DRAFT DECISION

Power and Water Corporation Distribution Determination 2019 to 2024

Attachment 4 Regulatory depreciation

September 2018

AUSTRALIAN ENERGY REGULATOR

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Note

This overview forms part of the AER's draft decision on the distribution determination that will apply to Power and Water Corporation for the 2019–2024 regulatory control period. It should be read with all other parts of the draft decision.

The draft decision includes the following attachments:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

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Attachment 17 – Connection policy

Attachment 18 – Tariff structure statement

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Shortened forms

Shortened form	Extended form
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CCP 13	Consumer Challenge Panel, sub-panel 13
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIAM	demand management innovation allowance (mechanism)
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for Electricity Distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NT NER or the rules	National Electricity Rules As in force in the Northern Territory

Shortened form	Extended form
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SCS	standard control services
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

4 Regulatory depreciation

Depreciation is the allowance 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 Power and Water, we make determinations on the indexation of the regulatory asset base (RAB) and depreciation building blocks for Power and Water's 2019–24 regulatory control period.[1] The regulatory depreciation allowance is the net total of the straight-line depreciation less the indexation of the RAB.

This attachment sets out our draft decision on Power and Water's regulatory depreciation allowance. It also presents our draft decision on the proposed depreciation schedules, including an assessment of the proposed asset lives used for forecasting depreciation.

4.1 Draft decision

We determine a regulatory depreciation allowance of $131.8 million ($nominal) for Power and Water for the 2019–24 regulatory control period. Power and Water proposed a regulatory depreciation allowance of $161.0 million ($nominal).[2] Our decision represents a decrease of $29.2 million or 18.1 per cent on the proposed amount. This reduction occurs mainly because of:

- Our changes to Power and Water's proposed year-by-year depreciation tracking model. We accept Power and Water's proposal to use the year-by-year tracking method for depreciating its existing assets consistent with the approach we approved in our recent decisions for other regulated businesses. However, we have made the following amendments in the depreciation model consistent with the changes made in the roll forward model (RFM) (discussed in attachment 2):
    - We applied the depreciation approach based on actual capex for the 2014–19 regulatory control period.
    - We changed 2014–15 to 2017–18 actual CPI inputs to be consistent with Power and Water's approved annual pricing proposals.
- Our determinations on other components of Power and Water's proposal also affect the forecast regulatory depreciation allowance. Specifically, they relate to:
    - the opening RAB as at 1 July 2019 (attachment 2)
    - expected inflation rate (attachment 3)

[1] NT NER, cll. 6.12.1, 6.4.3.

[2] Power and Water, *PWC12.1 - SCS Post-tax Revenue Model - 16 Mar 18 - Public*, March 2018.

- forecast capital expenditure (attachment 5) and its effect on the projected RAB over the 2019–24 regulatory control period.[3]

Our draft decision on other aspects of Power and Water's regulatory depreciation is that:

- we accept Power and Water's proposed asset classes and its straight-line depreciation method used to calculate the regulatory depreciation allowance.
- we largely accept Power and Water's proposal to remap the asset classes approved by the Utilities Commission. However, we updated the standard asset lives to reflect some error corrections in the weights and asset lives used to calculate the asset lives for the remapped asset classes.
- we accept Power and Water's proposed new 'Property leases' and 'Fleet leases' asset classes and the standard asset lives of 15.8 years and 5.7 years respectively.
- we do not accept the proposed standard asset life of 14.3 years for the 'Property' asset class. We have amended it to 40 years which reflects the economic life of the asset components associated with this asset class.
- we do not accept Power and Water's proposed standard asset life of 5 years for the 'Equity raising costs' asset class. We have instead determined a standard asset life of 48.1 years based on the weighted average standard life of all depreciable assets in the post-tax revenue model (PTRM).

Table 4.1 sets out our draft decision on the annual regulatory depreciation allowance for Power and Water's 2019–24 regulatory control period.

Table 4.1 AER's draft decision on Power and Water's depreciation allowance for the 2019–24 regulatory control period ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Straight-line depreciation	42.3	48.4	52.4	58.0	61.5	262.7
Less: inflation indexation on opening RAB	23.7	25.1	26.2	27.6	28.2	130.9
Regulatory depreciation	**18.6**	**23.3**	**26.2**	**30.4**	**33.3**	**131.8**

Source: AER analysis.

[3] 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 2019–24 regulatory control period.

4.2 Power and Water's proposal

For the 2019–24 regulatory control period, Power and Water proposed a total forecast regulatory depreciation allowance of $161.0 million ($nominal). To calculate the depreciation allowance, Power and Water proposed to use:[4]

- the straight-line depreciation method employed in the AER's PTRM
- the closing RAB value at 30 June 2019 derived from the AER's RFM
- the proposed forecast capex for the 2019–24 regulatory control period
- an expected inflation rate of 2.42 per cent for the 2019–24 regulatory control period
- the year-by-year depreciation tracking model (attached to the proposed PTRM), which implements the straight-line method to calculate the forecast depreciation for the 2019–24 regulatory control period.

Power and Water has proposed to remap the approved asset classes by the Utilities Commission in its 2014 NT network price determination to better reflect how it actually manages its assets.[5] It also proposed two new asset classes for property and fleet leases for capitalised leases.[6] Table 4.2 sets out the definition of the proposed asset classes and the standard asset life for each asset class.

Table 4.2 Make-up of Power and Water's proposed asset classes and standard asset lives

Proposed RAB asset class	Associated definition	Proposed standard asset life (years)
Substations	Assets contained within zone, terminal or switching substation facilities. These are facilities which are typically defined by the presence of HV switchgear and power transformers. In Maximo these assets would be defined by the ZSS service. Assets also include capacitor banks, instrument transformers, auxiliary supplies, battery systems, cables and conductors, buildings, climate control, and fire systems etc.	41.2
Distribution lines	Lines or cables emanating from a substation at distribution voltage level (11kV or 22kV), as well as LV lines and cables. Includes poles and pole tops, voltage regulators, cable tunnels and LV pillars. Excludes distribution substations, distribution switchgear and LV services.	56.0
Transmission lines	Lines or cables emanating from a substation at transmission (132kV) or subtransmission (66kV) voltage levels. Includes poles, towers and pole tops.	56.6
LV services	LV service is the final cable or conductor dedicated to connecting a customer into the LV network. This is usually a cable from a pillar to the customer's metering box, or a	56.0

4 Power and Water, *Regulatory proposal*, March 2018, p. 99.
5 Power and Water, *Regulatory proposal*, March 2018, p. 94.
6 Power and Water, *PWC12.1 - SCS Post-tax Revenue Model - 16 Mar 18 - Public*, March 2018.

	conductor from a nearby pole to a connection box mounted on the customer's roof. This includes the connection hardware such as clamps and overhead service protection devices (fuses and circuit breakers).	
Distribution substations	Distribution facilities which transform voltage from HV distribution levels (22kV or 11kV) to LV. This includes other associated assets such as LV switchgear, earthing, equipment enclosures, footings, locks, signage etc. Where the facility is indoors, this category includes costs associated with maintaining the room's fixtures and fittings, including cable tunnels. HV switchgear is excluded - this is covered in the distribution switchgear category.	45.0
Distribution switchgear	Assets which perform switching at distribution voltage levels (22kV or 11kV). This includes switching facilities such as switching stations, RMUs, modular switchgear, air-break switches, gas-break switches, reclosers, fuse savers, EDOs and links.	54.7
Protection	This category includes protection relays and protection panels (including auxiliary relays, test blocks and panel wiring) in substation facilities. Recloser protection components are excluded - these are considered part of the recloser device.	41.4
SCADA	This category includes RTUs and RTU panels in substation facilities, as well as the Energy Management System (EMS) hardware and software in the control centres. Distribution SCADA components are excluded - these are considered part of the distribution device.	14.0
Communications	This category includes communications (comms) equipment in substation facilities and comms facilities, including antennas, radios, multiplexors, battery systems, comms cable and pilot wires. Distribution comms components are excluded as these are considered part of the distribution device.	14.7
Land and easements	Land includes expenditure related to real chattels (such as interests in land such as a lease) but excludes expenditure related personal chattels (e.g. furniture) that should be reported under non-network other expenditure. An electricity easement is the right held by Power and Water to control the use of land near above-ground and underground power lines and substations.	n/a
Property	Expenditure directly attributable to non-network buildings and property assets including: the replacement, installation, operation and maintenance of non-network buildings, fittings and fixtures.	14.3
IT and communications	All non-network expenditure directly attributable to IT and communications assets including replacement, installation, operation, maintenance, licensing, and leasing costs but excluding all costs associated with SCADA and network control expenditure that exist beyond gateway devices (routers, bridges) at corporate offices.	11.8
Motor vehicles	Expenditure directly attributable to motor vehicles including: purchase, replacement, operation and maintenance of motor vehicles assets registered for use on public roads, excluding mobile plant and equipment.	14.3
Plant and equipment	Expenditure directly attributable to the replacement,	13.6

	installation, maintenance and operation of non-network assets, excluding motor vehicle assets, building and property assets and IT and communications assets.	
Property leases (New due to change to accounting standard)	This reflects existing leases and minor upgrades or fit-outs for administration and support buildings. Capex is driven by whether existing assets are best owned or leased and can accommodate staff and contractors satisfactorily.	15.8
Fleet leases (New due to change to accounting standard)	This reflects operating lease arrangement with NT Fleet. Capex forecast reflects the need to have reliable, well-maintained fleet for the safety, reliability, quality and security of the supply of services.	5.7

Source: Power and Water, *PWC12.1 - SCS Post-tax Revenue Model - 16 Mar 18 - Public*, March 2018; Power and Water, *Regulatory proposal*, March 2018, pp. 95-97.

Table 4.3 sets out Power and Water's proposed depreciation allowance for the 2019–24 regulatory control period.

Table 4.3 Power and Water's proposed depreciation allowance for the 2019–24 regulatory control period ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Straight-line depreciation	48.2	54.8	58.1	64.1	68.9	294.2
Less: inflation indexation on opening RAB	23.6	25.4	26.6	28.3	29.2	133.2
Regulatory depreciation	**24.6**	**29.4**	**31.5**	**35.8**	**39.7**	**161.0**

Source: Power and Water, *PWC12.1 - SCS Post-tax Revenue Model - 16 Mar 18 - Public)*, March 2018.

4.3 Assessment approach

We determine the regulatory depreciation allowance using the PTRM as a part of a service provider's annual revenue requirement.[7] 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.[8]

Our standard approach to calculating depreciation is to employ the straight-line method set out in the PTRM. We consider the straight-line method satisfies the NT NER requirements in clause 6.5.5(b) as it provides an expenditure profile that reflects the nature of assets over their economic life.[9] 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. We must consider whether the proposed depreciation schedules conform to the following key requirements:

7 NT NER, cll. 6.4.3(a)(3) and (b)(3).
8 NT NER, cl. 6.5.5(a).
9 NT NER, cl. 6.5.5(b)(1).

- the schedules depreciate using a profile that reflects the nature of the assets of category of assets over the economic life of that asset or category of assets[10]
- 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 of category of assets was first included in the RAB for the relevant distribution system.[11]

If a service provider's building block proposal does not comply with the above requirements, then we must determine the depreciation schedules for the purpose of calculating the depreciation for each regulatory year.[12]

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

- the opening RAB at 1 July 2019
- the forecast net capex in the 2019–24 regulatory control period[13]
- 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 associated with the opening RAB as at 1 July 2019—calculated in a year-by-year tracking depreciation model (attached to the proposed PTRM).

Our draft decision on Power and Water's regulatory depreciation allowance reflects our determinations on the opening RAB at 1 July 2019, expected inflation and forecast capex (the first three building block components in the above list).[14] Our determinations on these components of the service provider's proposal are discussed in attachments 2, 3 and 5 respectively.

We typically assess the proposed standard asset lives against the approved standard asset lives in the service provider's distribution determination for the 2014–19 regulatory control period. However, as Power and Water has remapped its asset classes, the standard asset lives in this proposal are no longer directly comparable to those approved by the Utilities Commission in its 2014 NT network price determination. Instead, we have assessed Power and Water's proposed standard asset lives against the standard asset lives of comparable asset classes approved in our recent distribution determinations for other service providers.

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10 NT NER, cl. 6.5.5(b)(1).

11 NT NER, cl. 6.5.5(b)(2).

12 NT NER, cl. 6.5.5(a)(2)(ii).

13 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 2019–24 regulatory control period.

14 Our final decision will update the opening RAB as at 1 July 2019 for revised estimates of actual capex and inflation.

We usually depreciate a service provider's existing assets in the PTRM by using remaining asset lives at the start of a regulatory control period. Our preferred method to establish a remaining asset life for each asset class is the weighted average remaining life approach.[15] The weighted average method rolls forward the remaining asset life for an asset class from the beginning of the previous regulatory control period. This method reflects the mix of assets within that asset class. It also reflects when the assets were acquired over that period and the remaining asset lives of existing assets at the end of that period. The residual asset values of all assets are used as weights to calculate the remaining lives at the end of the period. Power and Water has adopted an alternative approach—year-by-year tracking—to implement straight-line depreciation. We have therefore assessed whether this approach would meet the depreciation provisions of the NT NER, as discussed in section 4.4.1.

4.3.1 Interrelationships

The regulatory depreciation allowance is a building block component of the annual revenue requirement.[16] Higher (or quicker) depreciation leads to higher revenues over the regulatory control period. It also causes the RAB to reduce more quickly (assuming no further capex). This outcome reduces the return on capital allowance, although this impact is usually smaller than the increased depreciation allowance in the short to medium term.[17]

Ultimately, however, a service provider can only recover the capex that it incurred on assets once. The depreciation allowance reflects how quickly the RAB is being recovered, and it is based on the remaining and standard asset lives used in the depreciation calculation. It also depends on the level of the opening RAB and the forecast capex. Any increase in these factors also increases the depreciation allowance.

The RAB has to be maintained in real terms, meaning the RAB must be indexed for expected inflation.[18] The return on capital building block has to be calculated using a nominal rate of return (WACC) applied to the opening RAB.[19] As noted in attachment 1, the total annual revenue requirement is calculated by adding up the return on capital, depreciation, 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

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15 We consider this depreciation method to be a generally superior approach. The reasons are outlined in our decision on the roll forward model for electricity transmission network service providers. See AER, *Explanatory statement, Proposed amendment, Electricity transmission network service providers, Roll forward model*, August 2010, pp. 5–6.

16 The PTRM distinguishes between straight-line depreciation and regulatory depreciation, the difference being that regulatory depreciation is the straight-line depreciation minus the indexation adjustment.

17 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.

18 NT NER, cl. 6.5.1(e)(3).

19 NT NER, cl. 6.5.2(d)(2).

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.[20] 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.[21] 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.

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 service provider) and lower in the future—producing a steeper downward sloping profile of total revenue.[22] Under both approaches, the total revenues being recovered are in present value neutral terms—that is, returning the initial cost of the RAB.

Figure 4.1 shows the recovery of revenue under both approaches using a simplified example.[23] 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.

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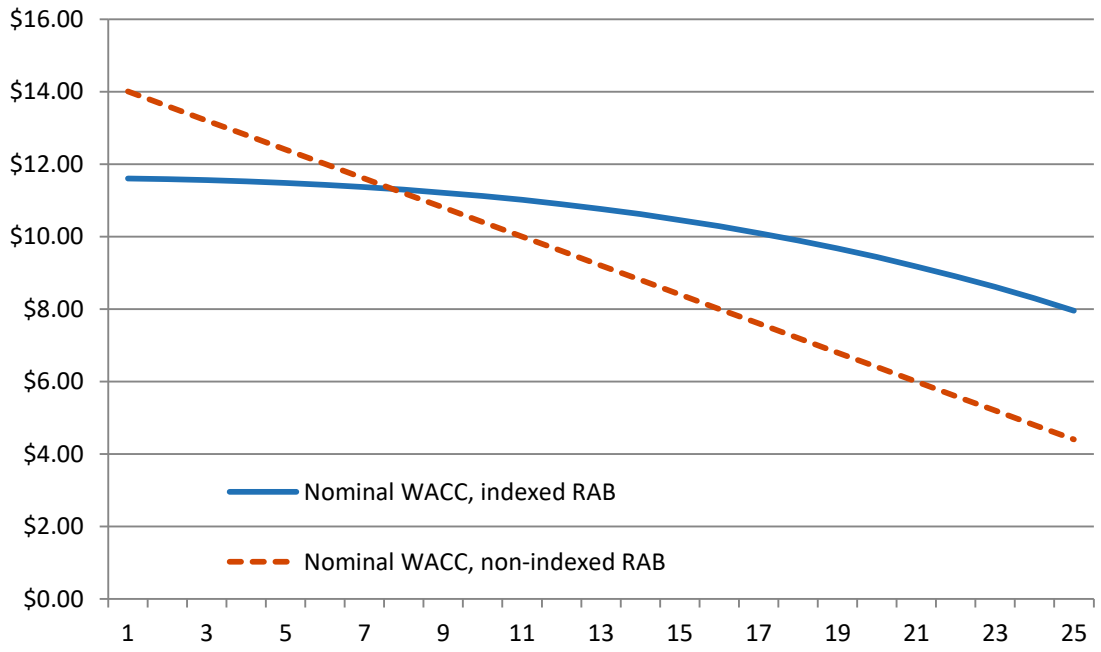
[20] NT NER, cl. 6.4.3(b)(1)(ii).

[21] 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

[22] 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 NPV neutrality.

[23] The example is based on the initial cost of an asset of $100, a standard economic life of 25 years, a real WACC of 7.32 per cent, expected inflation of 2.5 per cent and nominal WACC of 10 per cent. Other building block components such as opex, tax and capex are ignored for simplicity as they would affect both approaches equally.

Figure 4.1 Revenue path example – indexed vs un-indexed RAB ($nominal)



Source: AER analysis.

Figure 2.1 in attachment 2 shows the relative size of the inflation and straight-line depreciation and their impact on the RAB based on Power and Water's proposal. A 10 per cent increase in the straight-line depreciation causes revenues to increase by about 3.6 per cent.

4.4 Reasons for draft decision

We accept Power and Water's proposed straight-line depreciation method for calculating the regulatory depreciation allowance as set out in the PTRM and its depreciation model. Overall, we decreased Power and Water's proposed forecast regulatory depreciation allowance for the 2019–24 regulatory control period by $29.2 million (or 18.1 per cent) to $131.8 million. This reduction is made due to the following amendments:

- we made several changes in the depreciation model, mainly to be consistent with the changes we made in the RFM (attachment 2).
- we increased the proposed standard asset lives for the 'Property' and ‘Equity raising costs’ asset classes. We also updated Power and Water's proposed standard asset lives to reflect the changes made to the asset class remapping calculation.
- we amended other components of Power and Water's regulatory proposal, which also affect the forecast regulatory depreciation allowance—the opening RAB as at 1 July 2019 (attachment 2), expected inflation rate (attachment 3) and forecast

capital expenditure (attachment 5) including its effect on the projected RAB[24] over the 2019–24 regulatory control period.

Our assessment of Power and Water's proposed year-by-year tracking depreciation approach and standard asset lives are discussed in turn in the following subsections.

4.4.1 Year-by-year tracking approach

Power and Water proposed the year-by-year tracking approach to calculate the forecast straight-line depreciation amounts for its asset values as at 1 July 2019. This represents a change from the current depreciation approach (employed in the 2014–19 regulatory control period) to determining remaining asset lives at the end of each regulatory control period. We accept that Power and Water's proposed year-by-year tracking approach meets the requirements of the NT NER in that it will result in depreciation schedules that:

- reflect the nature of the assets and their economic life[25]
- ensure that total depreciation (in real terms) equals the initial value of the assets[26]
- allows the economic lives of existing assets to be consistent with those determined on a prospective basis in the 2014 NT network price determination.[27]

Although we have accepted the year-by-year tracking approach for Power and Water, we maintain our preference for the weighted average remaining life method, which is our standard approach used in other decisions. We prefer the weighted average remaining life method because it:

- meets the requirements of the NT NER, including that it produces depreciation schedules that align with the economic life of the assets
- avoids the complexity inherent in the year-by-year tracking approach, which also brings with it additional administration costs and an increased risk of error
- reduces the variability in depreciation schedules that may arise under year-by-year tracking.

While we largely accept Power and Water's year-by-year tracking depreciation model, we have adjusted this model to apply the actual depreciation approach, consistent with the change we made in the RFM (discussed in attachment 2). To do so, we adjusted the depreciation model so that depreciation for the 2014–19 regulatory control period reflects actual incurred capex, rather than the forecast capex for this period as proposed by Power and Water. We also aligned the amount of depreciation on the

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[24] 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 2019–24 regulatory control period.

[25] NT NER, cl. 6.5.5(b)(1).

[26] NT NER, cl. 6.5.5(b)(2).

[27] NT NER, cl. 6.5.5(b)(3).

opening RAB as at 1 July 2014 with the amount as approved by the Utilities Commission at the 2014 NT network price determination. This alignment is required because we accepted Power and Water's proposed reduction to the value of the opening RAB as at 1 July 2014 to correct an error made at the 2014 NT network price determination (see attachment 2). Further, we have recalculated the annual straight–line depreciation from 2019–20 onwards based on the residual asset value and remaining asset life as at 1 July 2019. We have notified Power and Water about our approach through an information request and in response, it did not have any concerns with our approach.[28]

In addition, we made the following amendments in the depreciation model, which also had an impact on the forecast depreciation amount:

- we changed the 2014–15 to 2017–18 actual CPI inputs to reflect December quarter CPI consistent with the inflation rates used in the annual pricing for those years, reflecting the changes we made in the RFM (see attachment 2)
- we corrected the depreciation calculation formula for the 'Land and easements' asset class to ensure that there is no depreciation calculated, as land assets are not subject to depreciation.
- we extended the depreciation calculations by three years from 2074 to 2077 to ensure that the depreciation schedule for all assets accurately reflect the complete depreciation value of the initial asset value.

4.4.2 Standard asset lives

We accept the majority of Power and Water's proposed standard asset lives for its asset classes in respect of the forecast capex to be incurred in the 2019–24 regulatory control period. We note that Power and Water's standard asset lives for its remapped asset classes are largely comparable with those used by other distributors for similar asset classes.[29] However, we do not accept Power and Water's proposed standard asset lives for the 'Property' and 'Equity raising costs' asset classes.

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[28] Power and Water, *Response to information request #036– Change to depreciation approach in the RFM and year by year tracking model*, 31 July 2018, p. 2.

[29] AER, *Draft decision: TasNetworks distribution determination 2017–19*, attachment 5, September 2016, pp. 16-17; AER, *Final decision: Jemena distribution determination 2016–20*, attachment 5, May 2016, p. 10; AER, *Final decision: Powercor distribution determination 2016–20*, May 2016, attachment 5, p. 12; AER, *Final decision: United Energy distribution determination 2016–20*, May 2016, attachment 5, p. 10; AER, *Final decision: CitiPower distribution determination 2016–20*, attachment 5, May 2016, p. 12; AER, *Final decision: AusNet Services distribution determination 2016–20*, May 2016, attachment 5, p. 10; AER, *Final decision: Ausgrid distribution determination 2014–19,* April 2015, attachment 5, p. 10; AER, *Final decision: Endeavour distribution determination 2014–19,* April 2015, attachment 5, p. 9; AER, *Final decision: Essential Energy distribution determination 2014–19,* April 2015, attachment 5, p. 9; AER, *Final decision: ActewAGL distribution determination 2014–19,* April 2015, attachment 5, p. 10; AER, *Final decision, Energex distribution determination 2015–20,* October 2015, attachment 5, p, 10; AER, *Final decision, Ergon Energy distribution determination 2015–20,* October 2015, attachment 5, p. 10; and AER, *Final decision, SA Power Networks distribution determination 2015–20,* October 2015, attachment 5, p. 9.

Remapped asset classes

Power and Water proposed to remap the asset classes as approved by the Utilities Commission to better align asset classes that have similar expected economic lives. Table 4.2 summarised the asset types associated with each of the remapped asset class. We largely accept the remapping of the asset classes. However, we made some minor corrections to the weighted average approach used to calculate the standard asset lives for the new asset classes to be consistent with the approved standard assets lives in the 2014 NT network price determination.[30] Please see section 2.4.1 in attachment 2 for further discussion on the remapping of Power and Water's asset classes.

We consider that the proposed standard asset lives assigned to the remapped asset classes are reasonable for the majority of the asset classes. We have compared the proposed standard asset lives with those used by other distributors for similar asset classes. As shown in Table 4.4, the majority of Power and Water's proposed standard asset lives are relatively close to the median standard asset lives for similar asset classes for other distributors, with the exception of the 'Property' asset class.

Table 4.4 Power and Water's proposed standard asset lives compared to the NEM median (years)

Asset classes	Proposed standard asset lives	Median standard asset lives for other DNSPs
Substations	41.2	42.6
Distribution lines	56.0	55.0
Transmission lines	56.6	55.0
LV services	56.0	52.1
Distribution substations	45.0	40.0
Distribution switchgear	54.7	45.0
Protection[a]	41.4	45.0
SCADA	14.0	9.5
Communications	14.7	15.0
Land and easements	n/a	n/a
Property	14.3	40.0
IT and communications	11.8	10.0
Motor vehicles	14.3	8.5
Plant and equipment	13.6	8.4

[30] NT NER, cl.6.5.5(b)(3).

Source: AER analysis.

n/a: not applicable. The assets allocated to those asset classes are not subject to depreciation, and hence we do not have a benchmark standard asset life for these assets.

(a) For this analysis we have applied the same standard asset life as the 'Distribution Switchgear' asset class. This is because 'Protection' is usually included alongside 'Distribution switchgear' assets as one asset class.

Property asset class

We do not accept Power and Water's proposed standard life of 14.3 years for the 'Property' asset class and instead determine a standard asset life of 40 years for this asset class. We consider that Power and Water's proposed standard asset life does not reflect the economic life of the assets in this asset class for the 2019–24 regulatory control period.[31] As set out in Table 4.4 above, we note that the median standard asset life for property assets for other distributors is significantly higher than Power and Water's proposal.

In response to our information request, Power and Water has clarified that the capex associated with the 'Property' asset class consists a mix of assets. These assets relate to the refurbishment, replacement and upgrades of buildings which have longer standard lives than the proposed 14.3 years. Power and Water has therefore provided an alternative standard asset life of 40 years for the 'Property' asset class.[32] We accept Power and Water's revised standard asset life of 40 years as we consider that it reflects the economic lives of the assets related to this asset class. It also reflects the median standard asset life assigned to property assets for other distributors.

Equity raising costs

We do not accept Power and Water's proposed standard asset life of 5 years for 'Equity raising costs' and instead determine a standard asset life of 48.1 years for this asset class. We consider that the standard asset life for equity raising costs for regulatory depreciation purposes should be the weighted average standard life of all depreciable assets in the PTRM.[33] This approach is consistent with our previous determinations for other regulated businesses. Based on this approach, we determine a standard asset life of 48.1 years for the 'Equity raising costs' asset class. We discussed with Power and Water about our approach through an information request. Power and Water did not have any concerns with this approach.[34]

New asset classes – 'Property leases' and 'Fleet leases'

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31 NT NER, cl. 6.5.5(b)(1).

32 Power and Water, *Response to information request #021 – Assessment of standard lives for asset classes,* June 2018.

33 Power and Water has also assigned a standard tax asset life of 5 years to the equity raising costs asset class. We consider this to be appropriate as the Australian Taxation Office requires equity raising costs to be depreciated over a five-year period on a straight-line basis for tax purposes.

34 Power and Water, *Response to information request #018 – RFM PTRM modelling issues,* May 2018.

Power and Water proposed two new asset classes for depreciating the forecast capex associated with capitalised property and fleet leases respectively.[35] We accept the proposed new asset classes for this purpose.[36] We also accept Power and Water's proposed standard asset lives of 15.8 and 5.7 years for the 'Property leases' and 'Fleet leases' asset classes respectively. In response to our information request,[37] Power and Water stated that it has estimated the standard asset lives for these two asset classes by calculating the weighted average of the initial lease terms on Power and Water's existing property and fleet leases with:

- the weights for property determined using the lifetime lease payments of each lease, and
- the weights for vehicle leases determined by the number of vehicles in each life cohort.

We consider these approaches to be appropriate as they reflect the expected economic lives of leases to be capitalised in the 'Property leases' and 'Fleet leases' asset classes over the 2019–24 regulatory control period.

Table 4.5 sets out our draft decision on Power and Water's standard asset lives for the 2019–24 regulatory control period. We are satisfied that:[38]

- the standard asset lives 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 was first included in the RAB for Power and Water.

Table 4.5 AER's draft decision on Power and Water's standard asset lives as at 1 July 2019 (years)

Asset class	Standard asset life
Substations	42.0
Distribution lines	55.5
Transmission lines	56.5
LV services	55.8
Distribution substations	45.0
Distribution switchgear	52.4
Protection	42.0

35 Power and Water, *PWC12.1 - SCS Post-tax Revenue Model - 16 Mar 18 - Public)*, March 2018.

36 Our decision on the forecast capex associated with leases is discussed in attachment 5.

37 Power and Water, *Response to information request #021 – Assessment of standard lives for asset classes,* June 2018.

38 NT NER, cll. 6.5.5(b)(1)–(2).

SCADA	23.0
Communications	13.4
Land and easements	n/a
Property	40.0
IT and communications	11.9
Motor vehicles	14.3
Plant and equipment	13.6
Property leases	15.8
Fleet leases	5.7
Equity raising costs	48.1

Source: AER analysis.

n/a: not applicable. We have not assigned a standard asset life to this asset class because the assets allocated to it are not subject to depreciation.