



Explanatory statement

Electricity transmission and distribution network service providers

Proposed amendments to the roll forward models (Distribution - version 3) (Transmission - version 4)

December 2019

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Invitation for submissions

The Australian Energy Regulator invites interested parties to make written submissions on the proposed amendments to the distribution and transmission roll forward models by close of business, **20 January 2020**.

We prefer that all submissions sent in an electronic format are in Microsoft Word or other text readable document form. Submissions should be sent electronically to ModelReviews@aer.gov.au.

Alternatively, submissions can be sent to:

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We prefer 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.

We will place all non-confidential submissions on our website. For further information regarding our use and disclosure of information provided to us, see the ACCC/AER Information Policy (June 2014), which is available on our website.

Please direct enquiries about this paper, or about lodging submissions to ModelReviews@aer.gov.au or to the Networks Finance and Reporting branch of the AER on 1300 585 165.

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ATO	Australian Tax Office
capex	capital expenditure
DV	diminishing value
ITAA	Income Tax Assessment Act
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules
NGL	National Gas Law
NGO	National Gas Objective
NSP	network service provider
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
RFM	roll forward model
SL	straight-line
TAB	tax asset base
WARL	weighted average remaining life

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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 are following.³

¹ NEL, s. 7.

² NGL, s. 23.

³ AER, *Revised stakeholder engagement framework*, September 2017.

1 Introduction

The NER requires us to prepare and publish a roll forward model (RFM) for the regulatory asset base (RAB) of network service providers.⁴ To ensure that the RFM remains fit for purpose, we amend or replace the RFM when necessary.⁵ The current versions of the RFMs are version 2 for distribution and version 3 for transmission.

This explanatory statement sets out our proposed amendments to the transmission and distribution RFMs and the reasons for them, in accordance with the NER.⁶ We have amended the RFMs to implement the findings from our final report on the review of the regulatory tax framework (the tax review). We also propose several other amendments to the RFMs. This section provides an overview of the purpose of the RFM and our proposed amendments, Section 2 sets out in more detail the reasoning behind our proposed amendments. Section 3 summarises the initial consultation we took in amending the RFMs.

1.1 What does the RFM do?

The RFM establishes the method used to roll forward the value of the RAB:⁷

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

The closing RAB value for a regulatory control period as calculated by the RFM becomes the opening RAB for the next regulatory control period. This opening RAB 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. The RAB is used in the PTRM to calculate the annual revenue requirement.

The RFM deals with many aspects of RAB estimation, including:⁸

- establishment of the opening RAB for a regulatory control period
- adjustments for prudent and efficient capital expenditure (capex)
- the depreciation approach based on forecast or actual capex
- how the roll forward should occur within the regulatory control period.

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

- additions for actual capex, net of customer contributions and the value of asset disposals
- reductions for depreciation (based on approved asset lives and methods)
- indexation for actual inflation

⁴ NER, cll 6.5.1(b) and 6A.6.1(b).

⁵ NER, cll 6.5.1(c) and 6A.6.1(c).

⁶ NER, cll. 6A.20(b) and 6.16(b).

⁷ NER, cll. 6.5.1(e) and 6A.6.1(e).

⁸ NER, cll. S6.2 and S6A.2.

- adjustment for the difference between estimated and actual capex in the last year of the previous regulatory control period
- other adjustments for removal or addition of assets made under certain circumstances (such as a change in service classification) in accordance with the NER.

The RFM also incorporates a similar roll forward calculation of the tax asset base (TAB) over the regulatory control period. As with the RAB, the output TAB values from the RFM are inputs to the PTRM used with other inputs to calculate the corporate income tax building block. An electricity NSP's regulatory proposal must be prepared using our RFM.⁹

1.2 Why are we amending the RFM?

To ensure that the RFM remains fit for purpose, we amend or replace it when necessary.¹⁰

On 17 December 2018, we released the final report of our tax review which identified three changes to our approach in calculating the estimated cost of corporate income tax. Two of the findings required changes to our regulatory models—that is the RFM and PTRM.¹¹ Specifically, the final report of the tax review required the following two changes which affect the calculation of tax depreciation in the models:

- **diminishing value method** – apply the diminishing value (DV) method for tax depreciation purposes to all new depreciable assets except for certain assets (section 2.1)¹²
- **immediate expensing** – allow immediate expensing of certain capital expenditure (capex) for tax purposes (section 2.2).

In April 2019, we published new versions of the distribution and transmission PTRMs (version 4) which implemented the changes to the tax depreciation approach. This explanatory statement and proposed amendments to the RFMs commence the process for implementing the changes to the roll forward of assets for tax purposes.

In addition to changes to accommodate the findings of the tax review, we have also included a standard approach to calculate year-by-year tracking of depreciation for both RAB and tax depreciation (section 2.3).¹³ We have done this in response to the growing number of NSPs which have adopted the 'year-by-year tracking' approach to model straight-line (SL) depreciation. 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. Additionally, we consider that

⁹ NER, cll. S6.1.3(7), S6.1.3(10) and S6A.1.3(5).

¹⁰ NER, cll. 6.5.1(c) and 6A.6.1(c).

¹¹ Capping of certain gas asset tax lives was also a finding from the final report, but does not require a model change.

¹² For example, assets qualified under section 40-72 of the ITAA (e.g. intangible depreciable assets) are not subject to the DV method. Other assets such as buildings and other capital works, and equity raising costs are also not subject to this depreciation method.

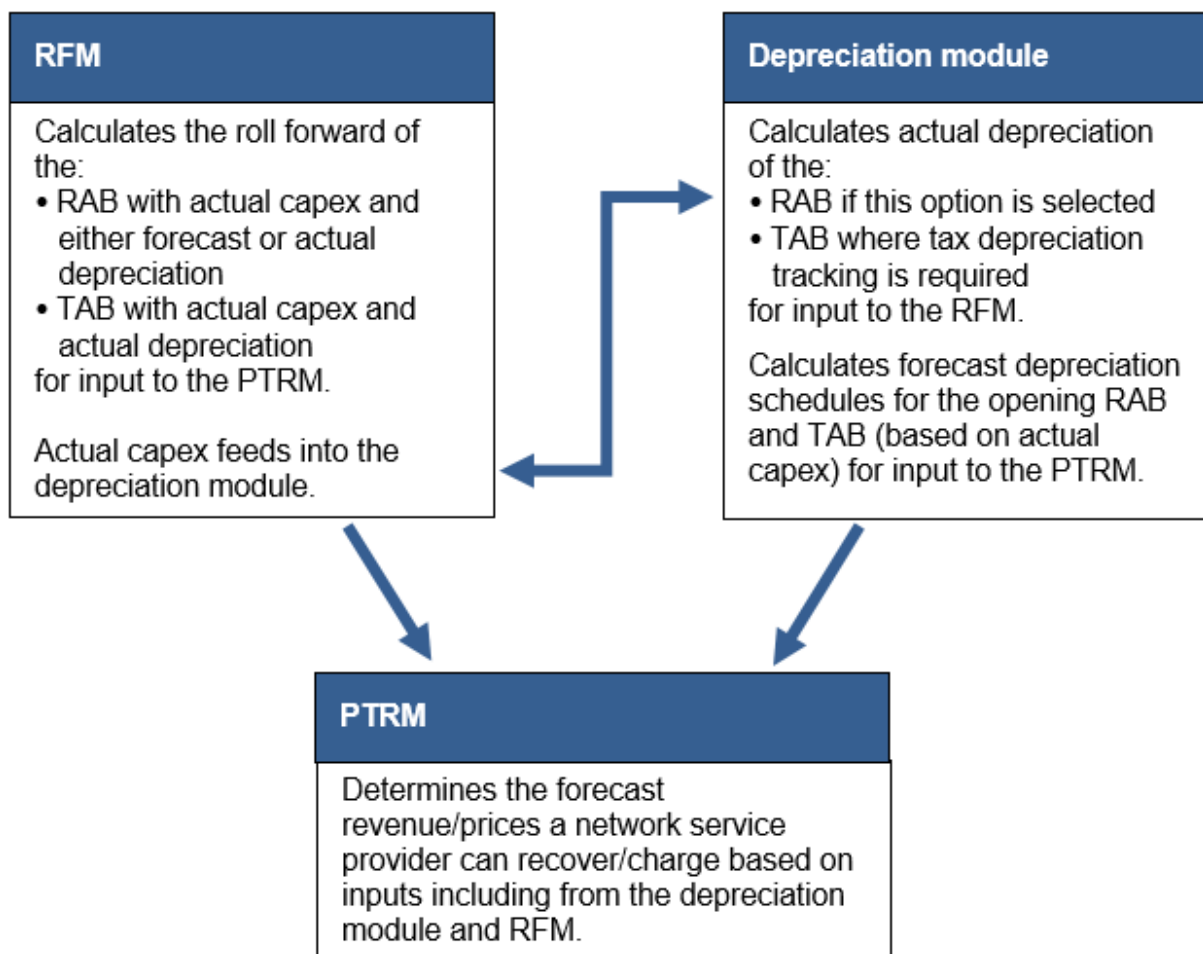
¹³ The year-by-year tracking approach implements the straight-line method of depreciation (in addition to grouping assets by type via asset classes) and tracks the asset classes on a yearly basis.

the change to DV tax depreciation for new assets arising from the tax review will require year-by-year tracking of tax depreciation to be implemented correctly.

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 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 asset base.

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

Figure 1 Interrelationship between the RFM, depreciation module and PTRM



We also propose amending the electricity distribution and transmission RFMs to accommodate the case where we determine that inefficient capex is to be excluded from the RAB and TAB as a result of an ex-post review of actual capex (section 2.4).¹⁴ For the reset

¹⁴ Here, 'inefficient' past capex refers to three specific assessments (labelled the overspending, margin and capitalisation requirements) detailed in NER, cl. S6.2.2A and S6A.2.2A. The details of our assessment approach for an ex-post review

of a 5 year regulatory control period, the ex-post review period comprises the final 2 years of the previous regulatory control period (t–2 and t–1) and the first 3 years of the current regulatory control period. While the current RFMs can handle the possibility of any final year (t–1) actual capex adjustments, they do not accommodate the possibility for any adjustments to the second last year (t–2) actual capex arising from an ex-post review.¹⁵ We have not made any capex adjustments from an ex-post review to date. However, we consider it appropriate that the RFM templates are capable of making this adjustment should it occur in future determinations. The amendments for this change are detailed in section 2.4.

We also propose the following minor amendments to the RFMs (section 2.5):

- expand the number of asset classes to 50 in the distribution RFM, consistent with the transmission RFM
- correct typographical errors and other formatting issues.

1.3 How can stakeholders contribute?

We invite stakeholders to consider our proposed amendments to the RFMs and make written submissions to us. As such, we are publishing:¹⁶

- the proposed amended RFMs, depreciation tracking modules and associated handbooks
- this explanatory statement, setting out the provision of the NER under which the RFMs are proposed to be amended, and the reasons for the proposed amendments.

The proposed amended transmission and distribution RFMs, depreciation tracking modules and associated handbooks are attached as appendices to this explanatory statement. We invite submissions on the proposed amendments from all interested parties by 20 January 2020.¹⁷

We discuss in detail our proposed amendments to the RFM in section 2. We welcome submissions from stakeholders on any aspects of the proposed amendments to the RFM and implementation of the depreciation tracking module.

We will consider submissions on the proposed amendments before we decide on the final amended RFMs. By the end of March 2020, we will publish:¹⁸

- a final decision that sets out the provision of the NER under which the RFM is being prepared and the reasons for the amendments
- the amended RFMs, depreciation tracking modules and associated handbooks.

The timeline and milestones for this RFM amendment process are shown in Table 1.

are set out in the Capital expenditure incentive guideline AER, *Capital expenditure incentive guideline*, November 2013, pp. 13–17.

¹⁵ For the current RFMs, any ex-post review resulting in year t–2 actual capex adjustments would require some formulas to be overwritten.

¹⁶ NER, cl. 6A.20(b) and 6.16(b).

¹⁷ Interested parties must be allowed at least 30 business days to make submissions to the AER; NER, cl. 6A.20(c) and 6.16(c).

¹⁸ The period between publication of the proposed amended models and final amended models will be no more than 80 business days. NER, cl. 6A.20(e) and 6.16(e).

Table 1 Proposed project timeline and milestones

Date	Milestone
5 December 2019	AER issues explanatory statement on proposed amendments and draft RFMs for consultation
20 January 2020	Stakeholder submissions on proposed amendments close
End of March 2020	AER issues final decision and amended RFMs

2 Proposed amendments

The main amendments to the RFMs are the implementation of the findings of the tax review changes, accommodating possible adjustments to t–2 capex, and the inclusion of a standard approach to modelling year-by-year depreciation tracking. Changes required to implement the findings of the tax review (recognition of immediate expensing of capex and DV depreciation method) only impact the tax depreciation of capex for regulatory control periods commencing after July 2019. These changes—specifically DV tax depreciation—will require year-by-year tracking of tax depreciation to be implemented correctly as noted in the recent electricity PTRM amendment process.¹⁹

As a result, the main calculations to implement these changes have been made in the depreciation tracking module. The RFM template files have been amended to provide for inputs associated with the year-by-year tracked depreciation to be used to roll forward the TAB and RAB where relevant. The RFMs have also been amended to accommodate possible t–2 capex adjustment inputs.

Table 2 and Table 3 provide a summary of our proposed amendments to the electricity RFMs and components of the depreciation tracking module to implement the required changes. These specific changes are also listed in a **Change log** worksheet in the proposed RFMs that will be removed from the final amended RFMs. A high level summary of changes will be provided in the **Intro** worksheet to the RFM. We have included various comments and labels in the amended RFMs to provide high level instruction on the new inputs required for calculating the tax depreciation.

¹⁹ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, p. 13.

Table 2 Summary of proposed amendments to the transmission and distribution RFMs

Proposed amendments	Worksheets	Change description
Year t–2 adjustment	RFM input	<p>Added additional areas for inputs for adjustments to year t–2 capex arising from an ex-post review including for each asset class:</p> <ul style="list-style-type: none"> - the ex-post adjustment to capex - previous period standard lives - previous period tax standard lives - previous period year t–1 tax depreciation. <p>Also added areas for CPI and WACC inputs for year t–2.</p>
	Adjustment for previous period, Total RAB roll forward, TAB roll forward	Amended calculations of the RAB roll forward and TAB roll forward to handle an ex-post review adjustment to year t–2 capex.
Year-by-year RAB and TAB tracking	RFM input	<p>The switch for the forecast depreciation input table now includes an option for year-by-year tracking of actual depreciation for the RAB roll forward. This option allows the user to enter the actual RAB depreciation as calculated in the depreciation tracking module.</p> <p>Added the actual tax depreciation input section for TAB roll forward as calculated in the depreciation tracking module.</p>
	RAB roll forward	Modified depreciation formulas for each asset class to accommodate the RAB tracking depreciation input.
Other minor changes	RFM input, Adjustment for previous period, PTRM input summary	<p>Expanded distribution RFM to allow for 50 asset classes (increase from 30 asset classes) to be consistent with electricity transmission RFM and current electricity PTRMs.</p> <p>Made other minor changes relating to formatting, labelling or formula updates which, while noted for completeness, are not consequential to the operation of the RFM.</p>

Table 3 Summary of proposed components of the new depreciation tracking module attachment to RFM

Proposed features	Worksheets	Description
General depreciation tracking	RAB input, TAB input, RAB tracking, TAB tracking, RAB tracking summary, Tracking output	Created separate input and calculation worksheets for both RAB and TAB depreciation tracking. Created a single output page for transferring data as inputs to both PTRM and RFM. File includes macros which enable expansion of rows/columns as necessary.
Immediate expensing	TAB input	Provided an input section for the actual capex by asset classes which can be immediately expensed for tax purposes for each year of the regulatory control period.
	TAB tracking	Tax depreciation calculations include an adjustment for immediately expensed actual capex for all asset classes.
Diminishing value tax depreciation	TAB input	Provided input sections for: <ul style="list-style-type: none"> - tax depreciation approach (using SL/DV methods switch) for each asset class - the DV depreciation multiplier as required by ATO for each year of the regulatory control period - tax standard lives and effective lives, and asset adjustment remaining lives for determining when to write-off residual TAB values.
	TAB tracking	TAB depreciation calculations allow for the selection of SL/DV methods.

2.1 Diminishing value method for tax depreciation

The current versions of the electricity RFMs use the SL method to calculate tax depreciation for all asset classes. The final report of the tax review established the DV method as the new regulatory benchmark for tax depreciation for all new assets.²⁰ Our latest version of the PTRMs implemented this approach.²¹ This includes, in the context of tax law: new assets added to the cost base of an existing depreciated asset, and new and separate depreciating assets for the purposes of Division 40 of the *Income Tax Assessment Act* (ITAA). This is relevant to all capex in regulatory control periods that commence after the tax review (i.e. from January 2019).²²

There are some exceptions to this approach such as assets relating to buildings, in-house software and equity raising costs.²³ We therefore provide for capex relating to these exempt categories to continue to be depreciated under the SL method. Description of these assets and reasons for these exceptions to the DV method are discussed in more detail in the final decision to the recent PTRM amendment.²⁴ The current PTRMs provide for asset classes 47–50 for these assets to be depreciated using the SL method for tax purposes rather than the DV method. It is expected that for consistency the same four asset classes in the RFM template and depreciation tracking module will be used for these asset types.²⁵

The tax review findings on tax depreciation apply only to capex in regulatory control periods that commence after the final report of the tax review. Therefore, the proposed RFM depreciation tracking module—where the change is implemented—allows the user to specify for each regulatory period, the tax depreciation method (DV or SL) to apply to capex for tax depreciation tracking purposes. The RFM template maintains the SL method for the tax depreciation calculation on the opening TAB and capex that is not subject to the tax review findings. Where the roll forward of the TAB for the regulatory control period is subject to the tax review findings on tax depreciation, it is expected that tax depreciation will be calculated in the depreciation tracking module (see Box 1). A flow chart displaying the implementation of tax review findings across models is included as appendix A. The depreciation tracking module (section 2.3) allows for tax depreciation of capex to be calculated using the DV approach where relevant, and input into the RFM template using the ‘Actual tax depreciation’ input section.

²⁰ AER, *Final report: Review of regulatory tax approach*, December 2018, p. 76.

²¹ AER, *Final decision – Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, pp. 11–13.

²² AER, *Final report: Review of regulatory tax approach*, December 2018, p. 71–78.

²³ The tax law/ruling relating to each of these asset classes are respectively: sections 43.15, 43.140, 43.210 and 43.20 of the ITAA and ATO taxation ruling 97/25; sections 40.72 and 995.1 of the ITAA and ATO taxation ruling 2016/3; and section 40.880 of the ITAA and ATO taxation ruling 2011/6.

²⁴ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, p. 17.

²⁵ For consistency in the formulae all asset classes in the tracking file module can accommodate depreciation using both the SL or DV methods.

Applying the diminishing value method to new assets

As was noted when implementing the findings of the tax review in the PTRM amendment process, year-by-year tracking of tax depreciation assists in separating the DV and SL 'asset pools' created by only applying DV to new assets. It also automatically tracks the age of each annual stream of capex for tax purposes to determine when the residual tax value should be deducted, consistent with the approach set out in the PTRM.

For capex that is subject to the DV method, we have developed the tax depreciation calculation in the depreciation tracking module to reflect the Australian Tax Office's (ATO's) formula as below:²⁶

$$\text{Base value} \times (\text{days held} \div \text{days in year}^{27}) \times (200\% \div \text{asset's tax effective life})$$

The 'base value' is the net capex²⁸ value for tax depreciation which is calculated within the depreciation tracking module. The 'asset's tax effective life' is the input for 'tax standard asset life' in the RFMs. Consequently, the DV calculation formula to be applied in the depreciation tracking module is as below:

$$D_t = \left(\text{Nominal net capex}_i - \sum_{n=0}^{t-1} D_n \right) \times 200\% \div \text{tax standard asset life}$$

where:

D_t is the tax depreciation in year t

$D_0 = 0$

$t = 1, 2, 3, \dots$

$i = \text{year } 0$

The 'TAB input' worksheet of the depreciation tracking module includes an input section to specify the tax depreciation method to apply to each asset class for the relevant regulatory control period. It also includes an input section for the DV multiplier (currently specified as 200 per cent by the ATO) to apply to the depreciation of each year of capex. This input section will allow revisions to be made in the model if the ATO changes this multiplier in the future.

Under the DV formula, the value of an asset class is depreciated in perpetuity. This means the residual value of the asset class would not be fully written off unless a constraint is set in the DV formula. Our amended PTRM used a RAB standard life (technical life) constraint to

²⁶ See ATO website: <https://www.ato.gov.au/forms/guide-to-depreciating-assets-2006-07/?page=17>.

²⁷ This is either 365 days, or 366 days for a leap year.

²⁸ The net capex for tax depreciation is equal to the gross capex, less disposals, less immediately expensed capex (as discussed in section 2.2).

tax depreciation under a DV approach in addressing the residual tax asset value issue.²⁹ This results in the asset fully depreciating at the end of its technical life (RAB standard asset life) for each asset class. This is consistent with the ATO treatment of depreciation where an asset's value is able to be written off for tax purposes if the business no longer holds or uses the asset.³⁰

In making this decision in the PTRM amendment we also noted that applying this constraint required the age of each annual stream of capex to be tracked for tax purposes to determine when the residual tax value should be deducted. We noted that we would be amending the RFM to include a standard approach to year-by-year depreciation tracking which would enable this constraint to be applied to capex in the roll forward process (as well as automatically separate the 'asset pools' using different depreciation methods). This constraint has been built into the tax depreciation formula within the depreciation tracking module, where an asset is only written off at the end of its technical (RAB) life.

2.2 Immediate expensing of actual capex

Certain capex (such as refurbishment capex) is able to be 'immediately expensed' under tax legislation. The current version of the electricity RFMs do not recognise the ability to immediately expense some capex, and instead treat all capex as additions to the TAB—depreciated over their approved standard tax asset life—for tax purposes. As set out in our amended electricity PTRMs that implemented the tax review changes, our approach now allows for immediately deductible capex to be expensed in the year in which the capex is incurred/commissioned.³¹

Consistent with the changes made to the PTRMs, we have developed the RFM depreciation tracking module to recognise immediate expensing of capex by:

- including an input section where the amount of actual capex that has been immediately expensed (by asset classes) can be recorded for each year of the regulatory control period
- removing the value of immediately deductible capex from the net capex which is then depreciated for tax purposes using the assigned tax asset life. That is, the net capex to be depreciated for tax purposes is the amount of gross capex, less disposals, less immediately expensed capex³²
- including the immediate expensing amount to the total tax depreciation for each regulatory year. This is to recognise that the value of immediately deductible capex is treated as a tax expense for the year in which it was incurred/commissioned.

²⁹ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, pp. 13–16.

³⁰ ITAA, section. 40.295.

³¹ AER, *Final decision – Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, pp. 10–11.

³² For distribution, the net capex for tax purposes reflects the as-incurred approach and includes any customer contributed capex. For transmission, the net capex reflects the as-commissioned approach.

We note that the proposed amendments above mean we do not need to make adjustments to the RFM template to accommodate immediate expensing of capex. This is because, as discussed in section 2.1 and Box 1, NSPs which have already implemented the tax review changes in their current determinations will be required to use the depreciation tracking module at the reset to calculate tax depreciation. Consistent with the prospective nature of the tax review report, this is only relevant to capex in regulatory control periods that commence after the tax review. Expenditure prior to this is not impacted by the recognition of immediate expensing of capex for tax depreciation purposes.

2.3 Year-by-year depreciation tracking approach

The current version of the RFMs calculates a ‘weighted average remaining life’ (WARL) for each asset class based on the SL depreciation on the existing RAB and TAB respectively. This approach determines an aggregated remaining life at the end of a regulatory control period for each asset class. This involves rolling forward the approved remaining lives of existing assets, and standard lives of new additions to the end of the regulatory control period. These are then weighted against each of their residual asset values at the end of the regulatory control period to come up with an average remaining life for the asset class as a whole. The RAB and TAB WARLs for each asset class—as calculated in the RFM—are then used as inputs to the PTRM to determine the forecast depreciation of the opening RAB and TAB values.

In recent decisions, many NSPs have proposed an alternative year-by-year tracking approach to calculate the forecast depreciation on existing assets.³³ The year-by-year tracking approach is more complex than WARL, as the annual capex of each asset class is tracked as disaggregated annual streams. This detail is preserved across multiple regulatory control periods. These annual streams of capex can be thought of as asset sub-classes. This approach provides greater granularity and transparency of the disaggregated capex categories at any point in time.

We have accepted the year-by-year tracking approach in our previous determinations because it meets the requirements of the NER in that it results in depreciation schedules that:

- reflect the nature of the assets and their economic life³⁴
- ensure that total depreciation (in real terms) equals the initial value of the assets³⁵

³³ AER, *Final decision: Power and Water Corporation distribution determination 2019–24 – Attachment 4*, April 2019; AER, *Final decision: TasNetworks transmission determination 2019–24 – Attachment 4*, April 2019; AER, *Final decision: TasNetworks distribution determination 2019–24 – Attachment 4*, April 2019; AER, *Final decision, ElectraNet transmission determination 2018–23 – Attachment 5*, April 2018; AER, *Draft decision, AusNet Services transmission determination 2017–22 – Attachment 5*, July 2016; AER, *Final decision: Jemena distribution determination 2016–20 – Attachment 5*, May 2016; AER, *Final decision: Powercor distribution determination 2016–20 – Attachment 5*, May 2016; AER, *Final decision: United Energy distribution determination 2016–20 – Attachment 5*, May 2016; AER, *Final decision: CitiPower distribution determination 2016–20 – Attachment 5*, May 2016; AER, *Final decision: AusNet Services distribution determination 2016–20 – Attachment 5*, May 2016; and AER, *Final decision, SA Power Networks distribution determination 2015–20 – Attachment 5*, October 2015.

³⁴ NER, cll. 6.5.5(b)(1) and 6A.6.3(b)(1).

- allows the economic lives of existing assets to be consistent with those determined on previous decisions.³⁵

NSPs currently using the year-by-year tracking approach have each been designing and using their own stand-alone depreciation model. This has resulted in bespoke depreciation tracking models with differing approaches for each individual business. Not only does this complicate the assessment of regulatory proposals for us, it also creates further complexity for stakeholders, who are required to examine every unique model during a determination process.

To address this and ease the burden for all stakeholders involved in developing, operating and assessing separate depreciation models, we have developed a standard year-by-year tracking depreciation approach. This approach is set out in the depreciation tracking module, and is an attachment to the RFM. The depreciation tracking module includes the calculation of RAB and TAB tracked depreciation. This standardises the approach, calculations and structure of year-by-year tracking depreciation for all NSPs to apply going forward.

This module consists of two input worksheets and two depreciation calculation worksheets for the RAB and TAB respectively, a RAB tracking summary and a final output worksheet containing necessary data for input to the RFM and PTRM. Buttons have been included to initiate macros which facilitate the expansion of the model as necessary. All inputs to this module should be sourced from the corresponding RFM for the relevant regulatory control period. Details of the required inputs and operating the depreciation tracking module are set out in the RFM handbooks (appendices F and G).

The calculations and functionality of the depreciation tracking module should not differ significantly from the majority of depreciation models currently used by NSPs. Accordingly, we consider there will be minimal disruption in migrating to this new prescribed module. We have conducted extensive engagement with all NSPs to address any implementation concerns, and to facilitate the migration of NSPs currently utilising a separate depreciation tracking model. We intend to continue this engagement throughout the RFM amendment process. Where there are unaccounted for differences between our prescribed module and the tracking models currently used by NSPs, we will continue working directly with the affected NSPs on how to adapt to the new depreciation tracking module.

We have also made the following amendments to the RFM in order to accommodate inputs coming from the depreciation tracking module:

- added a third input option for RAB depreciation in the RFM to account for actual year-by-year depreciation tracking for rolling forward the RAB
- inserted new input sections to allow for actual tax depreciation from the depreciation tracking module for rolling forward the TAB. An associated switch has also been added

³⁵ NER, cll. 6.5.5(b)(2) and 6A.6.3(b)(2).

³⁶ NER, cll. 6.5.5(b)(3) and 6A.6.3(b)(3).

to specify whether the tax depreciation is to be done using the WARL approach or year-by-year tracking approach sourced from the depreciation tracking module.³⁷

As discussed in section 2.1 and the final report of the tax review, all NSPs will be required to use year-by-year tracking for tax depreciation to fully implement the findings of the tax review.³⁸ This ensures the DV method of tax depreciation is applied to actual capex and the residual value is written off when the asset's economic life expires. This approach is consistent with that set out in our 2019 decision for amending the PTRM to implement the tax review changes.³⁹ Box 1 outlines the scenarios for implementing year-by-year depreciation tracking.

Box 1 Scenarios for implementing year-by-year depreciation tracking

Scenario 1: Current regulatory control period implemented the tax review findings

Where an NSP's most recent determination implemented the findings of the tax review on tax depreciation it will be required to use the RFM's depreciation tracking module to calculate tax depreciation at the next reset. This will ensure that tax depreciation over the current regulatory control period applies the DV method of tax depreciation to relevant capex over that period.

If an NSP currently calculates tax depreciation using year-by-year tracking in a separate depreciation model, it will be required to migrate the data to the RFM depreciation tracking module.

NSPs that do not use year-by-year tracking to calculate RAB depreciation may also choose to use this approach at the same time as for tax depreciation. However, this is not required and it may choose to remain using the WARL approach for its RAB depreciation.⁴⁰ The RFM also calculates WARLs that may be used to estimate forecast RAB depreciation in the PTRM. If an NSP currently calculates RAB depreciation in a separate depreciation tracking model, it will be required to migrate the data to the RFM depreciation tracking module at the next reset in order to continue with the year-by-year tracking approach.

Scenario 2: Next regulatory control period will implement tax review findings

If an NSP's most recent determination was made before the tax review changes (before 2019), its actual capex in the current regulatory control period is not subject to the tax review findings on tax depreciation. In this case, the NSP's next determination will implement the

³⁷ The option for year-by-year tax depreciation tracking is further separated into two options, dependant on whether an ex-post review of capex is triggered for year t-2 capex.

³⁸ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, pp. 11–18; AER, *Final report: Review of regulatory tax approach*, December 2018, pp. 71–78.

³⁹ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019, pp. 13–16.

⁴⁰ This is also applicable where an NSP applies the 'period-by-period tracking' approach. This approach creates separate asset classes for each regulatory control period, with the weighted average approach used to determine the remaining lives for the existing assets at the start of the period. In this case, the WARLs calculated can continue to be used to determine forecast RAB depreciation.

findings of the tax review in the PTRM to determine forecast revenues for the next regulatory control period. The roll forward of the TAB in this reset would not be affected by the tax review changes to tax depreciation. As such, the WARL approach and SL method of tax depreciation are able to be used.

NSPs in this situation may therefore continue using the WARL approach in respect of calculating RAB and TAB depreciation.⁴¹ They may also choose to use the year-by-year depreciation tracking of the RAB and/or TAB using the new RFM depreciation tracking module, but are not required to do so at this point.

NSPs that currently use a separate depreciation model to calculate year-by-year depreciation tracking (RAB and/or TAB) will be required to migrate the data to the RFM depreciation tracking module at the next reset in order to continue with the year-by-year tracking approach.

2.4 Changes to year t–2 capex arising from ex-post capex review

The NER allows us to assess the efficiency and prudence of capex after it is incurred to ensure we only use efficient and prudent capex to set regulated prices.⁴² As required by the NER we perform an ex-post review of actual capex, and may exclude from the RAB:

- inefficient or imprudent capex overspends
- capitalised operating expenditure (opex)
- inflated related party margins.⁴³

For a 5 year reset, the ex-post review period comprises the final 2 years of the previous regulatory control (t–2 and t–1) period and the first 3 years of the current regulatory control period.⁴⁴

Where the ex-post review determines that capex is to be excluded from the RAB, the relevant year's revised efficient gross capex (rather than actual gross capex) is entered in the RFM for the final year of the previous period (t–1) through to year 3 (of the current period). The RAB roll forward in the RFM would therefore be based on the revised efficient capex for those years. Additionally, the adjustment for year t–1 capex would be based on the difference between efficient capex and estimated capex.⁴⁵ In such a case, a similar adjustment is required for year t–2 capex.

⁴¹ This also applies to NSPs who are using the period-by-period tracking approach.

⁴² NER, cl. S6.2.2A and S6A.2.2A.

⁴³ AER, *Explanatory statement - capital expenditure incentive guideline*, November 2013, p. 7.

⁴⁴ The ex-post review period excludes the final 2 years of the current regulatory control period. For a standard 5 year reset, this means the first 3 years are included. For a 10 year reset this would mean the first 8 years would be included.

⁴⁵ Under circumstances where an ex-post review is not triggered, the adjustment for t–1 capex would represent the difference between estimated and actual capex.

The current electricity RFM templates do not accommodate adjustments to year t–2 actual capex.⁴⁶ We therefore propose amendments to the RFM templates include additional inputs and modifications to the formulae associated with the RAB roll forward and TAB roll forward.

The proposed additional inputs comprise for each asset class⁴⁷:

- the depreciation method used to roll forward the RAB in the previous regulatory control period
- the adjustment for year t–2 capex⁴⁸
- standard asset life from the previous regulatory control period
- tax standard life from the previous regulatory control period
- revised tax depreciation in year t–1
- previously determined tax depreciation in year t–1.

For the RAB roll forward, the proposed amendment calculates the effect of the year t–2 capex adjustment to the RFM opening RAB and then calculates the return on that adjustment over the current regulatory control period to offset the revenue impact of the inefficient capex.⁴⁹

For the TAB roll forward, in the current templates, the opening TAB is adjusted for year t–1 actual (rather than estimated) capex. Our proposed amendment expands on this to also include the adjustment where applicable for any change year t–2 capex and the associated adjustment to year t–1 actual depreciation.

2.5 Other minor changes

We have made a few presentational and other minor operational changes to the electricity RFMs. These include:

- The proposed distribution RFM has been expanded to accommodate up to 50 asset classes. This is an increase from the 30 asset classes in the current version of the distribution RFM. This makes the distribution RFM consistent with the transmission RFM in terms of the capability to handle the same number of asset classes. It also makes the RFMs consistent with the current PTRMs that accommodate 50 asset classes. We consider that this is a sufficient number of asset classes to meet future requirements for most DNSPs.
- The proposed RFMs include other minor amendments relating to formatting or labelling which are not consequential to the operation of the RFM (such as corrections to spelling or grammatical errors in cell notes).

⁴⁶ For the current RFM templates, any ex-post review undertaken would require some formulas to be overwritten.

⁴⁷ In the majority of resets where an ex-post review is not undertaken, the user can indicate in the model that no adjustment is required to negate any impact on the RAB and TAB.

⁴⁸ This is the difference in nominal mid-year terms between the efficient capex and the actual capex.

⁴⁹ This calculation is contained in the 'Adjustment for previous period' sheet.

3 Consultation

This section summarises the initial consultation process already undertaken, and identifies the key issues for comment on our proposed RFMs for electricity NSPs.

3.1 Initial consultation

In the lead up to developing the proposed electricity transmission and distribution RFMs, we conducted initial consultation with parties interested in the amendments to the RFMs. These included all electricity NSPs and other individuals that registered their interest in our amendment process. All stakeholders we engaged with were provided with preliminary draft models and asked to provide feedback on the proposed changes.

The RFM amendments are being made in parallel with the development of template gas RFMs. We have also had regard to the feedback received through that process—where relevant—in amending the proposed electricity RFMs. No major issues were raised with the underlying calculations in the amended RFMs. The majority of the feedback concerned cosmetic changes to the RFMs, and the application of the depreciation tracking module and its calculations. Feedback from stakeholders has been incorporated in the proposed amended RFMs. In particular, we have included a number of extra prompts to clarify where inputs are required in the depreciation tracking module. In response to feedback from AusNet Services, we have also included depreciation calculations for potential asset adjustments/movements in each year of a regulatory control period, rather than just end of period adjustments.

3.2 Key issues for consultation

Our positions on the proposed amended electricity RFMs implementing the tax review changes on the DV method and immediate expensing of capex reflect the positions set out in the recently completed electricity PTRM amendment process.⁵⁰ However, we would welcome receiving submissions on whether these positions have been correctly implemented in the proposed RFM amendments.

Further, we seek comment on:

1. The approach to reflecting any adjustments to actual capex in year $t-2$ arising from an ex-post review.
2. The implementation of year-by-year depreciation tracking, including:
 - the calculations underlying the RFM depreciation tracking module, and
 - amendments to the RFM to accommodate inputs from the depreciation tracking module.

⁵⁰ AER, *Final decision - Amendments to the electricity transmission and distribution post-tax revenue models*, April 2019.

Appendices

The appendices include the proposed amended electricity RFMs, depreciation tracking modules and associated handbooks (transmission and distribution). As noted above, the proposed amended RFMs include a **Change log** worksheet that will be removed from the final versions, with only a high level summary of changes in the **Intro** worksheet. The proposed handbooks currently include highlighted text to indicate where proposed changes were made. This highlighting will likewise be removed in the final versions.

Appendix A: Implementation of tax review depreciation findings–flow chart

Appendix B: Proposed amended transmission roll forward model

Appendix C: Proposed amended transmission roll forward model – depreciation tracking module

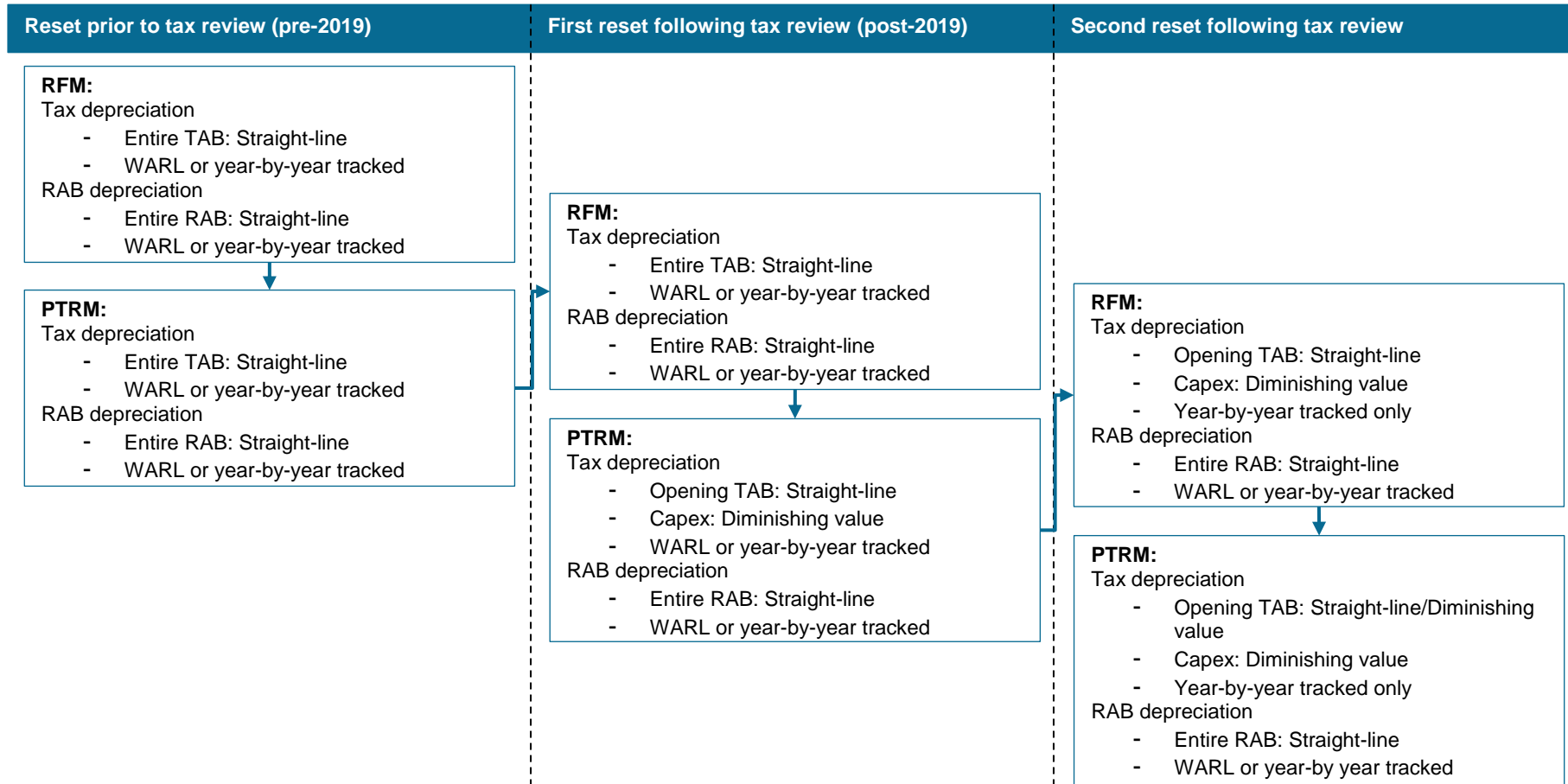
Appendix D: Proposed amended distribution roll forward model

Appendix E: Proposed amended distribution roll forward model – depreciation tracking module

Appendix F: Proposed amended transmission roll forward model handbook

Appendix G: Proposed amended distribution roll forward model handbook

Appendix A: Implementation of tax review depreciation findings—flow chart⁵¹



⁵¹ 'WARL' in the context of this flowchart also refers to the 'period-by-period tracking' approach used by some NSPs to calculate depreciation, where separate asset classes are created for each regulatory control period, with the weighted average approach used to determine the remaining lives for the existing assets at the start of the period.