Attachment 4

Capital base and depreciation

Access arrangement information

ACT and Queanbeyan-Palerang gas network 2021–26

Submission to the Australian Energy Regulator

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evoenergy

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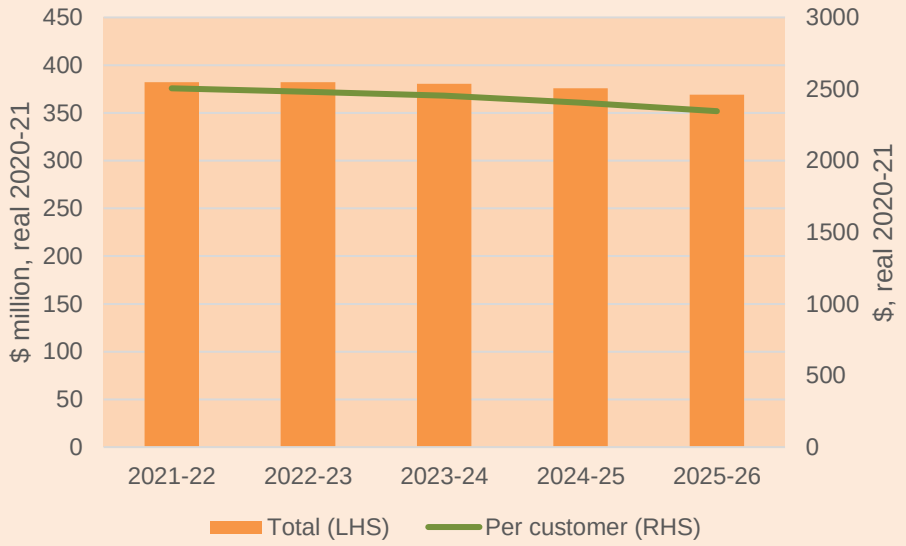
4 Capital base and depreciation

Key points

Over the 2021-26 regulatory period, the real capital base (also known as the regulatory asset base, or RAB) is forecast to decline by 3 per cent in total and by 6 per cent on a per customer basis as shown in the graph below. A declining capital base benefits customers by contributing to lower network charges.

Evoenergy has calculated the capital base using the AER's gas roll-forward model (RFM) and gas post-tax revenue model (PTRM) published in April 2020, adopting the AER's methodology for calculating forecast depreciation and forecast inflation.

Opening real capital base



4.1 Introduction

Part 9, Division 2 (r.72(1)) of the National Gas Rules (Rules) requires that access arrangement information include the following:

(b) how the capital base is arrived at and, if the access arrangement period commences at the end of an earlier access arrangement period, a demonstration of how the capital base increased or diminished over the previous access arrangement period;

(c) the projected capital base over the access arrangement period, including:

(i) a forecast of conforming capital expenditure for the period and the basis for the forecast; and

(ii) a forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method;

Further, Part 9, Division 4 (r.77) sets out how the opening capital base must be determined and Division 4 (r.78) sets out how the projected capital base is to be calculated.

This attachment details how Evoenergy has calculated the opening capital for 2021/22 and the projected capital base for the 2021-26 period consistently with the Rules.

4.1 Opening capital base for 2021/22

The opening capital base for 2021/22 has been calculated consistent with Part 9, Division 4 (r.77) of the Rules using the AER's RFM (see Appendix 4.1). Specifically, Evoenergy has started with the opening capital base from the previous regulatory period (2014/15), added actual net capital expenditure (capex), deducted depreciation and added actual inflation. Each of these inputs is discussed below and the resulting capital base roll-forward results are presented.

4.1.1 Opening capital base for 2014/15

The value of the opening capital base for 2014/15 is $326.88 million and is taken from the AER's final decision for the current access arrangement period.

4.1.2 Actual net capex

Actual net capex is calculated as actual capex less actual disposals and actual customer contributions. Table 4.1 presents these values and Attachment 3 provides further details of actual net capex. It is important to note that the capex values presented below are actuals up to the end of January 2020 and estimates for the remainder of the period.

Table 4.1 Actual net capex

$ million nominal	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Actual capex	23.50	17.09	19.15	13.27	13.89	14.79	14.79
Actual disposals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Actual customer contributions	0.04	0.12	0.03	0.45	0.97	0.11	0.12
Actual net capex*	**24.61**	**17.42**	**19.62**	**13.18**	**13.26**	**15.08**	**15.08**

* Actual net capex includes a half-year return, which is added in the RFM.

4.1.3 Depreciation

For the purposes of rolling forward the capital base, Evoenergy must adopt the depreciation methodology specified in the current access arrangement. Clause 4.3 of the current access arrangement specifies that in determining the capital base at the commencement of the 2021 access arrangement period, depreciation is to be based on forecast capital expenditure.

Therefore, Evoenergy has implemented the forecast depreciation approach to rolling forward the capital base. Forecast depreciation is taken directly from the AER's final decision PTRM for the current regulatory period. These values are presented in Table 4.2.

Table 4.2 Depreciation

$ million nominal	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Forecast depreciation	-13.73	-11.83	-13.37	-14.29	-15.28	-16.32	-17.29

Part 9, Division 6 (r. 90) of the Rules states that in relation to the calculation of depreciation for rolling forward the capital base from one access arrangement period to the next:

(1) A full access arrangement must contain provisions governing the calculation of depreciation for establishing the opening capital base for the next access arrangement period after the one to which the access arrangement currently relates.
(2) The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

Consistent with the Rule requirements, Evoenergy's access arrangement proposes that for the purposes of rolling forward the capital base at the commencement of the 2026 access arrangement period, depreciation is to be based on forecast capital expenditure.

4.1.4 Inflation

The RFM inflates the capital base annually by the actual Consumer Price Index (CPI). The CPI used must be based on the rate used for the annual forecast revenue adjustments, consistent with the specified method in the decisions covering the previous and current access arrangement periods. The specified method for calculating CPI in the previous and current access arrangement periods is the CPI weighted average of eight capital cities for all groups calculated as the December quarter divided by the previous December quarter. As the CPI for the final year (2020/21) is not yet known, a placeholder value of 2 per cent has been adopted and will be updated when the relevant CPI data are available.

The value of inflation included in the capital base roll-forward is calculated by applying the inflation rate to the opening value of the capital base. The inflation rates and the value of inflation included in the capital base roll forward are present in Table 4.3.

Table 4.3 Inflation

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Inflation rate	2.49%	1.69%	1.48%	1.91%	1.78%	1.84%	2.00%
Inflation value, ($ million nominal)	8.13	5.71	5.16	6.89	6.55	6.84	7.54

4.1.5 Capital base roll-forward

Based on the inputs set out above, the capital base is rolled forward each year in the RFM to get a closing value for 2020/21, which becomes the opening value of the capital base for the first year of the 2021–26 regulatory period. The capital base roll-forward also includes a true-up for the difference between forecast and actual capex in the final year of the previous regulatory period and a return on that difference (no adjustment is required for 2014/15 given that actuals were used for this year). The individual elements of the capital base roll-forward are summarised in Table 4.4 below.

Table 4.4 Capital base roll-forward

$ million nominal	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Opening capital base	326.88	338.35	349.66	361.07	366.86	371.39	376.99
Actual net capex	24.61	17.42	19.62	13.18	13.26	15.08	15.08
Forecast depreciation	-13.73	-11.83	-13.37	-14.29	-15.28	-16.32	-17.29
Actual inflation	8.13	5.71	5.16	6.89	6.55	6.84	7.54
Difference in final year capex	-4.66						0.00
Return on difference in final year capex	-2.88						0.00
Closing capital base	338.35	349.66	361.07	366.86	371.39	376.99	382.31

4.2 Projected capital base for 2021-26

The capital base for the 2021-26 regulatory period has been forecast in accordance with Division 4 (r.78) of the Rules using the AER's PTRM (see Appendix 4.2). Within the PTRM, the process to calculate the capital base for each year of the 2021-26 regulatory period is to take the opening value of the capital base and add forecast net capex, deduct forecast depreciation and add forecast inflation. Each element of the forecast capital base calculation is discussed below and the capital base results for the 2021-26 period are presented.

4.2.1 Opening value of the capital base

The opening value of the capital base for 2021/22 is taken directly from the RFM. As presented in Table 4.4, the opening value of the capital base in nominal terms for 2021/22 (equal to the closing value of the capital base for 2020/21) is $382.31 million.

4.2.2 Forecast net capex

Forecast net capex is calculated as forecast capex less forecast disposals and forecast customer contributions. These values are presented in Table 4.5 and discussed in detail in Attachment 3.

Table 4.5 Forecast net capex

$ million nominal	2021/22	2022/23	2023/24	2024/25	2025/26
Forecast capex	15.70	15.74	13.24	12.24	11.91
Forecast disposals	0.00	0.00	0.00	0.00	0.00
Forecast customer contributions	0.09	0.10	0.10	0.11	0.12
Forecast net capex	**15.60**	**15.64**	**13.13**	**12.13**	**11.80**

4.2.3 Forecast depreciation

Division 6 (r89) of the Rules sets out the depreciation criteria, specifying that the depreciation schedule should be designed:

(a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and

(b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and
(c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and
(d) so that an asset is depreciated only once; and
(e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.

In normal operating circumstances, Evoenergy considers that the engineering lives of assets best reflect the economic lives of assets and depreciation schedules based on these lives would allow a service provider to secure sufficient funds to meet its financing needs and other costs. However, the current policy environment does not reflect normal operating circumstances. As explained in section 2 of our access arrangement information overview, the ACT Government's climate change strategy for 2019-25 includes the development of a plan for achieving net zero emissions from gas use by 2045, including an action to set timelines with appropriate transition periods for phasing out new and existing gas connections. While Evoenergy is committed to working with the ACT Government and other stakeholders to develop a transition roadmap for the future of the gas network, including the consideration of renewable gas, the future is uncertain.

If the ACT Government decides to implement further policy measures that result in the gas network being phased out, then Evoenergy's gas network assets will become obsolete before the end of their engineering lives. This is particularly the case for new investment, where engineering lives can be 50 to 80 years in length – well beyond the ACT Government's target date of 2045 for achieving new zero emissions. This would leave significant investments unrecovered, an outcome inconsistent with the objectives and principles of the regulatory framework, which seeks to provide businesses with a reasonable expectation that they will recover their costs.

In this environment of uncertainty, Evoenergy considers it prudent to shorten the useful lives of some new, long-lived assets for calculating forecast depreciation to reflect the likelihood that they may become obsolete before the end of their engineering lives. Specifically, this proposal involves shortening the asset lives of three asset categories for new investment;

- High pressure mains from 80 years to 50 years
- Medium pressure mains from 50 to 30 years
- Medium pressure services from 50 to 30 years

In Evoenergy's view, the Rules specifically allows for adjustments to asset lives to ensure that they remain reflective of economic lives and so as to allow a service provider sufficient funds to meet its financing and other costs. Given the legislated target for zero net emissions in the ACT by 2045, Evoenergy considers its proposal to reduce asset lives for some categories of new investment to be consistent with the Rules. It is important to note that Evoenergy's proposal to reduce asset lives for only some asset categories and only for new investment only goes part way to fully depreciating the capital base by 2045.

Evoenergy notes that the AER, in its recent final decision on Jemena's gas distribution network, did not accept Jemena's proposal to shorten asset lives for new expenditure on

selected asset classes.[1] The AER disagreed with Jemena's assessment of the timing and extent of asset stranding on its network. Specifically, the AER noted that the NSW Government has not adopted a position which is likely to end use of gas in NSW by 2050, nor are there specific policies directed at curtailing gas consumption. The AER also noted that Jemena's capex proposal was based on a 'business as usual' approach, which is not consistent with an expectation of declining demand across its entire network.

Evoenergy considers its position to be significantly different to that of NSW distributors. The ACT Government has legislated a zero net emissions target for 2045 and has set out its Climate Change Strategy for 2019-25, which includes the development of a plan to phase out all new and existing gas connections and a campaign to support the transition from gas to electric options[2]. In response to the ACT Government's position on reducing emissions from gas, Evoenergy's proposal is not 'business as usual'. Rather, Evoenergy is proposing to minimise expenditure over the 2021-26 access arrangement period, including no market expansion in new ACT suburbs, while it develops a roadmap for the future of the gas network in the ACT and surrounding areas. In Evoenergy's view, the specific circumstances in the ACT give rise to significant asset stranding risk that warrant the shortening of asset lives as proposed.

To further support this proposal, Evoenergy engaged Incenta Economic Consulting (Incenta) to prepare advice on the stranded asset risk faced by Evoenergy and the role shortening asset lives for new investment can play in reducing this risk. This builds on advice Incenta prepared for Jemena Gas Networks, which examined the economic principles for managing stranded asset risk in competitive markets and for regulated services and discussed how stranded asset risk can be managed with the current regulatory framework.[3]

The full Incenta report is provided as Appendix 4.3 and includes the following key conclusions:

- Providing a reasonable expectation of cost recovery is a pre-requisite for there being an incentive to invest in both regulated and competitive markets.
- Two principle mechanisms exist in any market for providing cost recovery in the presence of stranded asset risk:
  - *Removing*: which is removing, or substantially reducing, the prospect of a stranding event occurring; and
  - *Compensating*: allowing the stranding risk with the business to remain but with the business being compensated for bearing this risk.
- Evoenergy faces material stranded asset risk under the current regulatory asset lives, and the AER has been clear that the rate of return it provides does not contain compensation for this risk. Accordingly, a change to regulatory settings is required to provide Evoenergy with a reasonable opportunity to recover efficient costs and hence preserve incentives for investment.

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[1] AER 2020, Attachment 4: Regulatory depreciation | Final decision – Jemena Gas Network (NSW) Ltd Access Arrangement 2020-25.
[2] ACT Government 2019, ACT Climate Change Strategy 2019-25, September, p. 10.
[3] Incenta Economic Consulting 2020, *JGN revised 2020-25 access arrangement proposal – Attachment 8.3 Response to the AER's draft decision - Using asset lives to manage stranded asset risks*

- An absence of incentives for efficient investment may manifest in an inefficient substitution of capital and operating expenditure, inefficient deferral of asset replacement and/or an avoidance of discretionary projects that would benefit customers, all of which is detrimental to the long term interests of customers.
- Advancing depreciation is the preferred method for addressing stranded asset risk for regulated entities, particularly for Evoenergy, for two reasons:
  - It does not create any windfall gains or losses and so is NPV neutral; and
  - The circumstances associated with the expected end of life for the assets means that relying on compensation would likely lead to similar prices to advancing depreciation but with the prospect that windfall gains or losses are created given uncertainty as to the exact timing of standing and the remaining possibility for transition to hydrogen or other net zero emitting gas.
- The most critical factor for advancing depreciation for Evoenergy is that action is taken as early as possible. This is to preserve incentives for investment, ensure a fairer outcome for customers and to recognise the fact that the consequence of acting late are asymmetric (ie at some point it will become too late either to remove or properly compensate for stranding risk).
- In terms of acting early, Evoenergy's current proposal to shorten the regulatory lives for only new investments is intended as a first step and will still leave Evoenergy exposed to a material proportion of its assets being stranded. Accordingly, the next steps should be contemplated and set out as early as possible.
- Evoenergy's proposal for the recognition of stranded asset risk is consistent with the regulatory framework. It is permitted under the Rules and is consistent with the promotion of the National Gas Objective and revenue and pricing principles in the National Gas Law.
- In its recent final decision for Jemena, while the AER clearly stated it supports the principles that a firm should expect to earn a normal return on investment and that accelerated depreciation is an appropriate tool for managing stranding risk, it set the threshold for evidence too high. Nevertheless, given the ACT Government's policy position, Evoenergy's circumstances meet the high threshold for evidence set by the AER.

Consistent with Incenta's conclusions and as a first step in managing the asset stranding risk it faces, Evoenergy has adopted the asset lives presented in Table 4.6 below. Evoenergy has adopted the straight-line depreciation methodology to calculate depreciation, as set out in the AER's PTRM, and has made no adjustment to the remaining lives of existing assets, with these values taken from the RFM.

The resulting forecast depreciation used to forecast the capital base for the 2021-26 regulatory period is presented in Table 4.7. Evoenergy's proposal to shorten asset lives results in forecast depreciation being $0.7 million (2020/21 dollars) higher over the 2021-26 regulatory period than it would have been with no change to asset lives.

Evoenergy's forecast depreciation for the 2021-26 period is $6.5 million higher than in the current access arrangement period. This is largely due to increased expenditure on metering during both the current and forthcoming access arrangement periods. Metering has a relatively short asset life (15 years) and while some of Evoenergy's metering expenditure is associated with market expansion, the majority (78 per cent) involves meter renewals.

Table 4.6 Proposed asset lives

	Remaining life	Standard life
HP Mains	60.4	50
HP Services	34.4	50
MP Mains	23.9	30
MP Services	36.0	30
TRS & DRS - Valves & Regulators	8.4	15
Contract meters	6.0	15
Tariff meters	10.7	15
Regulatory costs	5.0	5
IT System	5.0	5

Table 4.7 Forecast depreciation

$ million nominal	2021/22	2022/23	2023/24	2024/25	2025/26
Forecast depreciation	-15.91	-17.11	-18.39	-19.54	-20.65

4.2.3.1 CONSUMER FEEDBACK ON DEPRECIATION

Evoenergy received a number of comments on its approach to depreciation in response to its GN21 draft plan.

The CCP24's submission stated that:

> *At this stage we do not support the proposal for accelerated depreciation. We do not understand why customers should bear a risk that best sits with the business owners and the ACT Government. The ACT Government as a 50% owner of Evoenergy is in a unique position. Government policy is the driver of any stranded asset risk and associated call for accelerated depreciation[4].*

Evoenergy agrees with the CCP24 that it is Government policy responding to the need for urgent climate change action that is the driver of the potential asset stranding and Evoenergy's consequent proposal to accelerate depreciation of some assets. At the centre of the Government's policy is the long-term interests of ACT consumers. Specifically, the Government's target of zero net emissions by 2045 is aimed at improving the social well-being of current and future generations of consumers. While the Rules do not deal specifically with the costs associated with Government social policies, it would seem consistent with economic efficiency that the parties that benefit from those policies contribute to the costs of implementing those policies. The suggestion by CCP24 that the costs associated with asset stranding resulting from Government policy sit entirely with business owners seems inconsistent with the efficient recovery of social policy costs. Even if it were appropriate for Evoenergy to bear the risk associated with asset stranding, the current regulatory framework prevents Evoenergy being appropriately compensated for this risk, as the allowed rate of return must be calculated in accordance with the rate of return instrument.

[4] CCP24 2020, Advice to the Australian Energy Regulator on Evoenergy Draft Plan, April, p.20.

Further, the suggestion by CCP24 that the ACT Government's 50 per cent ownership of Evoenergy puts it in a unique position does not appear to recognise that ultimately, the ACT Government must recover its costs from ACT consumers. If the costs associated with stranded assets are not recovered through energy charges, then the Government must adopt an alternative mechanism to recover these costs from ACT consumers.

In contrast to the CCP24, Mr Cox [5] noted that the phasing out or replacement of Evoenergy assets requires compensation and a qualified, independent group could be established to examine how this could be achieved.

The Conservation Council[6] stated that the entire network needs to be depreciated by 2030, reflecting its view that gas should be fully phased out by this time. It argued that Evoenergy should be planning to decommission the network "right now in its 2021-26 access arrangement plan" rather than waiting another six years.

The submission from Better Renting[7] supported accelerated depreciation on the basis that this allows costs to be distributed between a greater number of households. However, Better Renting suggested that accelerated depreciation should also be applied to existing assets:

> *If Evoenergy anticipates assets becoming "obsolete" before the end of their technical life, this should apply consistently[8].*

ACTCOSS recommended that Evoenergy undertake an additional 'deep dive' with stakeholders on the issue of depreciation to inform its proposal to the AER. ACTCOSS holds the view that it is not reasonable to expect consumers to bear the full risk of Evoenergy's gas assets becoming stranded due to the perceived climate change mitigation risks. ACTCOSS notes that its primary concern is low-income gas consumers who are unable to afford to transition from gas are at a significant risk of being stuck on the gas network, facing even higher gas prices as costs are spread over a smaller customer base. ACTCOSS noted a report from California that discussed the equitable distribution of financial risk including considerations regarding the balance between future and current customers, electric and gas customers and high and low income customers.

Given the timing of submissions on the Draft GN21 Plan and the limitations on face-to-face meetings due to COVID-19 restrictions, a 'deep dive' on depreciation was not possible prior to the submission of Evoenergy's access arrangement. However, if the AER's draft decision provides the potential for accelerated depreciation to be implemented, Evoenergy would welcome further consumer consultation on this issue.

The concerns raised by ACTCOSS are exactly the reason that Evoenergy is proposing to implement accelerated depreciation. By bringing forward the recovery of asset costs, there are more customers to spread those costs over, avoiding the situation outlined by ACTCOSS where people 'stuck' on the gas network face even higher gas prices. Evoenergy agrees with ACTCOSS that the distributional issues identified in the Californian example need careful consideration but they do not eliminate the need for a solution to the recovery of stranded asset costs.

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[5] Cox, Kevin 2020, Stranded Assets, April.
[6] Conservation Council ACT Region 2020, Submission to Evoenergy regarding Draft GN21 Plan, April, p.5.
[7] Better Renting 2020, Evoenergy draft gas plan, April.
[8] Ibid, p.6.

While Evoenergy remains optimistic about the future of renewable gas (reflected in its proposal to take a very conservative approach to accelerating depreciation), there remains a clear possibility that the ACT Government will require the gas network to be shut down. This potential future pathway cannot be ignored. In Evoenergy's view, it is important that the AER provides certainty to businesses, consumers and other stakeholders by explaining how such asset stranding will be addressed within the bounds of the current NGL and Rules, or give consideration to what rule changes may be required to respond to this serious dilemma.

4.2.4 Forecast inflation

Forecast inflation is estimated using the AER's methodology based on Reserve Bank of Australia (RBA) forecasts. A placeholder value of 2.40 per cent has been used for the purpose of this proposal. The forecast inflation rate is applied to the opening capital base to calculate the value of inflation for each year (see Table 4.8).

Evoenergy notes the AER's use of the trimmed mean inflation forecast from the RBA for use in the 2020-25 network revenue determinations due to the unique economic circumstances resulting from COVID-19. Evoenergy understands that the AER will consider what approach to take in the future as part of its wider methodological review for estimating expected inflation. Evoenergy continues to hold the view that the AER's current methodology, which results in forecasts significantly above the observed inflation rates and market expectations, needs to be reconsidered[9]. Given the expected timing of the review, any changes would apply to Evoenergy's access arrangement decision.

Table 4.8 Forecast inflation

$ million nominal	2021/22	2022/23	2023/24	2024/25	2025/26
Forecast inflation	9.17	9.39	9.58	9.68	9.73

4.2.5 Forecast capital base for 2021-26

Based on the elements of the capital base discussed above, the forecast capital base for each year of the 2021-26 regulatory period is presented in Table 4.9.

Table 4.9 Forecast capital base

$ million nominal	2021/22	2022/23	2023/24	2024/25	2025/26
Opening capital base	382.31	391.18	399.09	403.41	405.68
Net capex	15.60	15.64	13.13	12.13	11.80
Forecast depreciation	-15.91	-17.11	-18.39	-19.54	-20.65
Forecast inflation	9.17	9.39	9.58	9.68	9.73
Closing capital base	391.18	399.09	403.41	405.68	406.57

4.3 Capital base metrics

In response to Evoenergy's Draft Plan, the CCP24 recommended that Evoenergy provide additional high-level data to assist stakeholders in analysing the regulatory building blocks. For the capital base, the CCP24 recommended the inclusion of capital base growth both in total and on a per customer basis.

[9] See ActewAGL 2017, Submission on the regulatory treatment of inflation, June.

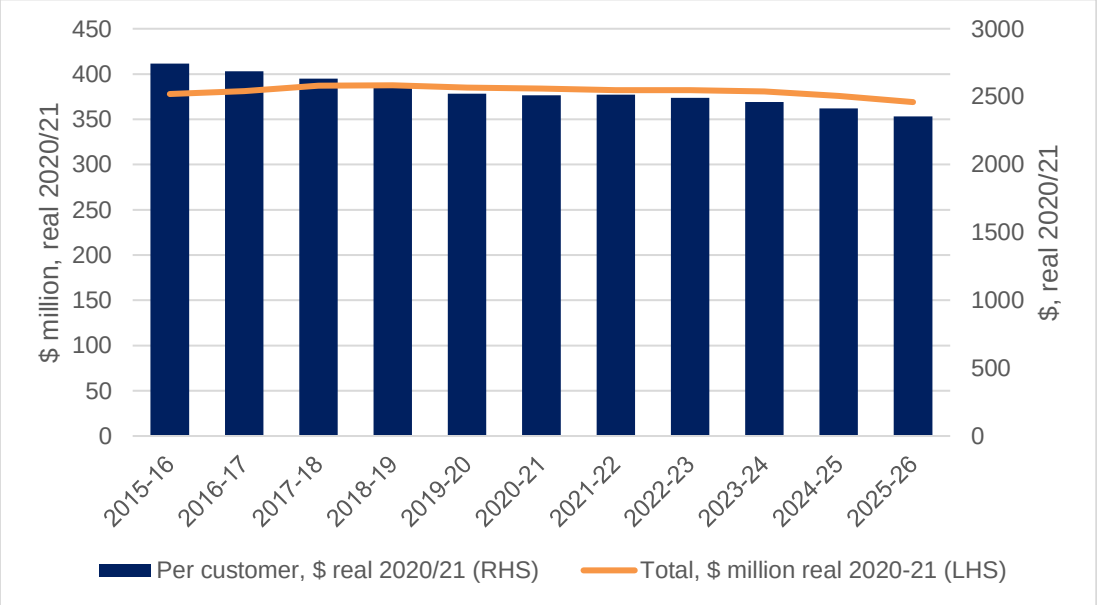
In response to this recommendation, Evoenergy provides the value of the opening capital base for the current and forthcoming regulatory periods both in nominal and real terms and both in total dollars and on a per customer basis in Table 4.10 below.

Table 4.10 Opening capital base

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Total, $ million nominal	338	350	361	367	371	377	382	391	399	403	406
Total, $ million real 2020/21	378	381	387	388	385	384	382	382	381	376	369
Per customer, $ nominal	2455	2465	2456	2427	2432	2465	2514	2550	2581	2591	2588
Per customer, $ real 2020/21	2743	2687	2633	2564	2521	2510	2514	2490	2462	2413	2354

To compare the change in the value of the capital base over time, it is useful to compare the real value of the capital base. This ensures a like-for-like comparison by removing the effects of inflation. Figure 4.1 below presents the real opening value of the capital base, both in total dollars and on a per customer basis from 2015/16 to 2025/26. Over this period, the total value of the capital base has declined by 2 per cent and the capital base per customer has declined by 14 per cent.

Figure 4.1 Change in value of the opening capital base over time



Shortened forms

Term	Meaning
AA	Access Arrangement
ACT	Australian Capital Territory
ACT climate change strategy	ACT Government's Climate Change Strategy 2019-25
ACTCOSS	ACT Council of Social Service
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ANU	Australian National University
ARENA	Australian Renewable Energy Agency
BISOE	BIS Oxford Economics
CABS	A Jemena Ltd proprietary system providing retailer billing, demand customer management, network balancing and retailer nomination services.
CALD	culturally and linguistically diverse (community)
capex	capital expenditure
CCP, CCP24	the AER's Consumer Challenge Panel (number 24)
CEG	Competition Economists Group
CEPA	Centre for Efficiency and Productivity Analysis (University of Queensland)
CESS	Capital Expenditure Sharing Scheme
CIE	Centre of International Economics
CIT	Canberra Institute of Technology
CPI	consumer price index
DAE	Deloitte Access Economics
DAMS	Distribution asset management services (agreement)
DC	Demand Capacity Tariff
DT	Demand Throughput Tariff
E2G	Electricity-to-gas
EEIS	Energy Efficiency Improvement Scheme
ECM	Efficiency Carryover Mechanism
ECRC	Energy Consumer Reference Council
EGWWS	electricity, gas, water and waste services (sector)
EI	Economic Insights
EIL	Energy Industry Levy
ETC	Estimated cost of corporate income tax
EPSDD	ACT Environment, Planning and Sustainable Development Directorate

GDBs	gas distribution businesses
GN21	Evoenergy gas network access arrangement 2021–26
GJ	gigajoule = 10^9 joules
GWh	gigawatt hour
I&C	Industrial and commercial
ITAUF	Information Technology Asset Utilisation Fee
km	kilometre
LPG	liquid petroleum gas
MDLs	Meter Data Loggers
NGL	National Gas Law
NGO	National Gas Objective
NSW	New South Wales
opex	operating expenditure
PFP	Partial Factor Productivity
PJ	petajoule = 10^{15} joules
PLS	Pressure Limiting Station
PPA	power purchase agreement
PTRM	post-tax revenue model
QPRC	Queanbeyan–Palerang Regional Council (local government authority)
RAB	regulatory asset base
RFM	roll-forward model
RIN	Regulatory Information Notice
Rules	National Gas Rules
SDRS	Secondary District Regulator Sets
TAB	tax asset base
TJ	terajoule = 10^{12} joules
UAG	unaccounted for gas
UNFT	Utilities Network Facilities Tax
VB	Volume Boundary (tariff class)
VI	Volume Individual (tariff class)