for PEC, and
- > a non-indexed component – this includes the PEC capex for the 2018–23 period.

Table 5.1 lists and described the nature and purpose of the specific changes, included as steps A through to F. All changes made to the *Assets* sheet are highlighted orange and include cell notes.

As a guiding principle, changes have been structured to minimise impact on the existing calculations, including by adding new calculations below the existing calculations (rather than inserting rows). We consider that this will make it easier for model users to follow our changes. We recognise that the same outcome could be achieved by making alternative changes to the PTRM.

As an alternative, we also developed a Revenue Adjustment PTRM that gives the same building blocks revenue as the Financeability Rule Change PTRM. We developed this version by:

- > First, calculating the annual differences between the maximum allowed revenue, in Real 2017-18 dollars, from the BAFO Outcome PTRM and the Financeability Rule Change PTRM (at row 30 of the *Revenue summary* sheet), and
- > Second, adding these differences as a revenue adjustment at row 402 of the PTRM input sheet.



**Table 5.1: Changes made to the Assets sheet**

Step	Cell references	Description	Purpose
A. Update real straight-line depreciation calculations for indexed RAB	Rows 380:530	<p>Two key changes:</p> <ul style="list-style-type: none"> <li>&gt; Added net, as commissioned, capex excluding that for PEC into column E for each asset class with allowed capex for the 2018–23 period and in \$m and Real 2017-18 terms</li> <li>&gt; Amended the depreciation formulas in columns H:BI to reference the net capex in column E when calculating real straight line depreciation rather than the net capex in the ‘PTRM input’ sheet.</li> </ul>	Exclude PEC capex from the real straight-line depreciation calculation so that it can be subjected to nominal straight line depreciation elsewhere in the ‘Assets’ sheet
B. Update residual RAB calculation for indexed RAB	Row 766	Amended the formula to exclude PEC capex	Exclude PEC capex from the residual RAB so that the section can capture only the indexed RAB component
C. Add new section for non-indexed RAB asset values	Row 1451:1599	<p>Added a new section to calculate the RAB roll-forward for the PEC as commissioned capex without indexation and using a nominal straight-line depreciation method. This section mirrors that for the indexed component of the RAB at rows 113:768, albeit with a reduced number of asset classes.</p> <p>Specific steps:</p> <ul style="list-style-type: none"> <li>&gt; Net as commissioned capex for PEC is added to column E for each asset class with allowed capex for the 2018–23 period in \$m nominal terms</li> <li>&gt; Straight line depreciation is calculated using the nominal dollar net capex for PEC, which gives nominal straight-line depreciation</li> <li>&gt; The closing asset value for a given year at row 1599 is calculated by adding net capex to the opening value (or the closing value for the prior year) and then subtracting nominal straight line depreciation.</li> </ul>	Calculate the asset value for the non-indexed component of the RAB that contains the PEC capex that is excluded from the indexed component of the RAB

Step	Cell references	Description	Purpose
D. Update the values to combine both the indexed and non-indexed components	Rows 771:775	Amended the formulas to combine the opening, residual, and inflated nominal asset values and straight-line depreciation to combine the indexed and non-indexed asset values	Ensure that both the indexed and non-indexed components are combined for subsequent calculations in the PTRM (e.g. building blocks)
E. Add section summarising indexed component of RAB	Rows 1602:1608	Added a new section that summarises the asset value roll-forward for the indexed component of the RAB using the format included for the aggregate RAB in rows 1433:1438. The values are sourced from the sections above.	Ensure that the roll-forward for the indexed component of the RAB is captured separately from the non-indexed component
F. Add section summarising roll-forward for all assets	Rows 1611:1617	Added a new section that combines the roll-forward for the indexed component of the RAB included in the new section at rows 1602:1608 and the equivalent information from the new section for the non-indexed RAB asset values at rows 1451:1599. This section also includes a check against the summary in rows 771:775	Provide a cross-check against the existing asset roll-forward summary section