FINAL DECISION
Essential Energy
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 Essential Energy 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 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

Contents

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."

Essential Energy (Essential) is the electricity distribution network service provider for customers in rural and regional NSW. On 30 April 2018, Essential submitted its regulatory proposal for the 2019–24 regulatory control period, commencing 1 July 2019 to 30 June 2024. On 1 November 2018, we released our draft decision for Essential. In response, Essential submitted a revised regulatory proposal on 21 December 2018. Stakeholder consultation on our draft decision and Essential'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 Essential will be 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 Essential's customers. This is our building block determination, and will form the basis of Essential's distribution tariffs for the 2019–24 regulatory control period. Essential's tariff structure statement (TSS) sets out the tariff structure through which it will recover its regulated revenue for SCS from customers.

Essential 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 Essential's ACS in Attachment 15 to this final decision. Essential has not proposed to provide any services on a negotiated basis in the 2019–24 regulatory control period.[2]

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1 NEL, s. 7.

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

1 Our final decision

Our final decision allows Essential Energy (Essential) to recover $5,079.3 million ($ 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 rural and regional NSW will be around 3.4 per cent ($ nominal) higher on average by 30 June 2024 compared to the current level.

Distribution network costs represent around 34.5 per cent of total electricity bills on average in rural and regional NSW. This means that the average annual electricity bill for a residential or small business customer on Essential's network is estimated to be around 1.2 per cent ($ nominal) higher by 30 June 2024 compared to the current level, holding all other components of the bill constant.

This outcome is $212.9 million ($ nominal, smoothed) lower than our draft decision, and $136.7 million ($ nominal, smoothed) lower than Essential's revised proposal. Having assessed Essential's revised proposal, we consider our final decision is justified as it:

- builds on the operational efficiencies Essential 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 balanced against the additional costs associated with past capital investment to meet NSW Government licence conditions for network security and reliability.

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 Essential has become more efficient and led the way in customer engagement, so it is better able to provide the services consumers want at the price they value. The amount of revenue Essential could recover from its customers fell from $6,986.6 million ($2018–19, smoothed) for the 2009–14 regulatory control period to $5,301.3 million ($2018–19)[3] for the 2014–19 period (a 24.1 per cent reduction).

The 2014–19 determination challenged Essential 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 the safety and reliability of the network that geographically covers 95 per cent of NSW.

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

In response, Essential has rationalised its business operations commensurate with lower recoverable revenues for 2014-19.[4] Over the past five years, we have seen Essential make significant progress in improving its efficiency through a range of measures, including a 36 per cent reduction in staffing levels.

Today, Essential 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 Essential's revealed operating expenditure (opex) as a starting point for its forecast expenditure for the next five years.

This final decision, which largely accepts Essential's revised revenue proposal and is consistent with our draft decision, reflects not only the considerable efficiency gains it has achieved over the current period, but also the strategies and initiatives it now proposes to deliver further efficiencies in expenditure and improvements in productivity over 2019–24. We note Essential has incorporated an opex productivity growth component of around three times greater than our standard approach for electricity distribution businesses. These savings are now locked in for consumers.

This final decision approves opex of $1,718.4 million ($2018–19) for the 2019–24 regulatory control period, which is the same as proposed by Essential in its revised proposal as well as our draft decision, and $70.3 million (3.9 per cent) lower than for the 2014–19 period.

This final decision also allows for sufficient capital investment to continue to improve network reliability and security over the next five years. It recognises the challenges in providing electricity to small, remote and geographically dispersed communities.

In terms of capital expenditure (capex), we accept a total net capex of $2,081.2 million ($2018–19) for the 2019–24 regulatory control period, which is the same as proposed by Essential in its revised proposal as well as our draft decision, and $270.5 million (11.5 per cent) lower than for the 2014–19 period.

Listening to customers

Essential has set a high watermark level for its approach to consumer engagement. It consulted extensively with customers and consumer representatives and put forward initial and revised regulatory proposals which were both understood and accepted by stakeholders, despite increased costs.

We consider the meaningful engagement Essential undertook with consumer groups to inform its 2014–19 remittal proposal as emblematic of its changing organisational

[4] Adding further uncertainty to this environment would have been Essential's legal challenge to the lower revenue we had approved for it for the 2014–19 regulatory control period. We note that Essential was the first of the affected NSW and ACT distribution businesses to formally seek to have its matter finalised. This was achieved following publication of our 2014–19 remade final decision (remittal) for Essential in May 2018, after our 2015 final decision was set aside.

culture. Essential's initial regulatory proposal for 2019–24 was well received by stakeholders, including Energy Consumers Australia (ECA) and our Consumer Challenge Panel (CCP10), each of which concluded that in their view, Essential's proposal was one that, from a consumer perspective, was capable of acceptance.[5] This result followed an extensive program of consumer engagement that commenced almost two years prior to submission of Essential's proposal, and focussed on consumer priorities of affordability, reliability and safety and how best to address them. Essential's consumer engagement approach has also been mindful of consumer groups' limited resources which they manage across several important consumer issues that are broader than energy alone.

Essential's stewardship of its 2019–24 regulatory proposal 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. Essential's efforts were also recognised by Energy Networks Australia as winner of its 2018 energy network consumer engagement award.

We are also 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.

Our November 2018 draft decision for Essential noted that in a number of respects, our decision agreed with it on the key drivers identified through its earlier stakeholder engagement as influencing its revenue requirement for the 2019–24 regulatory control period. Few areas of difference remained following our draft decision, among which was the applicable rate of return which has since been settled as it is based on a binding instrument in this final decision. Since our draft decision and prior to Essential lodging its 2019–24 revised proposal in December 2018, Essential has continued to meaningfully engage with consumer groups and our staff to narrow or eliminate the few remaining areas of difference.

Helping to keep Essential focussed during this regulatory determination process have been several consumer groups. We are especially appreciative of ECA, Public Interest Advocacy Centre (PIAC), Energy Users Association of Australia (EUAA) and our

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[5] CCP, CCP10 *Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24*, 8 August 2018, p. 92; ECA, *Essential Energy Regulatory proposal 2019-24, Submission to the AER Issues Paper*, 14 August 2018, p. 5.

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 of our decisions. For example, consumer groups played a key role in helping to resolve Essential's 2014–19 remittal, and also advocated strongly for a more thorough consideration of the approach to forecasting opex productivity growth in our regulatory determinations — a matter we have addressed in this final decision for Essential.

What the decisions 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 increase by around 3.4 per cent ($ nominal) for Essential compared to the 2018–19 level (as at 30 June 2019)
- average annual electricity bills would increase by around 1.2 per cent ($ nominal) for residential or small business customers on Essential's network compared to the 2018–19 level (as at 30 June 2019), holding all other components of the bill constant.[6] This suggests that average annual bills would be around $24 and $111 higher for residential and small business customers, respectively.

In making this final decision, we have had regard to a range of sources including Essential'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 Essential 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 Essential's 2019–24 regulatory proposal, namely:

- 2018 rate of return guideline review:[7] 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.

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6 We estimate the expected bill impact by varying the distribution 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 network charges, and does not imply that other components will remain unchanged across the regulatory control period.

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

- Regulatory tax approach review:[8] 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.[9]
- Approach to forecasting opex productivity growth for electricity distributors review:[10] 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 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 Essential accepts its proposal of forecast opex productivity growth of 1.47 per cent per year over the 2019–24 regulatory control period.

Our 2019–24 final decision also incorporates the revenue impact of the finalised remittal. In 2015, Essential 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 Essential. We remade our 2014–19 final decision in May 2018 following receipt of Essential's remittal proposal in November 2017.[11] Key consumer groups, including our CCP10, were supportive of Essential's remittal proposal and our decision. Essential 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 $33.0 million ($ 2018–19) from the estimated $22.5 million ($ 2018–19) at the time of our May 2018 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[12]), which have been adjusted for the impact of inflation.

In real terms, the total revenue allowance in this final decision is 10.8 per cent lower than the allowed revenue in our 2014–19 remade final decision.[13] Figure 1 shows real revenues decrease from 2018–19 levels by 1.7 per cent per annum on average over 2019–24.

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

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

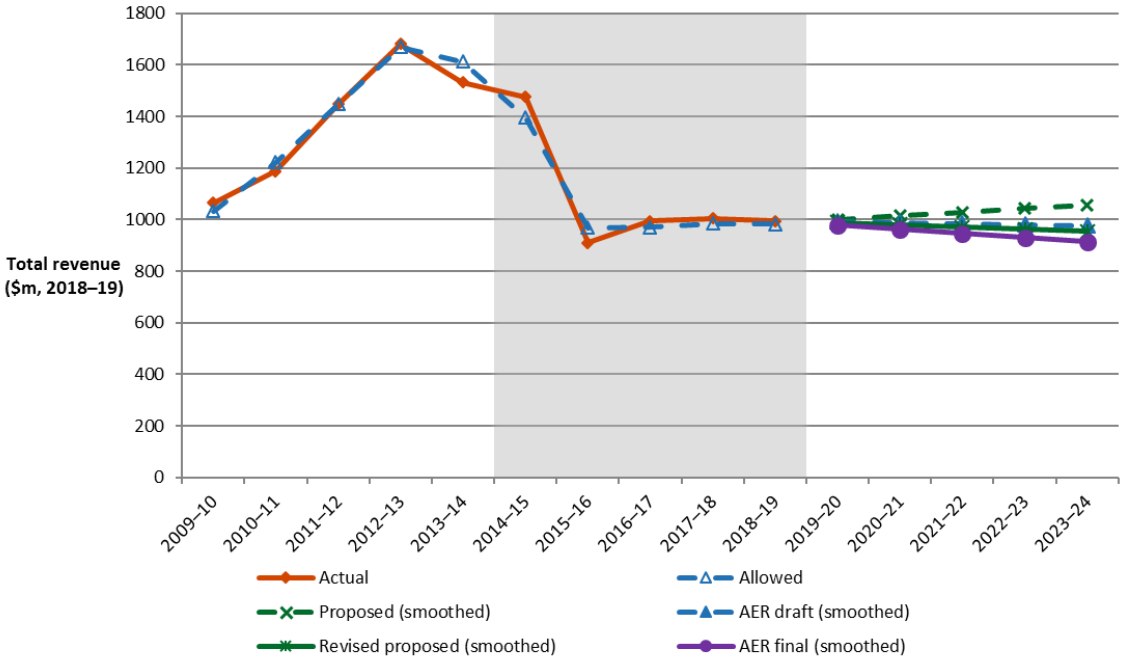
10 AER, *Final decision – Forecasting productivity growth for electricity distributors*, 8 March 2019.

11 AER, *Final decision – Essential Energy 2014–19 distribution determination*, May 2018.

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

13 This comparison is between the total revenue allowed under this final decision and that in our 2014–19 remade final decision for Essential.

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



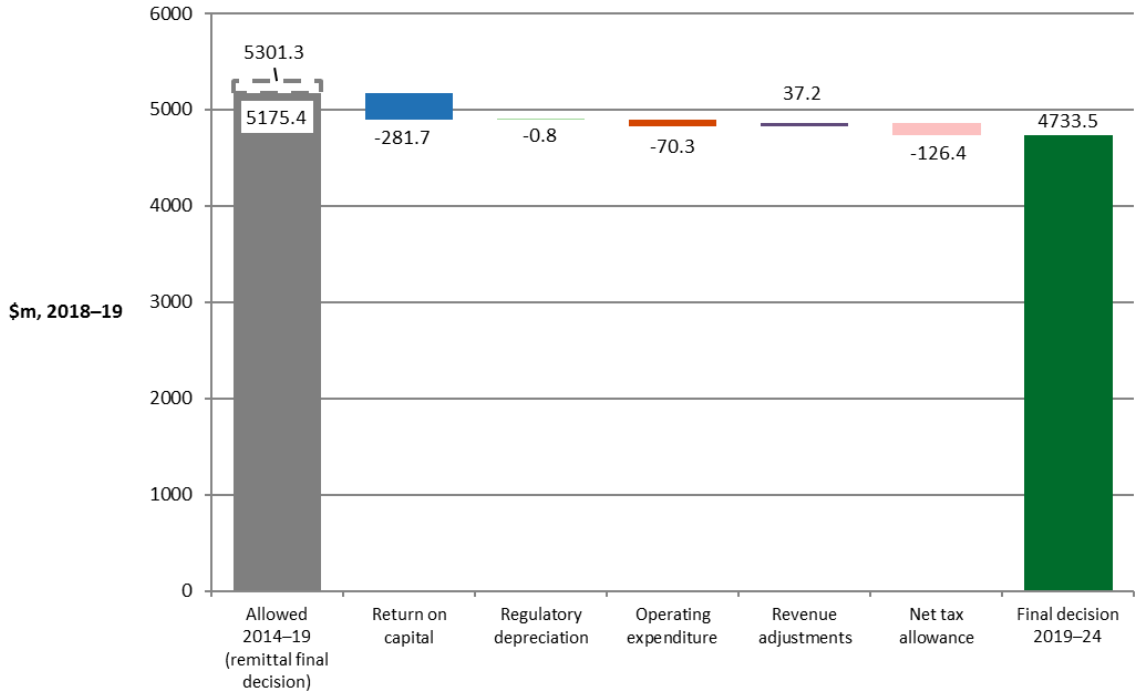
Source: AER analysis.

Essential'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 Essential's regulatory asset base (RAB) grew by 38.9 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 Essential 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 reflected 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 Essential has been under less pressure to expand and augment its network to meet the needs of additional customers or any increased demand from existing customers. Growth in the RAB fell to 9.3 per cent in real terms.

This 2019–24 final decision reflects a continuation of many of these trends. Figure 2 highlights the key drivers of the change in Essential'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 ($ million, 2018–19)



Source: AER analysis

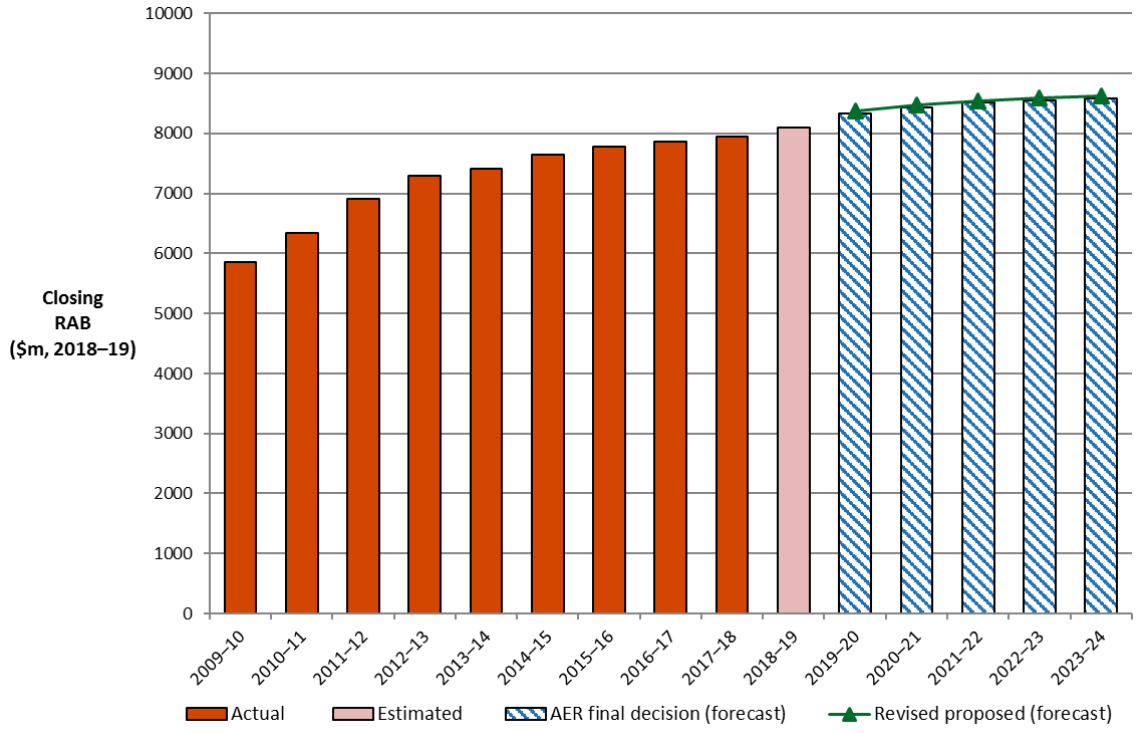
Note: 'Allowed 2014–19 (remittal final decision)' shows an additional $125.8 million (dashed grey outline) on top of the $5,175.4 million total. The $5,175.4 million is the sum of the revenue building blocks in the remittal PTRM, and incorporates the return on debt updates. The additional $125.8 million comprises $56.0 million for metering, Ancillary Network Services (ANS) and Emergency Recoverable Works (ERW), and $69.9 million representing further changes in the remittal PTRM calculations including: service target performance financial incentives, negotiated cap settlement amounts and difference in CPI adjustments.[14] '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 return to customers of $33.0 million arising from our 2014–19 remade final decision for Essential.

The return on capital (the product of the size of the Essential's RAB and the allowed rate of return) is the largest component of Essential's regulated revenue. The value of the RAB substantially impacts Essential's revenue requirement and the price consumers ultimately pay. This makes it a key issue for many stakeholders. Essential 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 regulatory depreciation allowance.

[14] 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.

Our final decision includes forecast capex to maintain the existing network by refurbishing and replacing assets that are reaching the end of their useful lives. While Essential has and continues to seek efficiencies, over 2019–24 the amount of capex that will be added to the RAB is greater than expected depreciation, so that the total value of Essential's RAB will continue to grow. However, as Figure 3 shows, projected RAB growth of 5.9 per cent over the 2019–24 regulatory control period is significantly below its peak over the 2009–14 period. We are encouraged by Essential's continued commitment to work with consumers on this important issue.

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



Source: AER analysis.

Despite continued RAB growth, the return on capital for the 2019–24 regulatory control period under this final decision is lower than in the current 2014–19 period. Over the 2019–24 period, the lower rate of return on Essential's RAB of 5.76 per cent that we have adopted for this final decision is offsetting the impact of RAB growth on regulated revenues, resulting in an overall reduction in the return on capital from period-to-period. This rate of return, which compares to the 6.74 per cent we set at the start of the current 2014–19 period, is consistent with the approach set out in the 2018 Rate of Return Instrument (2018 Instrument).[15]

[15] AER, *Rate of return instrument*, December 2018.

As noted above, Essential has made significant progress in improving its operating efficiency over the current 2014–19 regulatory control period. We are now in a position to accept Essential's revealed (actual) opex at the end of the current 2014–19 period as a starting point for its forecast expenditure for the next five years. In this way, Essential's revenue under this final decision passes on the significant operating efficiencies it has achieved in the current period to customers in the form of lower opex going forward, and adds to these Essential's further projected efficiency and productivity gains for the 2019–24 period. This is reflected in a real opex reduction of 5.5 per cent from period-to-period.

Revenue adjustments from incentive schemes are slightly higher for 2019–24 than for the 2014–19 regulatory control period. This outcome is driven largely by the capital expenditure sharing scheme (CESS) which applied to Essential for the first time in the 2014–19 period. Benefits accruing to Essential under the CESS as a result of the capex efficiencies it has achieved over the 2014–19 period are partly offset by the $33.0 million that we determined under our remittal decision for Essential will be returned to customers in the 2019–24 period.[16]

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

Our 2019–24 final decision on Essential's revenue includes its forecast opex and forecast capex (subject to some modelling corrections identified in the course of our review). However, our final decision does not reflect the total revenue proposed by Essential.

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

Our final decision adopts the approach in the 2018 Instrument to calculate a rate of return of 5.76 per cent. This is lower than the revised proposed rate of return of 5.96 per cent. Also reflecting the 2018 Instrument, our final decision adopts a value of imputation credits (gamma) of 0.585 in line with Essential's revised proposal.

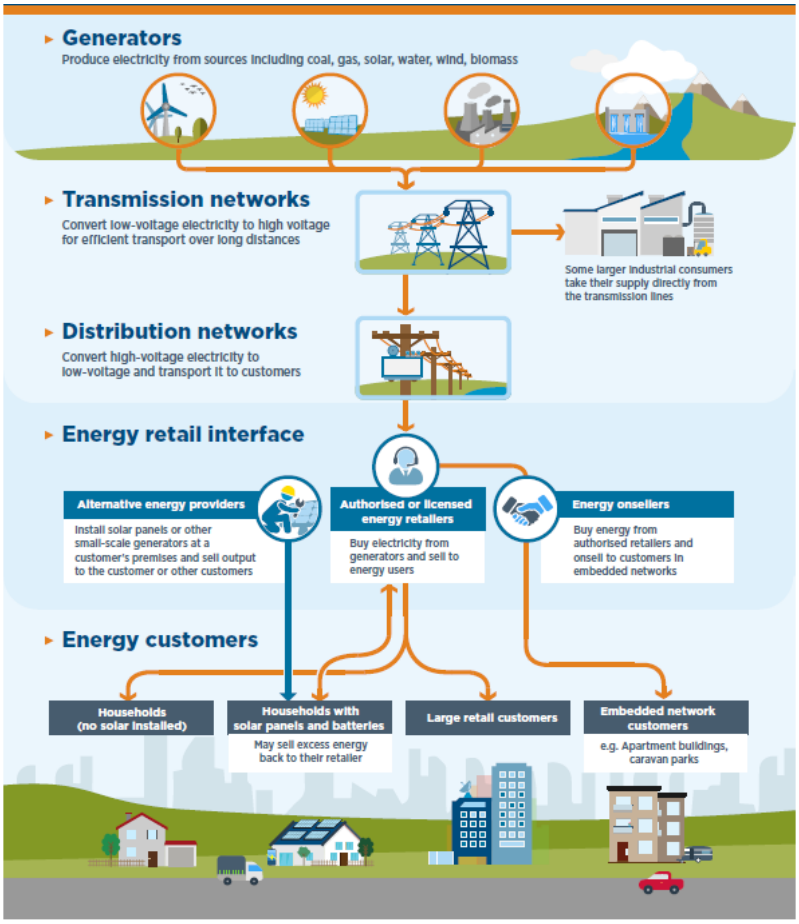
This final decision has also amended the PTRM to implement the findings in our final report on the review of the regulatory tax approach (the tax review), which concluded shortly before the submission of Essential's revised proposal. Specifically, for this final decision, we have applied the diminishing 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.

[16] AER, *Final decision, Essential Energy 2014-19 electricity distribution determination*, May 2018.

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 34.5 per cent of the total retail electricity bills Essential's customers pay.[17] 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.

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 1.2 per cent ($ nominal) increase over the five-year 2019–24 regulatory control period.

[17] Essential Energy, *R1a Final RIN - 1 - Reset_MASTER*, 30 April 2018.

We estimate the expected bill impact by varying the distribution charges in accordance with our final decision, while holding all other components constant. This approach isolates the effect of our final decision on distribution tariffs from other parts of the bill. However, this does not imply that other components will remain unchanged across the regulatory control period.[18]

We expect the impact of our 2019–24 final decision would be to increase the average annual residential electricity bill by 2023–24 by around $24 or 1.2 per cent ($ nominal) from the current 2018–19 level. Had we accepted Essential's revised proposal in full, the expected impact would have been a larger increase of around $56 or 2.7 per cent.

Similarly, for an average small business customer on Essential's network, we expect the average annual electricity bill by 2023–24 would increase by around $111 or 1.2 per cent ($ nominal) from the current 2018–19 level. Again, had we accepted Essential's revised proposal in full, the expected impact would have been a larger increase of around $258 or 2.7 per cent.

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

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]	2060[a]	2065	2071	2077	2081	2084
Annual change[c]		5 (0.2%)	6 (0.3%)	6 (0.3%)	3 (0.2%)	3 (0.2%)
Small business annual bill[b]	9530[b]	9553	9580	9610	9625	9641
Annual change[c]		23 (0.2%)	28 (0.3%)	30 (0.3%)	15 (0.2%)	16 (0.2%)
Essential's revised proposal						
Residential annual bill[a]	2060[a]	2072	2084	2097	2106	2116
Annual change[c]		12 (0.6%)	12 (0.6%)	12 (0.6%)	9 (0.4%)	10 (0.5%)
Small business annual bill[b]	9530[b]	9587	9642	9700	9743	9788
Annual change[c]		57 (0.6%)	55 (0.6%)	58 (0.6%)	43 (0.4%)	45 (0.5%)

Source: AER analysis; AER, Energy Made Easy website (standing offer); AEMC, *Residential electricity price trends 2018*, December 2018; Essential Energy, *R1a Final RIN – 1 – Reset master*, 30 April 2018.

(a) Annual bill for 2018–19 is sourced from Energy Made Easy website and reflects the average consumption of 5,000 kWh for residential customers in NSW (postcode 2650).

(b) Annual bill for 2018–19 is sourced from Energy Made Easy website and reflects the average consumption of 23,000 kWh for small business customers in NSW (postcode 2650).

(c) Annual change amounts and percentages are indicative. They are derived by varying the network tariff contribution to the 2018–19 bill amounts in proportion to yearly expected revenue divided by forecast energy as proposed by Essential. Actual bill impacts will vary depending on electricity consumption and tariff class.

1.4 Essential's consumer engagement

The NEO puts the long term interests of consumers at the centre of our decisions as a regulator and the way Essential operates its network. An important part of this is ensuring the regulatory proposal Essential puts to us for approval reflects the NEO, and that Essential 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 Essential working openly and collaboratively with consumers and providing opportunities for their views and preferences to be heard and to influence Essential'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.

Essential's consumer engagement in the preparation of its 2019–24 initial and revised regulatory proposals has been well received by stakeholders. Engagement commenced in June 2016 with consultation on its stakeholder engagement framework, after which Essential implemented a four-phase engagement program:[19]

- Phase 1 (January–June 2017): including online surveys and interviews of customers, seven deliberative customer forums, and meetings of its Customer Advocacy Group, Vegetation Management Consultation Group and Streetlight Consultative Committee
- Phase 2 (July–September 2017): including further online surveys and 16 interviews of customers and stakeholders, seven deliberative customer forums, two pricing workshops with stakeholder groups, meetings with local councils and retailers, and meetings of its Customer Advocacy Group and Streetlight Consultative Committee
- Phase 3 (January–February 2018): including public release of its engagement findings and draft Regulatory Proposal for stakeholder feedback, three 'closing the loop' customer forums, online survey, employee engagement, and meetings of its Customer Advocacy Group, Vegetation Management Consultation Group and Streetlight Consultative Committee
- Phase 4 (November–December 2018): including three deliberative forums, three stakeholder 'deep dive' workshops, in-depth large customer and retailer interviews, streetlight model consultation, an online forum on its engagement, and a meeting of its Customer Advocacy Group.

CCP10 observed that Essential had benefited both from its early start to engagement, and from trying a number of different engagement methods.[20] In commenting on its 2019–24 initial regulatory proposal, CCP10 noted that Essential:

> "…[was] proactive in addressing consumer concerns and they responded more holistically to consumer and stakeholder input, as well as being prepared to have the 'tough conversations' and to seek solutions."[21]

> "…has effectively integrated consumer and stakeholder input into all aspects of its regulatory proposal and has effectively applied input that they have sought and heard."[22]

ECA, EUAA as well as CCP10 had all previously commended Essential for its engagement on its 2019–24 initial regulatory proposal. They all agreed that, from a consumer perspective, Essential's initial proposal was capable (or close to capable) of

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19 Essential Energy, *2019–24 Revised Regulatory Proposal: Customer Overview*, January 2019, pp. 9–10.

20 CCP, *CCP10 Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24,*8 August 2018, p. 86.

21 CCP, *CCP10 Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24,* 8 August 2018, p. 6.

22 CCP, *CCP10 Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24,* 8 August 2018,, p. 89

acceptance.[23] Along with PIAC, this collective view has been reinforced in the latest round of submissions received in response to Essential's revised regulatory proposal:

CCP10 noted:[24]

> "In our response to the Regulatory Proposal in August 2018, a number of matters were raised as opportunities for Essential Energy to better reflect the issues raised by consumer representatives throughout the engagement, including RAB growth through indexing leading to higher prices; and an aggressive IT programme that had a challenging delivery programme that may impact its effectiveness.
>
> At the time, we concluded that Essential Energy's Regulatory Proposal was capable of being accepted as it was consistent with the long-term interests of consumers…
>
> CCP10 believes that Essential Energy's Revised Revenue Proposal is capable of acceptance by the AER. We take this position because there is clear evidence that the proposal is in the long-term interests of consumers, and that the Revised Proposal fairly and meaningfully reflects the outcomes of their intensive and effective engagement with consumer groups."

ECA noted:[25]

> "Our view is that Essential Energy's revised proposal is capable of acceptance…
>
> Essential Energy's revised proposal goes some way to address what we now have defined as 'The Essential Dilemma'. The Essential Dilemma refers to a steadily growing RAB despite reducing proposed expenditure…
>
> Essential Energy's approach to stakeholder engagement has demonstrated a path towards maturity beyond that of its contemporaries. Key to this is that Essential Energy has worked *with* its consumers in a genuine way, and that the voices of its consumer helped shape Essential Energy's thinking."

EUAA noted:[26]

> "We congratulate Essential on an initial proposal that was substantially accepted by the AER and its receipt of the ENA Energy Network Consumer

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[23] CCP, *CCP10 Response to AER Issues paper and revenue Proposals for NSW Electricity Distribution Businesses 2019-24,* 8 August 2018, p. 92; ECA, *Essential Energy Regulatory proposal 2019-24, Submission to the AER Issues Paper,* 14 August 2018, p. 5; EUAA, EUAA *Submission: AER Issues Paper, NSW Electricity distribution determinations: Ausgrid, Endeavour, Energy, Essential Energy 2019-2024*, 10 August 2018, p. 1.

[24] CCP, *CCP10 Response to the Essential Energy Revised Regulatory Proposal 2019-24 and AER draft determination*, February 2019, p. 24.

[25] ECA, *Submission to the AER's Draft Decision on the Essential Energy 2019 to 2024 Distribution Determination*, February 2019, pp. 1-3.

[26] EUAA, *Submission – NSW DNSP's 2019–24 Revenue Reset – January 2019*, February 2019, p. 2–13.

> Engagement Award. We believe their revised proposal is 'capable of acceptance'…
>
> Essential has been the standout for consumer engagement…Essential's leadership in consumer engagement has been significant not just for the other NSW DNSPs, but for networks throughout the NEM. The EUAA saw this first hand as a member of its Customer Advocacy Group."

PIAC added:[27]

> "Essential Energy has, on top of savings outlined in its initial proposal, found additional measures to deliver real price reductions to their customers and is investigating methods to address issues resulting from their historical and growing RAB…
>
> This growth in the RAB carries a significant risk to customers in the context of limited growth in customer numbers, flat or declining energy growth, and considerable uncertainty around the growth in peak demand. It also creates a significant exposure to changes in the cost of capital over the next 10-years from the historically low cost of capital that now prevails.
>
> We commend Essential Energy for their hard work, through this regulatory process and outside of it, to address and mitigate the size of its RAB and its impact on consumers. On this basis we can accept Essential Energy's revised proposal."

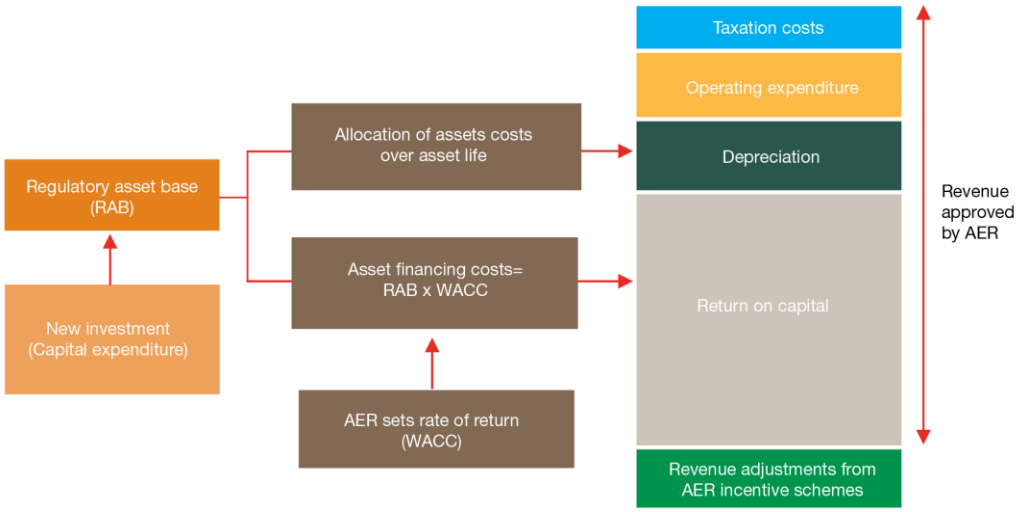
[27] PIAC, *PIAC submission to the AER's draft determinations and the NSW DNSPs' 2019–24 revised proposals*, February 2019, pp. 6–11.

2 Key components of our final decision on revenue

The total revenue Essential has proposed reflects its forecast of the efficient cost of providing network services over the 2019–24 regulatory control period. Essential'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 Essential'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 Essential to provide regulated distribution network services. As noted above, the value of the RAB substantially impacts Essential'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 final decision on Essential's revenue for 2019–24, we make a decision on its opening RAB as at 1 July 2019. 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:

- an opening RAB value of $8,105.0 million ($ nominal) as at 1 July 2019. This amount is $41.3 million (or 0.5 per cent) lower than Essential's revised proposed opening RAB value. We accepted the revised proposed opening RAB, subject to updating the 2018–19 inflation rate with the actual consumer price index (CPI) input for indexation in the RAB roll forward.
- a forecast closing RAB value of $9,675.1 million ($ nominal) as at 30 June 2024. This is $41.6 million (or 0.4 per cent) lower than Essential's revised proposal. The key difference between the forecast RAB outcome in our final decision and Essential's revised proposal is our related final decision on the opening RAB.

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

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

	2019–20	2020–21	2021–22	2022–23	2023–24
Opening RAB	**8,105.0**	**8,530.8**	**8,844.7**	**9,143.0**	**9,410.6**
Capital expenditure[a]	515.4	434.3	442.3	438.1	435.4
Inflation indexation on opening RAB	196.5	206.9	214.5	221.7	228.2
Less: straight-line depreciation	286.1	327.2	358.5	392.3	399.1
Closing RAB	**8,530.8**	**8,844.7**	**9,143.0**	**9,410.6**	**9,675.1**

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 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 5.76 per cent (nominal vanilla).[28] Essential's revised proposal has adopted the 2018 Instrument.[29] Submissions to this process and also separate but concurrent regulatory processes support the immediate full application of the binding 2018 Instrument to all resets.[30]

Our calculated rate of return, in Table 3, 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 Essential's proposed return on equity and debt averaging periods because they satisfied the 2018 Instrument.[31]

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28 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.

29 Essential Energy, *Empowering communities to share and use energy for a better tomorrow, 2019–24 Revised Regulatory Proposal*, January 2019, p. 59.

30 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.

31 AER, *Rate of return instrument*, December 2018, clauses 7–8, 23–25; Essential Energy, *Averaging Period Letter to the AER*, 10 May 2018; Essential Energy, *Resubmission of Cost of Debt Averaging Periods for 2019-24 - Confidential*, 16 July 2018. The July letter contained revised debt averaging periods as its initial proposal (in the 10 May 2018 letter) did not satisfy the conditions set out in the 2013 Guidelines and the draft 2018 Guidelines as the proposed averaging period for the first year (2019-20) had already commenced by the time the proposal was submitted.

Table 3 Final decision on Essential's rate of return (% nominal)

	AER draft decision (2019–24)	Essential revised proposal (2019–24)	AER final decision (2019–24)	Allowed return over regulatory control period
Nominal risk free rate	2.66% [a]	2.66% [b]	2.14% [c]	
Market risk premium	6%	6.1%	6.1%	
Equity beta	0.6	0.6	0.6	
Return on equity (nominal post–tax)	6.32%	6.32%	5.80%	Constant (%)
Return on debt (nominal pre–tax)	5.73%	5.73%	5.73%[d]	Updated annually
Gearing	60%	60%	60%	Constant (60%)
Nominal vanilla WACC	5.96%	5.96%	5.76%	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 31 July 2018.

[c] Final decision to accept proposed period of 1 February 2019 to 28 February 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. We set equity raising costs of $0.7 million ($2018–19). We accepted Essential's revised opex proposal, therefore we do not provide substitute estimates of its debt raising costs using our benchmark approach.[32]

[32] See section 2.5.

Imputation credits

Our final decision applies a gamma of 0.585 as per the binding 2018 Instrument.[33] This was the result of extensive analysis and consultation conducted as part of the 2018 rate of return review.[34] Essential's revised proposal has adopted the 2018 Instrument for gamma.[35]

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). Essential 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 regulatory 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 Essential's revenue for 2019–24 includes a regulatory depreciation allowance of $695.4 million ($ nominal). This is $2.8 million (0.4 per cent) lower than Essential's revised proposal. We have adopted the same approach to depreciation as Essential, 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 Essential reflects our final decision on the opening RAB as at 1 July 2019.[36] The effect of this change is to decrease the depreciation allowance relative to Essential's revised proposal.

Table 4 sets out our final decision on Essential's depreciation allowance for the 2019–24 regulatory control period. Further detail on Essential's regulatory depreciation can be found in Attachment 4.

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33 AER, *Rate of return instrument*, December 2018, clause 27.

34 AER, *Rate of return instrument explanatory statement*, December 2018, pp. 307–382.

35 Essential Energy, *Empowering communities to share and use energy for a better tomorrow, 2019–24 Revised Regulatory Proposal*, January 2019, p. 59.

36 Our final decision on the RAB also reflects our updates to the WACC for the 2019–24 regulatory control period.

Table 4 AER's final decision on Essential's forecast regulatory depreciation allowance for the 2019–24 regulatory control period ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Straight-line depreciation	286.1	327.2	358.5	392.3	399.1	1,763.2
Less: inflation indexation on opening RAB	196.5	206.9	214.5	221.7	228.2	1,067.8
Regulatory depreciation	**89.6**	**120.4**	**144.1**	**170.5**	**170.9**	**695.4**

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 Essential'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.

In its revised proposal, Essential accepts our draft decision of $2,081.2 million ($2018–19) for net capex.[37]

Our final decision accepts Essential's revised proposal of $2,081.2 million ($2018–19) for net capex for the 2019–24 regulatory control period. This is the same as our draft decision and $18.4 million lower than Essential's initial proposal of $2,099.6 million.

In our draft decision, we were broadly satisfied with Essential's overall capex proposal. Essential justified each major driver of its capex forecast; however, our draft decision addressed a modelling error in Essential's capex forecast which slightly over-stated Essential's forecast capex in real terms. As a result, our substitute estimate was $18.4 million lower than Essential's initial proposal.

Compared with the current 2014–19 regulatory control period, Essential's forecast capex for the 2019–24 period includes reductions in augmentation (augex), connections, replacement (repex) and capitalised overheads.

Essential's non-network capex proposal includes capital investment in its strategic initiatives program, which it forecasts will lead to ongoing capex and opex savings. This proposed investment includes:[38]

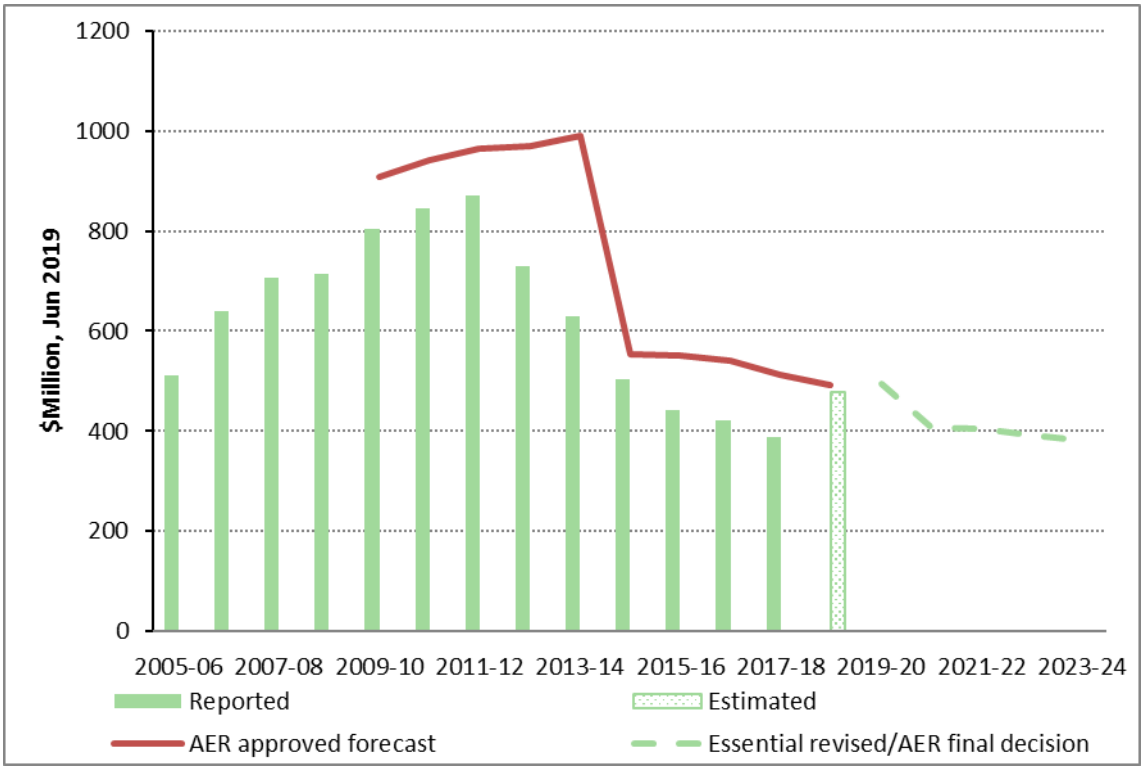
[37] Essential Energy, *Empowering communities to share and use energy for a better tomorrow, 2019–24 Revised Regulatory Proposal*, January 2019, p. 32.

- investing in research and new technology to improve asset monitoring, analysis and risk management
- risk-based asset planning to meet long-term customer needs
- automation of manual processes to reduce operational costs and drive efficiencies.

Essential has clearly indicated where its investment in these strategic initiatives will result in savings over the 2019–24 regulatory control period and beyond, in its initial regulatory proposal and subsequent information provided to us. For example, Essential has quantified the benefits of the strategic transformation program in its augex and capitalised overheads forecasts.

Figure 6 shows Essential's capex over the 2009–14 and 2014–19 regulatory control periods. It also shows the AER's final decision for capex for these two periods and for 2019–24. Annual capex decreased substantially from a peak in 2011–12. Our final decision for the 2019–24 period allows annual average capex at a slightly lower level to Essential's actual/estimated capex in 2014–19.

Figure 6 Essential's capex over time ($ million, 2018–19)



Source: AER analysis.

[38] Essential Energy, *Empowering communities to share and use energy for a better tomorrow, 2019–24 Regulatory Proposal*, April 2018, p. 7.

Table 5 shows Essential's forecast capex by driver for the 2019–24 regulatory control period.

Repex makes up the largest proportion of Essential's forecast capex for the 2019–24 period. In our draft decision, we noted that our own predictive modelling showed that Essential's proposed repex performs very well against the comparative modelled threshold and the National Electricity Market (NEM) benchmark average on both replacement lives and unit rates for most asset categories. Advice from our consultant, Arup, has informed our assessment of other elements of Essential's capex proposal. The advice supports our position that Essential's revised total capex proposal is consistent with the drivers of investment need, the efficient costs that a prudent operator would incur in the 2019–24 regulatory control period and reasonably reflects the capex criteria.

Table 5 Forecast capex by driver for the 2019–24 regulatory control period ($ million, 2018–19)

Category	Total
Augmentation	163.3
Connections	466.5
Replacement	805.6
Non-Network	525.8[a]
Capitalised overheads	598.8
Gross Capex (includes capital contributions)	**2,559.9**
Less Capital Contributions	(447.2)[b]
Less Disposals	(31.6)
Net Capex (excluding capital contributions)	**2,081.2**

Source: AER analysis.

Notes: (a) Gross of disposals.

(b) Capital contributions in this table include an overheads component. Forecast capital contributions for 2019–24 are $441.8 million excluding overheads.

Numbers may not add due to rounding.

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 we use to determine a service provider's annual total revenue requirement.

Our final decision is to accept Essential's revised opex proposal of $1,718.4 million ($2018–19) in total forecast opex for the 2019–24 regulatory control period.

Our final decision is consistent with Essential's initial proposal that we accepted in our draft decision.[39] Essential's total opex forecast is summarised in Table 6.

Table 6 Forecast opex for the 2019–24 regulatory control period ($ million, 2018–19)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
AER final decision, and Essential Energy proposed opex	375.5	362.5	350.3	327.1	303.1	1,718.4

Source: Essential Energy, *Regulatory proposal*, *Standard Control Services PTRM*, April 2018; AER analysis.

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

As set out in our draft decision, Essential's opex proposal maintains the cost savings Essential achieved in the current 2014–19 regulatory control period, and proposes further opex reductions as a result of specific strategic initiatives and an overall opex productivity growth target of 1.47 per cent per year over the 2019–24 period.[40] This proposal was supported by stakeholders.[41]

Since our draft decision, we have concluded an industry wide consultation on our approach to forecasting opex productivity growth.[42] We concluded that forecast opex productivity growth of 0.5 per cent per year reflects the opex productivity that can be achieved by a prudent electricity distributor acting efficiently under business-as-usual conditions. This productivity growth comes 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.

As noted above, Essential's proposal includes average annual forecast opex productivity growth of 1.47 per cent per year over the 2019–24 regulatory control period. This reflects the opex productivity growth that it expects to be able to achieve, and is higher than the opex productivity growth that we expect should be achieved at a minimum by a prudent electricity distributor acting efficiently. On this basis, the outcome of our opex productivity review has not changed the decision we made in our draft decision to accept Essential's opex proposal.

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[39] AER, *Draft Decision, Essential Energy Distribution determination 2019-24 Attachment 6 Operating Expenditure, November 2018*, p. 6-5.

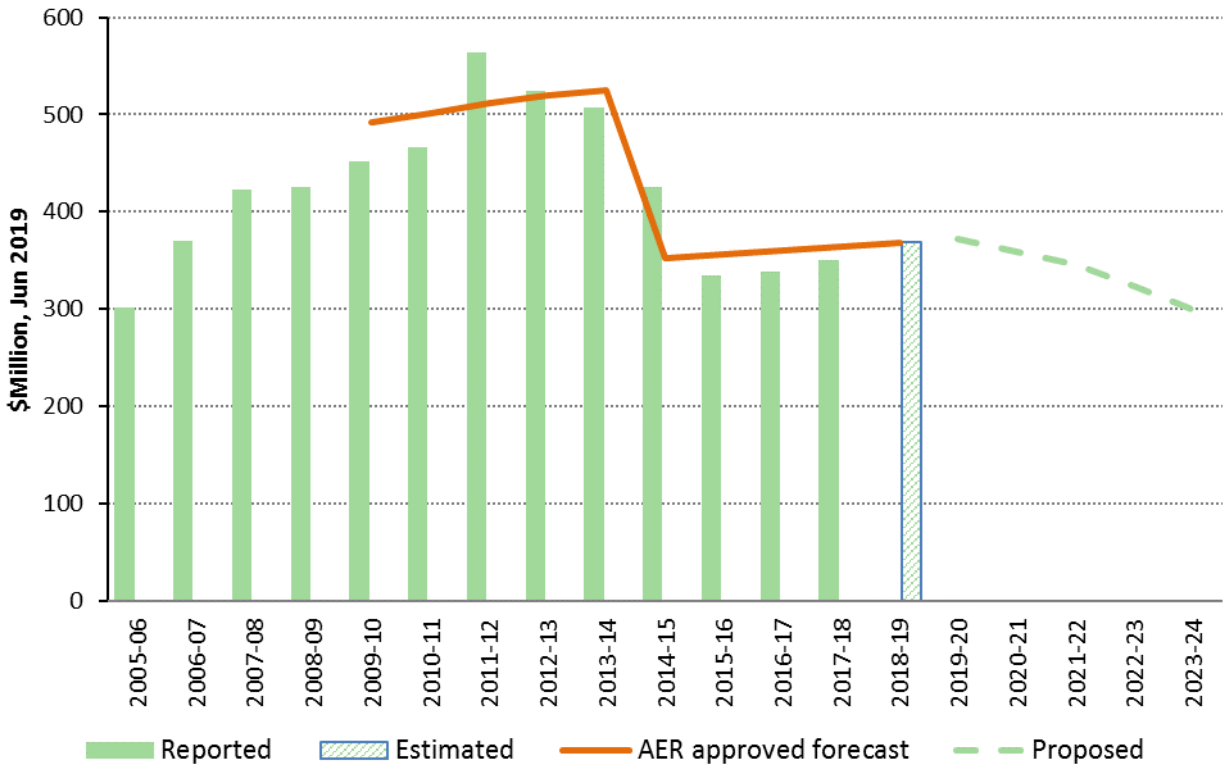
[40] AER, *Draft Decision, Essential Energy Distribution determination 2019-24 Attachment 6 Operating Expenditure,* November 2018 pp. 6-6 to 6-8.

[41] AER, *Draft Decision, Essential Energy Distribution determination 2019-24 Attachment 6 Operating Expenditure, November 2018*. pp 6-8 and 6-9.

[42] 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.

Figure 7 shows the change in Essential's opex over the last three regulatory control periods, including the opex reductions achieved over the current 2014–19 period and the further reductions that follow as part of its forecast opex for the 2019–24 period.

Figure 7 Essential's actual and forecast opex over time ($ million, 2018–19)



Source: AER analysis; Essential's PTRM.

Note: Excludes debt-raising costs.

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 Essential. Our final decision is to include a corporate income tax allowance of $79.9 million ($ nominal) in Essential's revenue for 2019–24. This represents a reduction of $30.7 million (or 27.8 per cent) on Essential'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 Essential'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 $16.6 million (or 15.0 per cent).

- we reduced Essential's revised proposed return on equity (section 2.2). Our final decision on the forecast return on equity affects the amount of estimated taxable income. Therefore, it has contributed to the reduction on the revised proposed corporate income tax allowance by about $13.1 million (or 11.8 per cent).

For this final decision, we accepted Essential's revised proposed:

- opening tax asset base (TAB) value of $6,807.4 million as at 1 July 2019
- standard and remaining tax asset lives as at 1 July 2019 for the existing asset classes and determine a standard tax asset life of 5 years for the new 'In-house software' asset class that is subject to the straight-line (SL) method of tax depreciation.

We have applied a value of imputation credits (gamma) of 0.585 as per the binding 2018 Instrument (section 2.2).

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

Table 7 sets out our final decision on the estimated cost of corporate income tax allowance for Essential over the 2019–24 regulatory control period. Further detail on Essential's corporate income tax can be found in Attachment 7.

Table 7 AER's final decision on Essential's cost of corporate income tax allowance for the 2019–24 regulatory control period ($ million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Tax payable	40.3	33.1	33.9	42.9	42.4	192.6
Less: value of imputation credits	23.6	19.4	19.8	25.1	24.8	112.7
Net corporate income tax allowance	**16.7**	**13.7**	**14.1**	**17.8**	**17.6**	**79.9**

Source: AER analysis.

2.7 Revenue adjustments

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

- Capital expenditure sharing scheme (CESS) — Essential has accrued rewards under the CESS, which we applied in the current 2014–19 regulatory control period to incentivise Essential to undertake efficient capex throughout the regulatory control 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, Essential out-performed our capex forecast, and our final decision is to approve a CESS revenue increment amount of $69.1 million ($2018–19).
- Demand management innovation allowance mechanism (DMIAM) — A DMIAM allowance of $4.61 million ($2018–19) has been applied to Essential 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 $33.0 million ($2018–19) has been applied to Essential, in accordance with what we determined will be returned to customers under our 2014–19 remade final decision for Essential.[43] This amount reflects the difference between our 2014–19 remade final decision and the revenue expected to be recovered by Essential under the interim price undertakings that have applied over the 2014–19 period. This adjustment was included in Essential's revised proposal.

[43] 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 Essential 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 Essential'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 Essential for the 2019–24 regulatory control period. Essential'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 Essential for the 2019–24 regulatory control period.[44] This is consistent with our draft decision and Essential's revised proposal.[45] When we apply the EBSS, we will:

[44] 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[46]
- 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.[47]

Table 8 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 8 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	356.6	360.6	375.5	362.5	350.3	327.1	303.1
Less debt raising costs	4.1	4.2	4.0	4.1	4.1	4.2	4.2
Forecast opex for the EBSS	352.5	356.4	371.5	358.4	346.1	322.9	298.9

Source: AER, *Essential Energy draft decision - PTRM*, April 2019; AER, *Essential Energy final decision 2014–19 distribution determination remittal - PTRM*, May 2018; 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.

In the 2014–19 regulatory control period, Essential out-performed our capex forecast. Our final decision is to apply a CESS revenue increment amount of $69.1 million from the application of the CESS in the 2014–19 period.

We note Essential was entitled to a higher CESS revenue increment of $86.6 million. However, consistent with our preliminary decision, Essential has elected to include the

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45 AER, *Essential Energy draft determination 2019–24 Draft decision, Attachment 8 – Efficiency Benefit Sharing Scheme,* November 2018 p. 5-8; Essential Energy, *Empowering communities to share and use energy for a better tomorrow, 2019–24 Revised Regulatory Proposal*, January 2019, p. 24.

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

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

lower increment of $69.1 million in its revised proposal. We have accepted Essential's revised proposal to adopt the preliminary decision CESS revenue increment.

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

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)[48], to Essential for the 2019–24 regulatory control period. We will not apply the guaranteed service level component to Essential as the existing jurisdictional arrangements will continue to apply.

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

3.4 Demand management incentive scheme

On 13 December 2017, we published a DMIS[49] and DMIAM.[50] 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 Essential for the 2019–24 regulatory control period, without any modification.[51] Essential's revised proposal accepted our draft decision.[52]

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

The DMIS contains three elements:[53]

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

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

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

51 AER, *Draft decision, Essential Energy distribution determination 2019-24, Attachment 11, Demand management incentive scheme*, November 2018.

52 Essential Energy, *Essential Energy – Revised Proposal – Attachment 1.1 Compliance with the National Electricity Rules,* January 2019, p. 10.

- 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
- 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.[54]

The DMIAM comprises:[55]

- 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 Essential
- project eligibility requirements
- compliance reporting requirements.

Our calculation of Essential's DMIAM funding over the 2019–24 regulatory control period is shown in Table 9. As noted earlier, the total DMIAM funding is $4.61 million ($2018–19) over the period. This calculation is based on the smoothed annual revenue requirement as set out in the PTRM for Essential in our 2019–24 final decision.

Table 9 AER's final decision on the DMIA for Essential ($ million, 2018–19)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
DMIA	0.92	0.93	0.93	0.93	0.90	4.61

Source: AER analysis.

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

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

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

4 Tariff structure statement

Essential'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.

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.[56] It is accompanied by an indicative pricing schedule.[57] 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, Essential'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 approve, in full, Essential's revised TSS.

Essential made numerous changes in response to our draft decision. These include:

- adopting a technologically neutral tariff assignment policy for residential and small business customers
- narrowing the demand charge peak charging windows to 5pm to 8pm.

We have changed our policy position from the draft decision to allow Essential to:

- give residential and small business customers the opportunity to opt-out of cost reflective tariffs
- not offer reassigned customers a 12-month data sampling period on the flat tariff.

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

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

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

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 Essential must set its prices. These include the classification of services, the conditions under which we may grant Essential additional revenues to cover unforeseen circumstances and the framework for Essential's negotiated services and customer connections.

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.

5.1.1 Final decision

We set out our proposed approach to the classification of distribution services for the NSW distributors in our Framework and Approach (F&A).[58] Our final decision is to retain the classification structure consistent with our F&A[59] 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.[60]

Reasons for our decision are provided below.

5.1.2 Essential's revised proposal

Essential largely accepted our classification of services in the F&A and draft decision, with the exception of two proposed changes. It has proposed:

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

59 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.

60 Ausgrid, *Revised Regulatory Proposal 1 July 2019 to 30 June 2024, January 2019*, pp. 176-177.

- an amendment to the description of 'emergency recoverable works' (contained in the 'common distribution service' group), to include rectification of urgent faults or defects related to private assets
- a new service titled 'urgent restoration and security of supply following a fault on a customer's high voltage network'.

The amendment that Essential proposed to the description of 'emergency recoverable works' would allow it to repair a customer's private assets where there is an urgent need to rectify a defect. Essential stated that regional, rural and remote customers often cannot source a private provider to rectify these defects in the short time required. This means that there is no time to advertise the job through their 'provider of last resort' system. A typical example of this is a private pole that has been hit by a car and is at immediate risk of failure. Essential proposed to recover the costs of these works in line with the process of cost recovery for emergency recoverable works.

A new service, called 'urgent restoration and security of supply following a fault on a customer's high voltage network', would allow Essential to repair high voltage customer assets in remote and regional areas. Essential stated that customers in remote areas often cannot procure services from contestable service providers on an urgent basis to restore power supply following a fault. This is particularly the case for industrial customers with high voltage assets, which often requires the services of highly specialised providers. Essential stated that extended power supply outages for these industrial high voltage customers can have health and safety impacts (for example, by cutting off underground ventilation for mines) or can result in significant financial loss (for example, by cutting temperature controls for large chicken sheds or industrial meat cool rooms). Essential proposed classifying this as an alternative control service (ACS).

5.1.3 Reasons for our decision

We understand the need for urgent repairs and restoration of supply work to private assets in regional and remote areas. However, under the NER, we can only classify distribution services; we do not classify non-distribution services.[61]

Furthermore, electricity distributors are subject to ring-fencing obligations which prevent electricity distributors from providing services which are not deemed to be distribution services.[62] As both of these proposed services involve work on behind-the-meter customer-owned assets, they do not meet the definition of services provided "by means of or in connection with the distribution system".[63]

As discussed below, our final decision will allow NSW distributors to perform minor repairs on a customer's assets as part of the 'rectification of simple customer faults'

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61 NER, Chapter 10, Glossary.

62 AER, *Ring-fencing Guideline Version 2* – October 2017, s.3.1, p. 11.

63 NER, Chapter 10, Glossary.

service. This reflects the fact that allowing a distributor to perform low-cost repairs when they are already onsite is the most practical outcome for customers. However, the new services Essential proposed would not be provided in situations that are incidental or incremental to distribution services that they already provide in the normal course of their business. Should Essential provide these services, they must do so in full compliance with their ring-fencing obligations.

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 a case such as this, our amendment to the 'common distribution service' allows the distributor to replace the service fuse and restore supply to the customer quickly.

Further, 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 extending the time limit to 30 minutes.[64] 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.

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 Essential's classified services for the 2019–24 regulatory control period can be found at Attachment 12.

5.2 Pass through events

We accept Essential's four nominated pass through events ('terrorism', 'natural disaster', 'insurance cap' and 'insurer's credit risk').

Our draft decision set out amendments to the event definitions so that the pass through events that apply to Essential will be consistent with recent decisions for other network

[64] Ausgrid, Revised Regulatory Proposal 1 July 2019 to 30 June 2024 January 2019, pp, 176-177.

service providers. Essential's revised proposal adopted these definitions. These are set out in Table 10.

Table 10 Approved nominated pass through events

Pass through event	AER definition
Insurance cap	An insurance cap event occurs if: • Essential Energy makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy, • Essential Energy incurs costs beyond the relevant policy limit, and • The costs beyond the relevant policy limit materially increase the costs to Essential Energy 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 Essential Energy was regulated • Essential Energy will be deemed to have made a claim on a relevant insurance policy if the claim is made by a related party of Essential Energy in relation to any aspect of the network or Essential Energy'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 Essential Energy becomes insolvent, and as a result, in respect of an existing or potential claim for a risk that was insured by the insolvent insurer, Essential Energy:
	  ○ 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,
	• Essential Energy's attempts to mitigate and prevent the event from occurring by reviewing and considering the insurer's track record, size, credit rating and reputation.
	• In the event that a claim would have been made after the insurance provider became insolvent, whether Essential Energy 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 Essential Energy 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:

Pass through event	AER definition
	• Whether Essential Energy 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 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 Essential Energy in providing direct control services. Note: In assessing a terrorism event pass through application, the AER will have regard to, amongst other things: • Whether Essential Energy 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 Essential's proposed distribution negotiating framework for the 2019–24 regulatory control period.[65] We did not receive any objections or submissions on our draft decision.

Our final decision is to approve Essential's negotiating framework. The distribution negotiating framework that will apply to Essential 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.[66] Our final decision is to retain the NDSC that we published for Essential in May 2018[67] for the 2019–24 regulatory control period. The NDSC give effect to the negotiated distribution services principles.[68]

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65 AER, *Draft Decision, Essential Energy distribution determination 2019 to 2024*, November 2018, Attachment 16, p. 16–1.

66 NER, cl. 6.12.1(16).

67 AER, *Draft Decision, Essential Energy distribution determination 2019 to 2024*, November 2018, Attachment 16, p. 16–1.

68 NER, cl. 6.7.1.

5.4 Connection policy

Our draft decision[69] approved, without modification, Essential's proposed connection policy that it submitted in its initial regulatory proposal.[70]

In its revised proposal, Essential accepted our draft decision.[71]

We did not receive any submissions on our draft decision and Essential's revised proposal that addressed Essential's connection policy.

Our final decision is to approve the connection policy submitted by Essential in its initial regulatory proposal on 30 April 2018.[72]

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69 AER, *Draft Decision Essential Energy Distribution Determination 2019 to 2024, Attachment 17 Connection policy*, November 2018.

70 Essential Energy, *Empowering communities to share and use energy for a better tomorrow*, *2019–24 Regulatory Proposal,* April 2018.

71 Essential Energy, Essential Energy – *Revised Proposal – Attachment 1.1 Compliance with the National Electricity Rules,* January 2019, p. 5.

72 Essential Energy, *Connection Policy-Connection Charges,* April 2018. Seehttps://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/essential-energy-determination-2019-24/proposal.

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).[73] 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.[74] This is not delivered by any one of the NEO's factors in isolation, but rather by balancing them in reaching a regulatory decision.[75]

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.[76] 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. [77]

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.[78] 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.[79] 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.[80] 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.[81] 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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73 NEL, section 16(1).

74 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.

75 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.

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

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

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

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

80 NEL, s. 7A(7).

81 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,[82] 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.[83]

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

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

[83] 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 Essential's distribution determination for the 2019–24 regulatory control period. Our final decision includes the following constituent components:[84]

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 Essential 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 Essential's building block proposal. Our final decision on Essential'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 Essential'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 Essential'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 Essential's proposed total net capital expenditure forecast of $2,081.2 million ($2018–19). This is set out in section 2.4 of this final decision Overview.
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 Essential's proposed total forecast operating expenditure inclusive of debt raising costs and exclusive of the demand management innovation allowance mechanism (DMIAM) of $1,718.4 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 5.73 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

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

Constituent component
a value of 0.585. This is set out in section 2.2 of this final decision Overview.
In accordance with clause 6.12.1(6) of the NER, the AER's final decision on Essential's regulatory asset base (RAB) as at 1 July 2019 in accordance with clause 6.5.1 and schedule 6.2 is $8,105.0 million ($ nominal). 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 Essential's cost of corporate income tax is $79.9 million ($ 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 not to approve the depreciation schedules submitted by Essential. Our final decision substitutes alternative depreciation schedules in accordance with clause 6.5.5(b) and 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 Essential 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 Essential in the 2019–24 regulatory control period. This is set out in Attachment 9 of this final decision. • We will apply our STPIS to Essential for the 2019–24 regulatory control period. This is set out in Attachment 10 of this final decision. • We will apply the DMIS and DMIAM to Essential 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 Essential 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 Essential must maintain a DUoS unders and overs account. It must provide information on this account to us in its annual pricing

Constituent component
proposal. This is set out in Attachment 13 of this final decision.
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 approve the tariff structure statement (TSS) proposed by Essential. 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 Essential will apply for the 2019–24 regulatory control period. This is set out in 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 Essential. 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 retails customers from one tariff class to another (including any applicable restrictions) for Essential is set out in Attachment 13 of this final decision.
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 Essential'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 Essential 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 Essential 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 Essential's proposed connection policy. This is set out in section 5.4 of this final decision Overview.

C List of submissions

We received 10 submissions in response to our draft decision and Essential's revised revenue proposal. These are listed below.

Submission from	Date received
AGL	5 February 2019
Consumer Challenge Panel (CCP10)	8 February 2019
Energy Consumers Australia (ECA)	15 February 2019
Energy and Management Services (EMS)	4 February 2019
Energy Users Association of Australia (EUAA)	5 February 2019
Orana Joint Organisation of Councils	4 February 2019
Origin	5 February 2019
Public Interest Advocacy Centre (PIAC)	7 February 2019
Red Energy / Lumo Energy	7 February 2019
Southern Lights NSW	5 February 2019