FINAL DECISION
Ausgrid
Distribution Determination

2019 to 2024

Overview

April 2019

AUSTRALIAN ENERGY REGULATOR

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Note

This Overview forms part of the AER's final decision on the distribution determination that will apply to Ausgrid for the 2019–24 regulatory control period. It should be read with all other parts of the final decision.

As a number of issues were settled at the draft decision stage or required only minor updates, we have not prepared all attachments. The attachments have been numbered consistently with the equivalent attachments to our longer draft decision. In these circumstances, our draft decision reasons form part of this final decision.

In addition to this Overview, the final decision includes the following attachments:

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 7 – Corporate income tax

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 12 – Classification of services

Attachment 13 – Control mechanisms

Attachment 15 – Alternative control services

Attachment 18 – Tariff structure statement

Attachment A – Negotiating framework

Attachment B – Pricing methodology

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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
ANS	Ancillary network services
Augex	Augmentation capital expenditure
Capex	Capital expenditure
CCP/CCP10	Consumer Challenge Panel, sub-panel 10
CESS	Capital expenditure sharing scheme
CPI	Consumer price index
DMIA/DMIAM	Demand management innovation allowance (mechanism)
DMIS	Demand management incentive scheme
DUoS	Distribution use of system
EBSS	Efficiency benefit sharing scheme
ERW	Emergency recoverable works
F&A	Framework and Approach
NDSC	Negotiated distribution service criteria
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NGL	National Gas Law
NSW	New South Wales
Opex	Operating expenditure
PTRM	Post-tax revenue model
RAB	Regulatory asset base
RBA	Reserve Bank of Australia
Repex	Replacement capital expenditure
RFM	Roll forward model
SCS	Standard control services

Shortened form	Extended form
STPIS	Service target performance incentive scheme
TAB	Tax asset base
TSS	Tariff structure statement

About this decision

The Australian Energy Regulator (AER) works to make all Australian energy consumers better off, now and in the future. We regulate energy networks in all jurisdictions except Western Australia. We set the amount of revenue that network businesses can recover from customers for using these networks.

The National Electricity Law and Rules (NEL and NER) provide the regulatory framework governing electricity transmission and distribution networks. Our work under this framework is guided by the National Electricity Objective (NEO):[1]

> "…to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

Ausgrid is the electricity distribution network service provider for Sydney, the Central Coast and the Hunter Valley. On 30 April 2018, Ausgrid submitted its regulatory proposal for the 2019–24 regulatory control period, commencing 1 July 2019 to 30 June 2024. We released our draft decision for Ausgrid on 1 November 2018. In response, Ausgrid submitted a revised regulatory proposal on 8 January 2019. Stakeholder consultation on our draft decision and Ausgrid's revised regulatory proposal closed on 5 February 2019. This final decision is released on 30 April 2019.

The key component of our distribution determination for Ausgrid is the total revenue it can recover from customers for the provision of common distribution services (standard control services (SCS)): those used by most, if not all, of Ausgrid's customers.[2] This is our building block determination, and will form the basis of Ausgrid's distribution tariffs for the 2019–24 regulatory control period. Ausgrid's tariff structure statement (TSS) sets out the tariff structure through which it will recover its regulated revenue for SCS from customers.

Ausgrid also provides alternative control services (ACS), the costs of which are recovered from users of those services only, through a capped price on the individual service. These costs are considered separately to our revenue determination. We discuss Ausgrid's ACS in Attachment 15 to this final decision. Ausgrid has not

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1 NEL, s. 7.

2 Ausgrid's proposal also includes revenue for its dual function (transmission) assets, which will be recovered through TransGrid as the coordinating transmission network service provider for NSW.

proposed to provide any services on a negotiated basis in the 2019–24 regulatory control period.[3]

Ausgrid's distribution business also operates dual function assets, which are high-voltage transmission assets forming part of a distribution network.[4] Our framework and approach decision established that we would apply transmission pricing rules to Ausgrid's dual function assets.[5] A transmission pricing methodology forms part of our regulatory determination for Ausgrid (section 5.5).[6]

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3 Our distribution determination for Ausgrid includes an approved negotiating framework and negotiated distribution service criteria, as required by the NER. Because Ausgrid has not included any negotiated services in its proposal, these elements of our determination will be inactive for the 2019–24 regulatory control period.

4 Ausgrid, *Ausgrid's submission on the AER's preliminary framework and approach paper*, April 2017, p. 20.

5 AER, *Framework and approach: Ausgrid, Endeavour Energy and Essential Energy: Regulatory control period commencing 1 July 2019*, July 2017, p. 82. NER, cl.6.25(b)

6 NER, cl. 6A.2.2(4).

1 Our final decision

Our final decision allows Ausgrid to recover $7,703.3 million ($ nominal, smoothed) from its customers for the 2019–24 regulatory control period, commencing 1 July 2019 to 30 June 2024.

As a result of this decision, the cost of electricity distribution network services in Sydney, the Central Coast and the Hunter Valley will be around 9.1 per cent ($ nominal) lower on average by 30 June 2024 compared to the current level.

Distribution network costs represent around 36 per cent of total electricity bills on average in Sydney, the Central Coast and the Hunter Valley.[7] This means that the average annual electricity bill for a residential or small business customer on Ausgrid's network is estimated to be around 3.3 per cent ($ nominal) lower by 30 June 2024 compared to the current level, holding all other components of the bill constant.

This outcome is $237.2 million ($ nominal, smoothed) lower than our draft decision, and $270.6 million ($ nominal, smoothed) lower than Ausgrid's revised proposal, primarily as a result of the lower rate of return applied in our final decision. Having assessed Ausgrid's revised proposal, we consider our final decision is justified as it:

- builds on the operational efficiencies Ausgrid has achieved in response to our lower approved revenues for the current 2014–19 regulatory control period and locks in ongoing efficiency gains for future regulatory control periods for the benefit of customers
- is reflective of the views of consumers following further engagement, particularly in respect of Ausgrid's capex requirements and approach to forecasting operating expenditure (opex) productivity growth.

Increased efficiency

This final decision for the upcoming 2019–24 regulatory control period continues the momentum built up over the current 2014–19 period as Ausgrid has become more efficient and more customer focused, so it is better able to provide the services consumers want at the price they value. The amount of revenue Ausgrid could recover from its customers fell from $10,973.6 million ($2018–19, smoothed) for the 2009–14 regulatory control period to $9,475.8 million ($2018–19)[8] for the 2014–19 period (a 13.6 per cent reduction).

The 2014–19 determination challenged Ausgrid to not only deliver network services more efficiently to its customers through prudent and efficient operating and capital expenditures, but to do so without compromising network safety and reliability. At the

[7] Including Ausgrid's dual function assets.

[8] Based on the 2014–19 remade final decision.

same time, Ausgrid was also navigating its way through the complex process of partial privatisation.

In response, Ausgrid rationalised its business operations commensurate with lower recoverable revenues for 2014–19.[9] Over the past four years, we have seen Ausgrid continue to improve its efficiency through a range of measures, including a 34 per cent reduction in staffing levels.[10]

Today, Ausgrid has become a more efficient network service provider with capability to operate and deliver network services from a lower revenue base — as evidenced by this final decision which accepts Ausgrid's revealed opex as a starting point for its forecast expenditure for the next five years. These savings are now locked in for consumers.

This final decision approves opex of $2,323.8 million ($2018–19) for the 2019–24 regulatory control period, which is the same amount proposed by Ausgrid in its revised proposal and $311.1 million (11.8 per cent) lower than for the 2014–19 period.

In terms of capital expenditure (capex), we accept a total net capex of $2,638.4 million ($2018–19) for the 2019–24 regulatory control period, which is the same amount proposed by Ausgrid in its revised proposal and $138.1 million (5 per cent) lower than for the 2014–19 period. The reduction in capex compared to previous regulatory control periods helps to ease pressure on Ausgrid's regulatory asset base (RAB) and the revenue it is entitled to recover from customers.

Listening to customers

As well as increasing efficiency to drive lower costs, Ausgrid has also improved its approach to consumer engagement, though more can be done.

Improvements initially made in Ausgrid's approach to customer engagement for its 2014–19 remittal proposal have flowed into its 2019–24 regulatory proposal development. For example, its 2019–24 proposal has been informed by several 'deep dive' workshops and ongoing bilateral meetings with consumer groups on the key aspects of its proposal, aimed at addressing the consumer priority areas of affordability, reliability and sustainability.

Our November 2018 draft decision for Ausgrid noted that in a number of respects, our decision agreed with Ausgrid on the key drivers identified through its earlier stakeholder engagement as influencing its revenue requirement for the 2019–24 regulatory control period. While Ausgrid's initial proposal proposed reductions to both opex and capex relative to the 2014–19 period, our draft decision set out a number of

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9 Adding further uncertainty to this environment would have been Ausgrid's legal challenge to the lower revenue we had approved for it for the 2014–19 regulatory control period. This matter was finalised in January 2019 following publication of our 2014–19 remade final decision (remittal) for Ausgrid, after our 2015 final decision was set aside.

10 Ausgrid, *Ausgrid's Regulatory Proposal, 1 July 2019 to 30 June 2024*, April 2018, p.124.

concerns where we considered Ausgrid had not justified its proposed expenditure based on the information available to us at the time.

Since our draft decision and prior to Ausgrid lodging its 2019–24 revised proposal in January 2019, Ausgrid made good use of the limited time it had by meaningfully engaging with consumer groups and our staff to narrow or eliminate the key areas of contention following our draft decision.

This is a clear example of the value to a network service provider from a comprehensively designed and well implemented consumer engagement program — in terms of successful passage through the regulatory determination process with a high degree of support from its stakeholders.

We are encouraged by the increasing number of network service providers that are devoting more resources to their respective consumer engagement programs, including greater emphasis on 'deep dive' workshops as part of their pre-lodgement engagement initiatives. Another positive development is the commitment of several network service providers to maintaining an open and ongoing dialogue with stakeholders throughout the regulatory control period, as opposed to engaging intensively once every five years when a regulatory proposal is being considered. By keeping the conversation going, constructive discussions around key and contentious issues could be had well before a regulatory proposal is finalised and submitted to us, with further possible refinements aired as part of our subsequent public consultation processes.

Helping to keep Ausgrid focussed during this critical time were several consumer groups. We are especially appreciative of Energy Consumers Australia (ECA), Public Interest Advocacy Centre (PIAC), Energy Users Association of Australia (EUAA) and our Consumer Challenge Panel (CCP10) for their strong engagement and commitment to obtaining beneficial outcomes for consumers. Their enduring commitment not only challenges network service providers to consider alternative options for the delivery of services at least cost to consumers, but also challenges us in terms of testing the robustness and clarity of our decisions. For example, consumer groups played a key role in helping to resolve Ausgrid's 2014–19 remittal, and also advocated strongly for an updated approach to forecasting opex productivity growth in our regulatory determinations — a matter we have addressed in this final decision for Ausgrid.

As already noted, Ausgrid mobilised its resources well over a short period time and clearly demonstrated in its 2019–24 revised proposal how it had incorporated the views of consumer groups following further engagement, particularly in respect of its capex requirements and approach to forecasting opex productivity growth. General feedback on Ausgrid's engagement approach from consumer groups suggests more meaningful engagement is required earlier in the regulatory process (such as part of 'deep dive' workshops) rather than compressing it near the end. Consumer groups have limited resources which they manage across several important consumer issues that are broader than energy alone.

What the decision means

Looking ahead, we estimate our 2019–24 final decision would mean that by the end of the 2019–24 regulatory control period (as at 30 June 2024):

- average network tariffs would decrease by around 9.1 per cent ($ nominal) for Ausgrid compared to the 2018–19 level (as at 30 June 2019)
- average annual electricity bills would decrease by around 3.3 per cent ($ nominal) for residential or small business customers on Ausgrid's network compared to the 2018–19 level (as at 30 June 2019), holding all other components of the bill constant.[11] This suggests that average annual bills would be around $67 and $156 lower for residential and small business customers, respectively.

In making this final decision, we have had regard to a range of sources including Ausgrid's revised proposal, submissions received as well as additional analysis undertaken and published by us. We are satisfied that the revenue we have determined that Ausgrid can recover from its customers for the 2019–24 regulatory control period is in the long-term interests of consumers and that its customers are paying no more than they should for safe and reliable electricity.

Other relevant decisions

This final decision incorporates the outcomes of three reviews progressed in parallel to our consideration of Ausgrid's 2019–24 regulatory proposal, namely:

- 2018 rate of return guideline review:[12] We released our final decision on this review on 17 December 2018. Legislative amendments to the National Electricity Law (NEL) and National Gas Law (NGL) that established the guideline as a binding instrument were made on 13 December 2018. As the instrument is binding, we have determined a rate of return using the approach set out in the instrument.
- Regulatory tax approach review:[13] We released our final report on this review on 17 December 2018. Our post-tax revenue model (PTRM) has been updated to implement the findings from this review, allowing for immediate expensing of forecast capex and applying the diminishing value method to calculate the tax depreciation for new assets.[14]
- Approach to forecasting opex productivity growth for electricity distributors review:[15] We released our final decision on 8 March 2019. Productivity growth is one element in the trend component of our opex forecasting approach. Our forecast of

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11 We estimate the expected bill impact by varying the distribution and transmission network charges in accordance with our final decision, while holding all other components constant. This approach isolates the effect of our final decision on the core distribution and transmission network charges, and does not imply that other components will remain unchanged across the regulatory control period.

12 AER, *Rate of return instrument*, 17 December 2018.

13 AER, *Final report – Review of regulatory tax approach*, 17 December 2018.

14 AER, *Distribution PTRM (version 4)*, April 2019.

15 AER, *Final decision – Forecasting productivity growth for electricity distributors*, 8 March 2019.

productivity growth is intended to capture the efficiency improvements distributors can make in providing distribution services. In our review, we determined that a prudent electricity distributor, acting efficiently, can achieve opex productivity growth of 0.5 per cent each year. Our 2019–24 final decision for Ausgrid accepts its revised proposal of 1.0 per cent per year forecast opex productivity growth from 2020–21 to 2023–24, which is more than necessary to capture improvements in good industry practice over these years and reflects what Ausgrid considers it can reasonably achieve.

Our 2019–24 final decision also incorporates the revenue impact of the finalised remittal. In 2015, Ausgrid appealed the 2014–19 revenue allowance we determined for it. In turn, the Australian Competition Tribunal set aside, and directed us to remake, our decision for Ausgrid. We remade our 2014–19 final decision in January 2019 following receipt of Ausgrid's remittal proposal in August 2018.[16] Key consumer groups, including our CCP10, were supportive of Ausgrid's remittal proposal and our decision. Ausgrid will return to customers from 1 July 2019 the difference between what it recovers under interim tariff undertakings and the 2014–19 revenue we have approved — now upwardly revised to $319.8 million ($2018–19) from the estimated $310.9 million ($2018–19) at the time of our January 2019 decision.

1.1 What is driving revenue?

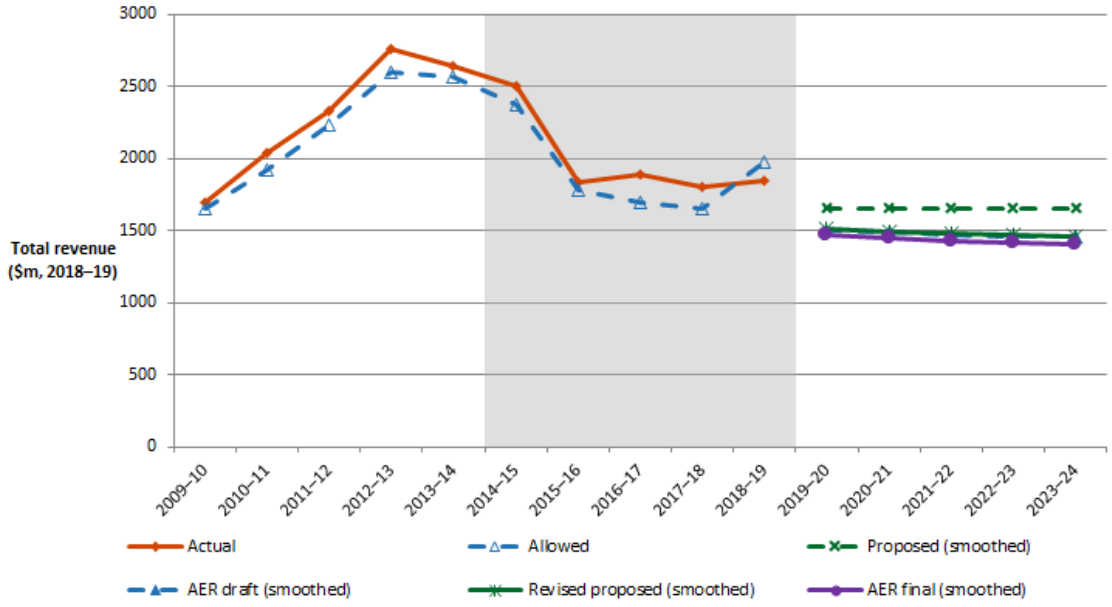
The changing impact of inflation over time makes it difficult to compare revenue from one period to the next on a like-for-like basis. To do this, we use 'real' values based on a common year (in this case, 2018–19[17]), which have been adjusted for the impact of inflation.

In real terms, the total revenue allowance in this 2019–24 final decision is 24.3 per cent lower than the allowed revenue in our 2014–19 remade final decision. Figure 1 shows real revenues decrease from 2018–19 levels by 20.6 per cent in 2019–20, followed by average decreases of 1.1 per cent per annum over 2020–24.

16 AER, *Final decision – Ausgrid 2014–19 distribution determination*, January 2019.

17 That is, 30 June 2019 dollar terms, based on Ausgrid's estimated actual revenue for 2018–19.

Figure 1 Revenue over time – distribution and transmission ($ million, 2018–19)



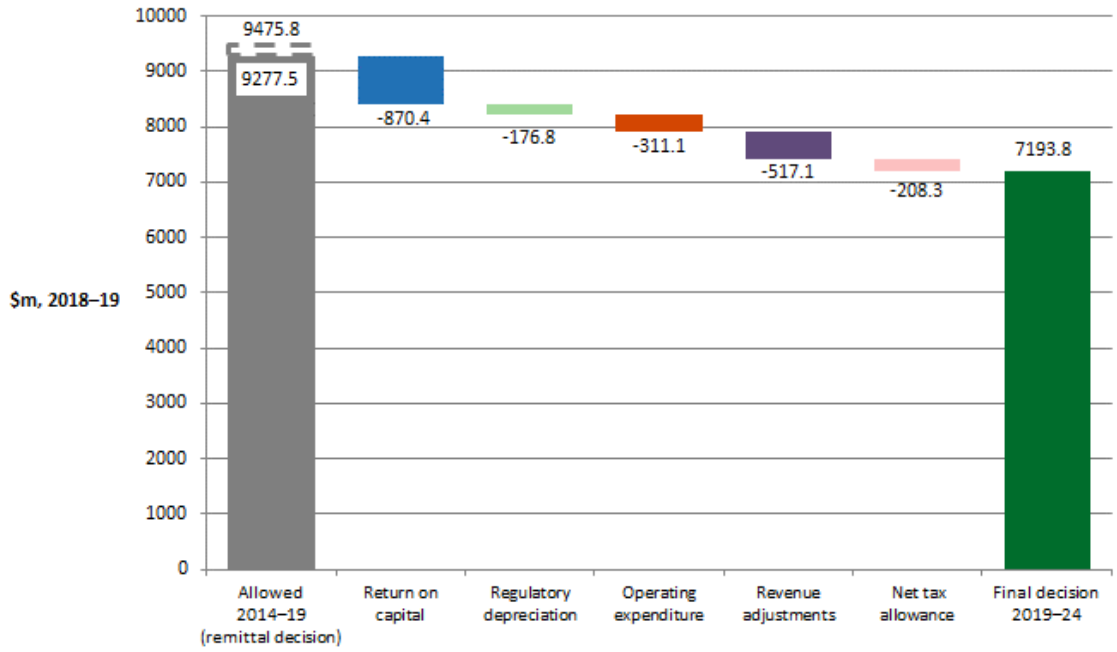
Source: AER analysis.

Ausgrid's allowed revenue for 2009–14 included provision for significant increases in capital investment to improve network security and reliability of supply in line with licence conditions imposed by the NSW Government at the time. Over that period, Ausgrid's regulatory asset base (RAB) grew by around 51.8 per cent in real terms. In a challenging investment environment during the global financial crisis, the rate of return (a forecast of the financing costs Ausgrid would require to attract efficient investment in its network) was set at 10.02 per cent. When applied to the growing RAB, this resulted in substantial increased revenues and higher prices for customers.

Lower approved revenues for the current 2014–19 regulatory control period reflect an improved investment environment. Approved rates of return have fallen from 10.02 per cent to 6.74 per cent. Evidence also suggests that distribution services could be provided at substantially lower cost than suggested by historical expenditure, while still maintaining safety and complying with reliability obligations. In addition, flatter electricity demand forecasts have meant that Ausgrid has been under less pressure to augment its network to meet the needs of additional customers or any increased demand from existing customers, and RAB growth has stabilised.

This 2019–24 final decision reflects a continuation of many of these trends. Figure 2 highlights the key drivers of the real change in Ausgrid's revenues from the current 2014–19 regulatory control period to this 2019–24 final decision, by reference to the revenue 'building blocks' that form the basis of our assessment.

Figure 2 Change in revenue from 2014–19 to 2019–24 – distribution and transmission ($ million, 2018–19)



Source: AER analysis.

Note: 'Allowed 2014–19 (remittal decision)' shows an additional $198.3 million (dashed grey outline) on top of the $9,277.5 million total. The $9,277.5 million is the sum of the revenue building blocks in the remittal PTRMs, and incorporates some of the remittal updates including opex and return on debt. The additional $198.3 million comprises $66.9 million for metering, ancillary network services (ANS) and emergency recoverable works (ERW) and $131.4 million representing further changes in the remittal PTRM calculations including: service target performance financial incentives, differences in CPI adjustments and negotiated cap settlement amounts.[18]

'Revenue adjustments' include increments/decrements accrued under incentives schemes, such as the capital expenditure sharing scheme (CESS) and demand management innovation allowance mechanism (DMIAM). It also includes a net return to customers of $319.8 million arising from our 2014–19 remade final decision for Ausgrid.

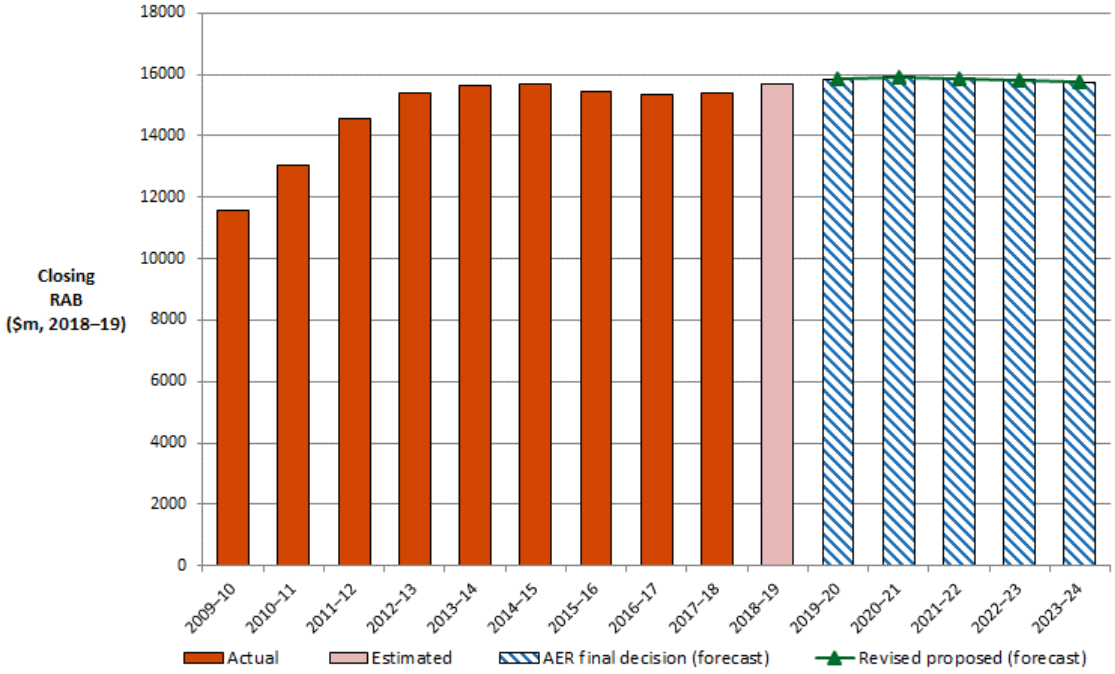
The return on capital (the product of the size of Ausgrid's RAB and the allowed rate of return) is the largest component of Ausgrid's regulated revenue. However, the return on capital under this final decision is lower than that for the current 2014–19 regulatory control period. Ausgrid's actual capex in the current 2014–19 period has been lower than forecast. Our 2019–24 final decision forecasts further capex reductions in the upcoming period. Our 2019–24 final decision applies the 2018 Rate of Return Instrument (2018 Instrument) and estimates a final rate of return on Ausgrid's RAB of

[18] Building block revenues are converted from nominal to real ($2018–19) values using both forecast and actual CPI. The 'Allowed 2014–19 (remittal final decision)' amount is converted from nominal to real ($2018–19) values only using actual CPI.

5.72 per cent[19] compared to the 6.74 per cent we previously set for the 2014–19 period.[20]

Ausgrid's RAB over the 2019–24 regulatory control period is projected to increase by 0.5 per cent, as shown in Figure 3.

Figure 3 Value of Ausgrid's RAB over time ($ million, 2018–19)



Source: AER analysis.

Over the 2019–24 regulatory control period, this combination of the lower rate of return, stabilising real RAB value and reductions in proposed capex going forward are working together to maintain downward pressure on revenues. These last two factors are also driving the lower regulatory depreciation allowance over the next five years.

Over the current 2014–19 regulatory control period, we have also seen Ausgrid make significant progress in improving its operating efficiency. At the time of our 2015 decision, we expressed concern that Ausgrid's opex was materially above efficient levels. The significant decrease in Ausgrid's opex over the current 2014–19 period is such that we are now in a position to accept Ausgrid's revealed (actual) opex at the end of the current period as a starting point for lower forecast expenditure for the next five years.

The large difference in revenue adjustments between the current 2014–19 regulatory control period and this 2019–24 final decision is due mainly to the 2014–19 remittal.[21]

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19 Nominal, vanilla weighted average cost of capital.

20 Based on the first year of the 2014–19 regulatory control period.

Our 2019–24 final decision includes a $319.8 million reduction to forward revenues. This represents the amount to be returned to customers to correct the difference between revenue recovered under interim price undertakings and our 2014–19 remade final decision.

1.2 Key differences between our final decision and Ausgrid's revised proposal

Our 2019–24 final decision does not allow the total revenue proposed by Ausgrid in its revised proposal. Total revenue approved in this 2019–24 final decision is $270.6 million ($ nominal) or 3.4 per cent lower than proposed by Ausgrid.

The biggest contributor to the difference between our 2019–24 final decision and Ausgrid's revised proposal is our change to the rate of return (and therefore the return on capital).

Our final decision applies the 2018 Instrument to calculate a rate of return of 5.72 per cent. This is lower than the revised proposed rate of return of 5.99 per cent. Also reflecting the 2018 Instrument, our final decision adopts a value of imputation credits (gamma) of 0.585.

1.3 Expected impact of our final decision on electricity bills?

The distribution network tariffs that will be set by reference to our final decision are only one contributor to electricity bills, and make up around 36 per cent[22] of the total retail electricity bills Ausgrid's customers pay.[23] Other components of the electricity bill include environmental policy costs, wholesale electricity costs and retail costs. Figure 4 illustrates the different components of the electricity supply chain. Each of these costs contributes to the retail prices charged to customers by their chosen electricity retailer.

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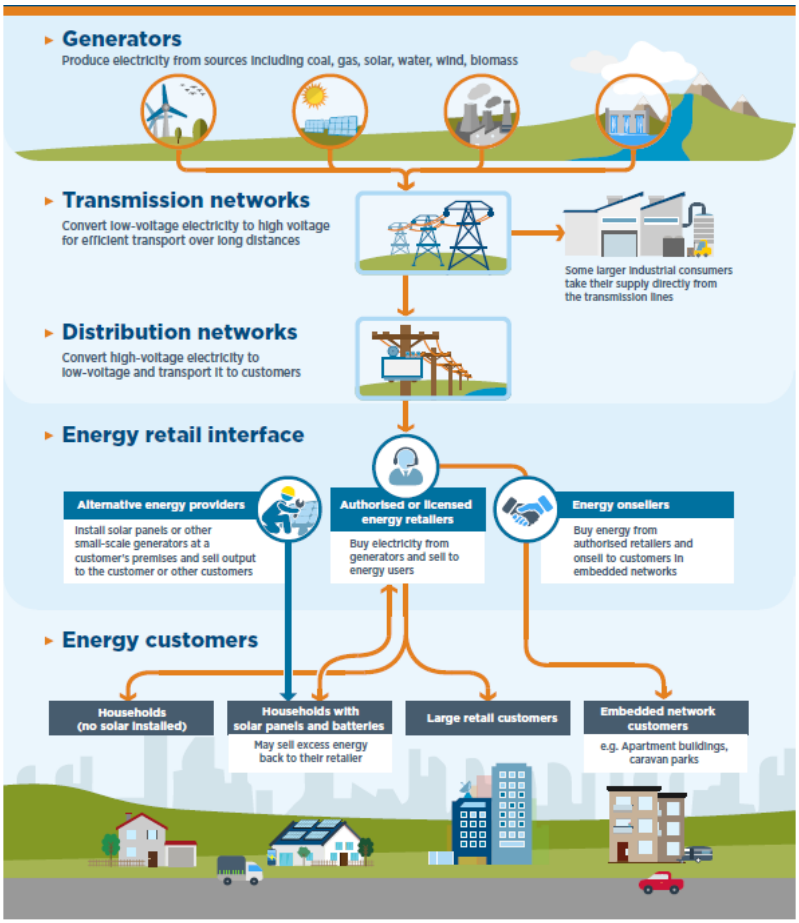
21 Ausgrid's proposed 2014–19 remittal PTRMs contained significant revenue adjustments, including amounts for the efficiency benefit sharing scheme (EBSS) and opex-related items that have been added as part of the remittal process. The 2014–19 inputs for the chart in Figure 2 re-allocates these opex-related items to the opex 'building block' for a more suitable period-to-period comparison. This period-to-period change for revenue adjustments is further accentuated because our 2019–24 final decision revenue adjustments include a significant (negative) amount to be returned to customers, reflecting Ausgrid's proposed resolution of the remittal on its 2014–19 revenues.

22 Including Ausgrid's dual function assets.

23 Ausgrid, *RIN 11.3 – RIN Workbook 1 – Consolidated,* 22 June 2018.

Figure 4 Electricity supply chain



Source: AER, *State of the Energy Market*, December 2018, p. 28.

Table 1 shows the estimated average annual impact of our final decision for the 2019–24 regulatory control period on electricity bills for residential and small business customers. These estimates suggest a 3.3 per cent ($ nominal) decrease over the five-year 2019–24 regulatory control period.

We estimate the expected bill impact by varying the distribution charges in accordance with our 2019–24 final decision, while holding all other components constant. This approach isolates the effect of our final decision on core distribution and transmission network tariffs from other parts of the bill. However, this does not imply that other components will remain unchanged across the regulatory control period.[24]

We expect the impact of our 2019–24 final decision would reduce the network component of the average annual residential electricity bill in 2023–24 by $67 or 3.3 per cent ($ nominal) from the current 2018–19 level. Had we accepted Ausgrid's

[24] It also assumes that actual energy consumption will equal the forecast adopted in our final decision. Since Ausgrid operates under a revenue cap, changes in energy consumption will also affect annual electricity bills across the 2019–24 regulatory control period.

revised proposal, the expected impact would have been a smaller decrease of $41 or 2.1 per cent ($ nominal).

Similarly, for an average small business customer on Ausgrid's network, we expect the average annual electricity bill in 2023–24 to decrease by $156 or 3.3 per cent ($ nominal) from the current 2018–19 level. Again, had we accepted Ausgrid's revised proposal, the expected impact would have been a smaller decrease of $97 or 2.1 per cent ($ nominal).

Table 1 Estimated contribution to annual electricity bills for the 2019–24 regulatory control period ($ nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
AER final decision						
Residential annual bill[a]	2013	1948	1949	1945	1946	1946
Annual change[c]		–65 (–3.3%)	1 (0.1%)	–4 (–0.2%)	1 (0%)	1 (0%)
Small business annual bill[b]	4687	4534	4538	4528	4530	4531
Annual change[c]		–152 (–3.3%)	3 (0.1%)	–10 (–0.2%)	2 (0%)	1 (0%)
Ausgrid's revised proposal						
Residential annual bill[a]	2013	1965	1971	1968	1970	1972
Annual change[c]		–48 (–2.4%)	6 (0.3%)	–3 (–0.2%)	2 (0.1%)	2 (0.1%)
Small business annual bill[b]	4687	4575	4589	4581	4586	4590
Annual change[c]		–111 (–2.4%)	13 (0.3%)	–7 (–0.2%)	5 (0.1%)	4 (0.1%)

Source: AER analysis; AER, Energy Made Easy website (standing offer); Ausgrid, *11.3 – RIN – Consolidated*, April 2018; AEMC *Residential electricity price trends report 2017 – New South Wales, December 2017*.

(a) Annual bill for 2018–19 is sourced from Energy Made Easy and reflects the average consumption of 5,000 kWh for residential customers in NSW (postcode 2000).

(b) Annual bill for 2018–19 is sourced from Energy Made Easy and reflects the average consumption of 10,000 kWh for small business customers in NSW (postcode 2000).

(c) Annual change amounts and percentages are indicative. They are derived by varying the network component of the 2018–19 bill amounts in proportion to yearly expected revenue for network services, divided by AEMO's forecast energy delivered for NSW/ACT for transmission and forecast energy for distribution as proposed by Ausgrid. Actual bill impacts will vary depending on electricity consumption and tariff class.

1.4 Ausgrid's consumer engagement

The NEO puts the long-term interests of consumers at the centre of our decisions as a regulator and the way Ausgrid operates its network. An important part of this is ensuring the regulatory proposal Ausgrid puts to us for approval reflects the NEO, and that Ausgrid has engaged with its consumers to determine how best to provide services that align with their long-term interests.

Consumer engagement in this context is about Ausgrid working openly and collaboratively with consumers and providing opportunities for their views and preferences to be heard and to influence Ausgrid's decisions. In the regulatory process, stronger consumer engagement can help us test service providers' expenditure proposals, and can raise alternative views on matters such as service priorities, capex and opex proposals and tariff structures.

Commencing in late-2016, Ausgrid's engagement with consumers on its 2019–24 initial and revised proposals have included:[25]

- focus groups and deliberative forums
- a quantitative survey and online forums
- meetings with its Customer Consultative Committee
- establishment of a Reset Working Group, Revised Proposal Working Group and Pricing Working Group
- a Network of the Future Forum with customer advocates and external experts
- meetings with local government representatives on street lighting and tree trimming, and with electricity retailers on tariff structures.

While this program of engagement has been recognised as an improvement from Ausgrid's engagement at the time of our last decision, there is room for further development.

In commenting on Ausgrid's 2019–24 initial regulatory proposal, our CCP10 observed:[26]

> "Some of the excellent engagement by Ausgrid…was undone by [an initial proposal] that did not reflect consumer input as strongly as it should have."

ECA added:[27]

> "…there is clearly further work needed by the senior management team in Ausgrid to develop a culture which supports authentic engagement over time."

EUAA went on to suggest that:[28]

> "…the consultation did not focus on identifying and addressing consumer needs and preferences and concerns with proposed actions. Rather, we consider that Ausgrid's process was intended to and did present company preferences and obtain endorsement from consumer bodies based on

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25 Ausgrid, *Ausgrid and our customers, Executive Summary*, April 2018, pp. 10-11.

26 CCP, *CCP10 Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24*, August 2018, p. 6.

27 ECA, *Ausgrid Regulatory Proposal 2019-24, Submission to the AER Issues Paper*, August 2018, p. 6.

28 EUAA, *EUAA Submission – AER Issues Paper – NSW Electricity Distribution Determinations; Ausgrid, Endeavour Energy, Essential Energy 2019–2024*, August 2018, p. 6.

> inadequate time or resources for consumer advocates to fully consider and respond to the matters under consideration."

In response to our draft decision, and reflective of the positive transformation occurring inside its business, Ausgrid noted in its 2019–24 revised regulatory proposal:[29]

> "In line with suggestions from customer advocates and the AER in its Draft Decision, we are evolving our approach to engagement, to better integrate customer preferences into our strategy and business decisions. We believe that being more transparent and inclusive will improve our decision making and improve customer outcomes."

In contrast to comments received in response to Ausgrid's initial proposal, consumer groups responded generally positively in their submissions on Ausgrid's revised proposal, noting a shift in Ausgrid's engagement style in pursuit of developing a revised proposal that could be supported by key consumer groups.

In commenting on Ausgrid's revised proposal, our CCP10 observed:[30]

> "CCP10 worked closely with ECA, PIAC and EUAA to develop a list of commitments made by Ausgrid through the latter stages of the engagement process that we believed consumers expected to see reflected in Ausgrid's Revised Proposal. Our goal in developing the commitments was to embed customer engagement in day-to-day operations…
>
> CCP10 congratulates Ausgrid on creating the opportunity (albeit very late in the 2019–24 process) to engage with customers and the AER in a new, more constructive and collaborative way. CCP10 acknowledges that Ausgrid's Revised Revenue Proposal reflects many commitments that are important to customers…
>
> Subject to the AER's analysis and review of the revised capex proposal of $2,690m…and a decision by the AER to adopt a trend productivity adjustment of at least 1% per annum, CCP10 believes that Ausgrid's Revised Revenue Proposal is capable of acceptance by the AER. We take this position because there is strong evidence that the proposal is in the Long-term Interest of Consumers, and that the Revised Proposal fairly and meaningfully reflects the outcomes of intensive and effective engagement with consumer groups."

ECA added:[31]

> "We have engaged heavily with Ausgrid since the release of the AER's draft decision, and our view that Ausgrid's revised proposal is capable of acceptance is based on our position that:

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29 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, p. 14.

30 CCP, *CCP10 Response to the Ausgrid Revised Regulatory Proposal 2019-24 and AER draft determination*, January 2019, pp. 26-27.

31 ECA, *Submission to the AER's Draft Decision on the Ausgrid 2019 to 2024 Distribution Determination*, February 2019, p. 1-3.

- Ausgrid will apply a productivity factor of no less than one per cent annually from FY21; and
- assessment by the AER that the proposed capital expenditure (capex) is efficient.

Important to our acceptance of the revised proposal are Ausgrid's broader commitments to us on the transparency of governance processes around investment and expenditure decision making…

Ausgrid has amended its proposal to better align with the long-term interests of consumers, including through a better approach to risk management and reductions in planned capex. Together, this improves affordability outcomes for consumers."

EUAA commented:[32]

"…subject [to] the AER accepting the revised capex proposal of $2.69b and a decision to adopt a trend productivity of at least 1% per year for 2021, Ausgrid's Revised Proposal is 'capable of acceptance' by the AER. The changes since October 2018 in Ausgrid's approach to consumer engagement and how this is reflected in their revised proposal have been remarkable. We congratulate them on this change to a much more collaborative and constructive approach and look forward to it developing further in the future."

PIAC noted:[33]

"Ausgrid has conducted substantial engagement on its capex proposal and, as a result, has substantively revised it since its initial proposal — reducing it from some $3.1 billion to $2.69 billion.

PIAC supports this as an example of good consumer engagement, although it left significant room for improvement in terms of execution — with the timing of this further engagement being particularly late in the development of the revised proposal."

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[32] EUAA, *Submission – NSW DNSP's 2019–24 Revenue Reset – January 2019*, February 2019, p. 2.

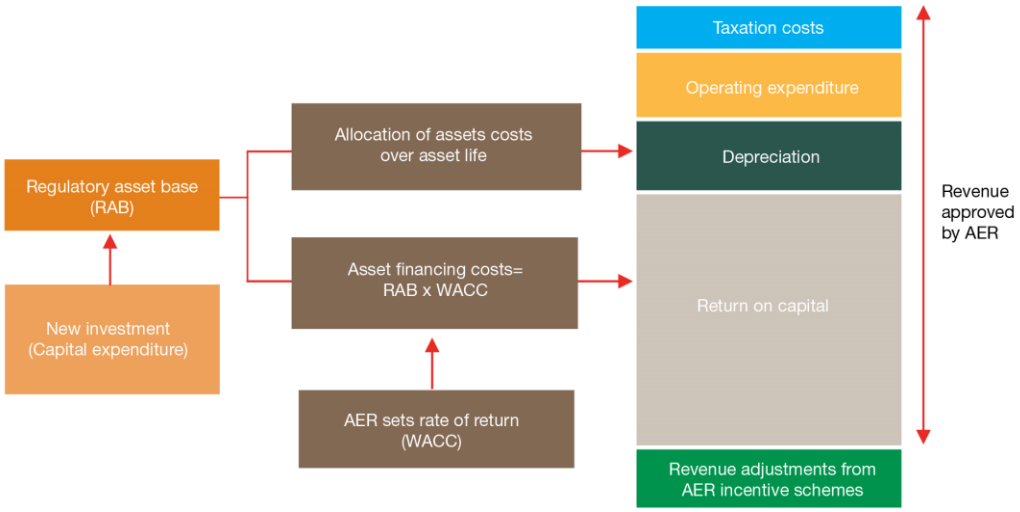
[33] PIAC, *PIAC submission to the AER's draft determinations and the NSW DNSPs' 2019–24 revised proposals*, February 2019, p. 9.

2 Key components of our final decision on revenue

The total revenue Ausgrid has proposed reflects its forecast of the efficient cost of providing network services over the 2019–24 regulatory control period. Ausgrid's revised proposal, and our assessment of it under the NEL and NER, are based on a 'building block' approach to determining a total revenue allowance which looks at five cost components (see Figure 5):

- return on the RAB (or return on capital, to compensate investors for the opportunity cost of funds invested in the business)
- depreciation of the RAB (or return of capital, to return the initial investment to investors over time)
    - The forecast capex approved in our decisions affects the projected size of the RAB and, therefore, the revenue generated from the return on capital and depreciation building blocks.
- forecast opex (the operating, maintenance and other non-capital expenses incurred in the provision of network services)
- revenue adjustments (including revenue increments/decrements resulting from the application of incentive schemes)
- estimated cost of corporate income tax.

Figure 5 The building block model to forecast network revenues



Source: AER 2018 State of the Energy Market report.

We use an incentive approach where, once regulated revenues are set for a five-year period, networks who keep actual costs below the regulatory forecast of costs retain part of the benefit. This benchmark incentive framework is a foundation of our regulatory approach and promotes the delivery of the NEO. Service providers have an

incentive to become more efficient over time, as they retain part of the financial benefit from improved efficiency. Consumers also benefit when efficient costs are revealed and a lower cost benchmark is set in subsequent regulatory periods.

In the sections below, we discuss the key components of our final decision on Ausgrid's revenue for the 2019–24 period in turn.

2.1 Regulatory asset base

The regulatory asset base (RAB) is the value of assets used by Ausgrid to provide regulated distribution and transmission network services. The value of the RAB substantially impacts Ausgrid's revenue requirement and the price consumers ultimately pay. This makes it a key issue for many stakeholders. Other things being equal, a higher RAB would increase both the return on capital and regulatory depreciation (return of capital) components of the revenue determination.

As part of our decision on Ausgrid's revenue for 2019–24, we make a decision on Ausgrid's opening RAB as at 1 July 2019 for its distribution and transmission (dual function assets) networks.[34] We use the RAB at the start of each regulatory year to determine the return on capital and regulatory depreciation (return of capital) building block allowances.

For our 2019–24 final decision, we have determined:

- opening RAB values of $13,779.4 million and $1,901.7 million ($ nominal) as at 1 July 2019 for Ausgrid's distribution and transmission networks, respectively
- forecast closing RAB values of $15,619.9 million and $2,143.1 million ($ nominal) as at 30 June 2024 for Ausgrid's distribution and transmission networks, respectively.

We accept Ausgrid's revised proposed opening RABs, subject to the following revisions:

- update the 2018–19 inflation rate with actual consumer price index (CPI) input for indexation in the RAB roll forward
- update the 2017–18 capex for amended allocations of movements in capitalised provisions.

The key difference between the forecast RAB outcome in our final decision and Ausgrid's revised proposal is our related final decision on the opening RAB.

Table 2 and Table 3 set out our final decision on the forecast RAB values for Ausgrid over the 2019–24 regulatory control period. Further details on Ausgrid's RAB can be found in Attachment 2.

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[34] NER, cl. 6.12.1(6). Ausgrid's dual function assets are high-voltage assets which support the broader NSW transmission network owned and operated by TransGrid. We apply transmission pricing to these assets.

Table 2 AER's final decision on Ausgrid's RAB for the 2019–24 regulatory control period – distribution ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24
Opening RAB	**13,779.4**	**14,272.8**	**14,677.7**	**15,010.7**	**15,315.1**
Capital expenditure[a]	586.8	525.4	479.4	476.5	476.0
Inflation indexation on opening RAB	334.1	346.1	355.9	364.0	371.4
Less: straight-line depreciation	427.5	466.6	502.3	536.1	542.6
Closing RAB	**14,272.8**	**14,677.7**	**15,010.7**	**15,315.1**	**15,619.9**

Source: AER analysis.

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

Table 3 AER's final decision on Ausgrid's RAB for the 2019–24 regulatory control period – transmission ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24
Opening RAB	**1,901.7**	**1,961.2**	**2,015.3**	**2,046.4**	**2,097.8**
Capital expenditure[a]	69.3	67.8	48.5	72.5	67.0
Inflation indexation on opening RAB	46.1	47.6	48.9	49.6	50.9
Less: straight-line depreciation	55.9	61.2	66.3	70.8	72.6
Closing RAB	**1,961.2**	**2,015.3**	**2,046.4**	**2,097.8**	**2,143.1**

Source: AER analysis.

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

2.2 Rate of return and value of imputation credits

The return each business is to receive on its RAB (the 'return on capital') continues to be a key driver of proposed revenues. We calculate the regulated return on capital by applying a rate of return to the value of the RAB.

We estimate the rate of return by combining the returns of the two sources of funds for investment: equity and debt. The allowed rate of return provides the business with a return on capital to service the interest on its loans and give a return on equity to investors.

An accurate estimate of the rate of return is necessary to promote efficient prices in the long-term interests of consumers. If the rate of return is set too low, the network business may not be able to attract sufficient funds to be able to make the required

investments in the network and reliability may decline. Conversely, if the rate of return is set too high, the network business may seek to spend too much and consumers will pay inefficiently high tariffs.

In December 2018, the NEL and NGL were amended to require us to make a binding rate of return instrument. As a binding instrument, it sets out the methodology for calculating the rate of return. The method must be capable of automatic application to all regulated network service providers without the exercise of discretion. The 2018 Rate of Return Instrument (2018 Instrument) specifies the return on debt as a formula, being the trailing average portfolio approach, and requires a business that is not already using a trailing average to transition to it over a 10-year period that is in the future.

As required under the NER, we have applied the 2018 Instrument and estimate an allowed rate of return of 5.72 per cent (nominal vanilla).[35] Ausgrid's revised proposal has adopted the 2018 Instrument.[36] Submissions to this process and also separate but concurrent regulatory processes support the immediate full application of the binding 2018 Instrument to all resets.[37]

Our calculated rate of return, in Table 4, will apply to the first year of the 2019–24 regulatory control period. A different rate of return will apply for the remaining regulatory years of the period. This is because we will update the return on debt component of the rate of return each year in accordance with the 2018 Instrument to use a 10-year trailing average portfolio return on debt that is rolled-forward each year. Our final decision is to accept Ausgrid's proposed return on equity and debt averaging periods because they satisfied the 2018 Instrument.[38]

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35 See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-guideline-2018/final-decision. The legislative amendments to replace the (previous) non-binding Rate of Return Guidelines with a binding legislative instrument were passed by the South Australian Parliament in December 2018. See, Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Act 2018 (SA). NGL, Chapter 2, Part 1, division 1A; NEL, Part 3, division 1B.

36 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, p. 132.

37 For example, see: EUAA, *Submission – NSW DNSP's 2019-24 Revenue Reset*, January 2019, p. 5; Origin, *Re: AER draft decision for NSW electricity distributors 2019-24*, 5 February 2019, p. 2; PIAC, *PIAC submission to the AER's draft determinations and the NSW DNSPs' 2019-24 revised proposals*, 7 February 2019, p. 9; ECA, *Submission to the AER's draft decision on the Endeavour Energy 2019 to 2024 distribution determination*, 15 February 2019, p. 2; CCP10, *CCP10 Response to the Ausgrid revised regulatory proposal 2019-24 and AER Draft Determination*, January 2019, p. 48; and CCP, *CCP10 Response to the Evoenergy Revised Regulatory Proposal 2019-24 and AER draft determination*, January 2019, pp. 43–44..

38 AER, *Rate of return instrument*, December 2018, clauses 7–8, 23–25; Ausgrid, *Attachment 7.02 - Averaging Period for cost of equity and debt – Public*, April 2018.

Table 4 Final decision on Ausgrid's rate of return (% nominal)

	AER draft decision (2019–24)	Ausgrid revised proposal (2019–24)	AER final decision (2019–24)	Allowed return over regulatory control period
Nominal risk free rate	2.66% [a]	2.70% [b]	2.04% [c]	
Market risk premium	6%	6.1%	6.1%	
Equity beta	0.6	0.6	0.6	
Return on equity (nominal post–tax)	6.3%	6.4%	5.70%	Constant (%)
Return on debt (nominal pre–tax)	5.73%	5.72%	5.74%[d]	Updated annually
Gearing	60%	60%	60%	Constant (60%)
Nominal vanilla WACC	5.96%	5.99%	5.72%	Updated annually for return on debt
Forecast inflation	2.42%	2.42%	2.42%	Constant (%)

Source: AER analysis.

[a] Calculated using a placeholder averaging period of 20 business days ending 31 July 2018.

[b] Calculated using a placeholder averaging period of 20 business days ending 16 November 2018.

[c] Final decision to accept proposed period of 25 February to 22 March 2019

[d] Final decision is to accept the proposed debt averaging periods and return on debt updated for latest averaging period.

Debt and equity raising costs

In addition to compensating for the required rate of return on debt and equity, we provide an allowance for the transaction costs associated with raising debt and equity. We include debt raising costs in the opex forecast because these are regular and ongoing costs. We include equity raising costs in the capex forecast because these costs are only incurred once and would be associated with funding the particular capital investments. Our final decision is to determine zero equity raising costs for Ausgrid. We accepted Ausgrid's revised opex proposal, therefore we do not provide substitute estimates of its debt raising costs using our benchmark approach.[39]

Imputation credits

Our final decision applies a gamma of 0.585 as per the binding 2018 Instrument.[40] This was the result of extensive analysis and consultation conducted as part of the

[39] See section 2.5.

[40] AER, *Rate of return instrument*, December 2018, clause 27.

2018 rate of return review.[41] Ausgrid's revised proposal has adopted the 2018 Instrument for gamma.[42]

2.3 Regulatory depreciation (return of capital)

Regulatory depreciation is the allowance provided so capital investors recover their investment over the economic life of the asset (return of capital). Ausgrid invests capital in large assets to provide electricity network services to its customers. The costs of these assets are recovered over the assets' useful lives, which in many cases can be 50 or more years. This means only a small part of the cost of such assets are recovered from customers upfront or in any year. The greater proportion is recovered over time through the depreciation allowance. The regulatory depreciation allowance is the net total of the straight-line depreciation less the inflation indexation adjustment of the RAB.

Our final decision on Ausgrid's revenue for 2019–24 includes a regulatory depreciation allowance of $787.3 million ($ nominal).[43] This is $5.5 million (or 0.7 per cent) lower than Ausgrid's revised proposal.

We have adopted the same approach to depreciation as Ausgrid, including its proposed asset lives which determine how quickly an asset class is depreciated (removed from the RAB). The difference between our final decision depreciation allowance and that proposed by Ausgrid reflects our final revenue decision on the opening RAB at 1 July 2019, including some amendments for asset reallocations. The final decision opening RAB, as we mentioned above, is lower than Ausgrid's revised proposal and is the main driver of the slight reduction in the depreciation allowance.

Table 5 and Table 6 show our final decision on Ausgrid's depreciation allowance for the 2019–24 regulatory control period.

Table 5 AER's final decision on Ausgrid's forecast regulatory depreciation allowance for the 2019–24 regulatory control period – distribution ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Straight-line depreciation	427.5	466.6	502.3	536.1	542.6	2,475.0
Less: inflation indexation on opening RAB	334.1	346.1	355.9	364.0	371.4	1,771.5
Regulatory depreciation	**93.3**	**120.5**	**146.4**	**172.1**	**171.2**	**703.5**

Source: AER analysis.

41 AER, *Rate of return instrument, Explanatory Statement*, December 2018, pp. 307–382.

42 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, p. 132.

43 This comprises $703.5 million for distribution assets and $83.8 million for dual function (transmission) assets.

Table 6 AER's final decision on Ausgrid's forecast regulatory depreciation allowance for the 2019–24 regulatory control period – transmission ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Straight-line depreciation	55.9	61.2	66.3	70.8	72.6	326.8
Less: inflation indexation on opening RAB	46.1	47.6	48.9	49.6	50.9	243.0
Regulatory depreciation	**9.8**	**13.7**	**17.4**	**21.2**	**21.7**	**83.8**

Source: AER analysis.

2.4 Capital expenditure

Capital expenditure (capex) — the capital costs and expenditure incurred in the provision of network services — mostly relates to assets with long lives, the costs of which are recovered over several regulatory control periods.

Capex is added to Ausgrid's RAB, which is used to determine the return on capital and return of capital (regulatory depreciation) building block allowances. All else being equal, higher forecast capex will lead to a higher projected RAB value and higher return on capital and regulatory depreciation allowances.

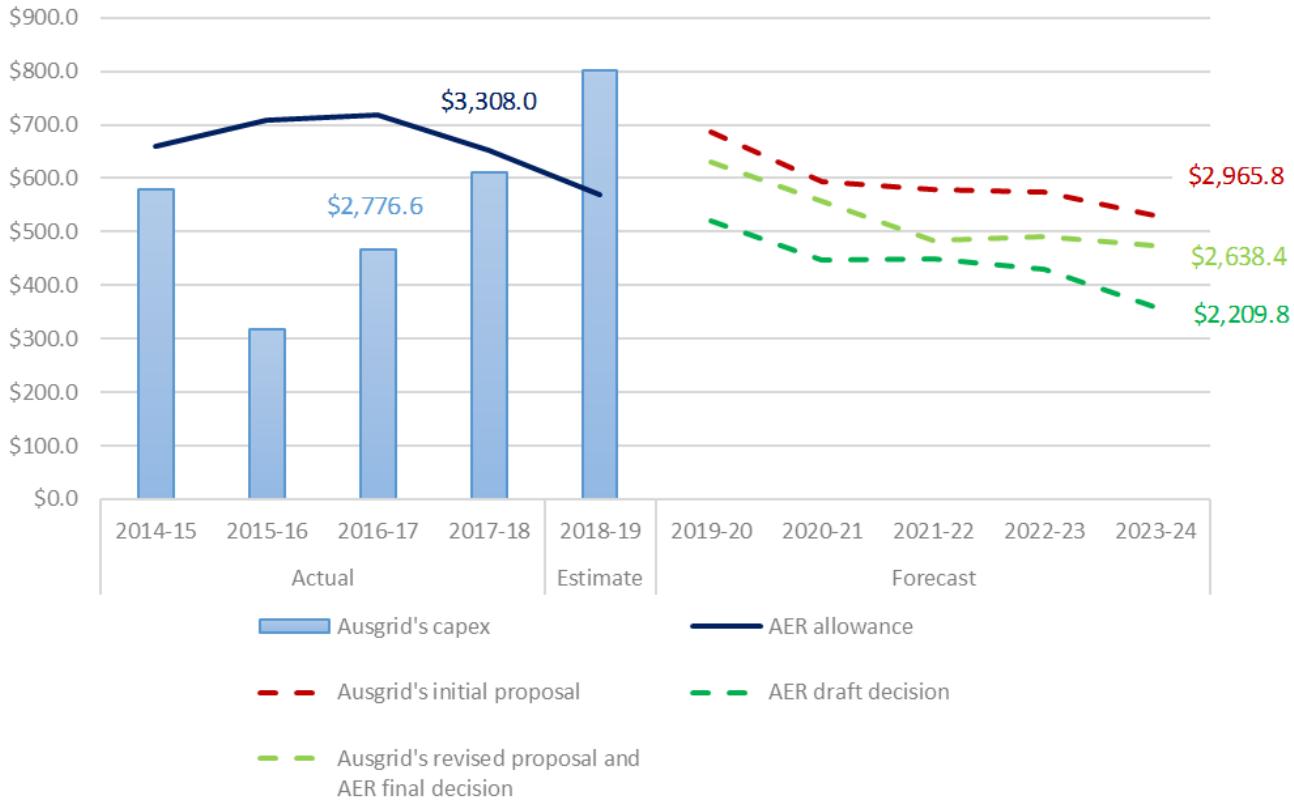
Our final decision on Ausgrid's revenue includes a total net capex forecast of $2,638.4 million ($2018–19) for the 2019–24 regulatory control period.

Our final decision accepts Ausgrid's revised total net capex forecast $2,638.4 million ($2018–19). Ausgrid's revised total net capex forecast is $327.3 million (11 per cent) lower than its initial total net capex forecast of $2,965.8 million ($2018–19), and $138.1 million (5 per cent) lower than its actual and estimated net capex over the 2014–19 regulatory control period.

We are satisfied that Ausgrid's revised total net capex forecast reasonably reflects the capex criteria and is consistent with the efficient costs that a prudent operator would incur in the 2019–24 regulatory control period.

Figure 6 outlines Ausgrid's historical capex trend, its initial and revised forecasts for the 2019–24 regulatory control period, and our draft and final decisions.

Figure 6 Ausgrid's capex over time ($ million, 2018-19)



Source: AER analysis.

Note: Net capex.

Table 7 sets out the capex amounts by driver that Ausgrid has justified would reasonably reflect the capex criteria.

Table 7 Assessment of required capex by driver for the 2019–24 regulatory control period ($ million, 2018–19)

Driver	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Augmentation	33.1	49.2	54.0	19.8	26.1	182.3
Net connections	10.2	7.3	6.0	5.2	3.9	32.8
Replacement	331.5	265.5	240.7	248.3	256.3	1,342.3
Non-network	89.0	83.4	83.5	84.3	65.3	405.4
Operational technology and innovation	33.0	31.8	30.0	27.8	14.1	136.8
Capitalised overheads	133.8	123.0	115.0	107.8	110.9	590.5
Gross capex	**767.1**	**678.1**	**668.3**	**625.8**	**584.9**	**3,324.2**
Less capital contributions	136.5	117.9	139.0	132.7	108.2	634.3
Less disposals	0.1	3.4	45.3	1.3	1.4	51.5
Net capex	**630.5**	**556.9**	**484.1**	**491.8**	**475.2**	**2,638.4**

Source: Ausgrid attachment 5.02.2, revised PTRMs and AER analysis.

Notes: Numbers may not add due to rounding.

Net capex = gross capex *less* capital contributions *less* disposals.

2.5 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenses incurred in the provision of network services. Forecast opex for standard control services (SCS) is one of the building blocks that we use to determine a service provider's annual total revenue requirement.

Our final decision is to accept Ausgrid's revised opex proposal of $2,323.8 million ($2018–19) in total forecast opex for the 2019–24 regulatory control period.

We have tested Ausgrid's revised proposal by comparing it to our alternative estimate of total opex forecast of $2,318.8 million ($2018–19), which is generally consistent with Ausgrid's revised proposal. On this basis, we are satisfied that Ausgrid's forecast reasonably reflects the opex criteria and is efficient.

Table 8 shows Ausgrid's revised proposal and our alternative estimate.

Table 8 AER final decision on total opex ($ million, 2018–19)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Ausgrid's revised proposal	462.3	462.8	464.5	466.3	467.9	2,323.8
AER alternative estimate	456.7	459.6	463.6	467.5	471.3	2,318.8
Difference	–5.6	–3.1	–0.9	1.2	3.3	–5.0

Source: Ausgrid, revenue proposal, PTRM, March 2019; AER analysis.

Note: Includes debt-raising costs. Numbers may not add up to total due to rounding.

Figure 7 shows our opex final decision (and Ausgrid's revised proposal which we have accepted), and Ausgrid's past allowances and past actual expenditure.

Figure 7 AER final decision on total forecast opex ($ million, 2018–19)

Source: AER analysis.

Notes: Excludes debt-raising costs.

Ausgrid's revised opex forecast adopted key aspects of our draft decision. The key differences between Ausgrid's revised opex forecast and our draft decision are:

- an upward adjustment to Ausgrid's base opex of $31.4 million ($2018–19) to account for a classification change to emergency recoverable works (ERW) costs.[44]

[44] Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, pp. 122-123. ERW costs are incurred where a distributor undertakes emergency work to repair damage following a person's act or omission, for

Ausgrid's initial proposal included a base opex adjustment of $26.8 million ($2018–19), which we did not include in our draft decision as we were not satisfied these costs were not already in Ausgrid's base year opex.[45]

- a step change in opex of $10.2 million ($2018–19) to fund demand management services to defer augmentation (augex) and replacement (repex) capex projects.[46] Ausgrid's initial proposal included $26.1 million ($2018–19) for this step change, and our draft decision accepted $8.5 million of this for projects for which Ausgrid demonstrated an efficient opex-capex trade off.[47] This revised step change decreased Ausgrid's initial opex proposal by $18.9 million.
- a 1 per cent annual productivity growth forecast from 1 July 2020.[48] This compares with a 0 per cent annual productivity growth forecast in Ausgrid's original proposal. This change decreased Ausgrid's initial opex proposal by $44.5 million.

Our decision to accept Ausgrid's revised total opex proposal of $2,323.8 million ($2018–19) reflects there is no material difference between the revised proposal and our alternative estimate of $2,318.8 million ($2018–19). We developed our alternative estimate using the same approach as in the draft decision, updated with the latest information. Our alternative estimate:

- accepts Ausgrid's proposed base year adjustment for ERW costs. Ausgrid provided verification that the unrecovered component of its ERW costs were not already in its base year opex.[49] This was supported by the CCP10 submission.
- accepts Ausgrid's proposed demand management step change. Ausgrid provided additional information, including cost-benefit analysis, demonstrating that the step change represented an efficient opex-capex trade-off.[50] This was supported by the CCP10, EUAA and Origin submissions.

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which that person is liable (for example, repairs to a power pole following a motor vehicle accident). The *Final framework and approach (FFA) Ausgrid, Endeavour Energy and Essential Energy July 2017*, stated that ERW costs, which were previously classified as an unregulated service, would be subsumed into the common distribution services group and classified as a standard control service.

45 *AER, Draft decision, Ausgrid, Distribution determination, 2019−24 Attachment 6 – Operating expenditure November 2018, pp. 41-43.*

46 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, p. 126.

47 *AER, Draft decision, Ausgrid, Distribution determination, 2019−24 Attachment 6 – Operating expenditure November 2018,* pp. 33-35.

48 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, January 2019, pp. 119-120.

49 Ausgrid, *Revised Proposal Attachment 6.06 – PWC Report of Factual Findings (ERW and MA) – Final*, January 2019. The AER's intention in making the classification change to ERW costs, as outlined in the NSW FFA, was that the reclassification would apply only to recovered ERW costs and so have zero net impact on network revenues and costs to consumers. For this decision only, where Ausgrid has misinterpreted the NSW FFA, we believe this was not an unreasonable misinterpretation, and Ausgrid has verified that unrecovered ERW costs are not included in its historical opex, we have accepted the base adjustment. FFA wording on the ERW reclassification for future resets was updated to make clear that the change applies only to recovered ERW costs.

50 Ausgrid, *Revised Proposal Attachment 6.05.1 Demand Management CBA for HV augmentation*, January 2019.

- updates price growth to reflect Deloitte Access Economics' wage price index forecasts from February 2019, averaged with the forecasts proposed by Ausgrid in its initial proposal from BIS Oxford, to forecast labour price growth.
- updates output growth which reflects the average output weights from the four benchmarking models included in our 2017 annual benchmarking report (consistent with the draft decision) for the period 2006–17.
- applies a 0.5 per cent annual opex productivity growth forecast.

On this last point, a key difference between Ausgrid's revised proposal and our alternative estimate is the approach to forecast opex productivity growth. Productivity growth captures the improvements in good industry practice that should be implemented by efficient distributors as part of business-as-usual operations. These improvements come from such things as the adoption of new technology, changes to management practices and other factors that contribute to improved productivity within the industry over time.

We forecast productivity growth of 0.5 per cent per year for six years from the 2017–18 base year until 2023–24. This is consistent with the industry wide consultation on our approach to forecasting opex productivity growth, which we concluded in March 2019.[51] In contrast, Ausgrid forecast opex productivity growth of 1 per cent per year for four years from 2020–21 to 2023–24, which is more than necessary to capture improvements in good industry practice over these years and reflects what Ausgrid considers it can reasonably achieve. Ausgrid's revised proposal notes that it is not forecasting positive productivity growth prior to 2020–21 because:[52]

- it faces guaranteed employment for a minimum number of employees to 30 June 2020 under the *Energy Networks Assets (Authorised Transactions) Act 2015*
- its 2017–18 base year is lower than its actual costs in that year, as it is absorbing transformation costs and other costs arising from its obligations under the *Energy Networks Assets (Authorised Transactions) Act 2015*.

We note that CCP10, EUAA, ECA and PIAC gave qualified support for Ausgrid's revised productivity growth forecast.[53] CCP10 and EUAA supported Ausgrid's revised proposal of 1 per cent per year from 1 July 2020 given the unique circumstance Ausgrid faced, while emphasising support for a higher forecast of 1.5–2.0 per cent per

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51 Our draft decision included a 0 per cent productivity growth forecast and noted that we would update the forecast with the outcome of the AER's *Review of our approach to forecasting opex productivity growth for electricity distributors*. The review's final decision, published on 8 March 2019, included a 0.5 per cent average annual productivity growth forecast. The review can be found on the AER website at: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-our-approach-to-forecasting-opex-productivity-growth-for-electricity-distributors.

52 Ausgrid, *Revised Proposal, Attachment 6.01, Ausgrid's Proposed Operating Expenditure,* January 2019, p. 38

53 CCP, *CCP10 Response to the Ausgrid Revised Regulatory Proposal 2019-24 and AER Draft Determination*, January 2019, pp.46-48. EUAA, *Submission, NSW DNSP's 2019-24 Revenue Reset*, January 2019, p.11, ECA, *Submission to the AER's draft decision on the Ausgrid 2019 to 2024 distribution determination,* February 2019, p.1.

year that it endorsed in our productivity review.[54] PIAC supported Ausgrid's revised proposal on the basis that 1 per cent per year would be the minimum amount applied by us.[55]

The Electrical Trades Union New South Wales branch (ETU) noted concern that our approach to benchmarking and determining real wage growth incentivised Ausgrid (and other distributors) to decrease the size and skill level of its workforce, and that this had coincided with a decline in network performance.[56] We have noted the ETU's comments on benchmarking. In this decision, we have relied on Ausgrid's proposed base opex to set our opex forecast, rather than economic benchmarking. We have only used economic benchmarking to test whether Ausgrid's proposed base opex is efficient and can be used as a reasonable basis for forecast.

Our opex model, which calculates our alternative estimate of opex, is available on our website.

2.6 Corporate income tax

The 'building block' approach to the calculation of revenue includes an allowance for the estimated cost of corporate income tax payable by Ausgrid. Our final decision is to include a corporate income tax allowance of $133.8 million ($ nominal) in Ausgrid's revenue for 2019–24.[57] This represents a reduction of $55.6 million (or 29.4 per cent) on Ausgrid's revised proposal.

The key reasons for this reduction are:

- we amended the PTRM to implement the findings in our final report on the review of the regulatory tax approach (the tax review), which concluded shortly before the submission of Ausgrid's revised proposal. Specifically, for this final decision, we have applied the diminishing value (DV) method for tax depreciation to all new depreciable assets except for forecast capex associated with in-house software, equity raising costs and buildings. These changes have reduced the revised proposed corporate income tax allowance by about $21.9 million (or 11.6 per cent).[58]
- we reduced Ausgrid's revised proposed return on equity (section 2.2). Our final decision on the forecast return on equity affects the amount of estimated taxable

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54 CCP, *CCP10 Response to the Ausgrid Revised Regulatory Proposal 2019-24 and AER Draft Determination*, January 2019, pp.46-48. EUAA, *Submission, NSW DNSP's 2019-24 Revenue Reset,* p.11.

55 PIAC, *PIAC submission to the AER's draft determinations and the NSW DNSPs' 2019-24 revised proposals*, 7 February 2019, p.12.

56 ETU, *Submission to the AER: Draft determination on Ausgrid: Regulatory period 2019-2024*, February 2019, pp.3 and 23-24. For a response to these issues, refer to AER*, Final Decision, Evoenergy Distribution Determination 2019-24, Attachment 6 - Operating expenditure*, April 2019 available on the AER website.

57 This comprises $128.8 million for Ausgrid's distribution network revenue and $4.9 million for its dual function asset (transmission) revenue. See *Attachment 7 Corporate income tax*, Tables 7-1 and 7-2, p. 7-7.

58 This reflects reductions of $19.4 million (or 10.9 per cent) and $2.5 million (or 21.9 per cent) for Ausgrid's distribution and transmission networks, respectively.

income. Therefore, it has contributed to the reduction on the revised proposed corporate income tax allowance by about $33.2 million (or 17.5 per cent).[59]

Our determination on the regulatory depreciation (section 2.3) affects the calculation of the estimated taxable income, which in turn impacts the corporate income tax allowances.

For this final decision, we reduced the revised proposed total opening tax asset base (TAB) values as at 1 July 2019 by $2.1 million. While we accept Ausgrid's approach for establishing the opening TAB, we have updated the revised proposed opening TAB values to reflect amendments to Ausgrid's allocations of movements in capitalised provisions for its 2017–18 actual capex.

As a consequence of the updated opening TAB values, we have updated Ausgrid's remaining tax asset lives as at 1 July 2019. We accept Ausgrid's revised proposed standard tax asset lives, which are consistent with our draft decision. We also determine standard tax asset lives of 40 years for the new 'Buildings (system)' and 5 years for the new 'In-house software' asset classes that are subject to the straight-line (SL) method of tax depreciation.

For this final decision, we have applied a value of imputation credits (gamma) of 0.585 as per the binding 2018 Instrument and consistent with Ausgrid's revised proposal (section 2.2).

Tables 9 and 10 set out our final decision on the estimated cost of corporate income tax allowance for Ausgrid over the 2019–24 regulatory control period for its distribution and transmission networks, respectively.

Further detail on our final decision regarding corporate income tax is set out in Attachment 7.

Table 9 AER's final decision on Ausgrid's cost of corporate income tax allowance for the 2019–24 regulatory control period – distribution ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Tax payable	66.1	54.7	61.9	67.4	60.2	310.4
Less: value of imputation credits	38.7	32.0	36.2	39.4	35.2	181.6
Net corporate income tax allowance	**27.4**	**22.7**	**25.7**	**28.0**	**25.0**	**128.8**

Source: AER analysis.

[59] This reflects reductions of $29.2 million (or 16.4 per cent) and $4.0 million (or 34.9 per cent) for Ausgrid's distribution and transmission networks respectively.

Table 10 AER's final decision on Ausgrid's cost of corporate income tax allowance for the 2019–24 regulatory control period – transmission ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Tax payable	2.4	1.7	1.7	3.1	3.0	11.9
Less: value of imputation credits	1.4	1.0	1.0	1.8	1.8	6.9
Net corporate income tax allowance	**1.0**	**0.7**	**0.7**	**1.3**	**1.2**	**4.9**

Source: AER analysis.

2.7 Revenue adjustments

Our final decision on Ausgrid's total revenue also includes a number of adjustments:

- Capital expenditure sharing scheme (CESS) — Ausgrid has accrued rewards under the CESS, which we applied in the current 2014–19 regulatory control period to incentivise Ausgrid to undertake efficient capex throughout the period. The CESS rewards efficiency gains and penalises efficiency losses, each measured by reference to the difference between forecast and actual capex. In the 2014–19 period, Ausgrid out-performed our capex forecast, and our final decision is to approve a CESS revenue increment amount of $87.6 million ($2018–19).
- Demand management innovation allowance mechanism (DMIAM) — A DMIAM allowance of $6.67 million ($2018–19) has been applied to Ausgrid over the 2019–24 regulatory control period. The DMIAM aims to encourage distribution businesses to find investments that are lower cost alternatives to investing in network solutions.
- Remittal — A revenue reduction of $319.8 million ($2018–19) has been applied to Ausgrid, in accordance with what we determined will be returned to customers under our 2014–19 remade final decision for Ausgrid.[60] This amount reflects the difference between our 2014–19 remade final decision and the revenue expected to be recovered by Ausgrid under the interim price undertakings that have applied over the 2014–19 period. This adjustment was included in Ausgrid's revised proposal.

[60] NER, cl. 8A.14.

3 Incentive schemes

Incentive schemes are a component of incentive based regulation and complement our approach to assessing efficient costs. These schemes provide important balancing incentives under the revenue determination to encourage Ausgrid to pursue expenditure efficiencies and demand side alternatives to capex and opex, while maintaining the reliability and overall performance of its network.

The incentive schemes that might apply to an electricity network as part of our decision are the:

- opex efficiency benefit sharing scheme (EBSS)
- capital expenditure sharing scheme (CESS)
- service target performance incentive scheme (STPIS)
- demand management incentive scheme (DMIS) and demand management innovation allowance mechanism (DMIAM).

Once we make our decision on Ausgrid's revenue cap, it has an incentive to provide services at the lowest possible cost, because its returns are determined by its actual costs of providing services. Our incentive schemes encourage network businesses to make efficient decisions. They give network businesses an incentive to pursue efficiency improvements in opex and capex, and to share them with consumers.

Our final decision is that each of the EBSS, CESS, STPIS, DMIS and DMIAM will apply to Ausgrid for the 2019–24 regulatory control period. Ausgrid's performance under these schemes in the 2019–24 regulatory control period will be reflected in its annual pricing proposals throughout that period and its revenue proposal for the subsequent, 2024–29 regulatory control period.

Our final decision on the incentive schemes are outlined below.

3.1 Efficiency benefit sharing scheme

The EBSS is intended to provide a continuous incentive for distributors to pursue efficiency improvements in opex, and provide for a fair sharing of these between network businesses and network users. Consumers benefit from improved efficiencies through lower regulated prices.

Our final decision is to apply version two of the EBSS to Ausgrid for the 2019–24 regulatory control period.[61] This is consistent with our draft decision and Ausgrid's revised proposal.[62] When we apply the EBSS, we will:

[61] AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

- exclude debt-raising costs from the EBSS as a pre-defined 'excluded category'
- adjust forecast opex to add (subtract) any approved revenue increments (decrements) made after the initial regulatory determination, such as approved pass through amounts
- adjust actual opex to remove DMIA opex
- adjust actual opex to add capitalised opex that has been excluded from the RAB[63]
- adjust actual opex to reverse any movements in provisions
- adjust opex for any services that will not be classified as standard control services (SCS) in the 2024–29 regulatory control period, to the extent this better achieves the requirements of clauses 6.5.8 of the NER.[64]

Table 11 sets out the opex forecasts we will use to calculate efficiency gains in the 2019–24 regulatory control period, including forecast debt-raising costs.

Table 11 Forecast opex for the EBSS ($ million, $2018–19)

	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
Total forecast opex	437.5	444.1	462.3	462.8	464.5	466.3	467.9
Less debt raising costs	8.1	8.2	7.8	7.8	7.9	7.9	7.8
Forecast opex for the EBSS	429.3	435.9	454.6	454.9	456.6	458.4	460.1

Source: AER, *Ausgrid final decision - PTRM*, April 2019; AER, *Ausgrid final decision 2014–19 distribution determination remittal - PTRM*, January 2019; AER analysis.

Note: Numbers may not add up due to rounding.

3.2 Capital expenditure sharing scheme

The CESS provides financial rewards for network service providers whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices.

As noted earlier, in the 2014–19 regulatory control period, Ausgrid out-performed our capex forecast. Our final decision is to apply a CESS revenue increment amount of $87.6 million from the application of the CESS in the 2014–19 period.

We will also apply the CESS as set out in version 1 of the Capital Expenditure Incentives Guideline to Ausgrid in the 2019–24 regulatory control period.

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62 AER, *Draft decision, Ausgrid Distribution determination 2019–24, Attachment 8–Efficiency Benefit Sharing Scheme,* November 2018, p. 8; Ausgrid, *Revised proposal, Attachment 9.01-Application on incentive schemes January 2019*, pp. 4-5.

63 NER, cl. 6.5.8(c)(4) requires us to have regard to any incentives the service provider may have to capitalise expenditure.

64 AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, p.9.

Further detail on our final decision regarding the CESS is set out in Attachment 9.

3.3 Service target performance incentive scheme

The STPIS is intended to balance a business' incentive to reduce expenditure with the need to maintain or improve service quality. The scheme achieves this by providing financial incentives to distributors to maintain and improve service performance where customers are willing to pay for these improvements.

Distributors can only retain their rewards for sustained and continuous improvements to the reliability of supply to customers. Once improvements are made, the benchmark performance targets will be tightened in future years.

Our final decision is to apply the service standards component (the s-factor) of our national STPIS, STPIS version 2.0 (November 2018)[65], to Ausgrid for the 2019–24 regulatory control period. We will not apply the guaranteed service level component to Ausgrid as the existing jurisdictional arrangements will continue to apply.

Attachment 10 sets out our final decision on Ausgrid's STPIS for 2019–24.

3.4 Demand management incentive scheme

On 13 December 2017, we published a new DMIS[66] and DMIAM.[67] These schemes replace the current DMIS and DMIA in the 2019–24 regulatory control period for all electricity distributors.

In our draft decision, our decision was to apply the new DMIS and DMIAM to Ausgrid for the 2019–24 regulatory control period, without any modification.[68] Ausgrid's revised proposal accepted our draft decision.[69]

We received no submissions on Ausgrid's proposed implementation of the new DMIS and DMIAM.

The DMIS contains three elements:[70]

- a cost uplift on expected costs of efficient demand management projects
- a net benefit constraint, to ensure the incentive payment for any project cannot be higher than that project's expected net benefit

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65 AER, *Electricity distribution network service providers—service target performance incentive scheme*, *Version 2.0*, November 2018. (AER, *STPIS*, November 2018).

66 AER, *Demand management incentive scheme, Electricity distribution network service providers*, December 2017.

67 AER, *Demand management innovation allowance mechanism*, *Electricity distribution network service providers*, December 2017.

68 AER, *Draft decision, Ausgrid distribution determination 2019-24, Attachment 11, Demand management incentive scheme*, November 2018.

69 Ausgrid, *Revised Regulatory Proposal, 1 July 2019 to 30 June 2024*, January 2019.

70 AER, *Demand management incentive scheme*, *Electricity distribution network service providers*, December 2017.

- an overall incentive constraint, which limits the total incentive in any year to one per cent of the distributor's allowed revenue for that year.

The cost multiplier (uplift) applicable to any eligible project will be the cost multiplier specified in the version of the DMIS that is in effect under clause 6.6.3 of the NER at the time the eligible project becomes a committed project.[71]

The DMIAM comprises:[72]

- a fixed allowance of $200,000 ($2016–17) plus 0.075 per cent of the annual revenue requirement for each regulatory year, as set out in our PTRM for Ausgrid
- project eligibility requirements
- compliance reporting requirements.

Our calculation of Ausgrid's DMIAM funding over the 2019–24 regulatory control period is shown in Table 12. As noted earlier, the total DMIAM funding is $6.67 million ($2018–19) over the period. This calculation is based on the smoothed annual revenue requirement as set out in the PTRM for Ausgrid in our 2019–24 final decision.

Table 12 AER's final decision on the DMIA for Ausgrid ($ million, 2018–19)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
DMIA	1.32	1.33	1.34	1.35	1.33	6.67

Source: AER analysis.

[71] AER, *Demand management incentive scheme*, *Electricity distribution network service providers*, December 2017, clause 2.1(2).

[72] AER, *Demand management innovation allowance mechanism*, *Electricity distribution network service providers*, December 2017.

4 Tariff structure statement

Ausgrid's 2019–24 proposal includes the second iteration of its tariff structure statement (TSS). Its current TSS applies from 1 July 2017 to 30 June 2019.

Ausgrid's second iteration of its TSS includes significant changes from the first iteration. Ausgrid engaged with a select group of consumer advocates to 'co-design' a new approach for the revised TSS. While we support Ausgrid, and other distributors, working with stakeholders in developing regulatory proposals, we consider that distributors should not use the revised regulatory proposal to propose a fundamentally different TSS where that is not sought by our draft decision.

A TSS applies to a distributor's tariffs for the duration of the regulatory control period. It describes a distributor's tariff classes and structures, the distributor's policies and procedures for assigning and reassigning customers to tariffs, the charging parameters for each tariff, and a description of the approach the distributor takes to setting tariffs in pricing proposals.[73] It is accompanied by an indicative pricing schedule.[74] A TSS provides consumers and retailers with certainty and transparency in relation to how and when network prices will change.

While an indicative pricing schedule must accompany the TSS, Ausgrid's tariffs for the entire 2019–24 regulatory control period are not set as part of this determination. Rather, tariffs for 2019–20 will be subject to a separate approval process that takes place in May 2019, after this final revenue determination in April 2019. Tariffs for the following four years will also be approved on an annual basis in May of each year.

Our final decision is to amend Ausgrid's revised TSS by:

- allowing residential and small business customers to choose time of use tariffs
- changing Ausgrid's tariff reassignment policy to allow existing customers to stay on the current tariff structure (time of use or flat tariffs) and only reassign customers that receive a new smart meter from 1 July 2019
- restoring the 'transitional TOU' tariffs for residential and small business customers, the transitional 40–160mWh tariff and the transitional 160–750mWh tariffs and setting out the price paths for these tariffs
- removing the three undefined 'placeholder' tariffs.

These amendments complement the changes Ausgrid has already made in response to our draft decision. These include:

- removing its undefined demand tariff for low voltage customers
- adopting flat tariffs rather than inclining block tariffs

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[73] NER, cl. 6.18.1A(a).

[74] NER, cl. 6.18.1A(e)

- no longer assigning customers to non-cost reflective tariffs
- adopting a 12-month data sampling period for customers that receive a new smart meter to replace a faulty accumulation meters, and
- aligning small business charging windows for small business energy, demand and capacity charges.

Attachment 18 of this final decision provides the detailed reasons for our changes to Ausgrid's revised TSS.

5 Other price terms and conditions

In this section, we consider the other aspects of our determination. These may be described as the terms and conditions of our determination that cover how Ausgrid must set its prices. These include the classification of services, the conditions under which we may grant Ausgrid additional revenues to cover unforeseen circumstances and the framework for Ausgrid's negotiated services, customer connections and transmission pricing.

5.1 Classification of services

Service classification determines the nature of economic regulation, if any, that is applicable to specific distribution services. Classification is important to customers as it determines which network services are included in basic electricity charges, the basis on which additional services are sold, and which services we will not regulate. Our decision reflects our assessment of a number of factors, including existing and potential competition to supply these services.

We set out our proposed approach to the classification of distribution services for the NSW distributors in our Framework and Approach (F&A).[75] Our final decision is to retain the classification structure consistent with our F&A[76] and draft decision, with the exception of a minor amendment to the activity of 'rectification of simple customer faults' based on a proposal by Ausgrid.

The amendment, captured in the description of the 'common distribution service', extends the time limit we imposed on NSW distributors to perform minor repairs on a customer's assets to restore power supply or to address a safety issue, from 20 minutes to 30 minutes.[77]

In our draft decision, we amended the description of the 'common distribution service' to allow distributors to perform minor repairs on a customer's assets to restore power supply or to address a safety issue. The service only applies in situations when a distributor's crew is already onsite to perform other regulated services, and the incremental cost of repairing the assets is low. The most common example is where a distributor is called out to a customer's premises to rectify a suspected network fault, only to find that a customer-owned service fuse, connecting the network and customer mains, has blown. In such a case, our amendment to the 'common distribution service'

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75 AER, *Final framework and approach for NSW electricity distributor – Regulatory control period commencing 1 July 2019*, July 2017.

76 AER, *Final framework and approach for NSW electricity distributor – Regulatory control period commencing 1 July 2019*, July 2017. NER, cl. 6.12.3(b) – The classification of distribution services must be as set out in the relevant framework and approach paper unless we consider that a material change of circumstances justifies departing from that proposed classification.

77 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, pp. 176-177.

allows the distributor to replace the service fuse and restore supply for the customer quickly.

In our draft decision, we placed a number of conditions around a distributor's ability to repair customer assets in order to protect the competitiveness of contestable markets. One of these conditions limits distributors to work that can be performed in less than 20 minutes and does not normally require a second visit.

Ausgrid proposed that this time limit should be extended to 30 minutes in our final decision. To support this proposed amendment, Ausgrid reviewed 5,000 call out jobs during 2017 and found that the average time on site was 38 minutes. Allowing 10 minutes to assess the issue and determine the cause of a fault, Ausgrid stated that 30 minutes is a more realistic amount of time in which Ausgrid could do simple repairs on customer assets.[78]

We consider that Ausgrid's proposed amendment is consistent with providing efficient outcomes for customers. We also consider that allowing an additional 10 minutes for distributors to restore safe power supply to customers will not significantly impact the competitiveness of contestable markets for electricity services. This decision applies to all NSW distributors.

A full list of Ausgrid's classified services for the 2019–24 regulatory control period can be found at Attachment 12.

5.2 Pass through events

We accept three of the nominated pass through events with the definitions proposed by Ausgrid ('insurer's credit risk', 'insurance cap' and 'natural disaster'). These are consistent with recent decisions.

We also accept Ausgrid's fourth pass through event ('terrorism'), but have amended the definition to align with our recent decisions. Ausgrid had proposed to alter the standard definition to add the words 'or other disruptive activities' (that is, in addition to 'acts or threats of violence' of the relevant type). In this way, Ausgrid sought to ensure cyber-attacks are potentially within scope.[79]

However we consider the standard definition is sufficiently clear on this — the words 'including, but not limited to' make it clear that the reference to 'use of force or violence or the threat of force or violence' is not intended to be an exhaustive list of terrorism events. Further, Ausgrid's proposed addition – 'other disruptive activity' – is potentially broad and could itself create uncertainty in the scope of the pass through event.

The approved pass through events and definitions are set out in Table 13.

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78 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, pp. 176-177.

79 Ausgrid, *Revised regulatory proposal 1 July 2019 to 30 June 2024*, pp. 153-154.

Table 13 Approved nominated pass through events

Pass through event	Definition
Insurance cap	An insurance cap event occurs if: • Ausgrid makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy, • Ausgrid incurs costs beyond the relevant policy limit, and • The costs beyond the relevant policy limit materially increase the costs to Ausgrid in providing direct control services. For this insurance cap event: • A relevant insurance policy is an insurance policy held during the 2019-24 regulatory control period or a previous regulatory control period in which Ausgrid was regulated. • Ausgrid will be deemed to have made a claim on a relevant insurance policy if the claim is made by a related party of Ausgrid in relation to any aspect of the network or Ausgrid's business. Note for the avoidance of doubt, in assessing an insurance cap event cost pass through application under rule 6.6.1(i), the AER will have regard to: • The relevant insurance policy for the event, and • The level of insurance that an efficient and prudent NSP would obtain in respect of the event.

Insurer's credit risk	An insurer's credit risk event occurs if:
	• An insurer of Ausgrid becomes insolvent, and as a result, in respect of an existing or potential claim for a risk that was insured by the insolvent insurer, Ausgrid:
	  ○ Is subject to a higher or lower claim limit or a higher or lower deductable than would have otherwise applied under the insolvent insurer's policy; or
	  ○ Incurs additional costs associated with funding an insurance claim, which otherwise have been covered by the insolvent insurer.
	Note: In assessing an insurer's credit risk event pass through application, the AER will have regard to, amongst other things,
	• Ausgrid's attempts to mitigate and prevent the event from occurring by reviewing and considering the insurers track record, size, credit rating and reputation.
	• In the event that a claim would have been made after the insurance provider became insolvent, whether Ausgrid had reasonable opportunity to insure the risk with a different provider.

Natural disaster	Natural disaster event means any natural disaster including but not limited to cyclone, fire, flood or earthquake that occurs during the 2019-24 regulatory control period that increases the costs to Ausgrid in providing direct control services, provided the fire, flood or other event was not a consequence of the acts or omissions of the service provider. Note: In assessing a natural disaster event pass through application, the AER will have regard to, amongst other things: • Whether Ausgrid has insurance against the event, • The level of insurance that an efficient and prudent NSP would obtain in respect of the event, • Whether a relevant government authority has made a declaration that a

Pass through event	Definition
	natural disaster has occurred.
Terrorism	Terrorism event means an act, including, but not limited to, the use of force or violence or the threat of force or violence of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which: • from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear), and • increases the costs to Ausgrid in providing direct control services. Note: In assessing a terrorism event pass through application, the AER will have regard to, amongst other things: • Whether Ausgrid has insurance against the event, • The level of insurance that an efficient and prudent NSP would obtain in respect of the event, and • Whether a declaration has been made by a relevant government authority that a terrorism event has occurred.

5.3 Negotiating framework and criteria

In our draft decision, we approved Ausgrid's proposed distribution negotiating framework for the 2019–24 regulatory control period.[80] Ausgrid's revised proposal accepted our draft decision.[81]

Our final decision is to approve Ausgrid's negotiating framework. The distribution negotiating framework that will apply to Ausgrid for the period of this determination is set out in Attachment A.

We are also required to make a decision on the negotiated distribution service criteria (NDSC) for the distributor.[82] Our final decision is to retain the NDSC that we published for Ausgrid in May 2018[83] for the 2019–24 regulatory control period. The NDSC give effect to the negotiated distribution services principles.[84]

5.4 Connection policy

Our draft decision modified Ausgrid's proposed connection policy that it submitted in its initial regulatory proposal.[85]

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80 AER, *Draft Decision, Ausgrid Distribution determination 2019 to 2024*, Attachment 16 – Negotiated services framework and criteria, November 2018, p. 16–2.

81 Ausgrid, *Ausgrid Revised Regulatory Proposal 2019–2024*, January 2019, p. 177.

82 NER, cl. 6.12.1(16).

83 AER, AER, *Draft Decision, Ausgrid Distribution determination 2019 to 2024*, Attachment 16 – Negotiated services framework and criteria, November 2018, p. 16–2.

84 NER, cl. 6.7.1.

85 AER, *Draft Decision Ausgrid Distribution Determination 2019 to 2024, Attachment 17 Connection policy*, November 2018.

In its revised proposal, Ausgrid accepted our draft decision but proposed further refinements.[86] These minor changes are to:

- improve the definition of connection works and customer-funded connection services
- clarify that augmentation works could be done by the customer not by themselves but by an accredited service provider
- clarify that certain augmentation works can be done by Ausgrid only
- provide more clarity to the operational arrangements of the pioneer reimbursement scheme.

We consider these proposed changes are reasonable.

In a submission on the draft decision and Ausgrid's revised proposal, CCP10 supported Ausgrid's 'causer pays' approach in its connection policy. This approach, together with contestability or the accredited service provider (ASP) scheme in NSW, has resulted in the majority of customer connection costs being funded by new connections and direct users, rather than spread across all customers through the revenue determination allowance.[87]

Our final decision is to approve the connection policy submitted by Ausgrid in its revised proposal in January 2019.[88]

5.5 Pricing methodology

The role of Ausgrid's pricing methodology is to answer the question 'who should pay how much' in order for Ausgrid to recover its costs relating to its provision of transmission services.[89] The pricing methodology must provide a 'formula, process or approach' that when applied:[90]

- allocates the aggregate annual revenue requirement to the categories of prescribed transmission services that a network business provides and to the connection points of network users[91]
- determines the structure of prices that a network business may charge for each category of prescribed transmission services.[92]

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86 Ausgrid, *Revised Proposal, Attachment 5.17 Connection Policy,* January 2019.

87 CCP10, *CCP10 Response to the Ausgrid Revised Regulatory Proposal 2019–24 and AER Draft Determination*, January 2019, p. 38.

88 Ausgrid, *Revised Proposal, Attachment 5.17 Connection Policy,* January 2019. See https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausgrid-determination-2019-24/revised-proposal

89 AEMC, *Rule determination: National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No. 22*, 21 December 2006, p. 1.

90 NER, cl. 6A.24.1(b).

91 NER, cl. 6A.24.1(b)(1).

92 NER, cl. 6A.24.1(b)(4).

Ausgrid must submit a transmission pricing methodology for our approval because its network includes high-voltage transmission assets, which are subject to the pricing arrangements for transmission standard control services (SCS).[93]

In our draft decision, we approved Ausgrid's proposed pricing methodology for the 2019–24 regulatory control period, subject to several amendments.[94] We also asked Ausgrid to update several references to the NER.[95]

Ausgrid accepted our draft decision and re-submitted its pricing proposal with the requested amendments.[96]

Our final decision is to approve Ausgrid's pricing methodology. Ausgrid's pricing methodology relates to transmission SCS only.

The pricing methodology that will apply to Ausgrid for the period of this determination is set out in Attachment B.

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93 NER, cl. 6A.24.1(b)(2).

94 AER, *Draft Decision, Ausgrid distribution determination 2019 to 2024*, December 2018, Attachment 19 Pricing methodology, p. 19-5.

95 AER, *Ausgrid - information request #061 - Pricing methodology - PUBLIC*, 4 March 2019; AER, *Follow up: Ausgrid - information request #061 - Pricing methodology*, 22 March 2019.

96 Ausgrid, *RE: Ausgrid - information request #061 - Pricing methodology*, 12 March 2019.

A The National Electricity Objective

The National Electricity Law (NEL) requires us to make our decision in a manner that contributes, or is likely to contribute, to achieving the National Electricity Objective (NEO).[97] The focus of the NEO is on promoting efficient investment in, and operation and use of, electricity services (rather than assets) in the long-term interests of consumers.[98] This is not delivered by any one of the NEO's factors in isolation, but rather by balancing them in reaching a regulatory decision.[99]

In general, we consider that the long-term interests of consumers are best served where consumers receive a reasonable level of safe and reliable service that they value at least cost in the long run.[100] A decision that places too much emphasis on short term considerations may not lead to the best overall outcomes for consumers once the longer term implications of that decision are taken into account. [101]

There may be a range of economically efficient decisions that we could make in a revenue determination, each with different implications for the long-term interests of consumers.[102] A particular economically efficient outcome may nevertheless not be in the long-term interests of consumers, depending on how prices are structured and risks allocated within the market.[103] There are also a range of outcomes that are unlikely to advance the NEO, or advance the NEO to the degree than others would. For example, we consider that:

- the long-term interests of consumers would not be advanced if we encourage over-investment which results in prices so high that consumers are unwilling or unable to efficiently use the network.[104] This could have significant longer term pricing implications for those consumers who continue to use network services.
- equally, the long-term interests of consumers would not be advanced if allowed revenues result in prices so low that investors do not invest to sufficiently maintain the appropriate quality and level of service, and where customers are making more use of the network than is sustainable.[105] This could create longer term problems in the network, and could have adverse consequences for safety, security and reliability of the network.

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97 NEL, section 16(1).

98 This is also the view of the AEMC. See, for example, AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, p. 5.

99 Hansard, SA House of Assembly, 26 September 2013, p. 7173. See also AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, pp. 7–8.

100 Hansard, SA House of Assembly, 9 February 2005, p. 1452.

101 See, for example, AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, pp. 6–7.

102 Re Michael: Ex parte Epic Energy [2002] WASCA 231 at [143].

103 See, for example, AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, p. 5.

104 NEL, s. 7A(7).

105 NEL, s. 7A(6).

The legislative framework recognises the complexity of this task by providing us with significant discretion in many aspects of the decision-making process to make judgements on these matters.

A.1 Achieving the NEO to the greatest degree

Electricity determinations are complex decisions. In most cases, the provisions of the National Electricity Rules (NER) do not point to a single answer, either for our decision as a whole or in respect of particular components. They require us to exercise our regulatory judgement. For example, chapters 6 and 6A of the NER requires us to prepare forecasts, which are predictions about unknown future circumstances. Very often, there will be more than one plausible forecast,[106] and much debate amongst stakeholders about relevant costs. For certain components of our decision there may therefore be several plausible answers or several plausible point estimates.

When the constituent components of our decision are considered together, this means there will almost always be several potential, overall decisions. More than one of these may contribute to the achievement of the NEO. In these cases, our role is to make an overall decision that we are satisfied contributes to the achievement of the NEO to the greatest degree.[107]

We approach this from a practical perspective, accepting that it is not possible to consider every permutation specifically. Where there are choices to be made among several plausible alternatives, we have selected what we are satisfied would result in an overall decision that contributes to the achievement of the NEO to the greatest degree.

A.2 Interrelationships between constituent components

Examining constituent components in isolation ignores the importance of the interrelationships between components of the overall decision, and would not contribute to the achievement of the NEO. We have considered these interrelationships in our analysis of the constituent components of our final decision in the relevant attachments. Examples include:

- underlying drivers and context which are likely to affect many constituent components of our decision. For example, forecast demand affects the efficient levels of capex and opex in the regulatory control period.
- direct mathematical links between different components of a decision. For example, the level of gamma has an impact on the appropriate tax allowance; the benchmark

[106] AEMC, *Rule Determination: National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006*, 16 November 2006, p. 52.

[107] NEL, s. 16(1)(d).

efficient entity's debt to equity ratio has a direct effect on the cost of equity, the cost of debt, and the overall vanilla rate of return.

- trade-offs between different components of revenue. For example, undertaking a particular capex project may affect the need for opex or vice versa.

B Constituent components

This Overview and the accompanying attachments, including where appropriate attachments to our draft decision, set out our final decision on Ausgrid's distribution determination for the 2019–24 regulatory control period. Our final decision includes the following constituent components:[108]

Constituent component
In accordance with clause 6.12.1(1) of the NER, the AER's final decision is that the classification of services set out in Attachment 12 will apply to Ausgrid for the 2019–24 regulatory control period.
In accordance with clause 6.12.1(2)(i) of the NER, the AER's final decision is not to approve the annual revenue requirement set out in Ausgrid's building block proposal. Our final decision on Ausgrid's annual revenue requirement for each year of the 2019–24 regulatory control period is set out in Attachment 1 of this final decision.
In accordance with clause 6.12.1(2)(ii) of the NER, the AER's final decision is to approve Ausgrid's proposal that the regulatory control period will commence on 1 July 2019. Also in accordance with clause 6.12.1(2)(ii) of the NER, the AER's final decision is to approve Ausgrid's proposal that the length of the regulatory control period will be 5 years from 1 July 2019 to 30 June 2024.
In accordance with clause 6.12.1(3)(i) and acting in accordance with clause 6.5.7(c) of the NER, the AER's final decision is to accept Ausgrid's proposed total net capital expenditure forecast of $2,638.4 million ($2018–19). This is set out in Attachment 5 of this final decision.
In accordance with clause 6.12.1(4)(i) and acting in accordance with clause 6.5.6(c) of the NER, the AER's final decision is to accept Ausgrid's proposed total forecast operating expenditure inclusive of debt raising costs and exclusive of the demand management innovation allowance mechanism (DMIAM) of $2,323.8 million ($2018-19). This is set out in section 2.5 of this final decision Overview.
In accordance with clause 6.12.1(5) of the NER and the 2018 Rate of Return Instrument, the AER's final decision is that the allowed rate of return for the 2019–20 regulatory year is 5.72 per cent (nominal vanilla), as set out in section 2.2 of this final decision Overview, and that the rate of return for the remaining regulatory years 2020–24 will be updated annually because our decision is to apply a trailing average portfolio approach to estimating debt which incorporates annual updating of the allowed return on debt.
In accordance with clause 6.12.1(5A) of the NER and the 2018 Rate of Return Instrument, the AER's final decision on the value of imputation credits as referred to in clause 6.5.3 is to adopt a value of 0.585. This is set out in section 2.2 of this final decision Overview.

[108] NEL, s. 16(1)(c).

Constituent component

In accordance with clause 6.12.1(6) of the NER, the AER's final decision on Ausgrid's regulatory asset base (RAB) as at 1 July 2019 in accordance with clause 6.5.1 and schedule 6.2 is $13,779.4 million and $1,901.7 million ($ nominal) for its distribution and transmission networks, respectively. This is set out in Attachment 2 of this final decision.

In accordance with clause 6.12.1(7) and clause 6.5.3 of the NER, the AER estimates Ausgrid's cost of corporate income tax is $133.8 million ($ nominal). This is set out in Attachment 7 of this final decision.

In accordance with clause 6.12.1(8) of the NER, the AER's final decision is to not approve the depreciation schedules submitted by Ausgrid. Our final decision substitutes alternative depreciation schedules in accordance with clause 6.5.5(b). This is set out in Attachment 4 of this final decision.

In accordance with clause 6.12.1(9) of the NER, the AER makes the following final decisions on how any applicable efficiency benefit sharing scheme (EBSS), capital expenditure sharing scheme (CESS), service target performance incentive scheme (STPIS), demand management incentive scheme (DMIS) or small-scale incentive scheme is to apply:

- We will apply version 2 of the EBSS to Ausgrid in the 2019–24 regulatory control period. This is set out in section 3.1 of this final decision Overview.
- We will apply the CESS as set out in version 1 of the Capital Expenditure Incentives Guideline to Ausgrid in the 2019–24 regulatory control period. This is set out in Attachment 9 of this final decision.
- We will apply our STPIS to Ausgrid for the 2019–24 regulatory control period. This is set out in Attachment 10 of this final decision.
- We will apply the DMIS and the DMIAM to Ausgrid for the 2019–24 regulatory control period. This is set out in section 3.4 of this final decision Overview.

In accordance with clause 6.12.1(10) of the NER, the AER's final decision is that all appropriate amounts, values and inputs are as set out in this final decision including attachments.

In accordance with clause 6.12.1(11) of the NER and our framework and approach paper, the AER's final decision on the form of control mechanisms (including the X-factor) for standard control services is a revenue cap. The revenue cap for Ausgrid for any given regulatory year is the total annual revenue calculated using the formula in Attachment 13 plus any adjustment required to move the distribution use of system (DUoS) unders and overs account to zero. This is set out in Attachment 13 of this final decision.

In accordance with clause 6.12.1(12) of the NER and our framework and approach paper, the AER's final decision on the form of the control mechanism for alternative control services is to apply price caps for all services. This is set out in Attachment 13 of this final decision.

In accordance with clause 6.12.1(13) of the NER, to demonstrate compliance with its distribution determination, the AER's final decision is that Ausgrid must maintain a DUoS unders and overs account. It must provide information on this account to us in its annual pricing proposal. This is set out in Attachment 13 of this final decision.

Constituent component
In accordance with clause 6.12.1(14) of the NER, the AER's final decision is to apply the following nominated pass through events for the 2019–24 regulatory control period in accordance with clause 6.5.10: • Terrorism event • Natural Disaster event • Insurance Cap event • Insurer's Credit Risk event These events have the definitions set out in section 5.2 of this final decision Overview.
In accordance with clause 6.12.1(14A) of the NER, the AER's final decision is to not approve the tariff structure statement (TSS) proposed by Ausgrid. This is set out in Attachment 18 of this final decision.
In accordance with clause 6.12.1(15) of the NER, the AER's final decision is that the negotiating framework as proposed by Ausgrid will apply for the 2019–24 regulatory control period. This is set out in section 5.3 of this final decision Overview.
In accordance with clause 6.12.1(16) of the NER, the AER's final decision is to apply the negotiated distribution services criteria published in May 2018 to Ausgrid. This is set out in section 5.3 of this final decision Overview.
In accordance with clause 6.12.1(17) of the NER, the AER's final decision on the policies and procedures for assigning retail customers to tariff classes, or reassigning retail customers from one tariff class to another (including any applicable restrictions), for Ausgrid is set out in Attachment 13 of this final decision.
In accordance with clause 6.12.1(17A) of the NER, the AER's final decision is to approve Ausgrid's proposed pricing methodology for transmission standard control services. This is set out in section 5.5 of this final decision Overview.
In accordance with clause 6.12.1(18) of the NER, the AER's final decision is that the depreciation approach based on forecast capex (forecast depreciation) is to be used to establish the RAB at the commencement of Ausgrid's regulatory control period as at 1 July 2024. This is set out in Attachment 2 of this final decision.
In accordance with clause 6.12.1(19) of the NER, the AER's final decision on how Ausgrid is to report to the AER on its recovery of designated pricing proposal charges is to set this out in its annual pricing proposal for each regulatory year of the 2019–24 regulatory control period. The method to account for the under and over recovery of designated pricing proposal charges is set out in Attachment 13 of this final decision.
In accordance with clause 6.12.1(20) of the NER, the AER's final decision is to require Ausgrid to maintain a jurisdictional scheme unders and overs account. It must provide information on this account to us in its annual pricing proposal as set out in Attachment 13 of this final decision.
In accordance with clause 6.12.1(21) of the NER, the AER's final decision is to apply Ausgrid's

Constituent component
proposed connection policy. This is set out in section 5.4 of this final decision Overview.

C List of submissions

We received 13 submissions in response to our draft decision and Ausgrid's revised revenue proposal. These are listed below.

Submission from	Date received
AGL	5 February 2019
Ausgrid	28 February 2019
Consumer Challenge Panel (CCP10)	24 January 2019
Electrical Trades Union of Australia (ETU)	8 February 2019
Energy Consumers Australia (ECA)	15 February 2019
Energy Users Association of Australia (EUAA)	5 February 2019
John Herbst	5 February 2019
Origin	5 February 2019
Public Interest Advocacy Centre (PIAC)	7 February 2019
Power Design & Energy Projects	6 February 2019
Red Energy / Lumo Energy	7 February 2019
Southern Sydney Regional Organisation of Council (SSROC)	4 February 2019
WINconnect	4 February 2019