Jemena Electricity Networks (Vic) Ltd

2016-20 Electricity Distribution Price Review Regulatory Proposal

Revocation and substitution submission

Attachment 7-10 Nuttall Consulting - Addendum to April 2015 independent analysis of replacement expenditure

Public

6 January 2016

Nuttall Consulting

Regulation and business strategy

AER repex modelling - addendum

Revised analysis with Preston conversion project

A report to the JEN

Confidential final

17 December 2015

1 Revised analysis with Preston conversion project

This document serves as an addendum to the Nuttall Consulting report to Jemena Electricity Networks (JEN), "AER repex modelling: Category Analysis RIN calibration", dated 7 April 2015 (the repex modelling report). The repex modelling report, including a first addendum, was provided as Attachment 7.11 of the JEN regulatory proposal (2016-20) to the Australian Energy Regulator (AER).

This addendum, including the associated analysis and repex modelling, has been prepared by Dr Brian Nuttall. Dr Nuttall was solely responsible for the modelling and drafting of the repex modelling report.

1.1 Scope of this addendum

JEN has instructed Nuttall Consulting to revise the "reasonable range" studies that were included as an addendum to the repex modelling report. More specifically, JEN has instructed Nuttall Consulting to revise the analysis using the following[1]:

- the equivalent calibration methodology and assumptions applied in the repex modelling report
- only the AER study using JEN's forecast unit cost and the repex in the asset groups assessed by the AER's, as this reflects the limiting study and coverage of the AER's assessment
- revised category analysis and reset RIN templates 2.2, which have been amended by JEN to include historical and forecast data (i.e. repex, replacement volumes) associated with the Preston Conversion project
- revised category analysis RIN template 5.2, which includes updated services asset age profiles to correct for a known error in JEN's category analysis RIN services data inputs (these age profiles have been revised by JEN to provide the number of services rather than length of services).

JEN has provided Nuttall Consulting with the revised RIN data indicated above[2].

Readers of this document should refer to the repex modelling report for a description of the calibration methodology and assumptions. These matters are not repeated here.

[1] Advised in email, Gilbert + Tobin, dated 17/12/2015
[2] Provided in emails, dated 18/11/2015 and 9/12/2015

1.2 Revised repex model results

The revised analysis has covered $122 million or 49% of JEN's repex forecast, covering the repex forecast in the following six asset groups: poles, overhead conductors, underground cables, services, transformers and switchgear asset groups (as defined in RIN template 2.2).

Table 1 below summarises the revised results of this analysis (equivalent to Table 48 in the repex model report).

Table 1 JEN reasonable range – forecast unit cost study (calibrated historical lives)

Unit cost assumption	Repex forecast (2016 - 2020) $ millions	Percentage of JEN forecast %
Forecast unit costs	$126	104%
JEN forecast covered	**$122**	

The revised study result using JEN's forecast unit costs is supportive of JEN's repex forecast, when the repex associated with the Preston conversion project is included in the calibration process and forecast.

The make-up of this study can also be seen in the charts below (similar to Figures 48 in the repex model report), which indicates the portion of JEN's historical and forecast repex covered by the model (i.e. modelled repex). The chart also indicates the contribution due to the inclusion of the Preston conversion project in this analysis.

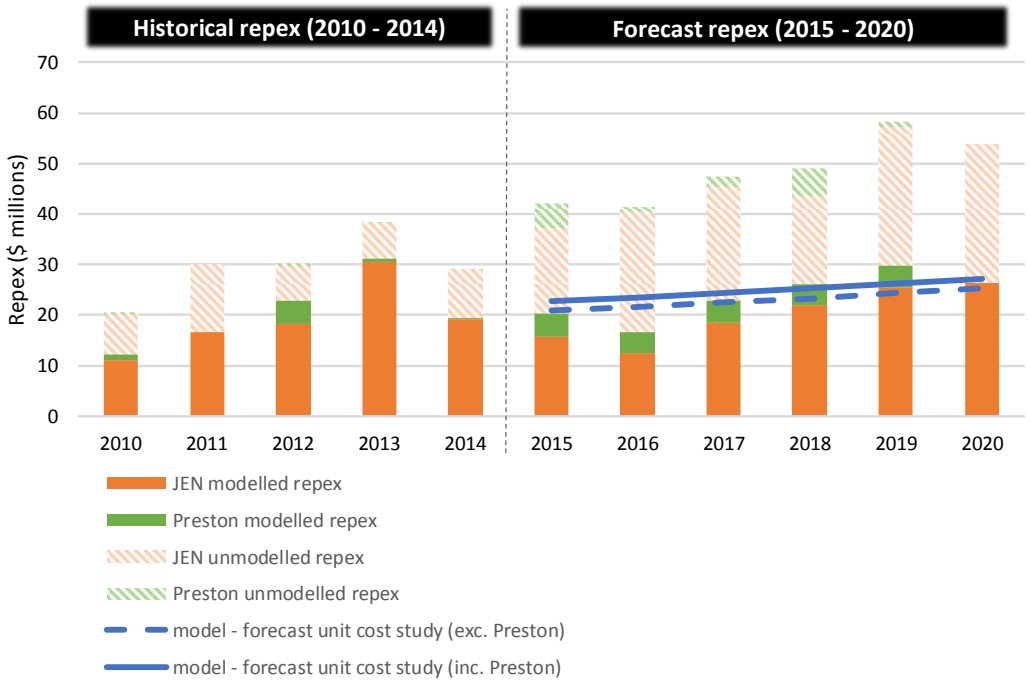

Figure 1 forecast unit cost study results