Draft Decision

Evoenergy Electricity Distribution Determination 2024 to 2029

(1 July 2024 to 30 June 2029)

Attachment 4
Regulatory depreciation

September 2023

AUSTRALIAN ENERGY REGULATOR

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4 Regulatory depreciation

Regulatory depreciation is the amount provided so capital investors recover their investment over the economic life of the asset (return of capital). In deciding whether to approve the depreciation schedules submitted by Evoenergy, we make determinations on the indexation of the regulatory asset base (RAB) and depreciation building blocks for Evoenergy's 2024–29 regulatory control period for its distribution and transmission (dual function assets) networks.[1] Evoenergy's dual function assets are high voltage assets which support the broader ACT/NSW transmission network owned and operated by Transgrid. The AER has decided to continue applying transmission pricing to these assets.[2]

The regulatory depreciation amount is the net total of the straight-line depreciation less the indexation of the RAB.

This attachment sets out our draft decision on Evoenergy's regulatory depreciation amounts. It also presents our draft decision on the proposed depreciation schedules, including an assessment of the proposed standard asset lives used for calculating straight-line depreciation.

4.1 Draft decision

We determine regulatory depreciation amounts of $253.8 million and $48.2 million ($ nominal) for Evoenergy's distribution and transmission networks respectively for the 2024–29 period. Evoenergy proposed regulatory depreciation amounts of $253.4 and $48.1 million ($ nominal) for its distribution and transmission networks respectively.[3] Our draft decision represents an increase of $0.4 million (0.2%) and $0.2 million (0.4%) on the proposed amounts.

The increases are primarily the result of our draft decision on the expected inflation rate for the 2024–29 period (Attachment 3), which affects the projected RAB over this period. Indexation of the RAB is $6.0 million lower (for distribution) and $0.9 million lower (for transmission) than the proposal, largely due to applying a lower expected inflation rate of 2.80% per annum in this draft decision compared to Evoenergy's proposal of 2.87% per annum. Straight-line depreciation is $5.5 million (1.4%) lower (for distribution) and $0.7 million (1.0%) lower (for transmission) than the proposal mainly due to lower forecast capex (Attachment 5). The lower RAB indexation has more than offset the decrease in straight-line depreciation (since indexation is deducted from straight-line depreciation).

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1 Clause 6.12.1 of the National Electricity Rules (NER) sets out the 'constituent decisions' we must make as part of a distribution determination. We must decide whether or not to approve the depreciation schedules submitted by a Distribution Network Service Provider (cl. 6.12.1(8)). This is one of the building blocks we must use to determine the annual revenue requirement: cl.6.4.3 of the NER.

2 AER, *Framework and approach: Evoenergy (ACT), Regulatory control period commencing 1 July 2024*, July 2022, p. 49.

3 Evoenergy, *Distribution PTRM,* January 2023; Evoenergy, *Transmission PTRM,* January 2023.

For our draft decision on Evoenergy's regulatory depreciation:

- We accept Evoenergy's proposed asset classes, its straight-line depreciation method, and the standard asset lives used to calculate the regulatory depreciation amount for both its distribution and transmission networks.
- We accept Evoenergy's proposed year-by-year tracking approach to calculate straight-line depreciation of existing assets, and its forecast capital expenditure (capex) (section 4.4.1).

We made determinations on other components of Evoenergy's proposal which affect the forecast regulatory depreciation—for example, the opening RAB at 1 July 2024 (Attachment 2), expected inflation (Attachment 3), and forecast capex (Attachment 5) including its effect on the projected RAB over the 2024–29 period.[4]

Table 4.1 and Table 4.2 set out our draft decision on the annual regulatory depreciation amounts for Evoenergy's 2024–29 period for its distribution and transmission networks respectively.

Table 4.1 AER's draft decision on Evoenergy's forecast depreciation for the 2024–29 period – distribution ($million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	76.7	84.0	77.8	81.7	73.3	393.5
Less: inflation indexation on opening RAB	26.4	27.1	27.7	28.8	29.7	139.7
Regulatory depreciation	**50.3**	**56.9**	**50.1**	**52.9**	**43.6**	**253.8**

Source: AER analysis.

Table 4.2 AER's draft decision on Evoenergy's forecast depreciation for the 2024–29 period – transmission ($million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	14.4	15.9	15.0	14.9	13.5	73.8
Less: inflation indexation on opening RAB	5.1	5.1	5.2	5.2	5.0	25.6
Regulatory depreciation	**9.4**	**10.8**	**9.9**	**9.8**	**8.5**	**48.2**

Source: AER analysis.

[4] Capex enters the RAB net of forecast disposals and capital contributions. It includes equity raising costs (where relevant) and the half-year weighted average cost of capital (WACC) to account for the timing assumptions in the PTRM. Our draft decision on the RAB (Attachment 2) also reflects our updates to the WACC for the 2024–29 period.

4.2 Evoenergy's proposal

For the 2024–29 period, Evoenergy proposed total forecast regulatory depreciation amounts of $253.4 million and $48.1 million ($ nominal) for its distribution and transmission networks respectively. To calculate the depreciation amount, Evoenergy proposed to use:[5]

- the straight-line depreciation method employed in the AER's post-tax revenue model (PTRM)
- the closing RAB values at 30 June 2024 derived from the AER's roll forward model (RFM)
- the forecast capex for the 2024–29 period proposed by Evoenergy
- an expected inflation rate of 2.85% per annum for the 2024–29 period
- the AER's year-by-year tracking depreciation module in the RFM, which implements the straight-line method to calculate the forecast depreciation (over the 2024–29 period) of the opening RAB at 1 July 2024
- the same asset classes and standard asset lives for depreciating its forecast capex for the 2024–29 period (except for the 'Equity raising costs' asset class), which are consistent with those approved in the 2019–24 distribution determination. The 'Equity raising costs' asset class had no standard asset life proposed as there was no forecast cost proposed.

Table 4.3 and Table 4.4 set out Evoenergy's proposed regulatory depreciation amounts for the 2024–29 period for its distribution and transmission networks respectively.

Table 4.3 Evoenergy's proposed regulatory depreciation for the 2024–29 period – distribution ($million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	77.4	84.8	78.7	83.0	75.2	399.0
Less: inflation indexation on opening RAB	27.0	27.9	28.7	30.1	31.9	145.7
Regulatory depreciation	**50.3**	**56.9**	**50.0**	**52.9**	**43.2**	**253.4**

Source: Evoenergy, *Distribution PTRM,* January 2023.

[5] Evoenergy, *Distribution PTRM,* January 2023*;* Evoenergy, *Distribution RFM*, January 2023; Evoenergy, *Transmission PTRM,* January 2023; Evoenergy, *Transmission RFM*, January 2023.

Table 4.4 Evoenergy's proposed regulatory depreciation for the 2024–29 period – transmission ($million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	15.0	15.8	15.0	15.0	13.8	74.5
Less: inflation indexation on opening RAB	5.2	5.2	5.3	5.3	5.4	26.5
Regulatory depreciation	**9.8**	**10.6**	**9.7**	**9.6**	**8.4**	**48.1**

Source: Evoenergy, *Transmission PTRM,* January 2023.

4.3 Assessment approach

We must determine the regulatory depreciation amount as part of determining a distributor's annual revenue requirement.[6] The calculation of depreciation in each year is governed by the value of assets included in the RAB at the beginning of the regulatory year, and by the depreciation schedules.[7]

4.3.1 Approach to determining depreciation

Our standard approach to calculating depreciation is to employ the straight-line method set out in the PTRM. Regulatory practice has been to assign a standard asset life to each category of assets that represents the economic or technical life of the asset or asset class.[8] We must consider whether the proposed depreciation schedules conform to the following key requirements:

- the schedules must depreciate using a profile that reflects the nature of the assets or category of assets over the economic life of that asset or category of assets[9]
- the sum of the real value of the depreciation that is attributable to any asset or category of assets must be equivalent to the value at which that asset or category of assets was first included in the RAB for the relevant distribution system.[10]

To the extent that a distributor's regulatory proposal does not comply with the above requirements, we must determine the depreciation schedules for calculating the depreciation for each regulatory year.[11]

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6 NER, cll. 6.4.3(a)(3) and (b)(3).

7 NER, cl. 6.5.5(a).

8 This is the standard practice for the AER, as well as other jurisdictional regulators. See for example, IPART, *Cost building block model template*, 20 June 2014, Table 1; ERAWA, *Final Decision on Proposed Revisions to the Access Arrangement for the Western Power Network*, September 2012, Appendix 2: Target Revenue Calculation (Revenue Model).

AER, *Final decision: Electricity distribution network service providers – Post-tax revenue model handbook*, April 2021, p. 15.

AER, *Draft decision: AusNet Services transmission determination 2017-18 to 2021-22, Attachment 5 – Regulatory depreciation*, July 2016, p. 37.

9 NER, cl. 6.5.5(b)(1).

10 NER, cl. 6.5.5(b)(2).

11 NER, cl. 6.5.5(a)(2)(ii).

The regulatory depreciation amount is an output of the PTRM. We therefore assessed Evoenergy's proposed regulatory depreciation amount by analysing the proposed inputs to the PTRM for calculating that amount. The key inputs include:

- the opening RAB at 1 July 2024
- the forecast net capex in the 2024–29 period[12]
- the expected inflation rate for the above period
- the standard asset life for each asset class—used for calculating the depreciation of new assets associated with forecast net capex in the above period
- the depreciation of existing assets in the opening RAB as at 1 July 2024—calculated in a separate year-by-year tracking depreciation module.

Our draft decision on Evoenergy's regulatory depreciation amount reflects our determinations on the opening RAB at 1 July 2024, expected inflation rate and forecast capex (the first three building block components in the above list).[13] Our determinations on these components of Evoenergy's proposal are discussed in Attachments 2, 3 and 5 respectively.

In this attachment, we assess Evoenergy's proposed standard asset lives against:

- the approved standard asset lives in the distribution determination for the 2019–24 period
- the standard asset lives of comparable asset classes approved in our recent distribution determinations for other service providers
- the appropriate economic lives of the assets.

Our regulatory models (RFM and PTRM) provide for two approaches for calculating the straight-line depreciation of existing assets:

- the 'weighted average remaining lives' (WARL) approach: This approach calculates the remaining asset life for an asset class by weighting together its remaining asset life at the beginning of the regulatory control period with the new capex added to the asset class during that period. The residual asset values are used as weights to calculate the remaining asset life at the end of that period. The WARL for the asset classes are calculated in our RFM and are inputs to the PTRM. We consider this approach meets the requirements for determining depreciation under the National Electricity Rules (NER).
- the 'year-by-year tracking' approach: Under this approach, the capex (in addition to grouping assets by type via asset classes) for each year of the regulatory control period is depreciated separately and tracked on a year-by-year basis over the assigned standard life for the asset class. This approach does not require the assessment of the remaining asset life at each five-yearly distribution determination. We consider this

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12 Capex enters the RAB net of forecast disposals and capital contributions. It includes equity raising costs (where relevant) and the half-year WACC to account for the timing assumptions in the PTRM. Our draft decision on the RAB (Attachment 2) also reflects our updates to the WACC for the 2024–29 period.

13 Our final decision will update the opening RAB as at 1 July 2024 for revised estimates of actual capex and inflation.

approach also meets the requirements for determining depreciation under the NER. Our depreciation tracking module in the RFM conducts the detailed calculations required under this approach. The output of this module is then recorded in the PTRM.

Evoenergy has proposed to apply the year-by-year tracking approach to calculate straight-line depreciation of its opening RAB as at 1 July 2024. Our assessment of Evoenergy's proposed year-by-year tracking approach is discussed in section 4.4.1.

4.3.2 Interrelationships

The regulatory depreciation amount is a building block component of the annual revenue requirement.[14] Higher (or quicker) depreciation leads to higher revenues over the regulatory control period. It also causes the RAB to reduce more quickly (excluding the impact of further capex). This reduces the return on capital amount, although this impact is usually smaller than the increased depreciation amount in the short to medium term.[15]

Ultimately, however, a distributor can only recover the capex that it incurs on assets once. The depreciation amount reflects how quickly the RAB is being recovered, and it is based on the asset lives used in the depreciation calculation. It also depends on the level of the opening RAB and the forecast capex, with any increase in these factors also increasing the depreciation amount.

The RAB has to be maintained in real terms, meaning the RAB must be indexed for expected inflation.[16] The return on capital building block has to be calculated using a nominal rate of return applied to the opening RAB.[17] As noted in Attachment 1, the total annual revenue requirement is calculated by adding up the return on capital, depreciation, operating expenditure (opex), tax and revenue adjustments building blocks. Because inflation on the RAB is accounted for in both the return on capital—based on a nominal rate—and the depreciation calculations—based on an indexed RAB—an adjustment must be made to the revenue requirement to prevent compensating twice for inflation.

To avoid this double compensation, we make an adjustment by subtracting the annual indexation gain on the RAB from the calculation of total revenue. Our standard approach is to subtract the indexation of the opening RAB—the opening RAB multiplied by the expected inflation for the year—from the RAB depreciation. The net result of this calculation is referred to as regulatory depreciation.[18] Regulatory depreciation is the amount used in the building block calculation of total revenue to ensure that the revenue equation is consistent with the use of a RAB, which is indexed for inflation annually. Figure 4.1 shows where the inflation components are included in the building blocks.

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14 The PTRM distinguishes between straight-line depreciation and regulatory depreciation, where regulatory depreciation is the straight-line depreciation less the indexation adjustment.

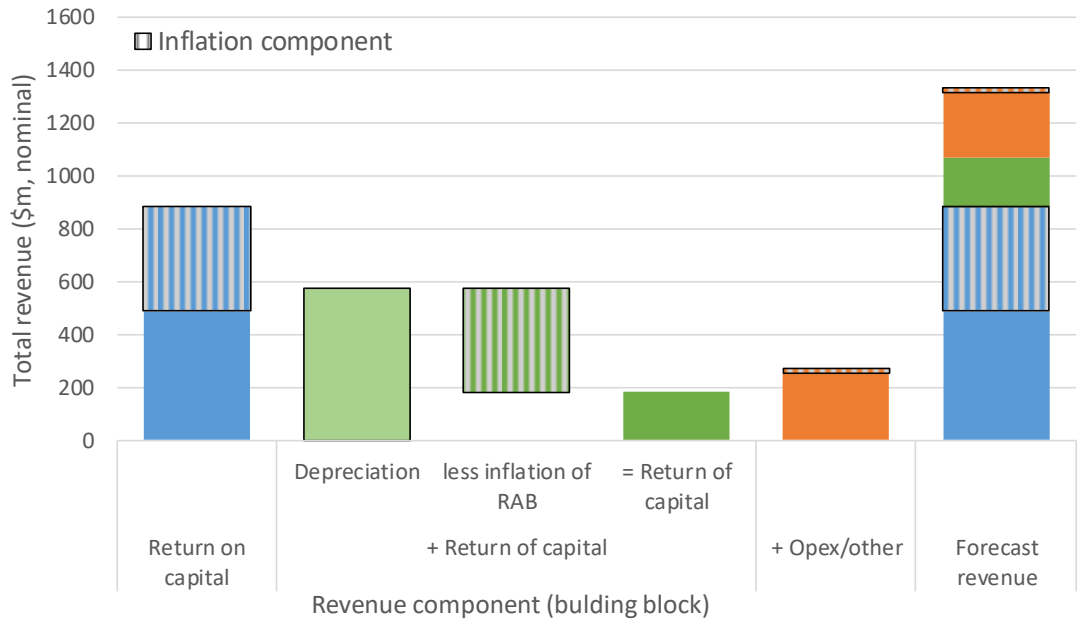
15 This is generally the case because the reduction in the RAB amount feeds into the higher depreciation building block, whereas the reduced return on capital building block is proportionate to the lower RAB multiplied by the WACC.

16 NER, cl. 6.2.3(c)(4).

17 AER, *Rate of return instrument*, cll. 1, 3, 36(c), February 2023.

18 If the asset lives are extremely long, such that the RAB depreciation rate is lower than the inflation rate, then negative regulatory depreciation can emerge. The indexation adjustment is greater than the RAB depreciation in such circumstances.

Figure 4.1 Inflation components in revenue building block – example



Source: AER analysis.

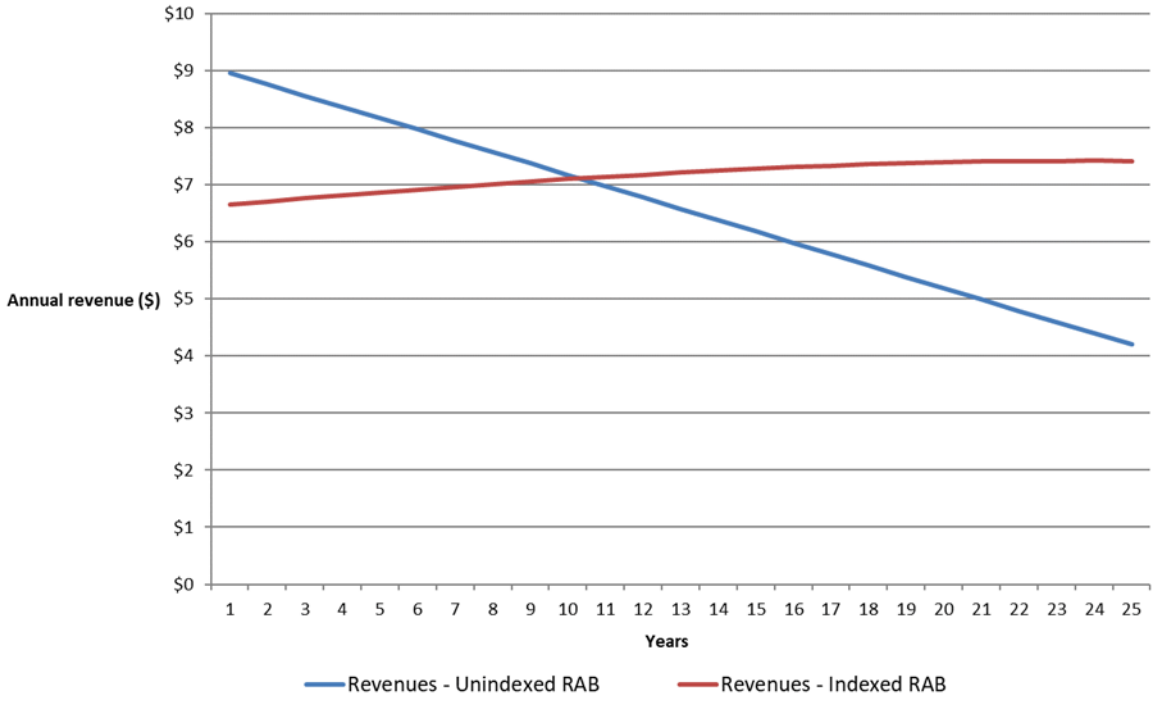
This approach produces the same total revenue requirement and RAB as if a real rate of return had been used in combination with an indexed RAB. Under an alternative approach where a nominal rate of return was used in combination with an un-indexed (historical cost) RAB, no adjustment to the depreciation calculation of total revenue would be required. This alternative approach produces a different time path of total revenue compared to our standard approach. In particular, overall revenues would be higher early in the asset's life (as a result of more depreciation being returned to the distributor) and lower in the future—producing a steeper downward sloping profile of total revenue.[19] Under both approaches, the total revenues being recovered are in present value neutral terms—that is, returning the initial cost of the RAB. Figure 4.2 shows the recovery of revenue under both approaches using a simplified example.[20] Indexation of the RAB and the offsetting adjustment made to depreciation results in smoother revenue recovery profile over the life of an asset than if the RAB was un-indexed. The indexation of the RAB also reduces price shocks when the asset is replaced at the end of its life.[21]

19 A change of approach from an indexed RAB to an un-indexed RAB would result in an initial step change increase in revenues to preserve net present value (NPV) neutrality.

20 The example is based on the initial cost of an asset of $100, a standard economic life of 25 years, a real WACC of 2.5%, expected inflation of 2.4% and nominal WACC of 4.96%. Other building block components such as opex, tax and capex are ignored for simplicity as they would affect both approaches equally.

21 In year 26 the revenues in the example for the un-indexed approach would jump from about $4 to $9, assuming the asset is replaced by an asset of roughly similar replacement cost as the initial asset. In contrast, in the same circumstances, the indexed approach would see revenues stay at roughly $7.

Figure 4.2 Revenue path example – indexed vs un-indexed RAB ($ nominal)



Source: AER analysis.

Figure 2.1 and Figure 2.2 (in Attachment 2) show the relative size of the inflation and straight-line depreciation, and their impact on the RAB based on Evoenergy's proposal. A 10% increase in the straight-line depreciation causes unsmoothed revenues ($ nominal) to increase by about 4.7% for both Evoenergy's distribution and transmission networks.[22]

4.4 Reasons for draft decision

We accept Evoenergy's proposed straight-line depreciation method for calculating the regulatory depreciation amount as set out in the PTRM. However, we increased Evoenergy's proposed forecast regulatory depreciation amounts for the 2024–29 period by $0.4 million (0.2%) to $253.8 million and $0.2 million (0.4%) to $48.2 million ($ nominal) for its distribution and transmission networks respectively.

The increases are primarily the result of our draft decision on the calculation of a lower expected inflation rate (Attachment 3), which affects the projected RAB over the 2024–29 period. The magnitude of the increase, however, is slightly offset by our draft decision on a lower forecast capex (Attachment 5). Our assessment of Evoenergy's proposal to use the year-by-year tracking depreciation approach and standard asset lives are discussed in the following subsections.

22 We have analysed the sensitivity of straight-line depreciation relative to total revenue based on input data provided in Evoenergy's proposal PTRMs.

4.4.1 Year-by-year tracking approach

Evoenergy has proposed a change in approach to implementing the straight-line method for the calculation of its forecast depreciation amount. It proposed to change from the WARL approach (approved for the 2019–24 period) to the year-by-year tracking approach going forward. We accept Evoenergy's proposed year-by-year tracking approach as it meets the requirements of the NER.

Therefore, consistent with our assessment in amending our regulatory models,[23] our draft decision is to accept Evoenergy's proposed change in approach as we consider that it results in depreciation schedules that meet the requirements of the NER by:[24]

- reflecting the nature of the assets and their economic life
- ensuring that total depreciation (in real terms) equals the initial value of the assets
- allowing the economic lives of existing assets to be consistent with those determined on a prospective basis in our 2019–2024 distribution determination.

We agree with Evoenergy's assessment that the impact of the change to year-by-year tracking is minimal.[25]

Evoenergy used our depreciation module in the RFM to implement year-by-year tracking. We have reviewed Evoenergy's application of this module and updated the following inputs to be consistent with the RFM:

- the actual CPI for 2022–23 with the 2022 December quarter CPI published by the Australian Bureau of Statistics, which became available after Evoenergy submitted its proposal. The estimated CPI for 2023–24 has also been updated with the latest forecast inflation published in the Reserve Bank of Australia's August *Statement on Monetary Policy*.
- the nominal vanilla weighted average cost of capital (WACC) for 2023–24 and equity raising costs. These updates are required to reflect the 2023–24 return on debt update in the PTRM for the 2019–24 period, which became available after Evoenergy submitted its proposal.

We also corrected minor inconsistencies with RIN data that impacted both RAB and depreciation as discussed in Attachment 2.

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23 AER, *Explanatory statement, Electricity transmission and distribution network service providers, Proposed amendments to the roll forward models (Distribution – version 3) (Transmission – version 4)*, December 2019, pp. 18–21; AER, *Final decision, Electricity transmission and distribution network service providers, Proposed amendments to the roll forward models (Distribution – version 3) (Transmission – version 4)*, April 2020, p. 11.

24 NER, cl. 6.5.5(b).

25 Evoenergy, *Attachment 3, Revenue and bill impacts, Regulatory proposal for the ACT electricity distribution network 2024–29*, January 2023, p.14.

4.4.2 Standard asset lives

We accept Evoenergy's proposed standard asset lives. We have calculated the standard asset life of equity raising costs by taking the weighted average of the standard asset lives of total forecast capex for each asset class over the 2024–29 period.

Evoenergy proposed the same standard asset lives for its existing asset classes in respect of the forecast capex to be incurred in the 2024–29 period, except for the 'Equity raising costs' asset class for which it did not propose a standard asset life. We accept the unchanged asset lives as they are consistent with those approved for the 2019–24 period and are largely comparable with the standard asset lives used by other network businesses for similar asset classes.

The standard asset life for the 'Equity raising costs' asset class needs to be reviewed each regulatory control period. We consider the standard asset life for this asset class should reflect the lives of the mix of assets making up the approved forecast net capex, because the equity raising cost benchmark is associated with that forecast.[26] However, no equity raising costs have been determined in our draft decision modelling. This is because Evoenergy does not satisfy the requirements to incur benchmark equity raising costs associated with the approved forecast capex. Accordingly, we record the standard asset life as not applicable in the PTRM for this draft decision.

Table 4.5 and Table 4.6 set out our draft decision on Evoenergy's standard asset lives for the 2024–29 period for its distribution and transmission networks respectively. We are satisfied that:[27]

- the standard asset lives and depreciation approach more broadly would lead to a depreciation schedule that reflects the nature of the assets over the economic lives of the asset classes, and
- the sum of the real value of the depreciation attributable to the assets is equivalent to the value at which the assets were first included in the RAB for Evoenergy.

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26 For this reason, we used forecast net capex as the weights to establish the weighted average standard asset life for amortising equity raising costs.

27 NER, cll. 6.5.5(b)(1)–(2).

Table 4.5 AER's draft decision on Evoenergy's standard asset lives at 1 July 2024 – distribution (years)

Asset class	Standard asset life
Zone substation	40.0
Distribution substations	40.0
Distribution overhead lines	50.0
Distribution underground lines	60.0
IT & communication systems (Networks)	10.0
Motor vehicles	7.0
Other non-system assets (Networks)	5.0
IT systems (Corporate)	5.0
Telecommunications (Corporate)	5.0
Other non-system assets (Corporate)	5.0
Land	n/a
Buildings	60.0
Equity raising costs[a]	n/a

Source: AER analysis.
n/a not applicable. We have not assigned a standard asset life to the 'Land' asset class because the capex allocated to it is not subject to depreciation.
(a) For this draft decision, the forecast capex determined for Evoenergy does not meet a level to trigger any benchmark equity raising costs and is therefore not assigned a standard asset life.

Table 4.6 AER's draft decision on Evoenergy's standard asset lives at 1 July 2024 – transmission (years)

Asset class	Standard asset life
Sub-transmission overhead	40.0
Sub-transmission underground	60.0
Zone substation	40.0
IT & communication systems (Networks)	10.0
Motor vehicles	7.0
Other non-system Assets (Networks)	5.0
IT systems (Corporate)	5.0
Telecommunications (Corporate)	5.0
Other non-system assets (Corporate)	5.0
Land	n/a
Buildings	60.0
Equity raising costs[a]	n/a

Source: AER analysis.
n/a not applicable. We have not assigned a standard asset life to the 'Land' asset class because the capex allocated to it is not subject to depreciation.
(a) For this draft decision, the forecast capex determined for Evoenergy does not meet a level to trigger any benchmark equity raising costs and is therefore not assigned a standard asset life.

Shortened forms

Term	Definition
AER	Australian Energy Regulator
capex	capital expenditure
CPI	consumer price index
NER	National Electricity Rules
NPV	Net present value
opex	operating expenditure
PTRM	Post-tax revenue model
RAB	regulatory asset base
RFM	roll forward model
WACC	weighted average cost of capital
WARL	weighted average remaining lives