Final decision

Gas transmission and distribution network service providers

Roll forward models (version 1)

April 2020

AUSTRALIAN ENERGY REGULATOR

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Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
capex	capital expenditure
DV	diminishing value
NEL	National Electricity Law
NEO	National Electricity Objective
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NSP	network service provider
PTRM	post-tax revenue model
RFM	roll forward model
TAB	tax asset base

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About us

We, the Australian Energy Regulator (AER), work to make all Australian energy consumers better off, now and in the future. We are the independent regulator of energy network service providers (NSPs) in all jurisdictions in Australia except for Western Australia. We set the revenue requirements these NSPs can recover from customers using their networks.

The National Electricity Law and Rules (NEL and NER) and the National Gas Law and Rules (NGL and NGR) provide the regulatory framework which govern the NSPs. Our role is guided by the National Electricity and Gas Objectives (NEO and NGO).

NEO:[1]

> …to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system.

NGO:[2]

> …to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

The decisions we make and the actions we take affect a wide range of individuals, businesses and organisations. Effective and meaningful engagement with stakeholders across all our functions is essential to fulfilling our role, and it provides stakeholders with an opportunity to inform and influence what we do. Engaging with those affected by our work helps us make better decisions, provides greater transparency and predictability, and builds trust and confidence in the regulatory regime. This is reflected in our *Stakeholder engagement framework* and in the consultation process we have conducted.[3]

1 NEL, s. 7.
2 NGL, s. 23.
3 AER, *Revised stakeholder engagement framework*, September 2017.

1 Introduction

This final decision (with associated handbooks) describes the final transmission and distribution capital base roll forward models (RFMs) to apply to gas service providers.[4] We have prepared two gas RFMs: one for distribution and one for transmission. We released an explanatory statement for the proposed RFMs in December 2019 and received two submissions.[5] This document sets out our final decision (including reasons), and response to submissions, in accordance with the NGR.[6]

The preparation of these RFMs has been assisted through our work on the published electricity distribution and transmission roll forward models. These RFMs also implement the relevant findings from our final report on the review of the regulatory tax framework (the tax review) and incorporate several amendments to account for gas specific requirements. This section provides an overview of the purpose of the template gas RFMs and the reason for developing them. Section 2 outlines the process for developing the RFMs, key differences compared to the electricity RFMs, and our response to a submission on the draft RFMs.

1.1 What does the RFM do?

The RFM establishes the method used to roll forward the capital base—that is, increase or decrease from the previous value:[7]

- from one access arrangement period to the next access arrangement period
- from one regulatory year to the next regulatory year in the same access arrangement period.

The closing capital base value for an access arrangement period as calculated by the RFM becomes the opening capital base for the next access arrangement period. This opening capital base value is the input to the post-tax revenue model (PTRM), where it is rolled forward from one regulatory year to the next regulatory year on a forecast indicative basis. It is used in the PTRM as part of the calculation of total revenue.

The RFM deals with many aspects of the capital base estimation, including:[8]

- establishment of the opening capital base for the next access arrangement period
- adjustments for conforming capital expenditure (capex)
- the depreciation approach based on forecast or actual capex
- how the roll forward should occur within the access arrangement period.

The roll forward of the capital base from year-to-year will reflect:

4 Included in the appendices.
5 AGIG, *Gas PTRM and roll-forward model review*, January 2020; Jemena, *Submission regarding proposed financial models*, January 2020.
6 NGR, r. 75A(7).
7 NGR, r. 75B(3).
8 NGR, r. 77.

- additions for actual capex, net of capital contributions[9] and the value of disposals
- reductions for depreciation (based on approved asset lives and methods)
- indexation for actual inflation
- adjustment for the difference between estimated and actual capex for the previous access arrangement period
- other adjustments for removal or addition of assets made under certain circumstances (such as changes in the speculative capital expenditure account or capital redundancy) in accordance with the NGR.

The RFM also incorporates a similar roll forward calculation of the tax asset base (TAB) over the access arrangement period. The purpose of the TAB is to calculate tax depreciation of the assets when estimating the NSP's cost of corporate income tax. As with the capital base, the output TAB values from the RFM are inputs to the PTRM used to calculate the building block costs.

We have included a standard approach to calculate year-by-year tracking of depreciation for both capital base and tax depreciation in response to the growing number of NSPs which have adopted the 'year-by-year tracking' approach to model depreciation.[10] This has resulted in bespoke tracking models with differing approaches for each individual business. Not only does this complicate our assessment of regulatory proposals, it also creates unnecessary complexity for stakeholders, requiring them to examine every unique model during a determination process. This approach is an alternative to the 'weighted average remaining life' approach to depreciation,[11] and provides greater granularity and transparency of the disaggregated year-by-year tracking of capex.

Our standard approach for year-by-year tracking is included as a separate template file (*depreciation tracking module*) which is an attachment to the RFM template file. The outputs from the depreciation tracking module will feed back into the RFM where tax depreciation includes capex depreciated using the diminishing value (DV) method. It will also be used to calculate inputs to the PTRM where the year-by-year depreciation tracking is used to determine forecast depreciation of the opening capital base.

A gas NSP's access arrangement proposal must be prepared using our RFM.[12]

Figure 1 shows the purpose and interrelationship between the RFM, depreciation module and the PTRM.

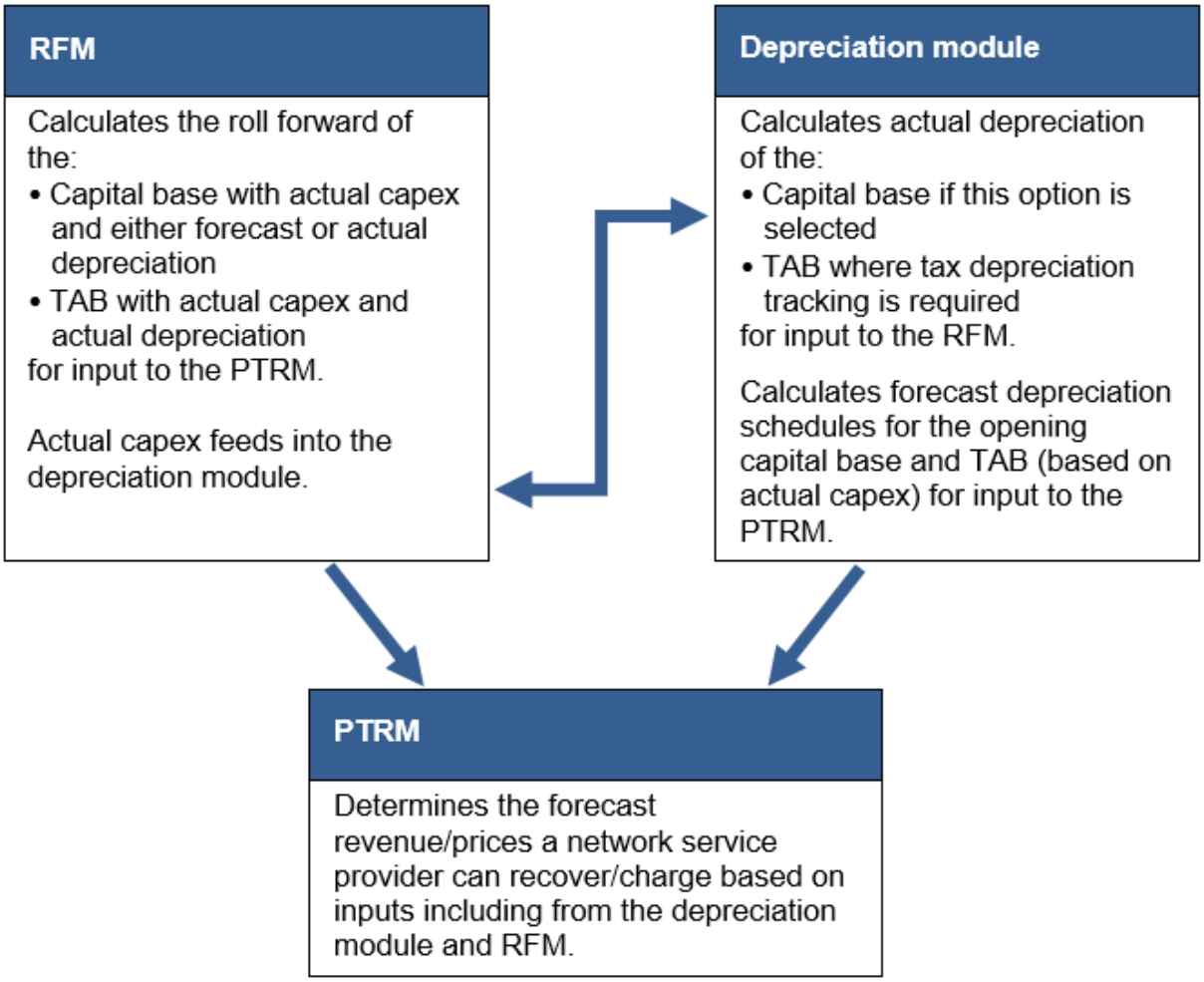
9 These include gifted assets or contributions from customers or government.

10 The year-by-year tracking approach implements the straight-line method of depreciation (in addition to grouping assets by type via asset classes) and tracks the asset classes on a yearly basis.

11 The weighted average remaining life approach calculates depreciation on the opening asset bases (by asset class) on a straight-line basis over the specified remaining life.

12 NGR, rr. 72(3) and 75A(2).

Figure 1 Overview of the interrelationship between the RFM, depreciation module and PTRM.



1.2 Why are we preparing template gas models?

On 14 March 2019 the Australian Energy Market Commission made a final determination to implement a range of improvements to the regulation of covered transmission and distribution gas pipelines across Australia.[13] Part of this determination included an amendment to the NGR, to allow the AER to prepare and publish a revenue and capital base roll forward models (financial models).[14] When published, these models must subsequently be used by NSPs as part of their access arrangement proposals.[15] The provisions for these rules relating to the publishing of financial models came into effect on 21 March 2019.

The NGR has not historically required gas businesses to use models published by us—NSPs instead submitted business-specific financial models or made ad-hoc amendments to the published template electricity models. The absence of a standard binding structure

13 AEMC, *Rule determination—Regulation of covered pipelines*, 14 March 2019. A covered pipeline is a pipeline regulated by the AER or Economic Regulation Authority in Western Australia.
14 NGR, r. 75A.
15 NGR, rr. 72(3) and 75A(2).

impacts the ability of stakeholders to fully engage in the determination process where resources must be devoted to comprehend the specific workings of bespoke financial models.

In line with the recently amended NGR we have published two models—one for the purposes of rolling forward the capital base, known as the RFM, and another for determining forecast revenues for an upcoming access arrangement period, known as the PTRM.[16] These models have been developed from the latest version of the electricity RFMs and PTRMs, with adjustments allowing for gas business-specific details and requirements.[17] As with the electricity models, we have developed models for distribution and transmission NSPs due to the differences in approaches to capital expenditure recognition, tariff variation mechanism and revenue equalisation.

The final gas transmission and distribution RFMs, and associated handbooks are published with this decision, in accordance with the NGR.[18] This final decision sets out our reasons for developing these models, including changes made since the December 2019 draft versions. As required by the NGR, these models must be used by gas NSPs as part of all subsequent access arrangement proposals.[19] To ensure the RFM remains fit for purpose, we may amend or replace it as necessary. In doing so, we will consult on the amendments in line with the requirements of the NGR.[20]

16 Revenues from reference services for all gas NSPs we currently regulate are determined on a post-tax basis, which is consistent with the approach we apply to electricity NSPs. As such, we have continued this approach in developing the template gas revenue model. The proposed revenue model is therefore referred to as the post-tax revenue model (PTRM).

17 The RFM templates for gas NSPs are being developed in parallel with revisions to the RFM templates for electricity NSPs.

18 NGR, r. 75A(9).

19 NGR, rr. 72(3) and 75A(2). This applies to access arrangement information provided for a full access arrangement proposal.

20 NGR, r. 75A(3)–(9).

2 Preparation of the RFMs

We prepared the template gas RFMs by including the amendments we have made to the latest versions of the electricity RFMs[21] published on our website as set out in our explanatory statement.[22] The final template RFMs also include different adjustments to allow for gas business-specific details and requirements. As with the electricity RFMs, we have separated the gas RFMs for distribution and transmission NSPs, due to the differences in approaches to capital expenditure recognition.

The RFMs for gas NSPs were developed in parallel with amendments to the RFMs for electricity NSPs.[23] These amendments include implementing the relevant findings from our final report of the tax review.[24] As a result, the gas RFMs incorporate some of the key amendments we made to the electricity RFMs through this process including:

- allowing for year-by-year tracking depreciation (capital base and TAB) via a separate 'depreciation tracking module' template file which will be an attachment to the RFM, and
- changes arising from the tax review regarding the use of DV tax depreciation for new assets and immediate expensing of certain capex.[25]

We wanted all stakeholders to have the opportunity to consider our proposed gas RFMs and make written comments in response. On 5 December 2019, we commenced the consultation process by publishing:[26]

- an explanatory statement, which described the proposed RFMs and the reasons for them
- the proposed gas RFMs, depreciation tracking modules and associated handbooks.[27]

Our explanatory statement accompanying the draft models contains further details on the following matters in developing the gas RFMs:[28]

- diminishing value method for tax depreciation
- immediate expensing of actual capex
- year-by-year depreciation tracking approach.

We asked stakeholders to make submissions on the proposed template RFMs by 20 January 2020.[29] We received two written submissions from the Australian Gas Infrastructure

21 The latest published versions of the electricity RFMs at the start of development were version 2 for distribution, and version 3 for transmission. These have since been updated to version 3 and 4 respectively.
22 AER, *Explanatory statement – Proposed gas roll forward models*, December 2019.
23 Refer to AER website: https://www.aer.gov.au/node/65053.
24 Amendments to the current electricity RFMs to implement the findings of the 2018 tax review (as well as other amendments) are being developed in parallel to the gas RFM templates (See: https://www.aer.gov.au/node/65053).
25 Historically, our models have used the straight-line method of tax depreciation for all assets. In our explanatory statement accompanying the draft models, we included a flow chart displaying the implementation of the tax review findings across our regulatory models at appendix A.
26 NGR, r. 75A(4).
27 AER, *Explanatory statement – Proposed gas roll forward models*, December 2019.
28 AER, *Explanatory statement – Proposed gas roll forward models*, December 2019, pp. 12–17.

Group (AGIG) and Jemena.[30] AGIG submitted that it did not see any major issues with our changes made to the RFM and believed that the model reflects what's been proposed.[31] Jemena's submission focused primarily on the PTRM, however, it raised a shortcoming with the proposed depreciation tracking module being unable to align with how Jemena's gas network (JGN) rolls forward its capital base over the 2015–20 access arrangement period.[32] We have been able to address this matter by making further adjustments to the depreciation tracking module. Our response to this submission is set out in section 2.2 below.[33]

2.1 Key differences with the electricity RFMs

The published electricity RFMs have also been amended to allow for adjustments to actual capex for the second last year (year t–2) of the previous regulatory control period where an ex-post review of capex has occurred. This is not required for the gas RFM. For a typical 5 year access arrangement period, the review of conforming capex usually comprises of the final year of the previous access arrangement period and the first 4 years of the current access arrangement period.[34] Any adjustment to actual capex in the final year of the previous access arrangement period can already be accommodated in the **Adjustment for previous period** worksheet.

The final report of the tax review included one finding that is only applicable to gas NSPs. This relates to the statutory cap of 20 years applying to certain classes of gas transmission and distribution assets for tax depreciation purposes.[35] The existing published electricity RFMs can accommodate this finding—as the tax standard asset lives are inputs to the RFM. Therefore, no specific model amendment was required to implement this finding in preparing the gas RFMs. However, we have included a comment note for the standard tax asset life inputs that mentions the statutory cap on these assets for reference.

The final gas RFMs include other minor changes to the electricity RFMs for gas-specific labels and rule references. The final gas RFMs, depreciation tracking modules and handbooks for distribution and transmission are at appendices A to F. To assist stakeholders to identify all changes made from the final amended electricity RFMs, there is a detailed change log at appendix G.

2.2 Response to submission

Jemena's submission raised an issue with the proposed depreciation tracking module being unable to handle the capex timing assumption employed in JGN's roll forward approach. JGN's roll forward of its capital base treats half a year's capex as being incurred at the start of the year and half at the end of the year. We note this approach by JGN is consistent with

29 AER, *Explanatory statement – Proposed gas post-tax revenue models*, December 2019, p. 10.
30 AGIG, *Gas PTRM and roll-forward model review*, January 2020; Jemena, *Submission regarding proposed financial models*, January 2020.
31 AGIG, *Gas PTRM and roll-forward model review*, January 2020, p. 1.
32 Jemena, *Submission regarding proposed financial models*, January 2020, pp. 3–4.
33 NGR, r. 75A(7)(c).
34 This is generally due to availability of actual information, which is lagged by one year, when the access arrangement review is taking place.
35 AER, *Final report: Review of regulatory tax approach*, December 2018, pp. 78–80.

its previous approved access arrangement and will only be relevant for the 2015–20 period when rolling forward its capital base. JGN has elected to use our standard RFM approach for recognising capex in rolling forward its capital base for future periods. That is, a year's capex is assumed to be incurred in the middle of that year and rolled into the capital base at the end of that year.

We have considered Jemena's submission as part of finalising the gas distribution depreciation tracking module, and agree that it should be capable of catering for JGN's capex timing approach for the 2015–20 period. We have included in the final gas distribution depreciation tracking module a switch for the first five years of depreciation tracking, which allows JGN to select its capex timing approach applying to the 2015–20 period.[36]

Jemena reviewed our changes and confirmed that the amended depreciation tracking module now accounts for JGN's capex timing difference for the 2015–20 period.[37]

36 This switch is reflected in the 'General information' section of the **Capital base input** worksheet (row 22) and flows into the amended formulae in the **Capital base tracking** worksheet.

37 Jemena, *Email response*, 17 February 2019.

Appendices

The appendices include the final template RFMs, depreciation tracking modules, associated handbooks (transmission and distribution) and a detailed list of changes from the final amended electricity RFMs.

Appendix A: Transmission roll forward model

Appendix B: Transmission roll forward model – depreciation tracking module

Appendix C: Distribution roll forward model

Appendix D: Distribution roll forward model – depreciation tracking module

Appendix E: Transmission roll forward model handbook

Appendix F: Distribution roll forward model handbook

Appendix G: List of changes from electricity roll forward model