FINAL DECISION
CitiPower distribution determination 2016 to 2020

Attachment 2 – Regulatory asset base

May 2016

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: (03) 9290 1444
Fax: (03) 9290 1457

Email: AERInquiry@aer.gov.au

Note

This attachment forms part of the AER's final decision on CitiPower distribution determination for 2016–20. It should be read with all other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Value of imputation credits

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Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	Advanced metering infrastructure
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
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
NER	national electricity rules
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

Shortened form	Extended form
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
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

2 Regulatory asset base

We are required to make a decision on CitiPower's opening regulatory asset base (RAB) as at 1 January 2016.[1] 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 final decision on the opening RAB value as at 1 January 2016 for CitiPower and roll forward of the forecast RAB over the 2016–20 regulatory control period.

2.1 Final decision

We do not accept CitiPower's revised proposed opening RAB value of $1802.6 million ($ nominal). Instead, we determine an opening RAB value of $1762.9 million ($ nominal) as at 1 January 2016. This is a decrease of $39.7 million (or 2.2 per cent) compared to CitiPower's revised proposed opening RAB value. In coming to this decision:

- We accept CitiPower's revised proposed approach to RAB indexation using annual actual (one-year lagged) inflation inputs.
- We updated the 2015 capex estimate with a more recent estimate provided by CitiPower.

Table 2.1 sets out our final decision on the roll forward of the RAB values for the 2011–15 regulatory control period.

We determine a forecast closing RAB value at 31 December 2020 of $2274.3 million ($ nominal). This is $117.0 million (or 4.9 per cent) lower than the amount of $2391.2 million ($ nominal) in CitiPower's revised proposal.[2] Our final decision on the forecast closing RAB reflects the amended opening RAB as at 1 January 2016, and our final decisions on the expected inflation rate (attachment 3), forecast capex (attachment 6) and forecast regulatory depreciation (attachment 5).

Our final decision also maintains our preliminary decision position on the use of forecast depreciation for establishing the RAB at the commencement of the regulatory control period from 1 January 2021.[3] CitiPower's revised proposal adopted our preliminary decision on this issue.[4]

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1 NER, cl. 6.12.1(6).

2 To accurately reflect the forecast closing RAB value at 31 December 2020 proposed by CitiPower, the revised forecast RAB value presented in this attachment are calculated using the rate of return from the revised proposal. These amounts are different from the amounts set out on page 246 of CitiPower's revised proposal which are calculated using the rate of return from our preliminary decision. See CitiPower, *Revised regulatory proposal*, 6 January 2016, p. 246 and attachment 1.10 (*CP PUBLIC RRP MOD 1.10 CP 2016-20 PTRM.xlsm*); and CitiPower, *Letter re: Impact of rate of return on allowed revenues*, 20 January 2016.

3 NER, cl. 6.12.1(18).

4 CitiPower, *Revised regulatory proposal*, January 2016, p. 245.

Table 2.2 sets out our final decision on the forecast RAB values for CitiPower over the 2016–20 regulatory control period.

Table 2.1 AER's final decision on CitiPower's RAB for the 2011–15 regulatory control period ($ million, nominal)

	2011	2012	2013	2014	2015[a]
Opening RAB	1287.3	1395.7	1488.8	1580.9	1686.4
Capital expenditure[b]	140.6	118.0	141.4	156.2	147.6
Inflation indexation on opening RAB	35.9	49.1	29.8	34.2	38.9
Less: straight-line depreciation	68.0	74.0	79.1	84.9	92.1
Closing RAB	1395.7	1488.8	1580.9	1686.4	1780.8
Difference between estimated and actual 2010 capex (1 January 2010 to 31 December 2010)					–21.4
Return on difference for 2010 capex					–12.2
Six months CPI adjustment					15.7
Closing RAB as at 31 December 2015					**1762.9**

Source: AER analysis.

(a) Based on estimated capex.

(b) Net of disposals and capital contributions, and adjusted for CPI.

Table 2.2 AER's final decision on CitiPower's RAB for the 2016–20 regulatory control period ($ million, nominal)

	2016	2017	2018	2019	2020
Opening RAB	1762.9	1872.9	2014.4	2132.7	2222.1
Capital expenditure[a]	172.0	203.0	184.1	159.2	127.6
Inflation indexation on opening RAB	41.0	43.5	46.8	49.5	51.6
Less: straight-line depreciation	103.0	105.0	112.6	119.4	127.0
Closing RAB	**1872.9**	**2014.4**	**2132.7**	**2222.1**	**2274.3**

Source: AER analysis.

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

2.2 CitiPower's revised proposal

CitiPower's revised proposal used our RFM to establish an opening RAB as at 1 January 2016 and our PTRM to roll forward the RAB over the 2016–20 regulatory control period. Its revised proposal submitted an opening RAB value as at 1 January 2016 of $1802.6 million ($ nominal).[5] It adopted the preliminary decision's:[6]

- amendment to the allowed equity raising costs value
- approach to calculating the required 6-month indexation adjustment to the RAB.

However, it did not adopt the preliminary decision approach to indexing the RAB for actual inflation. CitiPower's revised proposal applies a one-year lagged actual inflation rate across all components of the RAB roll forward.[7]

Table 2.3 presents CitiPower's revised proposed roll forward of its RAB during the 2011–15 regulatory control period.

Table 2.3 CitiPower's revised proposed RAB for the 2011–15 regulatory control period ($million, nominal)

	2011	2012	2013	2014	2015[a]
Opening RAB	1287.3	1395.7	1488.8	1580.9	1686.4
Capital expenditure[b]	140.6	118.0	141.4	156.2	187.3
Inflation indexation on opening RAB	35.9	49.1	29.8	34.2	38.9
Less: straight-line depreciation	68.0	74.0	79.1	84.9	92.1
Closing RAB	1395.7	1488.8	1580.9	1686.4	1820.5
Difference between estimated and actual 2010 capex (1 January 2010 to 31 December 2010)					–21.4
Return on difference for 2010 capex					–12.2
Six month CPI adjustment					15.7
Closing RAB as at 31 December 2015					**1802.6**

Source: CitiPower, *Revised regulatory proposal*, *Roll forward model*, January 2016.

(a) Based on estimated capex.

(b) Net of disposals and capital contributions, and adjusted for CPI.

CitiPower proposed a revised closing forecast RAB as at 31 December 2020 of $2391.2 million ($ nominal). This value reflects its revised proposed opening RAB at 1 January 2016, forecast capex (inclusive of some asset reallocation between asset

5 CitiPower, *Revised regulatory proposal*, January 2016, p. 243.
6 CitiPower, *Revised regulatory proposal*, January 2016, p. 246.
7 CitiPower, *Revised regulatory proposal*, January 2016, p. 251.

classes),[8] expected inflation, and depreciation (based on forecast capex) over the 2016–20 regulatory control period. Its projected RAB over the 2016–20 regulatory control period is shown in Table 2.4.

Table 2.4 CitiPower's revised proposed RAB for the 2016–20 regulatory control period ($million, nominal)

	2016	2017	2018	2019	2020
Opening RAB	1802.6	1923.6	2081.6	2218.0	2324.6
Capital expenditure[a]	179.3	216.0	199.1	173.7	139.5
Inflation indexation on opening RAB	45.1	48.1	52.0	55.4	58.1
Less: straight-line depreciation	103.3	106.1	114.7	122.5	131.1
Closing RAB	**1923.6**	**2081.6**	**2218.0**	**2324.6**	**2391.2**

Source: CitiPower, *Revised regulatory proposal*, *Post-tax revenue model*, January 2016. CitiPower, *Letter re: Impact of rate of return on allowed revenues*, 20 January 2016.

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

2.3 Assessment approach

Many aspects of our assessment approach for the RAB from our preliminary decision remain unchanged. Section 2.3 of our preliminary decision details the general approach.[9] However, we have accepted a change to the approach for indexation of the opening RAB for CitiPower. Section 2.4.1 discusses this change as it affects CitiPower.

2.4 Reasons for final decision

We determine an opening RAB value for CitiPower of $1762.9 million ($ nominal) as at 1 January 2016, a decrease of $39.7 million ($ nominal) or 2.2 per cent from the revised proposed value. This difference is due to our update of the 2015 inputs in the RAB roll forward for a revised estimate of capex.

Based on the approved opening RAB we forecast a closing RAB value of $2274.3 million by 31 December 2020. This represents a reduction of $117.0 million, or 4.9 per cent compared to the revised proposal. The reasons for our decision are discussed below.

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8 The asset reallocation is related to the movement of some assets out of the 'Victorian Bushfire Royal Commission' asset class to the 'Distribution System Assets' asset class. We consider this issue in attachment 5 of this final decision.

9 AER, *Preliminary decision, CitiPower determination 2016 to 2020: Attachment 2 – Regulatory asset base*, October 2015, pp. 9–11.

2.4.1 Opening RAB as at 1 January 2016

We determine CitiPower's opening RAB value as at 1 January 2016 to be $1762.9 million ($ nominal). This amount is $39.7 million (or 2.2 per cent) lower than CitiPower's value of $1802.6 million in its revised proposal. Our final decision on CitiPower's opening RAB as at 1 January 2016 reflects:

- updated 2015 capex estimate using revised estimates provided by CitiPower
- a change in approach from the preliminary decision to the indexation of the RAB for actual inflation. Our final decision is to accept the approach in CitiPower's revised proposal.

In the preliminary decision, we made certain amendments to CitiPower's proposed roll forward of its RAB over the 2011–15 regulatory control period which CitiPower adopted in its revised proposal. These amendments included:

- amending the proposed approach to the 6-month indexation adjustment required in the RAB
- adjusting allowed equity raising costs to the correct dollar terms.

We also noted the roll forward of CitiPower's RAB included an estimated capex value for 2015, because actual capex was not yet available.[10] We stated we would update the 2015 estimated capex value for the final decision.

CitiPower's revised proposal did not adopt the preliminary decision approach to indexing the RAB for actual inflation.

These two issues are discussed in turn below.

We are required to consider the extent to which our roll forward of the RAB to 1 January 2016 contributes to the achievement of the capital expenditure incentive objective.[11] We note that under the transitional rules, in making this distribution determination we do not have the power to determine whether past capex should be excluded for inefficiency reasons.[12] Therefore, for the purposes of this final decision, we have included CitiPower's actual or estimated capex in the 2011–15 regulatory control period when rolling forward the RAB to 1 January 2016. In future determinations, the NER allow us to review a service provider's past capex and exclude inefficient past capex from being rolled into the RAB.[13] Our RAB roll forward applies the incentive framework approved in the previous distribution determination,

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10 NER, cl S6.2.1(e)(2).

11 NER, cl. 6.12.2(b).

12 NER, cl. 11.60.5.

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

which included the use of an actual depreciation approach.[14] As such, we consider that it contributes to an opening RAB that includes capex that reflects prudent and efficient costs, in accordance with the capital expenditure criteria.[15]

Indexing the RAB for actual inflation inputs

Our final decision is to accept CitiPower's revised proposed approach to RAB indexation, known as the 'all-lagged' approach. Under this approach, a one-year lagged inflation series is used to index all components of the RAB roll forward.[16] This is a departure from our preliminary decision, which used our standard 'partially-lagged' approach.[17]

We have had regard to the indexation approach used in previous Victorian distribution determinations, where the Essential Services Commission (ESC) applied the all-lagged approach prior to 2010.[18] Each of the five Victorian service providers, including CitiPower, submitted that we should apply the same unbroken inflation series to preserve the real value of its assets.[19] We agree that this consistency is desirable. To this end, the Victorian service providers' historical indexation differs from the standard approach applied to other non-Victorian networks in previous determinations.

More broadly, CitiPower also submitted a number of reasons why the all-lagged approach should be used, regardless of the previous approach to indexation.[20] We have reviewed this material together with the submissions on this common issue from the four other Victorian service providers.[21] While we agree with elements of this reasoning, there are several areas where we disagree or where the available evidence is inconclusive. Our views have been informed by consideration of this issue in our

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14 See AER, *Final decision, Victorian electricity distribution network service providers, Distribution determination 2011–15*, October 2010, pp. 459–462.

15 NER, cll. 6.5.7(a) and (c).

16 Although we describe this as one-year lag (as does CitiPower), the series is lagged by one year and three months. The additional three months reflects a practical delay to allow for the publication of CPI data and implementation in the annual pricing approval process. This additional three month delay is accepted by both parties and not considered contentious.

17 Under the partially lagged approach, two aspects of the RFM indexation use a one-year lagged inflation series (straight line depreciation and new capex), but one aspect uses the actual (non-lagged) inflation outcomes (opening RAB). Note that, as per the previous footnote, the actual (non-lagged) inflation series is lagged by three months to allow for publication of CPI data and pricing implementation.

18 In our 2010 determination for CitiPower we applied the RAB roll forward from 2006 to 2010 in accordance with the ESC approach under transitional rules. AER, *Final decision, Victorian electricity distribution network service providers, Distribution determination 2011–2015*, *attachment 'CitiPower RFM Final Decision.xls'* , October 2010.

19 CitiPower, *Revised regulatory proposal*, 6 January 2016, pp. 256–257; AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 8-7 to 8-8; Jemena, *Revised regulatory proposal, Attachment 5-4 Asset base roll-forward and depreciation*, 6 January 2016, pp. 2–3; Powercor, *Revised regulatory proposal*, 6 January 2016, pp. 250–251; and United Energy, *Revised regulatory proposal*, 6 January 2016, pp. 72–73.

20 CitiPower, *Revised regulatory proposal*, 6 January 2016, pp. 254–258.

21 AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 8-6 to 8-9; Jemena, *Revised regulatory proposal, Attachment 5-4 Asset base roll-forward and depreciation*, 6 January 2016, pp. 1–6; Powercor, *Revised regulatory proposal*, 6 January 2016, pp. 248–252; and United Energy, *Revised regulatory proposal*, 6 January 2016, pp. 72–73.

recent update of the RFM template for transmission service providers.[22] In that update, we decided to maintain applying the partially-lagged approach for indexation. However, the Victorian service providers have raised several new issues that were not before us at that time.

These conceptual issues relating to indexation in the RAB roll forward are relevant for all distribution service providers, not just CitiPower or the Victorian service providers as a group. We expect to commence a formal update of the AER's standard RFM template for distribution networks later this year.[23] That process will allow us to further evaluate the strengths and weaknesses of both indexation approaches (and any other alternatives). It will also allow affected stakeholders, including other service providers and consumers, to comment.[24]

Our decision to accept CitiPower's revised proposed approach, therefore, reflects the specific history of the Victorian service providers and the current mixed state of evidence for the partially-lagged and all-lagged indexation approaches.[25] As part of this, we accept the RFM implementation in CitiPower's revised proposal, where the inflation inputs are lagged by one year and formulae in the RFM are adjusted so that this one-year lag then flows through to the inflation index construction.[26]

Update to 2015 estimated capex

CitiPower's revised proposal did not include an update for 2015 estimated capex; however, a revised estimate was provided following an information request.[27] We accept CitiPower's revision to the net capex estimate for 2015 of $141.2 million ($ nominal).[28] This amount is lower than in the initial proposal and reflects more up-to-date data, and therefore is the best forecast available. We note that the financial impact of any difference between actual and estimated capex for 2015 will be accounted for at the next reset.[29]

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22 AER, *Final decision, Amendment, Electricity transmission network service providers, Roll forward model (version 3)*, 23 October 2015, p. 11–12.

23 NER, cl. 6.5.1(b)–(d).

24 We note that the AER's current approach had support from service providers when the current RFM template was developed in 2008. See the submissions available online at http://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/roll-forward-model-2008/draft-decision.

25 Further, it is likely that there would not be a material difference in revenue outcomes even if we were to change our final decision from all-lagged to the partially-lagged approach. This is because, when changing from one inflation series to another, we would give consideration to a transitional adjustment reflecting the impact of the change.

26 In contrast, CitiPower's initial proposal used lagged inputs but did not adjust the formulae. This meant it applied a two-year lag to some RFM components. CitiPower no longer proposes this approach.

27 CitiPower, *RE: AER information request - CitiPower #033 and Powercor #034 – 2015 estimated capex update* [email to AER], 3 March 2016.

28 This amount is adjusted for the movement in capitalised provisions and before adjusting for the half-WACC to account for the timing assumption in the PTRM.

29 NER, cl. S6.2.1(e)(3).

2.4.2 Forecast closing RAB as at 31 December 2020

We forecast a closing RAB value of $2274.3 million by 31 December 2020 for CitiPower. This represents a reduction of $117.0 million, or 4.9 per cent to CitiPower's revised proposal. This reduction reflects our final decision on the required inputs for determining the forecast RAB in the PTRM. To determine the forecast RAB value, we have amended the PTRM inputs as a result of the following changes:

- We reduced CitiPower's revised proposed opening RAB as at 1 January 2016 by $39.7 million or 2.2 per cent (section 2.4.1).
- We reduced CitiPower's revised proposed forecast capex for the 2016–20 regulatory control period by $61.7 million ($ 2015) or 6.8 per cent (attachment 6).
- We reduced CitiPower's revised proposed expected inflation rate from 2.50 per cent to 2.32 per cent (attachment 3). This results in a decrease to the indexation of the RAB component for the 2015–20 regulatory control period by $26.3 million ($ nominal) or 10.2 per cent.
- We reduced CitiPower's revised proposed forecast straight-line depreciation for the 2016–20 regulatory control period by $10.7 million ($ nominal) or 1.9 per cent (attachment 5).

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

Our final decision accepts CitiPower's revised proposal to roll forward its RAB for the commencement of the 2021–25 regulatory control period using depreciation based on forecast capex (updated for actual inflation).[30] This is consistent with our preliminary decision, CitiPower's initial proposal and the framework and approach.[31]

[30] CitiPower, *Revised regulatory proposal*, January 2016, p. 245.

[31] AER, *Preliminary decision CitiPower distribution determination - Attachment 2 - Regulatory asset base*, October 2015*, p. 17;* CitiPower, *Regulatory proposal*, April 2015, p. 185; AER, *Final Framework and Approach for the Victorian Electricity Distributors*, October 2014, pp. 121–126.