DRAFT DECISION

Power and Water Corporation Distribution Determination 2019 to 2024

Attachment 2 Regulatory asset base

September 2018

AUSTRALIAN ENERGY REGULATOR

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au

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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

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Attachment 10 – Service target performance incentive scheme

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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

2 Regulatory asset base

As part of our distribution determination, we make a decision on Power and Water's opening regulatory asset base (RAB) as at 1 July 2019.[1] The RAB is the value of those assets that are used by Power and Water to provide standard control services. We use the RAB at the start of each regulatory year to determine the return of capital (regulatory depreciation) and return on capital building block allowances.

This attachment presents our draft decision on the opening RAB value as at 1 July 2019 for Power and Water and roll forward of the forecast RAB over the 2019–24 regulatory control period. It also presents our draft decision on whether depreciation for establishing the RAB as at the commencement of the 2024–29 regulatory control period is to be based on actual or forecast capital expenditure.[2]

2.1 Draft decision

We determine an opening RAB value of $966.4 million ($nominal) as at 1 July 2019 for Power and Water.[3] This value is $7.2 million (or 0.7 per cent) lower than Power and Water's proposed opening RAB of $973.5 million ($nominal) as at 1 July 2019.[4] This is because we made the following amendments to Power and Water's proposed inputs to the roll forward model (RFM)[5]:

- corrected the opening RAB values and the standard and remaining asset lives as at 1 July 2014 at the asset class level to reflect the approved values as determined by the Utilities Commission in the 2014 NT network price determination for the 2014–19 regulatory control period
- updated the 2014–15 to 2017–18 inflation rate with December on December actual CPI inputs for indexation in the RAB roll forward to be consistent with the inflation rates used in the annual pricing for these years
- applied the actual depreciation approach for the RAB roll forward instead of the forecast depreciation approach as proposed by Power and Water to be consistent with the 2014–19 distribution determination
- reallocated the $19.6 million ($nominal) written down value for the roll-in of corporate assets into the RAB from estimated capex for 2018–19 to a final year adjustment in the RFM.

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1 NT NER, cl. 6.12.1(6).

2 NT NER, cl. 6.12.1(18).

3 This RAB value is for Power and Water's assets providing standard control services (SCS). We have determined an amount of $16.7 million for Power and Water's alternative control service (ACS) RAB, which is further discussed at attachment 15.

4 Power and Water, *Regulatory proposal*, March 2018, p. 100, Table 12–5.

5 AER, *Electricity distribution network service providers Roll forward model (version 2)*; NT NER, cl.6.5.1(da).

To determine the opening RAB as at 1 July 2019, we have rolled forward the RAB over the 2014–19 regulatory control period in accordance with our RFM to determine a closing RAB value at 30 June 2019. This roll forward includes an adjustment at the end of the 2014–19 regulatory control period to account for the difference between actual 2013–14 capex and the estimate approved by the Utilities Commission in the 2014 NT network price determination.[6]

Table 2.1 sets out our draft decision on the roll forward of the RAB values for Power and Water over the 2014–19 regulatory control period.

Table 2.1 AER's draft decision on Power and Water's RAB for the 2014–19 regulatory control period ($million, nominal)

	2014–15	2015–16	2016–17	2017–18[a]	2018–19[b]
Opening RAB	860.6[c]	905.0	936.0	949.7	957.9
Capital expenditure[d]	81.3	70.5	51.0	42.9	45.8
Inflation indexation on opening RAB[e]	14.8	15.3	13.8	18.1	23.2
Less: straight-line depreciation[f]	51.8	54.8	51.1	52.9	55.5
Interim closing RAB	905.0	936.0	949.7	957.9	971.4
Difference between estimated and actual capex in 2013–14					–5.8
Return on difference for 2013–14 capex					–2.1
Roll-in of corporate assets[g]					19.6
Closing RAB as at 30 June 2019 (ACS and SCS)					983.1
Closing RAB as at 30 June 2019 (ACS only)					16.7
Closing RAB as at 30 June 2019 (SCS only)[h]					**966.4**

Source: AER analysis.

(a) Based on estimated capex. We will update the RAB roll forward for actual capex in the final decision.

(b) Based on estimated capex provided by Power and Water. We expect to update the RAB roll forward with a revised capex estimate in the final decision, and true-up the RAB for actual capex at the next reset.

(c) This is the corrected opening RAB as at 1 July 2014 as proposed by Power and Water. Please see section 2.4.1 for further explanation about this correction.

(d) Net of disposals and capital contributions, and adjusted for actual CPI and half-year WACC.

(e) We will update the RAB roll forward for actual CPI for 2018–19 in the final decision.

(f) Based on actual as-incurred capex.

(g) See section 2.4.1 for further information on the roll-in of corporate assets to the RAB.

(h) From 1 July 2019 metering will be classified as providing ACS and therefore metering assets are to be excluded from the SCS RAB.

[6] The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2014–19 determination.

We determine a forecast closing RAB value at 30 June 2024 of $1177.8 million ($nominal). This is $54 million (or 4.4 per cent) lower than the amount of $1231.8 million ($nominal) proposed by Power and Water.[7] Our draft decision on the forecast closing RAB reflects the updated opening RAB as at 1 July 2019, and our draft decisions on the expected inflation rate (attachment 3), forecast depreciation (attachment 4) and forecast capex (attachment 5).

Table 2.2 sets out our draft decision on the forecast RAB values for Power and Water over the 2019–24 regulatory control period.

Table 2.2 AER's draft decision on Power and Water's RAB for the 2019–24 regulatory control period ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24
Opening RAB	966.4	1026.0	1070.8	1127.2	1152.2
Capital expenditure[a]	78.3	68.1	82.6	55.4	58.9
Inflation indexation on opening RAB	23.7	25.1	26.2	27.6	28.2
Less: straight-line depreciation	42.3	48.4	52.4	58.0	61.5
Closing RAB	1026.0	1070.8	1127.2	1152.2	1177.8

Source: AER analysis.

(a) Net of forecast disposals and capital contributions. In accordance with the timing assumptions of the post-tax revenue model (PTRM), the capex includes a half-year WACC allowance to compensate for the six month period before capex is added to the RAB for revenue modelling.

We accept Power and Water's proposal that the forecast depreciation approach (instead of an actual depreciation approach) is to be used to establish the opening RAB at the commencement of the 2024–29 regulatory control period.[8] We consider this approach is consistent with the capital expenditure incentive objectives in that it will provide sufficient incentives for Power and Water to achieve capex efficiency gains over the 2019–24 regulatory control period.

2.2 Power and Water's proposal

Power and Water used our RFM to establish an opening RAB as at 1 July 2019 and our post-tax revenue model (PTRM) to roll forward the RAB over the 2019–24 regulatory control period.

Power and Water proposed an opening RAB value as at 1 July 2014 of $860.6 million ($nominal).[9] Rolling forward this RAB and using depreciation based on forecast capex, Power and Water proposed a closing RAB as at 30 June 2019 of $973.5 million

7 Power and Water, *Regulatory proposal*, March 2018, p. 100, Table 12–5.

8 NT NER, cl. 6.12.1(18).

9 Power and Water, *Regulatory proposal*, March 2018, p. 98, Table 12–4.

($nominal).[10] Table 2.3 presents Power and Water's proposed roll forward of its RAB during the 2014–19 regulatory control period.

Table 2.3 Power and Water's proposed RAB for the 2014–19 regulatory control period ($million, nominal)

	2014–15	2015–16	2016–17	2017–18[a]	2018–19[a]
Opening RAB	860.6	901.5	929.0	949.4	963.3
Capital expenditure[b]	81.1	70.4	51.2	43.0	66.0[c]
Inflation indexation on opening RAB	11.4	11.8	19.7	23.0	23.4
Less: straight-line depreciation[d]	51.8	54.7	50.5	52.2	54.7
Interim closing RAB	901.5	929.0	949.4	963.3	998.0
Difference between estimated and actual capex in 2013–14					–5.8
Return on difference for 2013–14 capex					–2.2
Closing RAB as at 30 June 2019 (ACS and SCS)					990.0
Closing RAB as at 30 June 2019 (ACS only)					16.5
Closing RAB as at 30 June 2019 (SCS only)[e]					**973.5**

Source: Power and Water, *PWC12.11 - SCS and ACS Metering RFM - 16 Mar 18 - Public*, March 2018.

(a) Based on estimated capex.

(b) Net of disposals and capital contributions, and adjusted for CPI and half-year WACC.

(c) This includes Power and Water's proposed roll in of $19.6 million of corporate assets in 2018–19. See section 2.4.1 for further information.

(d) Adjusted for actual CPI. Based on forecast as-incurred capex.

(e) From 1 July 2019 metering will be classified as providing ACS and therefore metering assets are to be excluded from the SCS RAB.

Power and Water proposed a forecast closing RAB as at 30 June 2024 of $1231.8 million ($nominal). This value reflects its proposed opening RAB, forecast capex, expected inflation, and depreciation (based on forecast capex) over the 2019–24 regulatory control period. Its projected RAB over the 2019–24 regulatory control period is shown in Table 2.4.

Table 2.4 Power and Water's proposed RAB for the 2019–24 regulatory control period ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24
Opening RAB	973.5	1048.4	1096.5	1168.8	1204.5

[10] For SCS assets only.

Capital expenditure[a]	99.5	77.6	103.7	71.5	67.0
Inflation indexation on opening RAB	23.6	25.4	26.6	28.3	29.2
Less: straight-line depreciation	48.2	54.8	58.1	64.1	68.9
Closing RAB	1048.4	1096.5	1168.8	1204.5	1231.8

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

(a) Net of forecast disposals and capital contributions. Inclusive of equity raising costs and the half-year WACC to account for the timing assumptions in the PTRM.

Power and Water proposed to apply a forecast depreciation approach to establish the RAB at the commencement of the 2024–29 regulatory control period, consistent with the approach set out in our *Framework and approach* paper.[11]

2.3 Assessment approach

We roll forward Power and Water's RAB during the 2014–19 regulatory control period to establish the opening RAB at 1 July 2019. This value can be adjusted for any differences in the estimated and actual capex.[12] It may also be adjusted to reflect any changes in the use of the assets, with only assets used in the provision of standard control services to be included in the RAB.[13]

To determine the opening RAB, we developed an asset base RFM. A service provider must use the RFM in preparing its regulatory proposal.[14] We roll forward the RAB from the beginning of the 2014–19 regulatory control period to the beginning of the 2019–24 regulatory control period. The RAB value set out in the NT NER as at the beginning of the 2014–19 regulatory control period is $928.34 million ($nominal).[15] Our draft decision has varied from this RAB value—we discuss this further in section 2.4.1.

Our approach to rolling forward the RAB also involves an adjustment to account for the difference between the actual capex and the estimate approved for the final year of the previous regulatory control period.[16]

The roll forward for each year of the above period occurs by:

11 Power and Water, *Regulatory proposal*, March 2018, p. 100.

12 NT NER, cl. S6.2.3A(d)(3).

13 NT NER, cl. S6.2.1.

14 NT NER, cll. 6.5.1(b), 6.5.1(e), S6.1.3(7); AER, *Electricity distribution network service providers: Roll forward model version 2*, 15 December 2016.

15 NT NER, cl. S6.2.3A(c).

16 NT NER, cl. S6.2.3A(d)(3). The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2014–19 determination. In the RFM, the roll forward of the RAB commences in 2013–14. This is to allow us to adjust for the difference between actual 2013–14 capex and the estimated 2013–14 capex used in the distribution determination for the 2014–19 regulatory control period.

- Adding actual inflation (indexation) adjustment to the opening RAB for the relevant year. This adjustment is consistent with the inflation factor used in the control mechanism.[17]
- Adding actual or estimated capex to the RAB for the relevant year.[18] We check actual capex amounts against the category analysis RIN data submitted to us.[19] However, there may be instances where adjustments are required to the category analysis RIN data.[20] We usually review a distributor's past capex and may exclude past capex from being rolled into the RAB where total capex exceeds the regulatory allowance.[21] The details of our assessment approach for capex overspending are set out in the *Capital expenditure incentive guideline*.[22] However, we note that under the NT NER our review of past capex does not apply to Power and Water for the purpose of establishing the opening RAB for the first regulatory year of the first regulatory control period. At the 2024–29 regulatory determination, 2019–20 to 2021–22 capex will form part of the review period for whether past capex should be excluded for inefficiency reasons.[23]
- Subtracting depreciation from the RAB for the relevant year, calculated in accordance with the *2014 NT Network price determination*.[24] Depreciation based on forecast or actual capex can be used to roll forward the RAB.[25] For this draft decision, we use depreciation based on actual capex for rolling forward Power and Water's RAB values over the 2014–19 regulatory control period.[26] However, depreciation based on forecast capex will be used for the 2019–24 regulatory control period at the next reset.[27]
- Subtracting any gross proceeds for asset disposals for the relevant year, by way of netting from capex to be added to the RAB.[28] We check these amounts against the category analysis RIN data.

These annual adjustments give the closing RAB for any particular year, which then becomes the opening RAB for the following year. Through this process the RFM rolls

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

18 NT NER, cl. S6.2.3A(d)(1),(2) and (4)).

19 We will update any estimated capex with actual capex at the time of the next reset.

20 For example, we make adjustment for movements in provisions if the actual capex amounts reported in the RIN include capitalised provisions.

21 NT NER, cl. S6.2.2A. Under the NT NER, cl S6.2.2A(b), the exclusion of inefficient capex could only come from three areas: overspend in capex, margin paid to third party and capitalisation of opex as defined in cll. S6.2.2A (c), (d) and (e) of the NT NER.

22 AER, *Capital expenditure incentive guideline*, November 2013, pp. 12–20.

23 NT NER cl. S6.2.2A(a2).

24 NT NER, cl. S6.2.3A(d)(5).

25 NT NER, cl. 6.12.1(18).

26 The use of actual depreciation is consistent with the depreciation approach established by the Utilities Commission's in its 2014 final determination for Power and Water. See Utilities Commission of the Northern Territory, *2014 network price determination, Final determination, Part B–Network price determination*, April 2014, p. 12.

27 Refer to section 2.4.3 for the reasons.

28 NT NER, cl. S6.2.3A(d)(6).

forward the RAB to the end of the 2014–19 regulatory control period. The PTRM used to calculate the annual revenue requirement for the 2019–24 regulatory control period generally adopts the same RAB roll forward approach as the RFM, although the annual adjustments to the RAB are based on forecasts, rather than actual amounts.[29]

The opening RAB for the 2024–29 regulatory control period can be determined using depreciation based either on forecast or actual capex incurred during the 2019–24 regulatory control period.[30] To roll forward the RAB using depreciation based on forecast capex, we would use the forecast depreciation contained in the PTRM for the 2019–24 regulatory control period, adjusted for actual inflation. If the approach to roll forward the RAB using depreciation based on actual capex was adopted, we would recalculate the depreciation based on actual capex incurred during the 2019–24 regulatory control period.

Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. We must have regard to:[31]

- the incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives and the relative benefits of each
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capital expenditure factors.

2.3.1 Interrelationships

The RAB is an input into the determination of the return on capital and depreciation (return of capital) building block allowances.[32] Factors that influence the RAB will therefore flow through to these building block components and the annual revenue requirement. Other things being equal, a higher RAB increases both the return on capital and depreciation allowances.

The RAB is determined by various factors, including:

- the opening RAB (meaning the value of existing assets at the beginning of the regulatory control period)
- net capex[33]

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29 NT NER, cl. S6.2.3.

30 NT NER, cl. S6.2.2B.

31 NT NER, cl. S6.2.2B(b) and (c).

32 The size of the RAB also impacts the benchmark debt raising cost allowance. However, this amount is usually relatively small and therefore not a significant determinant of revenues overall.

33 Net capex is gross capex less disposals and capital contributions. The rate of return or WACC also influences the size of the capex. This is because the capex is not depreciated in the year it is first incurred, but added to the RAB

- depreciation
- indexation adjustment – so the RAB is presented in nominal terms, consistent with the rate of return.

The opening RAB depends on the value of existing assets and will depend on actual net capex, actual inflation outcomes and depreciation in the past.

The RAB when projected to the end of the regulatory control period increases due to both forecast new capex and the indexation adjustment. The size of the indexation adjustment depends on expected inflation (which also affects the nominal rate of return or WACC) and the size of the RAB at the start of each year.

Depreciation reduces the RAB. The depreciation allowance depends on the size of the opening RAB, the forecast net capex and depreciation schedules applied to the assets. By convention, the indexation adjustment is also offset against depreciation to prevent double counting of inflation in the RAB and WACC, which are both presented in nominal terms. This reduces the depreciation building block that feeds into the annual revenue requirement.

We maintain the RAB in real terms by indexing for inflation.[34] A nominal rate of return (WACC) is multiplied by the opening RAB to produce the return on capital building block.[35] To prevent the double counting of inflation through the nominal WACC and indexed RAB,[36] the regulatory depreciation building block has an offsetting reduction for indexation of the RAB.[37] 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. If the RAB was un-indexed, there would be no need for an offsetting adjustment to the depreciation calculation of total revenue. This alternative approach provides for overall revenues being 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.[38] The implications of an un-indexed RAB are discussed further in attachment 4.

Figure 2.1 shows the key drivers of the change in the RAB over the 2019–24 regulatory control period as proposed by Power and Water. Overall, the closing RAB at the end of the 2019–24 regulatory control period would be 27 per cent higher than the opening RAB at the start of that period based on the proposal, in nominal terms. The

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at the end of the year. Instead, the capex amount is escalated by half- year WACC to arrive at an end of year value. It then begins depreciating the following year.

34 NT NER, cll. 6.3.2(a)(2) and 6.5.1(e)(3).

35 NT NER, cll. 6.5.2(a) and 6.5.2(d)(2).

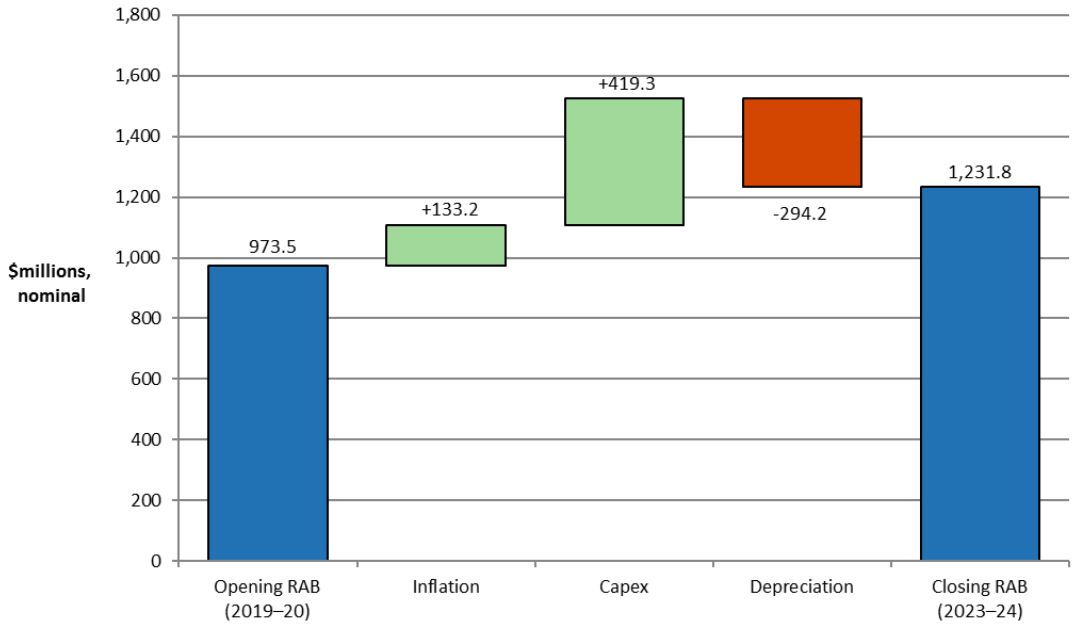
36 NT NER, cl. 6.4.3(b)(1)(ii).

37 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. Please also refer to section 4.3.1 of attachment 4 of this draft decision for further explanation of the offsetting adjustment to the depreciation.

38 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.

proposed forecast net capex increases the RAB by about 43 per cent, while expected inflation increases it by about 14 per cent. Forecast depreciation, on the other hand, reduces the RAB by about 30 per cent.

Figure 2.1 Key drivers of changes in the RAB ($million, nominal)



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

Note: Capex is net of forecast disposals and capital contributions. It is Inclusive of equity raising costs and the half-year WACC to account for the timing assumptions in the PTRM.

Power and Water's proposed forecast depreciation for the 2019–24 regulatory control period is $294.2 million ($nominal).[39] We have largely accepted Power and Water's depreciation proposal in terms of the assigned asset lives. However we have amended the proposed standard asset lives for the 'Property' and 'Equity raising costs' asset classes to better reflect the economic lives of these asset classes. This is discussed in attachment 4. The depreciation amount largely depends on the opening RAB (which in turn depends on capex in the past).

Forecast net capex is a significant driver of the increase in the RAB. The Consumer Challenge Panel 13 (CCP13) made a submission which encouraged the AER to pay particular attention to the effects of non-network ICT expenditure, repex and Power and Water's capitalisation policy on the growth of the RAB.[40] In our draft decision, we are not satisfied that Power and Water's proposed total forecast capex of $383 million

[39] This is the forecast straight-line depreciation.

[40] CCP13, *Response to proposals from PWC for a revenue reset for the 2019-24 regulatory period,* May 2018.

($2018–19)[41] for the 2019–24 regulatory control period reasonably reflects the capex criteria. We have therefore rejected Power and Water's proposed capex and have substituted our estimate of $315.6 million ($2018–19) for the 2019–24 regulatory control period.[42] Refer to attachment 5 for the discussion on forecast capex.

A ten per cent increase in the opening RAB causes revenues to increase by about 5.3 per cent. However, the impact on revenues of the annual change in RAB depends on the source of the RAB change, as some drivers affect more than one building block cost.[43]

2.4 Reasons for draft decision

We determine an opening RAB value for Power and Water of $966.4 million ($nominal) as at 1 July 2019, a reduction of $7.2 million ($nominal) or 0.7 per cent from the proposed value. We forecast a closing RAB value of $1177.8 million by 30 June 2024. This represents a reduction of $54.0 million or 4.4 per cent compared to Power and Water's proposal. The reasons for our draft decision are discussed below.

2.4.1 Opening RAB as at 1 July 2019

We do not accept Power and Water's proposal and instead determine an opening RAB value of $966.4 million ($nominal) as at 1 July 2019. This value is $7.2 million (or 0.7 per cent) lower than Power and Water's proposed opening RAB of 973.5 million ($nominal) as at 1 July 2019.[44]

To determine the opening RAB as at 1 July 2019 we have rolled forward the RAB over the 2014–19 regulatory control period to determine a closing RAB value as at 30 June 2019. In doing so we reviewed the key inputs of Power and Water's proposed RFM, such as the opening RAB as at 1 July 2014, asset lives, actual gross capex values, asset disposal values, capital contribution values, actual inflation and rate of return. Our assessment of these key inputs are discussed in turn below. In summary:

- We adopted the proposed opening RAB as at 1 July 2014 of $860.65 million ($2013–14) which is $67.7 million less than the $928.34 million set out in the NT NER.[45] This is due to an error correction to the approved RAB value in the Utilities Commission's 2014 NT network price determination for Power and Water (and subsequently set out in the NT NER).

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41 This amount is net of customer contributions, disposals and equity raising costs, and excludes a half-year WACC adjustment.

42 We have included a half-year WACC adjustment to take the values to end of year terms for the purposes of RAB roll forward.

43 If capex causes the RAB increase, return on capital, depreciation, and debt raising costs all increase too. If a reduction in depreciation causes the RAB increase, revenue could increase or decrease. In this case, the higher return on capital is offset (perhaps more than offset) by the reduction in depreciation allowance. Inflation naturally increases the RAB in nominal terms.

44 Power and Water, *Regulatory proposal*, March 2018, p. 91.

45 NT NER, cl. S6.2.3A(c).

- We accept the proposed remapping of the asset classes, except for the metering related asset classes. We also updated the opening RAB values and the standard and remaining asset lives as at 1 July 2014 at the asset class level to better reflect the values approved by the Utilities Commission in the 2014 NT network price determination.
- We accept the proposed actual capex, asset disposals and capital contribution values for 2013–14 to 2016–17 for rolling forward the RAB because they are consistent with the category analysis RIN.[46]
- We changed the 2014–15 to 2017–18 actual CPI inputs in the RFM to reflect December quarter CPI consistent with the inflation rates used in the annual pricing for those years.
- We changed the depreciation amounts to reflect actual capex to be consistent with the 2014 NT network price determination.
- We have reallocated the $19.6 million ($nominal) written down value for the roll-in of corporate assets into the RAB from estimated capex for 2018–19 to a final year adjustment in the RFM.

We note that under the NT NER, in determining the opening RAB for the first year of the first regulatory control period, the review of past capex does not apply to Power and Water.[47] Given this, the review period is not applicable for the 2014–19 regulatory control period. At the next reset, the 2019–20 to 2021–22 capex will form part of the review period for whether past capex should be excluded for inefficiency reasons.[48] Further, our RAB roll forward applies the incentive framework approved by the Utilities Commission in the 2014 NT network price determination, which included the use of an actual depreciation approach.[49] As such, we consider that the 2014–19 RAB roll forward contributes to an opening RAB (as at 1 July 2019) that includes capex that reflects prudent and efficient costs, in accordance with the capital expenditure criteria.[50]

Correction to opening RAB as at 1 July 2014

Power and Water has proposed to reduce the value of its opening RAB as at 1 July 2014 to $860.65 million ($2013–14) from $928.34 million as determined by the Utilities

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46 At the time of this draft decision, the roll forward of Power and Water's RAB includes estimated capex values for 2017–18 and 2018–19. We will update the 2017–18 estimated capex with actuals in the final decision. We may also update the 2018–19 estimated capex with a revised estimate in the final decision.

47 NT NER, cl. S6.2.3A(d).

48 NT NER, cl.S6.2.2A(a2); Here, 'inefficiency' of past capex refers to three specific assessments (labelled the overspending, margin and capitalisation requirements) detailed in NT NER, cl. S6.2.2A. The details of our ex post assessment approach for capex are set out in AER, *Capital expenditure incentive guideline*, November 2013, pp. 12–20.

49 Utilities Commission, *Part B–Network price determination*, April 2014, p. 12.

50 NT NER, cll. 6.4A(a), 6.5.7(a), 6.5.7(c) and 6.12.2(b).

Commission and set out in the NTNER.[51] This is to correct an error in the previous valuation, relied on by the Utilities Commission in its 2014 NT network price determination, which incorrectly included some unregulated assets in the opening RAB as at 1 July 2014.[52] Power and Water stated that it was instructed by the NT Government to use the corrected value, on the basis that the NT NER would be amended to correct the error in the NT Government's next package of regulatory reforms.[53]

For this draft decision, we have adopted the corrected value of the opening RAB as at 1 July 2014 as proposed by Power and Water, given that there is agreement between Power and Water and the NT Government that the original value of the opening RAB is in error.[54] We expect this corrected value to be reflected in the NT NER through regulations amending the NT NER to be made by the NT Government prior to the release of our final decision in April 2019.

Remapping of asset classes

Power and Water has amended the asset classes approved by the Utilities Commission in its 2014 NT network price determination to better capture assets with similar expected lives and to facilitate the separation of assets providing alternative control services (ACS) from those providing standard control services (SCS) in the 2019–24 regulatory control period. Our assessment of the proposal indicates that the remapping of asset classes does not materially impact the value of the RAB or provide an advantage to future depreciation allowances. Therefore, we accept the proposed remapping of asset classes for the 2014–19 regulatory control period subject to the following amendments:

- We have updated the standard and remaining asset lives as at 1 July 2014 for the remapped asset classes to reflect Power and Water's alternative method of remapping in its response to our information request.[55] In assessing Power and Water's proposal, we identified that some of the asset values used for the remapping of the asset classes are not consistent with the asset values approved by the Utilities Commission's 2014 NT network price determination. Following an information request to Power and Water, it provided us with an alternative method of remapping which better aligns with the asset values approved by the Utilities Commission. We reviewed this alternative method and accept that it reflects the values approved by the Utilities Commission. In addition, we have made some further changes to the asset lives used in calculating the weighted average standard asset lives and remaining asset lives for the new asset classes. We made

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51 NT NER, cl.S6.2.3A(c).

52 Power and Water, *PWC01.11 - Establishment of the Opening RAB Document*, January 2018, p. 5.

53 Power and Water, *Regulatory proposal*, March 2018, p. 92; Power and Water, *Response to information request #011– Value of opening RAB as at 1 July 2014*, 4 May 2018, p. 10.

54 NT Government, *Letter to the AER*, 4 August 2017.

55 Power and Water, *Response to information request #011– Value of opening RAB as at 1 July 2014*, 4 May 2018, pp. 4–9.

these changes so that the asset lives determined for the new asset classes are consistent with the previous approved standard and remaining assets lives in the Utilities Commission's 2014 NT network price determination.[56]

- We do not accept the proposed new metering asset classes for RAB roll forward purposes over the 2014–19 regulatory control period.[57] This is because the asset lives assigned to these asset classes were not approved by Utilities Commission in the 2014 NT network price determination as required under the NT NER.[58] Therefore, we have reallocated the actual capex related to these asset classes to the approved metering asset classes and asset lives for that period. Attachment 15 discusses our decision on the proposed new metering asset classes and asset lives for the 2019–24 regulatory control period.

Actual capex, asset disposal and capital contribution values

We accept the actual capex, asset disposal and capital contribution values for 2013–14 to 2016–17 for rolling forward the RAB over the 2014–19 regulatory control period. This is because we found these values were consistent with values in the category analysis RIN.[59] We note that at the time of this draft decision, the roll forward of Power and Water's RAB includes estimated values for 2017–18 and 2018–19. We will update the 2017–18 estimated values with actuals in the final decision. Power and Water may provide updates to the 2018–19 estimated values in its revised proposal, which we may adopt for the final decision.

In reviewing the actual capex values for 2013–14 to 2016–17, we note that Power and Water has not included capitalised provisions as capex when rolling forward its RAB because only expenses incurred or paid out were included in the actual capex.[60] We accept this approach because the NT NER requires Power and Water's opening RAB value to be increased by the amount of all capex incurred during its 2014–19 regulatory control period.[61] Therefore, we consider that capitalised provisions such as long service leave, annual leave and other related employee entitlements should not be included in the RAB until the business has paid out (incurred) the expenses to which the provisions relate.

Actual inflation inputs

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56 NTNER cl. 6.5.5(b)(3).

57 These asset classes are 'Metering Communications', 'Metering Dedicated CTs and VTs', 'Metering Non Network Other' and 'Metering Non Network IT and Communications'. Power and Water, *Regulatory proposal*, March 2018, pp. 96–97.

58 NT NER cl. 6.5.5(b)(3).

59 Power and Water, *PWC11.5CP - Category Analysis RIN Workbooks - Consolidated - 16 Mar 18 - PUBLIC*, March 2018.

60 Power and Water, *Response to information request #018–RFM PTRM modelling issues*, 6 June 2018, p. 1.

61 NT NER, cl.S6.2.3A(d)(1)(i).

Power and Water has proposed to use the March on March actual CPI series to roll-forward its RAB over the 2014–19 regulatory period.[62] Clause 6.5.1(e)(3) in the NTNER requires the adjustment for inflation of the RAB be consistent with the method used for the indexation of the control mechanism for the standard control services for the preceding regulatory control period (2014–19). Power and Water has used the December on December CPI series to adjust its tariffs over this regulatory control period. Therefore, as a requirement of the NT NER, we have updated the actual inflation input for 2014–15 to 2017–18 in the RFM with the December on December actual CPI for each year to be consistent with Power and Water's approved annual pricing proposals.[63] We have notified Power and Water about our approach through an information request and in response, it noted that it did not have any concerns with our approach.[64]

In our final decision we will update Power and Water's estimate of inflation for 2018–19 with actual CPI (December on December) as it becomes available.

Depreciation approach for establishing the opening RAB as at 1 July 2019

We do not accept Power and Water's proposal to apply depreciation values that are based on forecast capex to roll forward its RAB over the 2014–19 regulatory control period. This is inconsistent with the approach approved by the Utilities Commission in its 2014 NT network price determination for Power and Water.[65] The Utilities Commission determined Power and Water's opening RAB at the commencement of the 2019–24 regulatory control period to be established using actual depreciation (based on actual capex). Clause S6.2.3A(5) in the NT NER requires the previous value of the RAB be adjusted for depreciation in accordance with the 2014 NT network price determination. Therefore, we have updated our draft decision RFM for Power and Water to implement an actual depreciation approach in accordance with the Utilities Commission's 2014–19 regulatory determination, to be consistent with the requirements of the NT NER. We have notified Power and Water about our approach through an information request and in response, it noted that it did not have any concerns with our approach.[66]

Roll-in of corporate assets to the RAB

Power and Water has proposed to move its share of costs associated with corporate assets used to provide SCS from opex to capex due to changes to its cost allocation methodology. To implement this move, Power and Water has added $19.6 million ($nominal) representing the written down value at 30 June 2019 to the estimated

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62 Power and Water, *PWC12.11 - SCS and ACS Metering RFM - 16 Mar 18 - Public*, March 2018.

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

64 Power and Water, *Response to information request #018–RFM PTRM modelling issues*, 6 June 2018, p. 2.

65 Utilities Commission, *Part B–Network price determination*, April 2014, p. 12.

66 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. 1.

capex for 2018–19 in its proposed RFM.[67] The proposed corporate assets value is allocated to the 'Property', 'Land and easements', 'IT and communications' and 'Plant and equipment' asset classes.

We consider the proposed roll-in amount of $19.6 million is reasonable because:

- This amount reflects the written down value of Power and Water's share of the corporate assets as at 30 June 2019.
- The annual expense is not included in the base year opex to ensure that there is no double counting due to capitalisation of this cost.[68]

However, we consider this amount should not be added to the 2018–19 estimated capex in the RFM as proposed by Power and Water. This is because the proposed approach would incorrectly make an additional half-year WACC adjustment to the proposed $19.6 million when rolling into the RAB.

Our RFM makes a half-year WACC adjustment to the estimated capex for 2018–19 as the estimated capex is assumed to be incurred in the middle of the year terms. Therefore, an additional half-year WACC is applied to compensate for half a year's return and to align with the end of year timing assumption for when capex is added to the RAB under the RFM. However, we do not consider this adjustment should be applied to the corporate assets as the proposed $19.6 million is already in end of year dollars terms according to Power and Water's corporate assets model. Therefore, the half-year WACC adjustment is not required.

In response to our information request, Power and Water submitted that any capex incurred in 2018–19, including any acquisition of corporate assets, should be assumed to be incurred as at 31 December 2018 and hence earn a half-year WACC.[69] We do not agree with this submission. We consider that the half-year WACC should only be applied to new capex entering the RAB rather than to written down values of existing assets. Power and Water has already received an opex allowance for its corporate assets in the 2014–19 regulatory control period and therefore should not receive any further return for these assets.

For the reasons discussed above, we do not accept Power and Water's proposed approach to add the $19.6 million corporate assets to the 2018–19 estimated capex in the RFM. We instead add this amount as a final year adjustment to the RAB through the corresponding input section in the RFM, which ensures that only $19.6 million is rolled in at the end of the 2014–19 regulatory control period (30 June 2019). As a consequence of making a final year adjustment, we have to make a decision on the remaining asset lives for these corporate assets for depreciation purposes. We have

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67 Power and Water, *Regulatory proposal*, March 2018, p. 91. Power and Water, *PWC12.9 - Corporate Assets Model - 31 Jan 18 - Public*, January 2018.

68 Power and Water, *Regulatory proposal*, March 2018, p. 98. Power and Water, *Response to information request #026– Roll in of corporate assets*, 12 July 2018, p. 1.

69 Power and Water, *Response to information request #026– Roll in of corporate assets*, 12 July 2018, p. 2.

applied a remaining asset life of 18.3, 7.4 and 5.0 years for the 'Property', 'IT and communications' and 'Plant and equipment' asset classes respectively. We have calculated these remaining asset lives using a weighted average approach and the detailed asset lives data provided in Power and Water's proposed corporate asset model. We have not assigned a remaining asset life to the 'Land and easements' asset class as land and easements are non-depreciable assets.

2.4.2 Forecast closing RAB as at 30 June 2024

We forecast a closing RAB value of $1177.8 million ($nominal) by 30 June 2024 for Power and Water. This represents a reduction of $54.0 million or 4.4 per cent to Power and Water's proposal. This reduction reflects our draft decision on the inputs for determining the forecast RAB in the PTRM.

The submission from the CCP13 on Power and Water's proposal raised concerns with the increase to the size of its RAB over the 2019–24 regulatory control period.[70] The change in the size of the RAB depends on our assessment of its various components including forecast capex (attachment 5), expected inflation (attachment 3) and forecast depreciation (attachment 4). Inflation and capex increase the RAB, while depreciation and disposals reduce it.

To determine the forecast RAB value for Power and Water, we amended the following PTRM inputs:

- We reduced Power and Water's proposed opening RAB as at 1 July 2019 by $7.2 million or 0.7 per cent ($nominal) (section 2.4.1).
- We reduced Power and Water's proposed forecast capex for the 2019–24 regulatory control period by $67.3 million ($2018–19) or 17.6 per cent (attachment 5).
- We updated Power and Water's proposed expected inflation rate of 2.42 per cent per annum to 2.45 per cent per annum (attachment 3). This results in an increase to the indexation of the RAB component for the 2019–24 regulatory control period by $1.4 million or 1.1 per cent ($nominal), all else being equal.[71]
- We reduced Power and Water's proposed forecast straight-line depreciation for the 2019–24 regulatory control period by $31.4 million or 10.7 per cent ($nominal) (attachment 4). We accept Power and Water's proposal to use the year-by-year tracking method for depreciating its assets subject to amendments to the depreciation model to correct modelling errors.

Figure 2.2 shows the key drivers of the change in Power and Water's RAB over the 2019–24 regulatory control period for this draft decision. Overall, the closing RAB at

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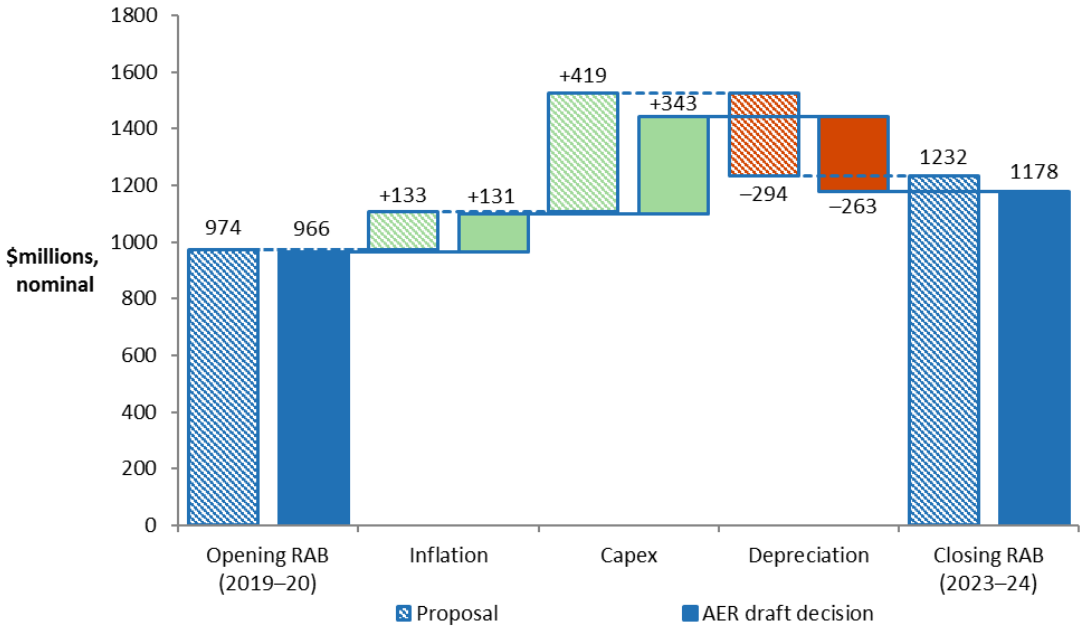
[70] CCP13, *Response to proposals from PWC for a revenue reset for the 2019-24 regulatory period,* May 2018.

[71] Compared to the proposal, our draft decision results in a decrease to the indexation of the RAB by $2.3 million or 1.7 per cent ($ nominal). The decrease in the indexation to the RAB despite the increase in the inflation rate is due to the lower opening RAB and lower forecast capex in our draft decision.

the end of the 2019–24 regulatory control period is forecast to be 22 per cent higher than the opening RAB at the start of that period, in nominal terms. The approved forecast net capex increases the RAB by about 36 per cent, while expected inflation increases it by about 14 per cent. Forecast depreciation, on the other hand, reduces the RAB by about 27 per cent.

Figure 2.2 Key drivers of changes in the RAB – Power and Water's proposal compared with AER's draft decision ($million, nominal)



Source: AER analysis.

Note: Capex is net of forecast disposals and capital contributions. It is inclusive of equity raising costs and the half-year WACC to account for the timing assumptions in the PTRM.

2.4.3 Application of depreciation approach in RAB roll forward for next reset

We accept Power and Water's proposal on the depreciation approach to be applied to establish the RABs at the commencement of the 2024–29 regulatory control period. We determine that the depreciation approach will be based on the depreciation schedules (straight-line) using forecast capex at the asset class level approved for the 2019–24 regulatory control period.[72]

Power and Water proposed to use the forecast depreciation approach to roll forward its RAB for the commencement of its 2024–29 regulatory control period,[73] consistent with our *Framework and approach*.[74]

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[72] NT NER, cll. 6.12.1(18) and S6.2.2B.

[73] Power and Water, *Regulatory Proposal*, March 2018, p. 100.

We stated in the *Framework and approach* that depreciation used to roll forward the RAB could be based on either:[75]

- Actual capex incurred during the regulatory control period (actual depreciation). We roll forward the RAB based on actual capex less the depreciation on the actual capex incurred by the distributor, or
- The capex allowance forecast at the start of the regulatory control period (forecast depreciation). We roll forward the RAB based on actual capex less the depreciation on the forecast capex approved for the regulatory control period.

We have used actual depreciation for this draft decision when rolling forward the opening RAB at the commencement of the 2019–24 regulatory control period (section). This is consistent with the decision made by the Utilities Commission in its 2014 NT network price determination for Power and Water. The use of forecast depreciation to establish the opening RAB at the commencement of the 2024–29 regulatory control period will therefore represents a change of approach.As discussed in attachment 9, Power and Water is not currently subject to a capital expenditure sharing scheme (CESS) but we will apply the CESS to Power and Water over the 2019–24 regulatory control period. We consider this scheme will provide sufficient incentives for Power and Water to achieve capex efficiency gains over that period. We are satisfied that the use of a forecast depreciation approach in combination with the application of the CESS and our other ex post capex measures are sufficient to achieve the capex incentive objective.[76]

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[74] AER, *Framework and approach for Power and Water Corporation (NT) for the regulatory control period commencing 1 July 2019,* July 2017, p. 56.

[75] AER, *Framework and approach for Power and Water Corporation (NT) for the regulatory control period commencing 1 July 2019,* July 2017, p. 55.

[76] Our ex post capex measures are set out in the capex incentives guideline, AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 13–19, 20–21. The guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective.