Explanatory statement

# Proposed amendment

# Electricity transmission network service providers

# Roll forward model

August 2010

AUSTRALIAN ENERGY REGULATOR

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## Request for submissions

Interested parties are invited to make written submissions to the Australian Energy Regulator (AER) on the amendments proposed in this explanatory statement by the close of business 28 September 2010.

Submissions can be sent electronically to: aerinquiry@aer.gov.au

Alternatively, submissions can be mailed to:

Mr Warwick Anderson
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The AER prefers that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is the subject of the confidentiality claim
- provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on the AER's website: www.aer.gov.au. For further information regarding the AER's use and disclosure of information provided to it, see the ACCC/AER *Information Policy*, which is also available on the AER's website.

Enquiries about this explanatory statement, or about lodging submissions, should be directed to the Network Regulation North Branch of the AER on (02) 6243 1233.

# Contents

# Shortened forms

| | |
|---|---|
| AER | Australian Energy Regulator |
| capex | capital expenditure |
| NER | National Electricity Rules |
| PTRM | post-tax revenue model |
| RAB | regulatory asset base |
| RFM | roll forward model |
| TNSP | transmission network service provider |

# 1 Introduction

The Australian Energy Regulator (AER) is responsible for the economic regulation of prescribed transmission services provided by transmission network service providers (TNSPs) in the National Electricity Market, in accordance with the National Electricity Rules (NER).

Chapter 6A of the NER requires the AER prepare and publish a post-tax revenue model (PTRM) and roll forward model (RFM) for TNSPs. In September 2007 the AER published the first version (version 1.0) of the PTRM and RFM for TNSPs.

The AER uses the RFM to determine the closing regulatory asset base (RAB) for a regulatory control period. The closing RAB value for a regulatory control period, as calculated by the RFM, becomes the opening RAB to be used in the PTRM for the purposes of making a revenue determination for the next regulatory control period.

In modelling the revenue requirements for a TNSP the AER uses the PTRM. The PTRM employs certain assumptions, including how capital expenditure (capex) is to be recognised. The PTRM recognises capex on a 'partially as-incurred' approach—that is, the return on capital is calculated recognising capex on an as-incurred basis and the return of capital (regulatory depreciation) is calculated recognising capex on an as-commissioned basis.

Version 1.0 of the RFM provides a roll forward of the RAB using capital expenditure (capex) inputs which are on an as-incurred basis. In order to continue with recognising capex under the partially as-incurred approach in the PTRM, the next version of the RFM will be required to perform an additional roll forward of the RAB using as-commissioned capex inputs. The as-commissioned RAB then becomes an input into the PTRM for the purposes of calculating regulatory depreciation.

This explanatory statement sets out proposed amendments to version 1.0 of the RFM in accordance with the requirements under clauses 6A.6.1 and 6A.20 of the NER.

The AER is seeking to amend specific aspects of the RFM, which include:

- expanding the roll forward calculations to include additional functionality for a RAB that recognises capex on an as-commissioned basis
- inserting a standard approach to roll forward the average remaining asset lives by asset classes to determine the average remaining asset lives at the end of the regulatory control period.

The details of the proposed amendments are discussed in section 4 of this explanatory statement.

The AER's 2007 transmission network revenue cap for Powerlink Queensland (Powerlink) was the first determination to recognise capex on a partially as-incurred basis. As such, the amended PTRM and RFM (version 2) will need to be finalised in time for Powerlink to prepare its revenue proposal for the 2012–17 regulatory control period due on 31 May 2011.

# 2 NER requirements

Clause 6A.6.1(c) of the NER allows the AER to amend or replace the RFM and sets out the requirements the AER must comply with in doing so.

When amending the RFM, the transmission consultation procedures, as set out in clause 6A.20(b) of the NER, require the AER:

- publish the proposed amended model
- an explanatory statement setting out the purpose of the proposed amended model
- invite submissions on the proposed amended model.

Interested parties must be allowed at least 30 business days to make submissions to the AER. Within 80 business days of publishing the proposed amended RFM the AER must publish its final decision, handbook and model.

Clause 6A.6.1(e) of the NER sets out the contents of the RFM, which must include the method for rolling forward the RAB from one regulatory control period to the next regulatory control period, and from one regulatory year to the next regulatory year in the same regulatory control period. The AER must also have regard to provisions related to the RAB contained in schedule 6A.2 of the NER.

# 3 Reasons for the roll forward model

The AER published version 1.0 of the RFM for TNSPs in September 2007. The RFM was developed following consultation with interested parties in accordance with clauses 11.6.17 and 6A.20 of the NER.

The RFM is part of the suite of regulatory requirements designed to streamline and improve the quality of economic regulation of energy networks, reduce regulatory costs and enhance regulatory certainty, consistent with the Council of Australian Government's objectives.

The principal reason for the RFM is to calculate the value of the closing RAB for a regulatory control period by rolling forward the RAB for each regulatory year of a regulatory control period to reflect actual capex and depreciation during that period. The closing RAB value for a regulatory control period as calculated by the RFM becomes the opening RAB to be used for the purposes of making a revenue determination for the next regulatory control period.

The RAB values from the RFM are inputs into the PTRM, where they are rolled forward from one regulatory year to the next regulatory year on a forecast indicative basis, and are used in the calculation of the annual building block revenue requirements.

# 4 Proposed amendments

This section sets out the AER proposed amendments to version 1.0 of the RFM and the handbook. The amendments affect all the existing worksheets and an *Asset lives roll forward* worksheet has been added. The amended RFM is at appendix A and the amended handbook is at appendix B.

## 4.1 Establishing an as-commissioned closing RAB

The AER applies a partially as-incurred approach to the recognition of capex. Capex can be recognised as it is incurred (spent) or when the asset is commissioned (put into service). In the PTRM, the partially as-incurred approach provides for the return on capital to be calculated using a RAB determined on an as-incurred basis and the return of capital (regulatory depreciation) is calculated using a RAB determined on an as-commissioned basis.

Version 1.0 of the PTRM was developed to transition TNSPs to adopt the partially as-incurred approach for recognising capex. As such, the PTRM allows inputs for work in progress (or assets under construction) to establish an opening RAB on an as-incurred basis.

Given that all TNSPs have now transitioned to recognising capex under the partially as-incurred approach, the next version of the PTRM will require inputs for separate RABs—one that is based on rolling in as-commissioned capex and another based on rolling in as-incurred capex.

Version 1.0 of the RFM provides a roll forward of the RAB using as-incurred capex. In order to continue with recognising capex under the partially as-incurred approach in the PTRM, the RFM has been amended to perform an additional roll forward of the RAB using as-commissioned capex. The amendments involve replicating the existing roll forward calculations for establishing a closing RAB that uses as-incurred capex.

To calculate the RAB on an as-commissioned basis, amendments have been made to the *Actual RAB roll forward* and *Total actual RAB roll forward* worksheets in the RFM. The amendments to the *Actual RAB roll forward* worksheet are set out in the following rows:

- Real actual net capex – as-commissioned—rows 33:53
- Nominal opening regulatory asset base—rows 499:519
- Nominal actual net capex—rows 521:541
- Nominal actual regulatory depreciation—rows 543:563
- Nominal prudent additional capex allowance—rows 565:585
- Nominal foregone return on prudent additional capex—rows 587:607
- Nominal actual straight-line depreciation—rows 611:631

- Nominal actual inflation on opening RAB—rows 633:653.

The amendments to the *Total actual RAB roll forward* worksheet are set out in the following rows:

- Nominal opening regulatory asset base—rows 275:295
- Nominal actual net capex—rows 297:317
- Nominal actual regulatory depreciation—rows 319:339
- Nominal prudent additional capex allowance—rows 341:361
- Nominal foregone return on prudent additional capex—rows 363:383
- Interim closing regulatory asset base—rows 387:407
- Difference between actual and forecast net capex—rows 409:429
- Return on difference – net capex—rows 431:451
- Closing regulatory asset base – as-commissioned—rows 453:473

## 4.2 Calculating average remaining asset lives

Average remaining asset lives are inputs to the PTRM to calculate the regulatory depreciation allowance, which in turn forms part of the TNSP's maximum allowed revenue.

To date, the AER has assessed the calculation of average remaining asset lives on a case-by-case basis against the requirements of clause 6A.6.3(b) of the NER. This approach can be time consuming for both the AER and the TNSPs and has lead to different approaches being adopted in the calculation of average remaining lives. The AER considers that having a standard method built into the RFM as a default option will assist TNSPs in preparing their regulatory proposals, assist the AER in assessing these proposals and promote greater consistency across TNSPs in relation to this matter.

The AER proposes a weighted average method to calculate the average remaining asset lives. This approach involves weighting, within an asset class, the remaining life (*remaining life*$_k$) of each capital stream by the closing capital value (*closing capital*$_k$) of that capital stream as a proportion of the total closing capital value of the asset class.[1] For any given asset class, this approach results in a weighted average remaining asset life that reflects the economic life of that asset class, consistent with clause 6A.6.3(b)(1) of the NER. The calculation can be expressed mathematically as follows:

[1] Capital stream refers to the opening asset value or any capex value in each year of the regulatory control period. A worked example is included in the *Asset lives roll forward* worksheet of the amended RFM.

$$\text{Weighted average remaining life}_i = \sum_{k=1}^{n}\left(\frac{\text{closing capital}_k}{\sum_{k=1}^{n}\text{closing capital}_k} \times \text{remaining life}_k\right)$$

where:

*i* is the given asset class

*k* is the number of capital streams within the given asset class

*n* is the total number of capital streams within the given asset class.

The *Asset lives roll forward* worksheet has been added to the RFM to calculate the average remaining asset lives at the end of the regulatory control period. These become the opening average remaining asset lives and used as inputs to the PTRM.

## 4.3 Other amendments

This section sets out other amendments to the RFM and the handbook.

**Length of regulatory control period input**

The AER proposes to amend the *Inputs* worksheet of the RFM to incorporate an input for the length of regulatory control period in cell W7 to assist in the calculation of average remaining asset lives and for presentation purposes. The input value for this cell should be set equal to the number of regulatory years in the applicable regulatory control period. The cell is referenced in each worksheet of the amended RFM.

**Roll forward model handbook**

To incorporate the proposed amendments set out in sections 4.1 to 4.3 of this explanatory statement the AER proposes to amend the RFM handbook. In particular, the figures in the RFM handbook and the functional description of the *Actual RAB roll forward, Total actual RAB roll forward* and *Tax value roll forward* worksheets have been updated. A new section describing the *Asset lives roll forward* worksheet has also been added.

# Appendix A: Roll forward model

# Appendix B: Roll forward model handbook