DRAFT DECISION

Endeavour Energy Distribution Determination

2019 to 2024

Overview

November 2018

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Note

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

The draft decision includes the following attachments:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

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Attachment 11 – Demand management incentive scheme

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Attachment 16 – Negotiated services framework and criteria

Attachment 17 – Connection policy

Attachment 18 – Tariff structure statement

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Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
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
EBSS	Efficiency benefit sharing scheme
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
opex	operating expenditure
RAB	regulatory asset base
RBA	Reserve Bank of Australia
STPIS	Service target performance incentive scheme
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."

Endeavour Energy (Endeavour) is the electricity distribution network service provider for Sydney's greater west, the Blue Mountains, Southern Highlands, the Illawarra and South Coast. On 30 April 2018, Endeavour submitted its regulatory proposal for the five years commencing 1 July 2019.

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

Endeavour also provides alternative control services, 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 Endeavour's alternative control services in attachment 15 to this draft decision. Endeavour has not proposed to provide any services on a negotiated basis in the 2019–24 regulatory control period.[2]

1 NEL, s. 7.

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

Invitation for submissions

This is our draft decision on Endeavour's distribution determination for the 2019–24 regulatory control period. Endeavour will now have the opportunity to submit a revised proposal in response to this draft decision by 8 January 2019.

Submissions from interested stakeholders on both this draft decision and Endeavour's revised proposal are invited by 5 February 2019. We will consider and respond to all submissions received by that date in our final determination, which is due to be made by 30 April 2019.

Submissions should be sent to: NSW2019-24@aer.gov.au. Alternatively, submissions can be sent to:

Sebastian Roberts
General Manager
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Submissions should be in Microsoft Word or another text readable document format.

We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process.

Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information should:

(1) clearly identify the information that is the subject of the confidentiality claim

(2) provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on our website.[3]

[3] For further information regarding our use and disclosure of information provided to us, see the *ACCC/AER Information Policy* (June 2014), which is available on our website: https://www.aer.gov.au/publications/corporate-documents/accc-and-aer-information-policy-collection-and-disclosure-of-information

1 Our draft decision

Our draft decision would allow Endeavour to recover $4413.0 million ($nominal) from its customers from 1 July 2019 to 30 June 2024. We estimate that this draft decision, if implemented, would mean that by the end of the 2019–24 regulatory control period:

- Endeavour's average distribution network tariff would increase (in nominal terms) by about 1.3 per cent[4]
- Holding all other components of the bill constant, the average annual electricity bill for a residential or small business customer on Endeavour's distribution network would increase by about 0.4 per cent.[5]

For Endeavour's residential and small business customers, this suggests that the average annual electricity bill would be $6 and $12 higher, respectively, by the end of the 2019–24 regulatory control period.

Endeavour's proposal was made following a period of engagement with consumers on how best to address consumer priorities of affordability, reliability and safety. This engagement included a series of expenditure 'deep dives' undertaken by Endeavour as part of our agreement to extend the time for submission of its proposal from 31 January to 30 April 2018. This engagement was a significant improvement since our last decision for Endeavour in 2015. However, some areas of contention identified by consumer groups in the course of Endeavour's engagement remained at the time its proposal was submitted.

Since submission of its initial proposal Endeavour has continued to engage with us and with key stakeholders to understand and address concerns with its forecast increase in capital expenditure (capex) for 2019–24 in particular. In many respects we now agree with Endeavour on the key drivers influencing its revenue requirement for 2019–24. Our draft decision takes into account new information provided by Endeavour in response to that engagement, including a reduced capex forecast provided on 30 August 2018. Endeavour's reduced forecast has now formed the basis of the total forecast capex we have adopted for the purpose of this draft decision, which better reflects the efficiency gains achieved in the current period.

Over the current period we have also seen Endeavour make significant progress in improving its efficiency. Where our last decision expressed concerns that its operating expenditure (opex) in particular was materially above efficient levels, we are now in a position to accept Endeavour's revealed opex as a starting point for its forecast expenditure for the next five years. However, opex is another area in which we require

4 An average increase of 0.3 per cent per annum from 1 July 2018.

5 An average increase of 0.1 per cent per annum from 1 July 2018. We estimate the expected bill impact by varying the distribution network charges in accordance with our draft decision, while holding all other components constant. This approach isolates the effect of our draft decision on the core distribution network charges, and does not imply that other components will remain unchanged across the regulatory control period.

further information before we can accept Endeavour's proposed forecast for 2019–24. This includes further consideration of how changes in productivity over time should be reflected in forecast opex.

Our ongoing reviews of approaches to the rate of return[6] and corporate income tax allowance[7] are also likely to impact our final decision.

In making this draft decision we have had regard to a range of sources including Endeavour's proposal, submissions received as well as additional analysis undertaken and published by us. Endeavour will now have the opportunity to respond to our concerns in its revised proposal. We will continue to work with Endeavour and stakeholders to ensure that our final decision, which will determine the revenue Endeavour can recover from its customers for the 2019–24 regulatory control period, is in the long term interests of consumers and that Endeavour's customers are paying no more than they should for safe and reliable electricity.

Our remade decision on Endeavour's revenue for 2014–19

Our draft decision on Endeavour's revenue from 1 July 2019 also includes the impact of our remade decision on its 2014–19 revenues.

Endeavour appealed our 2015 determination of its revenue allowance for the current, 2014–19, regulatory control period. The Australian Competition Tribunal set aside our decision and directed us to remake it. We completed that process in September 2018,[8] after Endeavour had submitted its 2019–24 proposal.

Our remade decision for 2014–19 will impact Endeavour's network tariffs for 2019–24. The difference between what Endeavour will recover over the 2014–19 period under interim tariff undertakings and the total revenue we have approved in our remade final decision will be returned to customers from 1 July 2019.

To that end, Endeavour included a revenue adjustment in its 2019–24 proposal reflecting the expected outcomes of its remade decision. In this draft decision we have now incorporated the final outcomes of the remittal process.

1.1 How would our draft decision affect 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 30 per cent of the total retail

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6 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-rate-of-return-guideline

7 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-regulatory-tax-approach-2018

8 AER - Final decision Endeavour Energy 2014–19 distribution determination - September 2018

electricity bills Endeavour's customers pay.[9] Other contributors to the total retail bill are:

- Wholesale costs incurred by retailers in purchasing electricity from the National Electricity Market (or of generation as relevant in the case of vertically integrated gentailers), and of managing hedging and price exposure.
- Costs charged by TransGrid as the coordinating transmission network service provider for NSW (which we regulate under our transmission determination for TransGrid[10]).
- Costs of complying with environmental (green) schemes, including Commonwealth and State-based schemes and feed-in tariff schemes.
- The costs of running a retail electricity business, such as billing, marketing and customer assistance costs.
- A retail margin (or profit) returned to shareholders of the retail electricity business.

Each of these costs contributes to the retail prices charged to customers by their chosen electricity retailer.

Table 1 shows the estimated average annual impact of our draft decision on electricity bills for residential and small business customers. These estimates suggest a nominal increase of 0.4 per cent over the five year period.

We estimate the expected bill impact by varying the distribution charges in accordance with our draft decision, while holding all other components constant. This approach isolates the effect of our draft 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.[11]

We estimate the impact of this draft decision would be to increase the average annual residential electricity bill in 2023–24 by about $6 or 0.4 per cent ($ nominal) from the current, 2018–19 level. By comparison, had we accepted Endeavour's proposal, the expected impact would have been an increase of about $52 or 3.3 per cent.

Similarly, for an average small business customer on Endeavour's network, we estimate the average annual electricity bill in 2023–24 would increase by about $12 or 0.4 per cent ($ nominal) from the current 2018–19 level. By comparison, had we accepted Endeavour's proposal the estimated impact would have been an increase of about $101 or 3.3 per cent.

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9 Endeavour Energy - RIN0.01 Final RIN Workbook 1 Reset (Consolidated) - 30 April 2018

10 https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/transgrid-determination-2018-23.

11 It also assumes that actual energy consumption will equal the forecast adopted in our draft decision. Since Endeavour 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 draft decision						
Residential annual bill[a]	1610[a]	1604	1607	1611	1616	1616
Annual change[c]		–6 (–0.4%)	4 (0.2%)	4 (0.3%)	4 (0.3%)	0 (0%)
Small business annual bill[b]	3110[b]	3098	3105	3113	3121	3122
Annual change[c]		–12 (–0.4%)	7 (0.2%)	8 (0.3%)	8 (0.3%)	1 (0%)
Endeavour's proposal						
Residential annual bill[a]	1610[a]	1620	1631	1641	1652	1662
Annual change[c]		10 (0.6%)	11 (0.7%)	10 (0.6%)	11 (0.7%)	11 (0.6%)
Small business annual bill[b]	3110[b]	3129	3150	3170	3191	3211
Annual change[c]		19 (0.6%)	21 (0.7%)	19 (0.6%)	21 (0.7%)	20 (0.6%)

Source: AER analysis; AER, Energy Made Easy website (standing offer); Endeavour Energy, *RIN0.01 Final RIN Workbook 1 Reset (Consolidated)*, April 2018.

(a) Annual bill for 2018–19 is sourced from Energy Made Easy and reflects the average consumption of 5000 kWh for residential customers in NSW (postcode 2500).

(b) Annual bill for 2018–19 is sourced from Energy Made Easy and reflects the average consumption of 10000 kWh for small business customers in NSW (postcode 2500).

(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 Endeavour. Actual bill impacts will vary depending on electricity consumption and tariff class.

1.2 What is driving revenue?

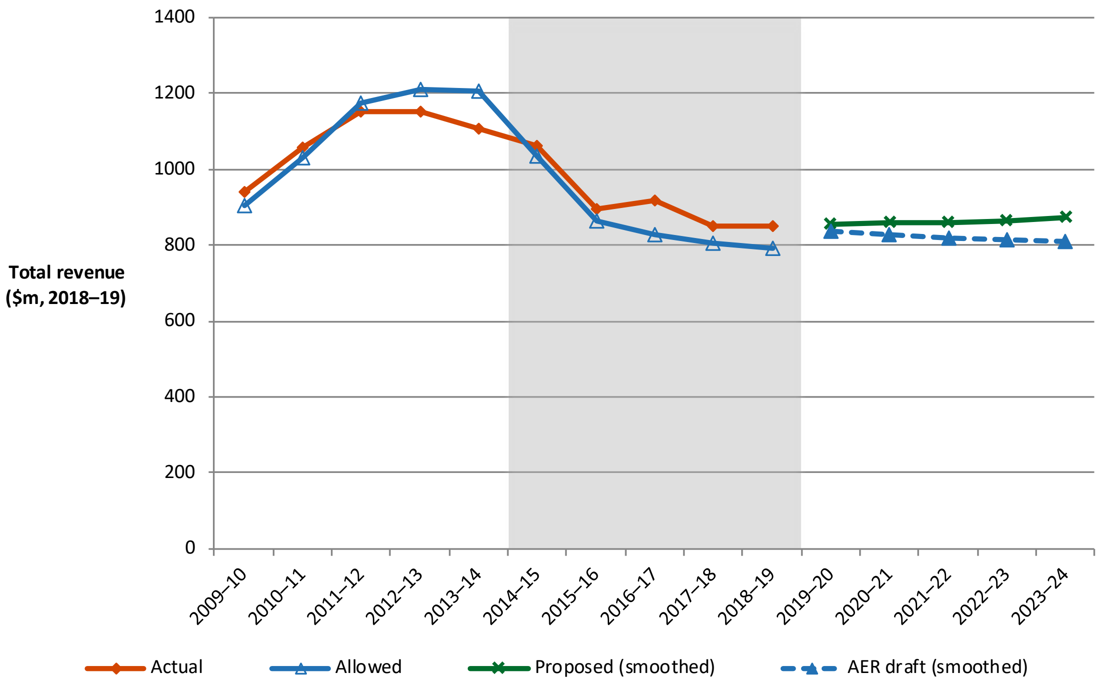
The changing impact of inflation over time makes it difficult to compare revenue from one period to the next on a like-for-like basis. To do this we use 'real' values based on a common year (in this case 2018–19[12]), which have been adjusted for the impact of inflation. In real terms, the total revenue allowance in this draft decision is 5 per cent lower than total allowed revenue for the current, 2014–19 period.[13] As Figure 1 shows, this would result in a real revenue decrease of 1.8 per cent in 2019–20[14] followed by average decreases of 0.9 per cent per annum over 2020–24.

12 i.e. 30 June 2019 dollar terms.

13 This comparison is between the total revenue allowed under this draft decision and that in our remade decision on Endeavour's total revenue allowance for 2014–19 (https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/endeavour-energy-determination-2014-19-remittal).

14 This real decrease for 2019–20 revenue is relative to 2018–19 estimated actual revenue rather than 2018–19 allowed revenue.

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



Source: AER analysis

Endeavour'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 Endeavour's regulatory asset base (RAB) grew by 34.0 per cent. In a challenging investment environment during the global financial crisis, the rate of return (a forecast of the financing costs Endeavour 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.

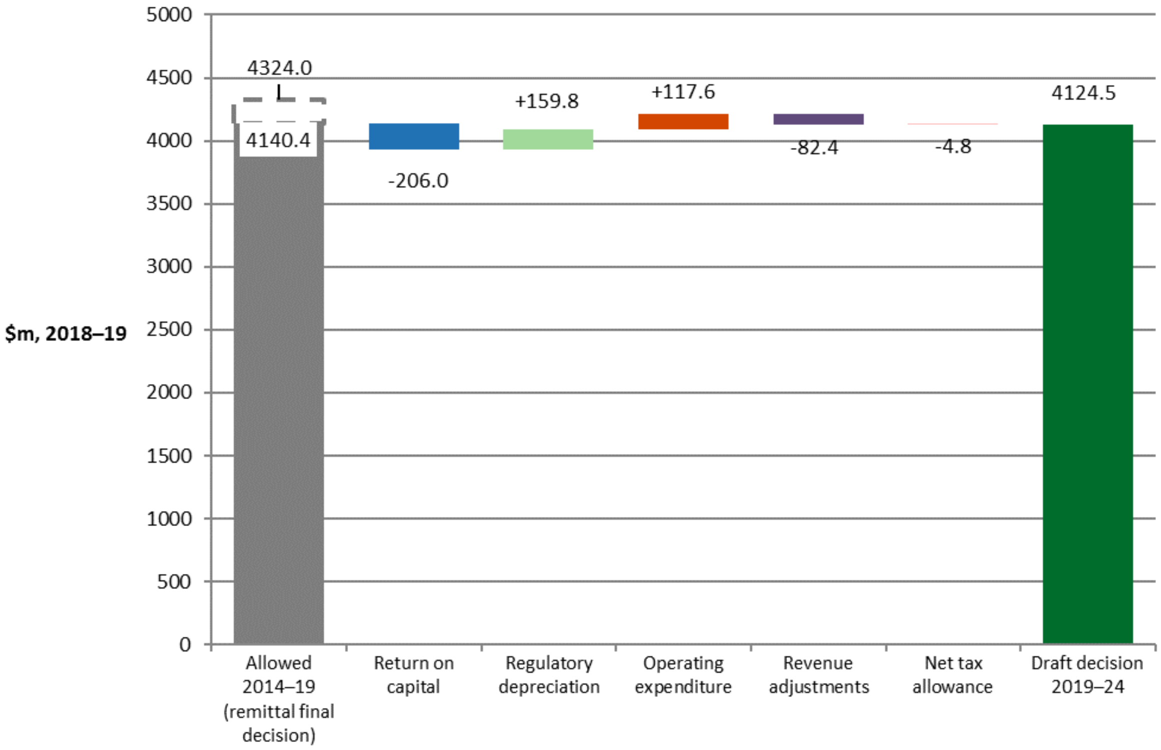
Lower approved revenues for the current, 2014–19 period[15] reflected an improved investment environment. Approved rates of return fell from 10.02 per cent to 6.74 per cent. Evidence also suggested that distribution services could be provided at substantially lower cost than historical expenditure suggested, while still maintaining safety and complying with reliability obligations. In addition, flatter demand forecasts meant that Endeavour was 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 6.5 per cent.

Our draft decision for 2019–24 reflects a continuation of many of these trends. Figure 2 below highlights the key drivers of the real change in Endeavour's revenues from the

[15] AER - Final decision Endeavour Energy 2014–19 distribution determination - September 2018.

current period to this draft decision for 2019–24, by reference to the revenue 'building blocks' that form the basis of our assessment.[16]

Figure 2 Change in revenue from 2014–19 to 2019–24 ($m, 2018–19)



Source: AER analysis

Note: The 'Allowed 2014–19 (remittal final decision)' column shows an additional $183.6 million (in dashed grey outline) on top of the $4140.4 million total. The $4140.4 million is the sum of the revenue building blocks in the remittal PTRM, and incorporates some of the remittal changes including expected inflation and the return on debt updates. The additional $183.6 million comprises $54.0 million for newly classified alternative control service metering in 2014–15 and $129.6 million representing further changes in the remittal PTRM calculations including: service target performance financial incentives, negotiated cap settlement amounts and difference in CPI adjustments.[17]

'Revenue adjustments' include increments or decrements accrued under incentives schemes such as the CESS, EBSS and DMIAM. These are discussed in section 2.6. It also includes a return to customers of $227.1 million arising from our remade decision for 2014–19.

[16] There is an overall period to period revenue decrease from our remade decision for 2014–19 (remittal) compared to this draft decision for 2019–24. The sum of the period to period changes in individual building blocks is positive, but adjustments for yield calculation (updated for actual volumes), service target performance financial incentives, negotiated cap settlement amounts and difference in CPI adjustments offset these to result in an overall decrease.

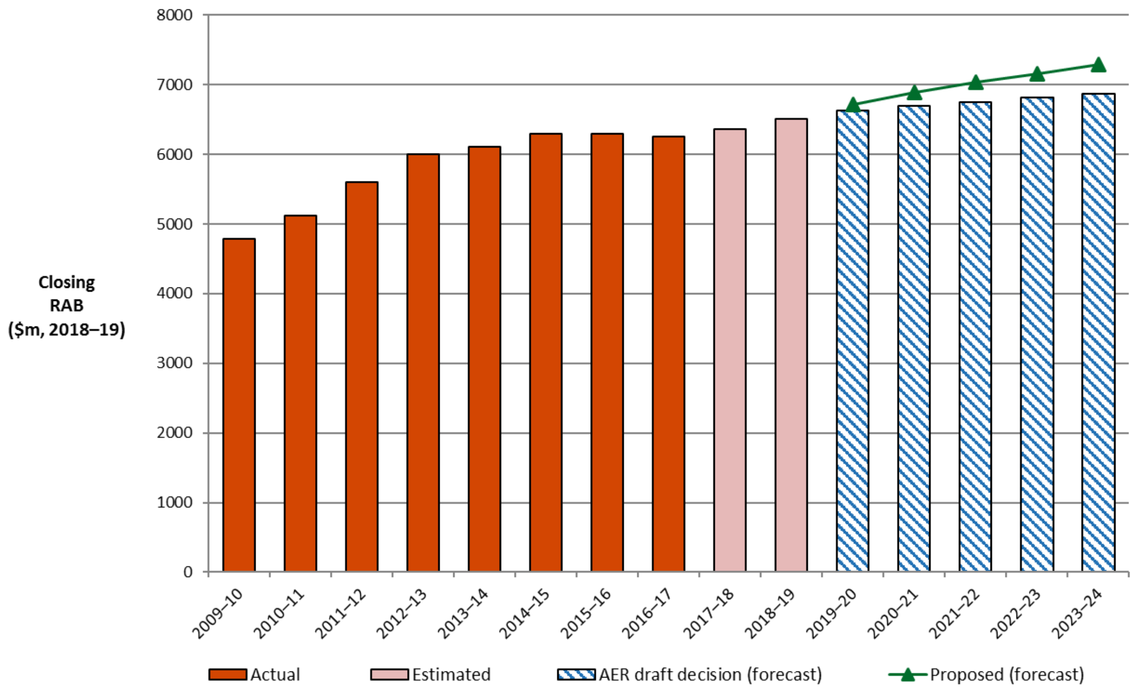
[17] Building block revenues are converted from nominal to real $2018-19 using both forecast and actual CPI, the 'Allowed 2014-19 (remittal final decision)' amount is converted from nominal to real $2018-19 only using actual CPI.

The return on capital (the product of the size of Endeavour's RAB and the allowed rate of return) is the largest component of Endeavour's regulated revenue. In this draft decision, a relatively stable forecast of capex to be added to the RAB over the 2019–24 period and our reduction to the placeholder rate of return mean that the return on capital under this draft decision is significantly lower than that for the current period.

Our draft decision revenue adopts a placeholder rate of return on Endeavour's RAB of 5.96 per cent.[18] This is consistent with the approach set out in our draft 2018 rate of return guideline, consultation on which is ongoing. This compares to the 6.74 per cent we previously set for the current period.[19]

This reduction in the rate of return for 2019–24 is helping to offset projected increases in Endeavour's RAB as Endeavour's forecast capex for 2019–24 increases from the current period to accommodate expected growth in its network area and particularly in Sydney's west. This growth in the RAB, combined with Endeavour's proposed change in approach to the calculation of the regulatory depreciation allowance, is also contributing to the increase in regulatory depreciation relative to the current period. However, as Figure 3 shows, projected real RAB growth of 5.5 per cent over 2019–24 is considerably below its peak in 2009–14.

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



Source: AER analysis.

18 Nominal, vanilla weighted average cost of capital.

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

Over the current period we have also seen Endeavour make significant progress in improving its operating efficiency. Where our last decision expressed concerns that its opex in particular was materially above efficient levels, we are now in a position to accept Endeavour's revealed (actual) opex at the end of the current period as a starting point for its forecast expenditure for the next five years, which under this draft decision would remain in line with current levels.

Endeavour's 2019–24 proposal includes revenue adjustments for benefits accrued under the opex Efficiency Benefit Sharing Scheme (EBSS) and the Demand Management Innovation Allowance Mechanism (DMIAM). However, these incentive scheme payments are offset by a downward adjustment of $227.1 million which will be returned to customers following our remade decision on Endeavour's 2014–19 determination.

1.3 Key differences between our draft decision and Endeavour’s proposal

Our draft decision does not reflect the total revenue proposed by Endeavour. The total revenue in this draft decision is 5.1 per cent lower than in Endeavour's proposal.

The biggest contributor to the difference between our draft decision and Endeavour's proposal is our proposed change to the rate of return (and therefore the return on capital). Our draft decision adopts the approach proposed in our draft 2018 rate of return guideline to calculate a rate of return of 5.96 per cent compared to Endeavour's proposed 6.11 per cent (which was based on our current, 2013 guideline).

Also reflecting our draft 2018 rate of return guideline, our draft decision adopts a value of imputation credits (gamma) of 0.5 compared to Endeavour's proposed 0.4 (again based on our 2013 guideline and approach), which has contributed to the reduction in the corporate income tax allowance relative to Endeavour's proposal.

Consultation on our draft 2018 guideline is ongoing, and is expected to conclude in December 2018. Legislation before the South Australian Parliament at the time of this draft decision will (if passed) make our final 2018 rate of return guideline binding on this and other decisions.[20]

While the total revenue in this draft decision shares many of the same drivers that informed Endeavour's proposal, our current assessment of its expenditure forecasts is also contributing to the difference between the two:

- The total forecast capex in Endeavour's April 2018 proposal included provision for a level of capital investment that we consider goes beyond what is efficient and prudent for the maintenance and operation of its network and given expected demand. The lower capex forecast we have substituted for the purposes of this draft decision aligns with the revised forecast Endeavour submitted to us on

[20] Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Bill 2018

30 August 2018. This has resulted in a lower projected RAB value over the 2019–24 period, and also a smaller increase in the regulatory depreciation allowance.

- On the information before us, we consider Endeavour's total forecast opex overestimates the likely changes in the costs of labour and network growth. Between now and our final decision in April 2019, we will also be giving further consideration to our approach to forecasting productivity. This review may change our approach going forward, which in turn may impact our final decision on Endeavour's opex.

We expand on these elements of our draft decision below and in attachments 5 and 6 to this draft decision.

1.4 Endeavour's consumer engagement

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

Endeavour's engagement on its 2019–24 proposal took place in four phases. Its 'establishment' and 'research' phases (focussing on engagement approaches) took place in 2016. Engagement with consumers then commenced in earnest from January 2017, and as part of our agreement to extend the time for submission of its proposal from 31 January 2018 to 30 April 2018 culminated in a series of 'deep dives' in early 2018. These phases are summarised in Table 2.

Table 2 Endeavour's consumer engagement

Establishment phase January-June 2016	Research Phase June-December 2016	Engagement phase 1 January - December 2017	Engagement phase 2 January - June 2018
Reviewed engagement approach from previous regulatory proposal against international utilities and decided to use more informal approaches to increase participation. Mapped the stakeholders and consumer groups to engage with. Began a strategic review of	Partnered with Brisbane City Council and QLD University of Technology to better understand consumer behaviour around tariff reform. Reviewed Australian research to understand how consumers and stakeholders wish to be engaged in the electricity	Met with consumer representatives to better understand their key issues; held focus groups and deliberative planning forums to explore residential and business priorities. Convened a forum to explore changes to the Framework and Approach	Held four deep dive workshops to test whether plans were based on sound evidence and justified by customer feedback Held a formal feedback workshop to let people know how Endeavour had responded to their preferences and explain in detail the reasons where

Establishment phase January-June 2016	Research Phase June-December 2016	Engagement phase 1 January - December 2017	Engagement phase 2 January - June 2018
Customer Consultative Committee.	sector (in partnership with Ausgrid and Essential Energy). Increased executive involvement to give consumers direct access to decision makers.	for the 2019-24 regulatory determination (followed by feedback on a draft paper). Discussed key issues at peak consumer group and retailer roundtables and Customer Consultative Committee meetings Held targeted sessions with Regional Councils and retailers on street lighting and tariffs. Sought feedback on a 'Directions Paper' which set out high level plans and invited feedback. Commissioned an internal audit of engagement against the AER Consumer Engagement Guideline, and conducted regular health checks on approach to engagement	they had not. Continued regular one on one meetings with, retailers, councils and customer groups to listen and respond to feedback. Submitted its regulatory proposal on 30 April 2018, with a clear expectation it would continue to hold conversations and seek feedback.

Source: Endeavour Energy - 0.02 Regulatory Proposal Overview - April 2018 – Public, pp. 6-7.

The significant advances Endeavour has made in its consumer engagement since our last review were widely acknowledged. Endeavour's engagement on its proposed TSS was singled out for particular praise, with Energy Consumers Australia (ECA) commenting that: [21]

> "…the engagement on the tariff structure proposals was effective and collaborative, leading to an innovative proposal from Endeavour Energy that responded to issues raised by stakeholders."

Stakeholder experiences of Endeavour's consumer engagement on other aspects of its initial proposal were mixed. Submissions received in response to Endeavour's proposal and our issues paper were on the whole positive about Endeavour's willingness to share information. In its *Evaluation of Consumer Engagement by NSW DNSPs*, the Public Interest Advocacy Centre (PIAC) found that:[22]

> "When it did engage, Endeavour Energy exhibited good practice network customer engagement. Endeavour Energy provided customer forum participants with clear, accurate and accessible information and worked hard to elicit informed feedback."

[21] ECA - Submission - Endeavour - 14 August 2018, p. 6.

[22] PIAC, *PIAC Evaluation of Consumer Engagement by NSW DNSPs 2017-18*, 8 August 2018, p. 2. (This report was provided as Attachment A to PIAC's submission on the three NSW proposals.)

However, PIAC, ECA and the AER’s Consumer Challenge Panel (CCP10) have each suggested that in contrast to Endeavour's effectiveness in sharing information with consumers, the resultant consumer input was not clearly reflected in the proposal Endeavour submitted on 30 April 2018. PIAC commented that "[w]hile some aspects of [Endeavour's] engagement program were good, this was punctuated by periods of inactivity and unwillingness to compromise", and that ultimately Endeavour's engagement "did not start early enough, nor continue for long enough, which limited its effectiveness." [23]

These views were most pronounced in the context of submissions on Endeavour's capex proposal. In particular, CCP10 found that Endeavour was:

> "…not as open to changing perspectives in the difficult conversations in the short time available and disappointingly Endeavour’s revenue proposal submitted on 30 April 2018 included an almost identical capex proposal and price path to those in their Discussion Paper from August 2017."[24]

ECA offered similar views:

> "While there were instances of good practice engagement, the lateness in starting and the premature ending of engagement – meaning no account was taken of feedback – limited its effectiveness.
>
> In the case of the deep dive forums, these were well run and valuable for stakeholders, in gaining understanding of Endeavour Energy’s proposal, but did not result in changes to the proposal in respect of capital expenditure."[25]

After submission of its proposal, Endeavour continued to engage with a number of stakeholders on identified areas of contention. CCP10 wrote that it had:

> "…continued our discussions with Endeavour since the end of April and we have observed a changing approach since the revenue proposal was lodged, with greater willingness to respond to consumers concerns. CCP10 welcomes this ongoing dialogue and encourages Endeavour to continue to work with stakeholders and consumer groups to refine its revenue proposal so that is capable of acceptance by stakeholders."[26]

This commitment to further engagement after its initial proposal was submitted was recognised as good practice by PIAC:

> "PIAC supports the approach Endeavour Energy has taken to stakeholder engagement since submissions were made to the AER’s issues paper. Through this process, Endeavour Energy has engaged constructively with

23 PIAC, *PIAC Evaluation of Consumer Engagement by NSW DNSPs 2017–18*, 8 August 2018, p. 2.

24 CCP10 - Submission - 8 August 2018, p. 86

25 ECA - Submission - Endeavour - 14 August 2018, p. 6.

26 CCP10 - Submission - 8 August 2018, p. 86

> PIAC, other consumer groups and the AER on their capex revisions, rate of return and opex productivity."[27]

This continued engagement was reflected in a submission made by Endeavour on 30 August 2018 in response to our issues paper, which included a series of potential reductions to its proposed capex program that have now formed the basis of the lower capex forecast included in this draft decision. As PIAC has observed in its response to Endeavour's submission:

> "Effectively, Endeavour Energy has taken steps to engage early on its revised proposal. We welcome this as good engagement practice."[28]

[27] PIAC - Submission - 19 September 2018, p. 1.

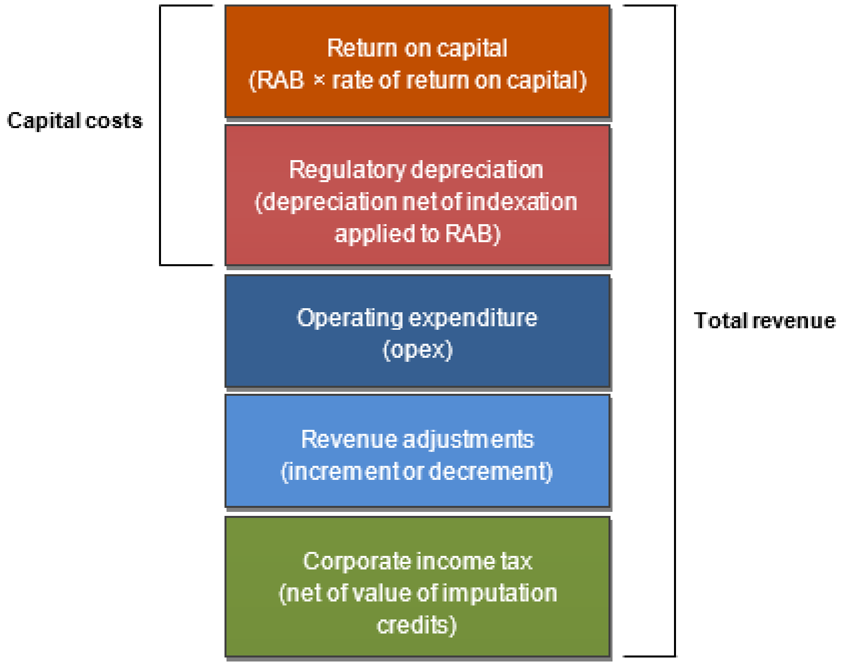
[28] PIAC - Submission - 19 September 2018, p. 1.

2 Key components of our draft decision on revenue

The total revenue Endeavour has proposed reflects its forecast of the efficient cost of providing network services over the 2019–24 regulatory control period. Endeavour's proposal, and our assessment of it under the NEL and NER, are based on a building block approach to determining a total revenue allowance (see Figure 4) which looks at five cost components:

- a return on the RAB (or return on capital, to compensate investors for the opportunity cost of funds invested in this 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 or decrements resulting from the application of incentive schemes, such as the Efficiency Benefit Sharing Scheme (EBSS) and Capital Expenditure Sharing Scheme (CESS) that applied to Endeavour for the 2014–19 regulatory control period and the DMIAM allowance for 2019–24.
- the estimated cost of corporate income tax.

Figure 4 The building block approach for determining total revenue



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 draft decision on Endeavour's revenue for 2019–24 in turn.

2.1 Regulatory asset base

The RAB is the value of assets used by Endeavour to provide regulated distribution network services. The value of the RAB substantially impacts Endeavour'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 depreciation (return of capital) components of the revenue determination.

As part of our decision on Endeavour's revenue for 2019–24, we make a decision on Endeavour's opening RAB as at 1 July 2019.[29] We use the RAB at the start of each

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29 NER, cl. 6.12.1(6).

regulatory year to determine the return of capital (regulatory depreciation) and return on capital building block allowances.

For our draft decision, we have determined:

- An opening RAB values of $6512.1 million ($ nominal) as at 1 July 2019, consistent with Endeavour's proposal
- A forecast closing RAB value of $7748.0 million ($ nominal) as at 30 June 2024.

Both our draft decision and Endeavour's proposal adopt our approved Roll Forward Model to calculate Endeavour's opening RAB as at 1 July 2019, and to project its closing RAB at 30 June 2024 in our approved Post-Tax Revenue Model. The key determinants of the projected RAB outcome in this draft decision—and of the difference between our draft decision and this element of Endeavour's proposal—are our related decisions on:

- the forecast of capex to be added to the RAB over the 2019–24 period, which as we discuss in section 2.4 below is lower than Endeavour initially proposed in April 2018
- updates to the estimation of inflation to reflect the most recent data from the Reserve Bank of Australia (RBA). Our draft decision applies a lower expected inflation rate of 2.42 per cent, compared to 2.5 per cent in Endeavour's proposal.

2.2 Rate of return and value of imputation credits

The return (the 'return on capital') each business will receive on its RAB 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.

A good 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. Alternatively, 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.

Our draft decision is for an allowed rate of return of 5.96 per cent (nominal vanilla, indicative) for the first year of the 2019–24 regulatory control period. We will annually update the return on debt and overall rate of return for the remaining regulatory years.

Our draft decision is to not accept Endeavour’s rate of return proposal of 6.11 per cent, which was based on our current, 2013 guideline.

We estimated our draft decision allowed rate of return using the approach set out in our draft 2018 rate of return guidelines. This reflects a departure from the current

(2013) guideline. After considering all the material submitted to us, we consider that this departure will, for the reasons set out in the draft 2018 guideline,[30] contribute to the achievement of the NEO and allowed rate of return objective[31] to the greatest degree.

Table 3 Draft decision on Endeavour's rate of return (% nominal)

	Endeavour final decision (2014–19)	Endeavour's proposal (2019–24)	AER draft decision (2019–24)	Allowed return over regulatory control period
Nominal risk free rate	2.55%	2.64%[a]	2.66%[b]	
Market risk premium	6.5%	6.5%	6%	
Equity beta	0.7	0.7	0.6	
Return on equity (nominal post–tax)	7.1%	7.2%	6.3%	Constant (%)
Return on debt (nominal pre–tax)	6.51%[c]	5.39%	5.73%[d]	Updated annually
Gearing	60%	60%	60%	Constant (60%)
Nominal vanilla WACC	6.74%	6.11%	5.96%	Updated annually for return on debt
Forecast inflation	2.42%[32]	2.5%	2.42%	Constant (%)

Source: AER analysis.

a Endeavour's placeholder risk free rate

b AER placeholder averaging period of 20 business days ending 31 July 2018

c AER return on debt for 2014–15

d AER placeholder trailing average return on debt for 2019-20 (the first year of the 2019-24 period). Our draft decision reflects a trailing average return on debt that assumes the annual return on debt (for the remaining years) is the placeholder annual return on debt estimated for 2019-20.

Our rate of return of 5.96 per cent in this draft decision represents a reduction from the 6.74[33] per cent we set in the previous regulatory control period. This is driven by lower returns on equity and debt.

We continue to apply the foundation model approach for estimating the return on equity and estimate a (placeholder) return on equity of 6.3 per cent. This is based on

30 AER, Draft rate of return guidelines explanatory statement, July 2018, p. 17.

31 NER, cl. 6.5.2(c).

32 We have corrected for an inflation estimation error for Endeavour that was identified in the merits review of Victorian Electricity and ACT Gas decisions. For example, see: AER, *Proposed revocation and substitution of TransGrid transmission determination 2014–2018*, 15 December 2017.
The corrected forecast inflation is 2.42 per cent.

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

an equity beta estimate of 0.6 and a market risk premium estimate of 6 per cent, which reflect the current market conditions and recent analysis outlined in the draft 2018 guideline.[34]

Our draft decision is to maintain the current transition path for Endeavour and estimate a placeholder return on debt of 5.73 per cent.[35] We have maintained our benchmark credit rating and term of debt from the 2013 guideline. However, for reasons outlined in the draft 2018 guideline, we have updated the implementation of our approach:

- to more accurately reflect the BBB+ benchmark credit rating for reasons outlined in the draft 2018 guideline.[36]
- to include an additional debt data series, the Thomson Reuters debt curve, to be evenly averaged with the RBA and Bloomberg debt curves.[37]

Endeavour proposed a value of 0.4 for imputation credits (gamma). Our draft decision is to apply a gamma of 0.5 for reasons outlined in the draft 2018 guideline. These reasons include analysis of data provided to us by the Australian Tax Office and Australian Bureau of Statistics, and observing the distribution rate of the top 20 ASX-listed firms.[38]

Consultation on our draft 2018 guideline is ongoing, and is expected to conclude in December 2018. As we noted above, legislation currently before the South Australian Parliament will (if passed) make our final 2018 rate of return guidelines binding on this and other decisions.

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

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34 AER, Draft rate of return guidelines explanatory statement, July 2018.

35 AER placeholder trailing average return on debt for 2019–20 (the first year of the 2019–24 period). Our draft decision reflects a trailing average return on debt that assumes the annual return on debt (for the remaining years) is the placeholder annual return on debt estimated for 2019–20.

36 AER, Draft rate of return guidelines explanatory statement, July 2018.

37 AER, Draft rate of return guidelines explanatory statement, July 2018.

38 AER, Draft rate of return guidelines explanatory statement, July 2018.

Our draft decision on Endeavour's revenue for 2019–24 includes a regulatory depreciation allowance of $631.7 million ($nominal).[39] This is $26.9 million (4.5 per cent) higher than Endeavour's proposal. Our draft decision incorporates:

- Endeavour's proposed change in approach to implementing the straight-line method for the calculation of its depreciation allowance, from our preferred weighted average remaining life approach to a period-by-period tracking approach.[40] Other things being equal, this approach results in a short to medium term increase in revenue (2.6 per cent over the 2019–24 period).[41] However, period-by-period tracking improves the matching of depreciation with the assets' underlying economic lives and is currently used by Ergon Energy and TransGrid. The NER require the depreciating rate to reflect an asset's economic life.[42] We have limited discretion in this regard.
- Endeavour's proposed asset lives which determine how quickly an asset class is depreciated (removed from the RAB).

The difference between our draft decision depreciation allowance and that proposed by Endeavour reflects other, related parts of our draft decision including:

- the expected inflation rate, which is lower than the rate used in Endeavour's proposal and explains the increase in the depreciation allowance compared to the proposal
- forecast capex, which is lower than Endeavour's initial, April 2018 proposal and results in a lower projected RAB value over the 2019–24 regulatory control period.[43]

The combined effect of these changes is to increase the depreciation allowance relative to Endeavour's proposal.

2.4 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 Endeavour'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

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39 This comprises $206.0 million for distribution assets and $38.5 million for dual function (transmission) assets.

40 Endeavour Energy - 0.01 Regulatory Proposal - April 2018, p. 84.

41 This relates to the profile of the return of capital over the life of the assets. It does not provide more returns overall in present value terms. The increase is less than if year-by-year tracking approach was used, as some other businesses do.

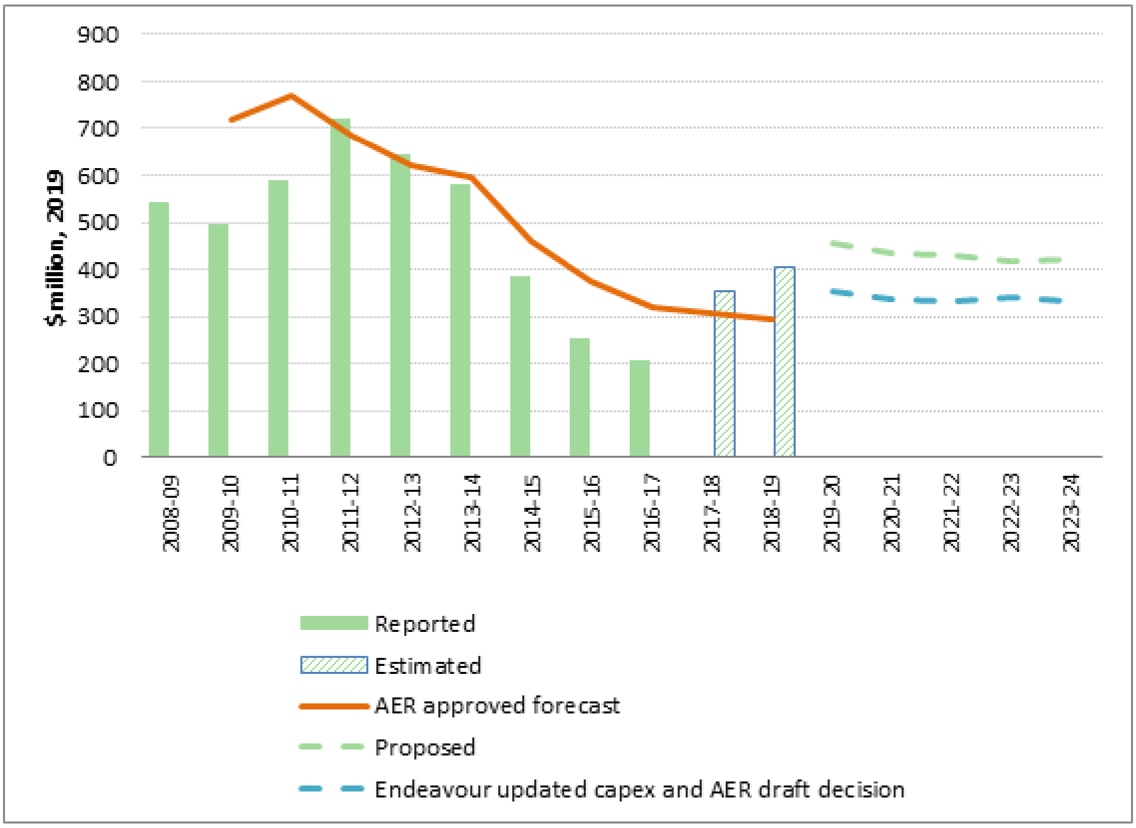
42 NER, cl. 6.5.5(b)(1).

43 Capex enters the RAB net of forecast disposals and capital contributions. It includes equity raising costs (where relevant) and the half-year WACC to account for the timing assumptions in the PTRM. Our draft decision on the RAB also reflects our updates to the WACC for the 2019–24 regulatory control period.

higher projected RAB value and higher return on capital and regulatory depreciation allowances.

Our draft decision on Endeavour's revenue includes total forecast capex of $1.7 billion ($2018–19) for 2019–24. Figure 5 illustrates the change in Endeavour’s capex over time.

Figure 5 Endeavour's capex over time ($m, 2018–19)



Source: AER analysis

Our draft decision substitutes a capex forecast that is 20 per cent lower than the $2.13 billion in Endeavour's April 2018 proposal. [44] We identified a number of concerns with that proposal, many of which were shared by stakeholders. Since that proposal was submitted, Endeavour has made a genuine commitment to constructively engage with us on these concerns, as reflected in its open dialogue throughout the review process and willingness to better understand our assessment. In response to that engagement, Endeavour provided new information—including a reduced capex forecast of $1.7 billion—in a submission in response to our issues paper on 30 August 2018. This commitment to continued engagement on forecast capex was commended in subsequent submissions from PIAC, ECA and CCP10.

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44 NER, cl. 6.12.1(3)(ii).

The substitute capex forecast we have adopted for our draft decision includes Endeavour's initial forecasts of non-network and reliability capex, and its proposed allowance for capitalised overheads. However, consistent with the updated forecast provided by Endeavour in its 30 August submission, the following factors have contributed to our draft decision to include Endeavour's lower forecast of $1.7 billion in our substitute estimate:

- The lower forecast of augmentation capex in this draft decision reflects a more realistic expectation of demand management and deferral opportunities, and recognises that Endeavour has been able to accommodate significant growth in the current period with less investment than its initial proposal suggested would be needed for the 2019–24 regulatory control period.
- Our draft decision recognises that connections volumes, particularly in Sydney's west, are expected to increase in the 2019–24 regulatory control period. The effect of the higher volumes will be largely offset by lower forecast unit rates for connections works compared with the current period. The key difference between Endeavour's proposal and this draft decision (and Endeavour's updated capex forecast) is the way it recovers the costs of new connections.

  In July 2017, Endeavour changed its reimbursement policy so that certain classes of shared assets,[45] which until then had been funded by the connecting customer, would instead be added to the RAB so that all network customers would fund these costs through Endeavour's distribution tariffs. As a result, the net connections capex that would be rolled into the RAB would increase by approximately four times, when compared to immediately prior to the change in policy. We do not consider that the proposed reimbursements to developers and other connecting customers that result from this change are prudent and efficient.

  We engaged extensively with Endeavour, flagging our concerns, including stakeholder feedback. Endeavour responded through its updated capex forecast, and decided to reverse this change, which has reduced its net connections capex by 62 per cent, and increased the share of connections funded by capital contributions by 33 per cent.
- Endeavour's proposed forecast was for an increase in replacement capex relative to the current period. Our modelling identified that Endeavour's initial replacement expenditure forecast had assumed higher unit rates and an earlier replacement of assets compared to its peers. The substitute forecast of replacement capex we have adopted for this draft decision addresses these concerns and is now broadly in line with Endeavour's actual replacement expenditure in the current period.

The differences between the total capex forecast of $2.13 billion in Endeavour's April 2018 proposal and the lower forecast of $1.7 billion we have substituted in this draft decision are summarised in Table 4.

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[45] The reimbursement policy refers to the changes that Endeavour has made to the application of its connection policy.

Table 4 Assessment of required capex by driver 2019–24 ($2019, million)

Category	Endeavour's 30 April proposal	Our alternative estimate	Difference (%)
Augmentation	416.8	349.8	(16%)
Connections	309.4	118.7	(62%)
Replacement	800.5	600.3	(25%)
Non-Network	170.0	170.0	0
Capitalised overheads	400.0	400.0	0
Other System	41.4	41.4	0
Reliability Compliance	20.0	20.0	0
Gross Capex (includes capital contributions and asset disposals)	**2692.8**	**2,434.6**	**(10%)**
Capital Contributions	534.7	709.8	33%
Asset Disposals	-	24.5	0
Net Capex (excludes capital contributions and asset disposals)	**2,133.5**	**1,700.3**	**(20%)**

Source: AER analysis.

Notes: Capital contributions in this table include an overheads component. Table excludes equity raising costs. Numbers may not add up due to rounding. Endeavour's 30 April proposed individual capex drivers include asset disposals.

2.4.1 Contingent project

Contingent projects are significant network augmentation projects that may arise during the regulatory control period but for which the need and/or timing is uncertain at the time of the determination. While the costs of such projects do not form a part of our the total forecast capital expenditure that we approve in this determination, the cost of the projects may ultimately be recovered from customers in the future if certain conditions are met. Approved contingent projects provide early transparency to consumers on significant investments for which they may ultimately be asked to pay, while providing some assurance to network service providers and other market participants that investments can proceed in a timely way should certain project triggers be met.

Endeavour proposed a $61.2 million ($2018–19) contingent project related to the Western Sydney Airport growth area. Endeavour considered the timing of the investment to be uncertain and proposed a trigger requiring a written request from the Western Sydney Airport Corporation to provide a connection to the airport.

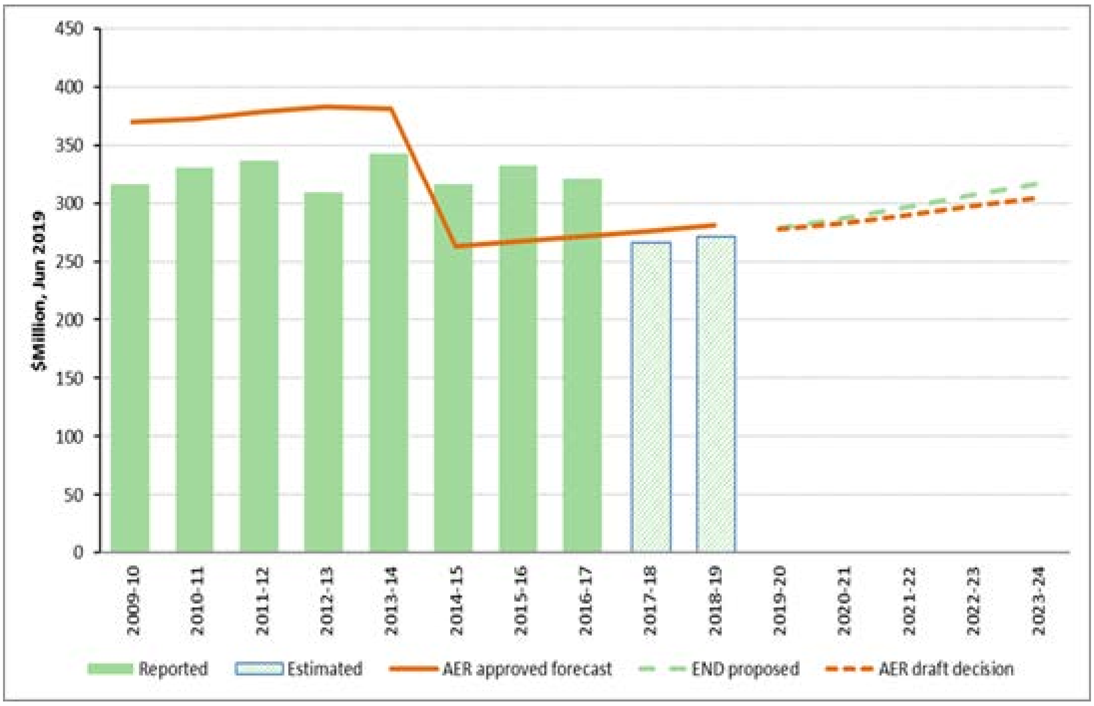
We have not included Endeavour's project contingent project in our draft decision.[46] Although the timing of the request is uncertain, we consider Endeavour will be required to undertake augmentation in the 2019–24 regulatory control period to provide a timely connection to the airport. However, we consider Endeavour can meet the connection requirement with a less capital intensive solution and further augmentation in future if demand forecasts materialise. We will continue to engage with Endeavour and other stakeholders on this issue as it prepares its revised proposal.

2.5 Operating expenditure

Our draft decision is to include total forecast opex of $1468.5 million ($2018–19) in Endeavour Energy's revenue for the 2019–24 regulatory control period.[47]

The total forecast opex in this draft decision is around 2.5 per cent lower than Endeavour's opex in the current period. Figure 6 shows the change in Endeavour's opex over the last two regulatory control periods, and compares this to its forecast opex and our draft decision for 2019–24.

Figure 6 Endeavour's opex over time ($m, 2018–19)



Source: AER analysis

The total opex forecast we have included in this draft decision is $35.5 million (2.4 per cent) lower than Endeavour's proposed forecast of $1504.0 million. [48] Like

[46] NER, cl. 6.6A.1(b)(1)

[47] NER, cl.6.12.1(4)(i); Includes debt-raising costs.

[48] NER, cl. 6.12.1(4)(ii).

Endeavour's, our substitute forecast starts with its 2017–18 base year expenditure as the basis for our 2019–24 forecast. Benchmarking analysis undertaken for this reset shows Endeavour's opex over the current period converging with the opex target set in our April 2015 decision, and a level that is more consistent with efficient business practices in the NEM.

However, our forecast of the expected increase in real labour prices in NSW (labour price growth) is lower than that proposed by Endeavour. We have applied our standard approach of averaging forecasts of growth in the NSW utilities wage price index by our consultant Deloitte Access Economics and Endeavour's consultant, BIS Oxford Economics. In contrast, Endeavour only applied BIS Oxford Economics' forecasts.

The differences between Endeavour's total proposed opex and the forecast we have substituted for the purposes of this draft decision are summarised in Table 5.

Table 5 Our alternative estimate compared to Endeavour's proposal ($ million, 2018–19)

	Endeavour	Our alternative estimate	Difference ($m)
Base opex	1331.6	1,333.6	2.0
2017–18 to 2018–19 increment	25.9	25.9	0.0
Price growth	57.2	20.8	–36.3
Output growth	70.9	71.7	0.8
Productivity growth	–	–	–
Debt raising costs	18.5	16.6	–1.9
Total opex	1504.0	1468.5	–35.5

Source: Endeavour Energy, 11.01 Opex model, April 2018, April 2018; AER analysis.

Note: Numbers may not add up to total due to rounding.

For the purpose of this draft decision, our rate of change applies a zero productivity growth forecast. This is consistent with Endeavour's proposal, and with our approach to forecasting the productivity component of our opex the rate of change in past decisions.

A number of stakeholders have questioned this approach, and we are now reviewing our approach to forecasting productivity.[49] This review may change our approach going forward. As part of this review we will consult with all distributors and any other interested stakeholders. We will take the outcome of this review into consideration in our final decision.

[49] https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-our-approach-to-forecasting-opex-productivity-growth-for-electricity-distributors

2.6 Revenue adjustments

Our draft decision on Endeavour's total revenue also includes a number of adjustments, for:

- An EBSS carryover amount totalling $234.9 million ($2018–19) from the application of the EBSS in the 2014–19 period. 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 distributors and network users.
- A CESS carryover amount totalling $12.3 million ($2018–19) from the application of the CESS in the 2014–19 period.
- A DMIAM allowance of $4.3 million ($2018–19) 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.
- A revenue reduction of $227.1 million ($2018–19) that we determined will be returned to customers under our final remade revenue decision for the 2014–19 period.[50] This amount reflects our remade decision on Endeavour's revenue for the current period and the revenue expected to be recovered by Endeavour under the interim price undertakings that have applied over that period. This adjustment was included in Endeavour's proposal, and has since been confirmed in our final remade decision for 2014–19.

2.7 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 Endeavour. Our draft decision is to include a corporate income tax allowance of $197.8 million ($ nominal) in Endeavour's revenue for 2019–24.

Adopting our current approach to the corporate income tax allowance, this allowance begins with an estimate of the taxable income that would be earned by a benchmark efficient company operating its network. This estimate takes into account estimated tax expenses such as interest (using our benchmark 60 per cent gearing) and tax depreciation. Tax expenses (including other expenses such as opex) are then offset against Endeavour's forecast revenue to estimate the taxable income. The statutory income tax rate of 30 per cent is then applied to the estimated taxable income to arrive at a notional amount of tax payable. Finally, a discount is applied to the notional amount of tax payable to account for the value of imputation credits (gamma).

The corporate income tax allowance we have included in our draft decision on Endeavour's revenue for 2019–24 is 14.2 per cent lower than that in Endeavour's proposal. The adjustments we have made in this draft decision to Endeavour's

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

proposed return on capital and regulatory depreciation building blocks affect our draft decision on revenues, which in turn impacts the tax calculation for this draft decision.

We have also made amendments for the purposes of this draft decision to apply a value of imputation credits (gamma) of 0.5, consistent with our draft 2018 rate of return guideline. We are still consulting on our draft 2018 rate of return guideline, and expect our final revised guideline, which will include a position on the value of imputation credits, will be binding on our final decision for Endeavour's 2019–24 revenue allowance.

We are also currently consulting on our approach to the corporate income tax allowance. It is possible that, as a result of that consultation, changes to our approach to the tax allowance could be decided before our final decision on Endeavour's revenue for 2019–24 is made. If this is the case, our final decision on Endeavour's corporate income tax allowance for 2019–24 may change from this draft decision.

3 Incentive schemes to apply for 2019-24

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 we've discussed in section 2, to encourage Endeavour 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 distribution network as part of our decision are:

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

Once we make our decision on Endeavour'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. If networks reduce their costs to below our forecast of efficient costs, the savings are shared with their customers in future regulatory periods through the EBSS and CESS.

The DMIS and DMIAM encourage businesses to pursue demand side alternatives to opex and capex. The STPIS ensures that the network business is not simply cutting costs at the expense of service quality. Incentives for opex and capex are balanced with the incentives under the STPIS to maintain or improve service quality. The incentive schemes encourage businesses to make efficient decisions on when and what type of expenditure to incur, and meet service reliability targets.

Our draft decision is that each of the EBSS, CESS, STPIS, DMIS and DMIAM should apply to Endeavour for the 2019–24 regulatory control period.

We discuss our draft decisions on each incentive scheme further in attachments 8 to 11.

4 Tariff structure statement

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

The requirement on distributors to prepare a TSS arises from a significant process of reform to the NER governing distribution network pricing. The purpose of the reforms is to empower customers to make informed choices by:

- providing better price signals—tariffs that reflect what it costs to use electricity at different times so that customers can make informed decisions to better manage their bills
- transitioning to greater cost reflectivity—requiring distributors to explicitly consider the impacts of tariff changes on customers, and engaging with customers, customer representatives and retailers in developing network tariff proposals over time
- managing future expectations—providing guidance for retailers, customers and suppliers of services such as local generation, batteries and demand management by setting out the distributor's tariff approaches for the entire duration of the regulatory control period.

Among other matters, Endeavour's TSS must set out its tariff classes, proposed tariffs, structures and charging parameters for each proposed tariff, policies and procedures it will use to assigning customers to tariff classes, or reassigning customers from one tariff to another and a description of the approach that Endeavour will take in setting each tariff in each pricing proposal during the 2019–24 regulatory control period.[51]

Our decision in this determination is on the structure of tariffs that will form the basis of tariff proposals throughout the regulatory control period.[52] We are also required to make a decision on the policies and procedures for assigning or re-assigning retail customers to tariff classes.[53] While an indicative pricing schedule must accompany the TSS, Endeavour's tariffs for the entire 2019–24 regulatory control period are not set as part of this determination.[54]

Tariffs for the financial year commencing 1 July 2019 will be subject to a separate approval process that takes place in May 2019, after we have made our final revenue determination in April 2019. In turn, tariffs for the following four years will also be approved on an annual basis.[55]

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51 NER, cl. 6.18.5.

52 NER, cl.6.12.1(14A)

53 NER, cl.6.12.1(17)

54 NER, cl. 6.8.2(d)(1).

55 NER, cll. 6.18.2 and 6.18.8

We see Endeavour as one of the more advanced distributors in the NEM in respect of its approach working with consumer groups to address the customer impact principal. Its proposal includes measures intended to increase cost reflectivity and improve price signals while concurrently managing customer impacts. Endeavour proposed some significant changes to its tariffs and tariff structures for the 2019–24 regulatory control period, including:

- assigning all new customer connections, and reassigning customers who upgrade their connections, to cost reflective tariffs
- offering a seasonal demand tariff with flat energy charges for residential and small business customers that is more accessible for customers than traditional demand tariffs with time of use energy tariffs
- using a default transitional tariff with a cost reflective tariff structure but with price levels which are not fully cost reflective to manage customer impacts
- introducing seasonal differences in tariffs for residential and small business customers
- narrowing the peak charging windows by three hours to more closely align charging windows with system peaks.

Our draft decision broadly supports the direction of these changes. However, we have concerns that some aspects of the TSS do not comply with the pricing principles set out in the NER.[56] In attachment 18 we have therefore set out a series of changes that we consider necessary for us to approve the TSS. These include amendments to provide more certainty as to how customers are assigned to particular tariffs, and of the structure of particular tariffs.

56 NER, cl.6.18.5

A The National Electricity Objective

The NEL requires us to make our decision in a manner that contributes, or is likely to contribute, to achieving the NEO.[57] 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.[58] This is not delivered by any one of the NEO's factors in isolation, but rather by balancing them in reaching a regulatory decision.[59]

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.[60] 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. [61]

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.[62] 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.[63] 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 overinvestment which results in prices so high that consumers are unwilling or unable to efficiently use the network.[64] 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.[65] 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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57 NEL, section 16(1).

58 This is also the view of the Australian Energy Market Commission (AEMC). See, for example, AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, p. 5.

59 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.

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

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

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

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

64 NEL, s. 7A(7).

65 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 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, chapter 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,[66] 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.[67]

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 draft 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

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

67 NEL, s. 16(1)(d).

benchmark 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 set out our draft decision on Endeavour's distribution determination for the 2019–24 regulatory control period. Our draft decision includes the following constituent components:[68]

Constituent component
In accordance with clause 6.12.1(1) of the NER, the AER's draft decision is that the classification of services set out in Attachment 12 will apply to Endeavour for the 2019–24 regulatory control period.
In accordance with clause 6.12.1(2)(i) of the NER, the AER's draft decision is not to approve the annual revenue requirement set out in Endeavour's building block proposal. Our draft decision on Endeavour's annual revenue requirement for each year of the 2019–24 regulatory control period is set out in attachment 1 of the draft decision.
In accordance with clause 6.12.1(2)(ii) of the NER, the AER's draft decision is to approve Endeavour'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 draft decision is to approve Endeavour'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)(ii) and acting in accordance with clause 6.5.7(d) of the NER, the AER's draft decision is not to accept Endeavour's proposed total net forecast capital expenditure of $2,141.1 million ($2018–19). Our draft decision therefore includes a substitute estimate of Endeavour's total net forecast capex for the 2019–24 regulatory control period of $1,700.3 million ($2017–18). This is discussed in attachment 5 of the draft decision.
In accordance with clause 6.12.1(4A) of the NER, the AER has determined that the proposed contingent projects are not contingent projects for the purpose of the revenue determination. The reasons for our decision, having regard to the requirements of clause 6.6A.1(b) are set out in attachment 5 of the draft decision.
In accordance with clause 6.12.1(4)(ii) and acting in accordance with clause 6.5.6(d) of the NER, the AER's draft decision is not to accept Endeavour's proposed total forecast operating expenditure inclusive of debt raising costs and exclusive of DMIAM of $1504.0 million ($2018-19). Our draft decision therefore includes a substitute estimate of Endeavour's total forecast opex for the 2019–24 regulatory control period of $1468.5 million ($2018–19) including debt raising costs and exclusive of DMIAM. This is discussed in attachment 6 of the draft decision.
In accordance with clause 6.12.1(5) of the NER, the AER's draft decision is that the allowed rate or return for the 2019–20 regulatory year is 5.96 per cent (nominal vanilla), as set out in Attachment 3 of this draft decision, and that the rate of return for the remaining regulatory years

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

Constituent component
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, the AER's draft decision is that the return on debt is to be estimated using a methodology referred to in clause 6.5.2(i)(2) and using the formula to be applied in accordance with clause 6.5.2(l). The methodology and formula are set out in Attachment 3 of this draft decision.
In accordance with clause 6.12.1(5B) of the NER, the AER's draft decision on the value of imputation credits as referred to in clause 6.5.3 is to adopt a value of 0.5.
In accordance with clause 6.12.1(6) of the NER, the AER's draft decision on Endeavour's regulatory asset base as at 1 July 2019 in accordance with clause 6.5.1 and schedule 6.2 is $6512.1 million ($ nominal). This is discussed in attachment 2 of the draft decision.
In accordance with clause 6.12.1(7) of the NER, the AER's draft decision is not to accept Endeavour's proposed corporate income tax of $230.6 million ($ nominal). Our draft decision on Endeavour's corporate income tax is $197.8 million ($ nominal). This is set out in attachment 7 of the draft decision.
In accordance with clause 6.12.1(8) of the NER, the AER's draft decision is not to approve the depreciation schedules submitted by Endeavour. Our draft decision substitutes alternative depreciation schedules in accordance with clause 6.5.5(b) and this is set out in attachment 4 of the draft decision.
In accordance with clause 6.12.1(9) of the NER, the AER makes the following draft decisions on how any applicable efficiency benefit sharing scheme, capital expenditure sharing scheme, service target performance incentive scheme, demand management incentive scheme or small-scale incentive scheme is to apply: • We will apply version 2 of the EBSS to Endeavour in the 2019–24 regulatory control period. This is set out in attachment 8 of the draft decision. • We will apply the CESS as set out in version 1 of the Capital Expenditure Incentives Guideline to Endeavour in the 2019–24 regulatory control period. CESS is discussed in attachment 9 of the draft decision. • We will apply our Service Target Performance Incentive Scheme (STPIS) to Endeavour for the 2019–24 regulatory control period, as set out in attachment 10 of the draft decision. • We will apply the DMIS and DMIAM to Endeavour for the 2019–24 regulatory control period, as set out in attachment 11 of the draft decision.
In accordance with clause 6.12.1(10) of the NER, the AER's draft decision is that all appropriate amounts, values and inputs are as set out in this determination including attachments.
In accordance with clause 6.12.1(11) of the NER and our framework and approach paper, the AER's draft decision on the form of control mechanisms (including the X factor) for standard control services is a revenue cap. The revenue cap for Endeavour for any given regulatory year is the total annual revenue calculated using the formula in attachment 13 plus any adjustment required to move the DUoS unders and overs account to zero. This is discussed in attachment

Constituent component
13 of the draft decision.
In accordance with clause 6.12.1(12) of the NER and our framework and approach paper, the AER's draft decision on the form of the control mechanism for alternative control services is to apply price caps for all services. This is discussed in attachment 13 of the draft decision.
In accordance with clause 6.12.1(13) of the NER, to demonstrate compliance with its distribution determination, the AER's draft decision is Endeavour must maintain a DUoS unders and overs account. It must provide information on this account to us in its annual pricing proposal. This is discussed in attachment 13 of the draft decision.
In accordance with clause 6.12.1(14) of the NER, the AER's draft 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 Credit Risk event These events have the definitions set out in Attachment 14 of the draft decision.
In accordance with clause 6.12.1(14A) the AER's draft decision is not to approve the tariff structure statement proposed by Endeavour. This is discussed in attachment 18 of the draft decision.
In accordance with clause 6.12.1(15) of the NER, the AER's draft decision is to apply the negotiating framework as proposed by Endeavour for the 2019–24 regulatory control period. This decision is set out in attachment 16 of the draft decision.
In accordance with clause 6.12.1(16) of the NER, the AER's draft decision is to apply the negotiated distribution services criteria published in May 2018 to Endeavour. This decision is set out in attachment 16 of the draft decision.
In accordance with clause 6.12.1(17) of the NER, the AER's draft decision on the procedures for assigning retail customers to tariff classes for Endeavour is set out in attachment 13 of the draft decision.
In accordance with clause 6.12.1(18) of the NER, the AER's draft decision is that the depreciation approach based on forecast capex (forecast depreciation) is to be used to establish the RAB at the commencement of Endeavour's regulatory control period as at 1 July 2024. This is discussed in attachment 2 of the draft decision.
In accordance with clause 6.12.1(19) of the NER, the AER's draft decision on how Endeavour is to report to the AER on its recovery of designated pricing proposal charges is to set this out in its annual pricing proposal. The method to account for the under and over recovery of designated pricing proposal charges is discussed in attachment 13 of the draft decision.
In accordance with clause 6.12.1(20) of the NER, the AER's draft decision is to require Endeavour to maintain a jurisdictional scheme unders and overs account. It must provide

Constituent component
information on this account to us in its annual pricing proposal as set out in attachment 13 of the draft decision.
In accordance with clause 6.12.1(21) of the NER, the AER's draft decision is not to approve the connection policy proposed by Endeavour. Our draft decision is to amend Endeavour's proposed connection policy as set out in attachment 17 of the draft decision.