DRAFT DECISION
Murraylink transmission determination
2018 to 2023

Overview

September 2017

AUSTRALIAN ENERGY REGULATOR

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Note

This overview forms part of the AER's draft decision on Murraylink's revenue proposal for the 2018–23 regulatory control period. It should be read with other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – maximum allowed revenue

Attachment 2 – regulatory asset base

Attachment 3 – rate of return

Attachment 4 – value of imputation credits

Attachment 5 – regulatory depreciation

Attachment 6 – capital expenditure

Attachment 7 – operating expenditure

Attachment 8 – corporate income tax

Attachment 9 – efficiency benefit sharing scheme

Attachment 10 – capital expenditure sharing scheme

Attachment 11 – service target performance incentive scheme

Attachment 12 – pricing methodology

Attachment 13 – pass through events

Attachment 14 – negotiated services

Contents

Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARORO	allowed rate of return objective
ASRR	annual service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules

Shortened form	Extended form
NSP	network service provider
NTSC	negotiated transmission service criteria
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RIT-T	regulatory investment test for transmission
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system
WACC	weighted average cost of capital

1 Our draft decision

We, the Australian Energy Regulator (AER), are responsible for the economic regulation of electricity transmission and distribution systems in all Australian states and territories, with the exception of Western Australia. Murraylink owns and operates a transmission link between the Victorian and South Australian transmission networks. We regulate the revenues that Murraylink can recover from its customers.

Murraylink submitted a revenue proposal for its electricity transmission network on 31 January 2017. The proposal sets out the revenue Murraylink proposes to recover from its electricity customers through transmission charges for the period 2018–23. This overview, together with its attachments, constitutes our draft decision on Murraylink's revenue proposal.

The National Electricity Law (NEL) and National Electricity Rules (NER) provide the regulatory framework governing electricity networks. In regulating Murraylink, we are guided by the National Electricity Objective (NEO), as set out in the NEL.[1] The NEO is:[2]

> 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.

This draft decision is one of the key steps in reaching our final decision. Our final decision will be released no later than 30 April 2018. Before that, Murraylink will have the opportunity to submit a revised proposal in response to this draft decision. Stakeholders will also have the opportunity to make submissions to us on our draft decision and Murraylink's revised proposal.

Following receipt of the revised proposal and submissions, we will then make our final decision taking everything we have heard into account. Table 1.1 lists the key dates and consultation deadlines for the process.

Stakeholders will have until 12 January 2017 to provide us with submissions on our draft decision and Murraylink's revised revenue proposal.

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1 The NEL also includes the revenue and pricing principles (RPP), which support the NEO. As the NEL requires, we have taken the RPPs into account throughout our analysis.

2 NEL, s. 7.

Table 1.1 Key dates and consultation

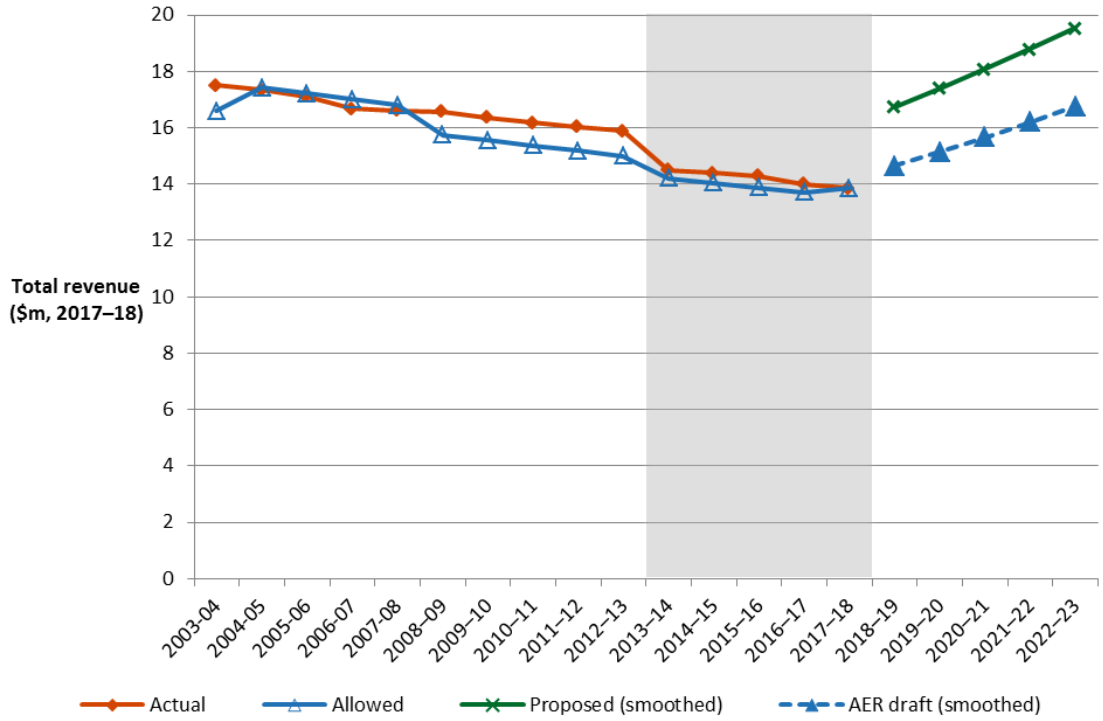
Task	Date
Revenue proposal submitted to the AER	31 January 2017
AER released Issues paper	28 March 2017
AER held public forum	10 April 2017
Submissions on revenue proposal close	12 May 2017
AER draft decision published	29 September 2017
AER public forum to explain draft decision	October 2017
Revised revenue proposal due to AER	1 December 2017
Submissions on draft decision and revised proposal	12 January 2018
AER release of final decision	No later than 30 April 2018

1.1 Key aspects of the draft decision

Our draft decision is that Murraylink can recover $84.6 million ($nominal, smoothed) from customers over the 2018–23 regulatory control period. This is a 12.1 per cent reduction from Murraylink's proposed revenue allowance of $96.3 million ($nominal). The reason for this is that we have applied a lower rate of return to that proposed by Murraylink and made an adjustment to Murraylink's proposed capital replacement costs of its new control systems. Our concerns with Murraylink's regulatory proposal align with concerns raised by consumers. Murraylink has not undertaken consumer engagement and could have improved its revenue proposal by taking into account consumer views.

Figure 1.1 compares our draft decision on Murraylink's revenue for 2018–23 to its proposed revenue and to the revenue allowed and recovered during the two previous regulatory control periods of 2003–13 and 2013–18. Murraylink's annual revenue marginally decreased each year from 2013 to 2018 in real 2017–18 dollar terms. Our draft decision results in a steady increase over the 2018–23 regulatory control period in the same real dollar terms.

Figure 1.1 Murraylink's past total revenue, proposed total revenue and AER draft decision total revenue allowance ($million, 2017–18)



Source: Murraylink, *Revenue proposal 2018-23 Attachment 10.1 – PTRM*, January 2017; AER analysis.

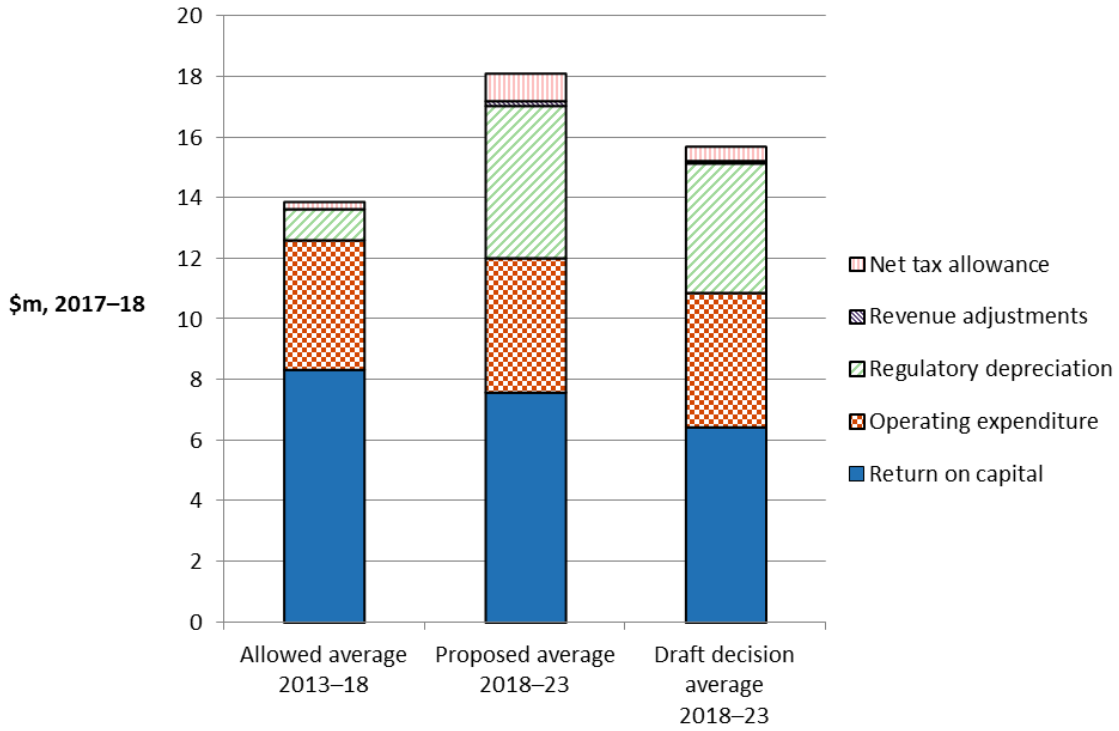
1.2 What is driving allowed revenue?

Our draft decision approves average annual revenues for the 2018–23 regulatory control period that are $1.7 million ($2017–18)—or 12.5 per cent—higher than was approved in our decision for 2013–18 in real dollar terms.[3] The reason for this increase has been the need to replace Murraylink's obsolete control systems to maintain the continued reliability and security of supply across the interconnector. Although we accept the need to replace the control systems, we have not accepted all the costs proposed by Murraylink.

Figure 1.2 compares the average annual building block revenue from our draft decision to that proposed by Murraylink for the 2018–23 regulatory control period, and to the approved average amount for the 2013–18 regulatory control period.

[3] In nominal dollar terms, our draft decision average annual revenues for the 2018–23 regulatory control period is about $3.4 million (or 25.3 per cent) higher than the average annual revenues approved for the 2013–18 regulatory control period.

Figure 1.2 AER's draft decision on constituent components of total revenue ($million, 2017–18)

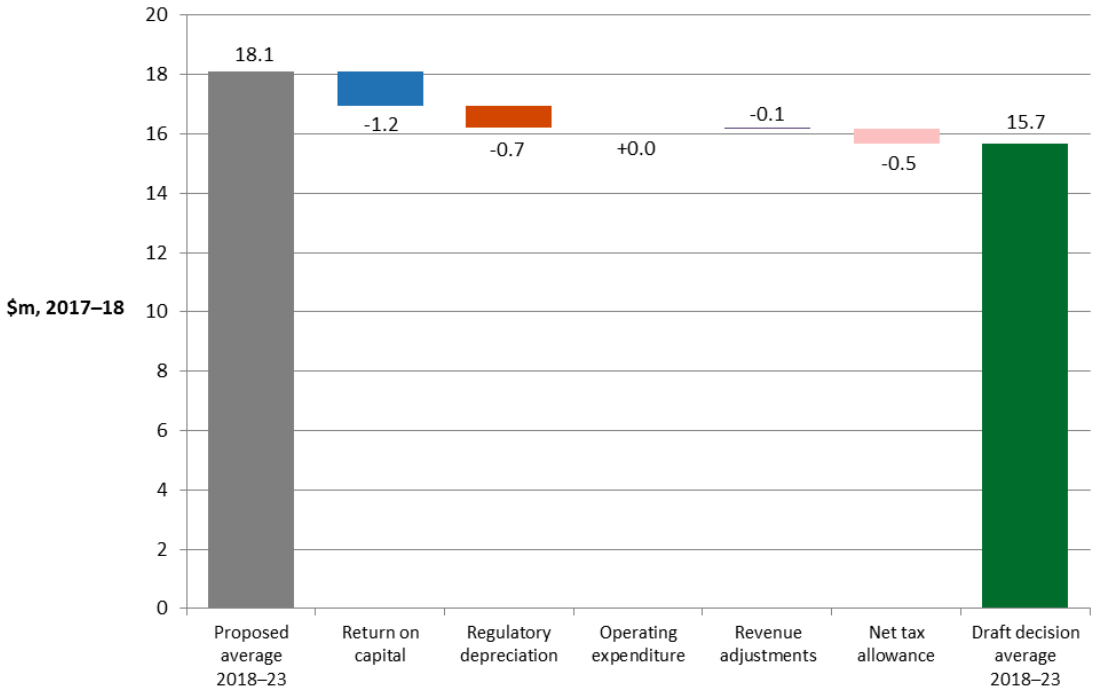


Source: AER analysis.

The greater amount of regulatory depreciation allowed in our draft decision for 2018–23 compared to the approved for 2013–18 results from our draft decision on capex, which influences the capital base and therefore regulatory depreciation. Despite the higher capital base, our decision on rate of return results in a lower return on capital for 2018–23 than approved for 2013–18.

Figure 1.3 compares our draft decision with Murraylink's proposal, broken down by the various building block components that make up the forecast revenue allowance.

Figure 1.3 AER's draft decision and Murraylink's proposed average annual building block costs ($million, 2017–18)



Source: AER analysis.

Figure 1.3 highlights that the allowed rate of return—which feeds into the return on capital—is the key difference between our draft decision and Murraylink's proposal, as do our decisions on capital expenditure and corporate income tax.

1.2.1 Allowed rate of return

The allowed rate of return provides Murraylink with revenue to service the interest on its loans and give a return on equity to its shareholders. It is applied to Murraylink's capital base to determine the return on capital building block.

Prevailing market conditions for debt and equity heavily influence the rate of return. Financial conditions have changed since our last decision for Murraylink in April 2013. Interest rates are lower and financial market conditions are more stable. This means that the cost of debt and the returns required to attract equity are lower.

This is reflected in a lower rate of return in this decision. Our draft decision is for a rate of return of 5.7 per cent (for 2018–19 regulatory year, indicative)[4]—compared to Murraylink's proposed 6.54 per cent (indicative) for the first year of the 2018–23

[4] This number will be updated for the agreed equity averaging period (to apply for the 2018–23 regulatory control period and agreed debt averaging period for the 2018–19 regulatory year. For the remaining years of the regulatory control period, we will update the rate of return annually.

regulatory control period. Some of the difference in our draft decision rate of return parameters and Murraylink's proposed rate of return reflect the use of updated data as opposed to methodological differences. We consider this further in section 2.2.

1.2.2 Capital expenditure

Murraylink has forecast a step up in capital expenditure. Murraylink's capex forecast of $33.8 million is $17.0 million or just over double its actual and estimated capex of $16.8 million ($2017–18) for the 2013–18 regulatory control period.[5] One project, the replacement of Murraylink's control systems, is the major driver of the increase capex forecast, accounting for $27.2 million ($2017–18) or approximately 80 per cent of the forecast.[6]

We accept the need for Murraylink to upgrade its control systems given its age and lack of supplier support from 2021, and consider that most of Murraylink's capex is necessary. However, we do not accept all of Murraylink's forecast capex. Specifically, we do not accept $4.5 million proposed to be spent on replacing its control systems, along with other smaller amounts on other proposed items. Although Murraylink has not provided an economic analysis to support its proposed expenditure on the new control systems, it will be required to do this as part of the RIT-T to be undertaken prior to the expenditure being incurred. We expect the RIT-T to identify efficient capex required to replace Murraylink's control systems. Customers will share in the future in any saving over the forecast capex allowed by us now.

We consider that Murraylink should only require capex of $26.6 million ($2017–18) to meet its obligations. This is a 21.3 per cent reduction on Murraylink's proposal.

This is discussed further in section 3.5 and attachment 6.

The increased capital expenditure we have allowed will lead to an increase in the size of Murraylink's regulatory asset base (RAB) and results in an increase to its regulatory depreciation and return on capital.

1.2.3 Regulatory asset base

Figure 1.4 shows the key drivers of the change in Murraylink's RAB over the 2018–23 regulatory control period for this draft decision. Overall, the closing RAB at the end of the 2018–23 regulatory control period is forecast to be 4.8 per cent higher than the opening RAB at the start of that period, in nominal terms. The approved forecast net capex increases the RAB by 25.1 per cent, while expected inflation increases it by 13.2 per cent. Forecast depreciation, on the other hand, reduces the RAB by 33.5 per cent.

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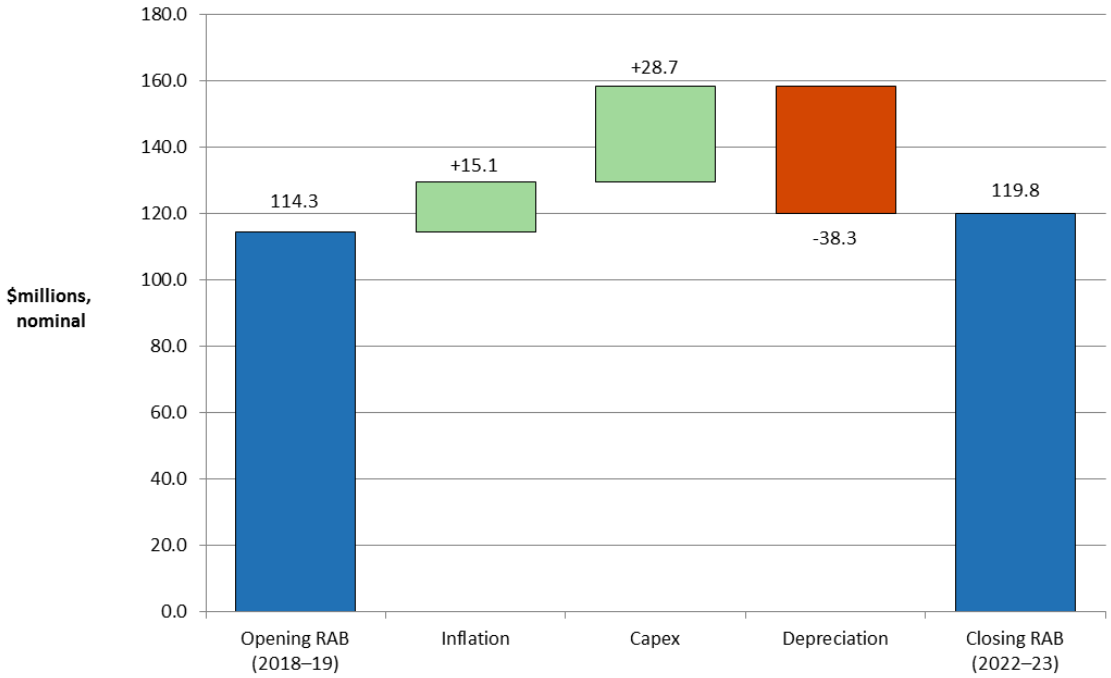
5 Murraylink, *Revenue proposal 2018-23 Attachment 4.1 – Murraylink – Capex Model*, 31 January 2017.

6 Ibid.

Figure 1.4 AER's draft decision on key drivers of changes in the RAB ($million, nominal)



Source: AER analysis.

1.2.4 Corporate income tax

Our revenue determination includes the estimated cost of corporate income tax for Murraylink's 2018–23 regulatory control period.[7] This allows Murraylink to recover the costs associated with the estimated corporate income tax payable during the 2018–23 regulatory control period.

Under the post-tax framework, a corporate income tax allowance is calculated as part of the building block assessment using our post-tax revenue model (PTRM). The reduction between Murraylink's proposal and our draft decision reflects our amendments to some of Murraylink's proposed inputs for forecasting the cost of corporate income tax. Changes to building block costs also affect revenues, which in turn impact the tax calculation. This is discussed further in section 2.7 and attachment 8.

[7] NER, cl. 6A.5.4(a)(4).

1.3 Expected impact of decision on residential electricity bills

Our draft decision on Murraylink's expected MAR ultimately has some effects to the annual electricity bills paid by customers in South Australia and Victoria. Murraylink is a small component of the broader transmission networks that serves South Australia and Victoria. The South Australian portion of Murraylink's annual expected MAR is 45 per cent.[8] ElectraNet is the main transmission network service provider for South Australia and we are currently assessing its revenue proposal for the 2018–23 regulatory control period, which coincides with Murraylink's period.[9]

We will therefore provide an estimate of the combined effect of the draft decisions for the ElectraNet and Murraylink transmission determinations on forecast average transmission charges and electricity bills in South Australia over the 2018–23 regulatory control period.[10] This will be included in our draft decision for ElectraNet which is expected to be published at the end of October 2017.

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8 ElectraNet, as coordinating network service provider for South Australia, takes the portion of Murraylink's expected MAR for developing the applicable transmission charges to apply to customers; Murraylink, *Revenue proposal 2018–23—Attachment 12.1—Pricing Methodology*, January 2017, pp. 5 and 6.

9 AusNet Services is the main transmission network service provider for Victoria. Its transmission determination for the 2017–22 regulatory control period was completed earlier in April 2017 and does not align with Murraylink's period. As a result, the bill impacts for Victorian customers in AusNet Services' transmission determination do not incorporate this draft decision for Murraylink.

10 Murraylink's annual revenue for 2017–18 is about 2 per cent of ElectraNet's annual revenue.

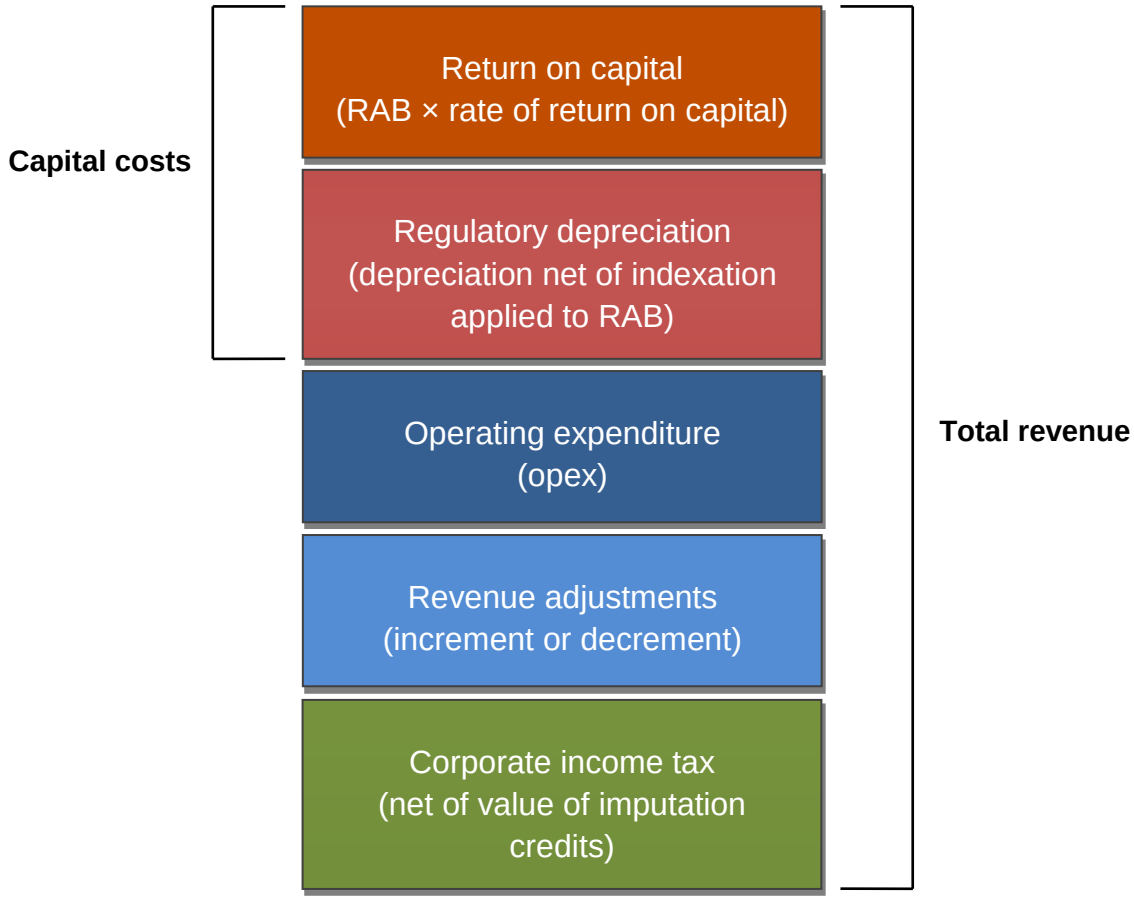
2 Key elements of our draft decision

We use the building block approach to determine Murraylink's maximum allowed revenue (MAR). The building block approach consists of five costs that a business is allowed to recover through its revenue allowance.

The building block costs are illustrated in Figure 2.1 and include:

- a return on the RAB (or return on capital)
- depreciation of the RAB (or return of capital)
- forecast opex
- revenue increments or decrements resulting from incentive schemes such as the efficiency benefit sharing scheme (EBSS)
- the estimated cost of corporate income tax.

Figure 2.1 The building block approach for determining total revenue



The building block costs are comprised of key elements that we determine through our assessment process. For example, the size of the RAB—and therefore the revenue

generated from the return on capital and return of capital building blocks—is directly affected by our assessment of capex.

This section summarises our draft decision on key elements of the building blocks including:

- RAB (section 2.1)
- Rate of return (section 2.2)
- Imputation credits (section 2.3)
- Depreciation allowance (section 2.4)
- Efficient level of capex (section 2.5)
- Efficient level of opex (section 2.6)
- Forecast level of corporate income tax (section 2.7).

Incentive schemes including the EBSS and CESS are covered in section 3. Table 2.1 shows our draft decision on Murraylink's revenues including the building block components.

Table 2.1 AER's draft decision on Murraylink's revenues ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Return on capital	6.6	6.6	7.0	7.3	7.2	34.7
Regulatory depreciation[a]	3.9	4.1	4.3	4.5	6.4	23.2
Operating expenditure[b]	4.5	4.6	4.8	4.8	5.1	23.8
Revenue adjustments[c]	–0.0	–0.2	0.5	0.0	0.2	0.5
Net tax allowance	0.4	0.4	0.5	0.5	0.6	2.5
Annual building block revenue requirement (unsmoothed)	15.3	15.5	17.1	17.2	19.5	84.6
Annual expected MAR (smoothed)	**15.0**	**15.9**	**16.9**	**17.9**	**19.0**	**84.6**[d]
X factor[e]	n/a[f]	–3.43%	–3.43%	–3.43%	–3.43%	n/a

Source: AER analysis.

(a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.

(b) Includes debt raising costs.

(c) Includes EBSS carry-over amounts.

(d) The estimated total revenue cap is equal to the total annual expected MAR.

(e) The X factors will be revised to reflect the annual return on debt update. Under the CPI–X framework, the X factor measures the real rate of change in annual expected revenue from one year to the next. A negative X factor represents a real increase in revenue. Conversely, a positive X factor represents a real decrease in revenue.

(f) Murraylink is not required to apply an X factor for 2018–19 because we set the 2018–19 MAR in this decision. The MAR for 2018–19 is around 5.7 per cent higher than the approved MAR for 2017–18 in real terms, or 8.3 per cent higher in nominal terms.

2.1 Regulatory asset base

We make a decision on Murraylink's opening regulatory asset base (RAB) at 1 July 2018 as part of our revenue determination. We also make a decision on Murraylink's projected RAB for the 2018–23 regulatory control period.[11]

The RAB roll forward accounts for the value of Murraylink's regulated assets over the regulatory control period. The size of the RAB substantially impacts Murraylink's revenue and the price consumers ultimately pay. It is an input into the determination of the return on capital and depreciation (return of capital) building blocks.[12] Other things being equal, a higher RAB increases both the return on capital and depreciation allowances. In turn, these increase Murraylink's revenue, and prices for services.

We determine an opening RAB for Murraylink of $114.3 million ($nominal) as at 1 July 2018. This is $0.1 million (or 0.05 per cent) higher than Murraylink's proposed value of $114.2 million. This is because we made the following amendments to the inputs of Murraylink's proposed roll forward model (RFM). We have

- applied the depreciation values based on actual capex rather than forecast capex, to be consistent with our final decision for Murraylink's 2013–18 regulatory control period
- changed the standard asset life for the 'Test equipment' asset class from 10 years to 'not applicable', to be consistent with our final decision for Murraylink's 2013–18 regulatory control period
- corrected the actual capex allocation for 2013–14 from the 'Switchyard' asset class to 'Other operating assets' asset class, to be consistent with Murraylink's regulatory accounts for 2013–14
- updated Murraylink's estimate of inflation for 2016–17 with actual CPI, as it is now available.

To determine the opening RAB as at 1 July 2018, we have rolled forward the RAB over the 2013–18 regulatory control period to determine a closing RAB value at 30 June 2018. This roll forward includes an adjustment at the end of the 2013–18 regulatory control period to account for the difference between actual 2012–13 capex and the estimate approved at the 2013–18 determination.[13]

Table 2.2 summarises our draft decision on the roll forward of Murraylink's RAB over the 2013–18 regulatory control period.

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11 NER, cl. 6A.6.1.

12 The size of the RAB also impacts the benchmark debt raising cost allowance. However, this amount is usually relatively small and therefore not a significant determinant of revenues overall.

13 The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2013–18 determination.

Table 2.2 AER's draft decision on Murraylink's RAB for the 2013–18 regulatory control period ($million, nominal)

	2013–14	2014–15	2015–16	2016–17[a]	2017–18[b]
Opening RAB	106.7	106.7	105.3	103.9	110.0
Capital expenditure[c]	0.3	0.7	0.9	7.7	7.5
Inflation indexation on opening RAB[d]	3.1	1.4	1.4	2.2	2.2
Less: straight-line depreciation[e]	3.4	3.6	3.7	3.8	4.0
Closing RAB	106.7	105.3	103.9	110.0	115.7
Difference between estimated and actual capex (1 July 2012 to 30 June 2013)					–1.0
Return on difference for 2012–13 capex					–0.4
Opening RAB as at 1 July 2018					**114.3**

Source: AER analysis.

(a) Based on estimated capex. We will update the RAB roll forward for actual capex in the final decision.

(b) Based on estimated capex provided by Murraylink. We expect to update the RAB roll forward with a revised capex estimate in the final decision, and true-up the RAB for actual capex at the next reset.

(c) As-incurred, net of disposals, and adjusted for actual CPI.

(d) We will update the RAB roll forward for actual CPI for 2017–18 in the final decision.

(e) Adjusted for actual CPI. Based on actual as-commissioned capex.

We determine a forecast closing RAB value at 30 June 2023 of $119.8 million ($nominal). This is $3.9 million (or 3.2 per cent) lower than the amount of $123.8 million ($nominal) proposed by Murraylink. Our draft decision on the forecast closing RAB reflects the amended opening RAB as at 1 July 2018, and our draft decisions on the expected inflation rate (attachment 3), forecast capex (attachment 6) and forecast depreciation (attachment 5).

Table 2.3 sets out our forecast RAB for Murraylink in 2018–23.

Table 2.3 AER's draft decision on Murraylink's RAB for the 2018–23 regulatory control period ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23
Opening RAB	114.3	114.6	122.3	127.6	125.4
Capital expenditure[a]	4.2	11.8	9.6	2.2	0.9
Inflation indexation on opening RAB	2.9	2.9	3.1	3.2	3.1
Less: straight-line depreciation[b]	6.7	7.0	7.3	7.7	9.5
Closing RAB	**114.6**	**122.3**	**127.6**	**125.4**	**119.8**

Source: AER analysis.

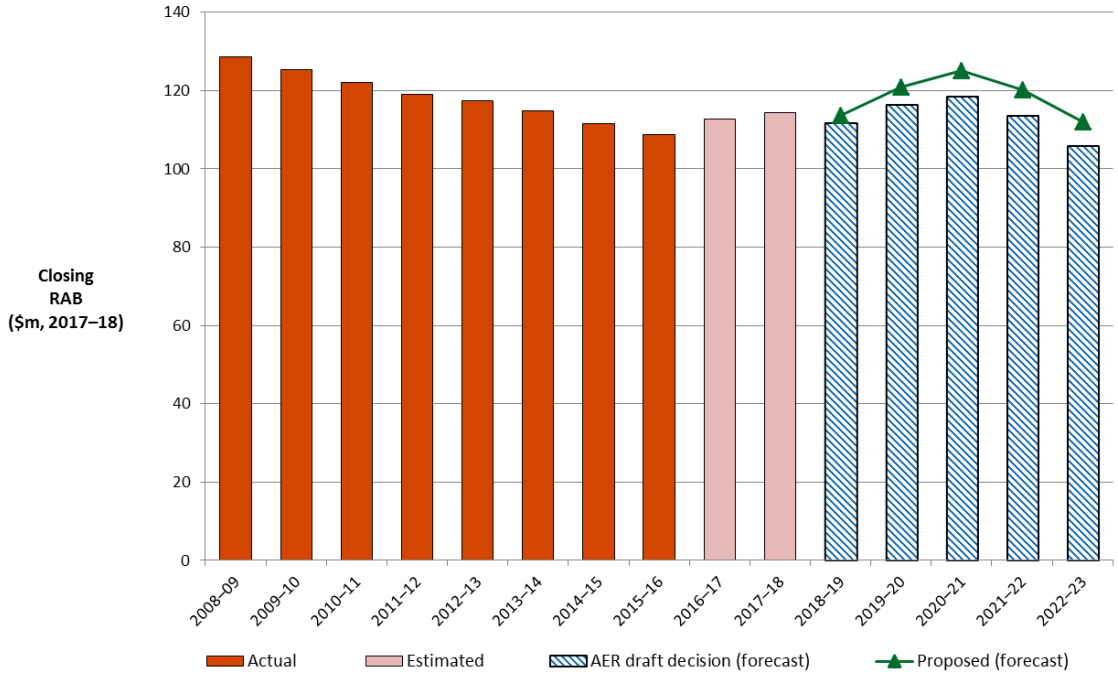
(a) As-incurred. In accordance with the timing assumptions of the post-tax revenue model (PTRM), the capex includes a half-WACC allowance to compensate for the six month period before capex is added to the RAB for revenue modelling.

(b) Based on as-commissioned capex.

We determine that the forecast depreciation approach is to be used to establish the opening RAB at the commencement of the 2023–28 regulatory control period for Murraylink.[14] We consider this approach will provide sufficient incentives for Murraylink to achieve capex efficiency gains over the 2018–23 regulatory control period.

Figure 2.2 compares our draft decision on Murraylink's forecast RAB to Murraylink's proposal and actual RAB in real dollar terms. The RAB is expected to increase from 2018–19 to 2020–21, then decrease for the remainder of the 2018–23 regulatory control period.

Figure 2.2 Murraylink's actual RAB, proposed forecast RAB and AER draft decision forecast RAB ($million, 2017–18)



Source: AER analysis.

Further detail on our draft decision regarding Murraylink's RAB is set out in attachment 2.

[14] NER, cl. S6A.2.2B(a).

2.2 Rate of return (return on capital)

The allowed rate of return provides a TNSP a return on capital to service the interest on its loans and give a return on equity to investors. The return on capital building block is calculated as a product of the rate of return and the value of the RAB.

We are satisfied that the allowed rate of return of 5.7 per cent (nominal vanilla) we determined contributes to the achievement of the NEO, and achieves the allowed rate of return objective (ARORO) set out in the NER.[15] That is, we are satisfied that this allowed rate of return is commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to Murraylink in providing prescribed transmission services.[16]

We are not satisfied that Murraylink's proposed (indicative) 6.54 per cent rate of return for the first year of the 2018–23 regulatory control period (to be updated annually) will achieve the ARORO.[17] In addition to taking into account the proposal and submissions of Murraylink in reaching our draft decision position, we also took account of information provided in submissions from CCP9 and other stakeholders. The difference between our draft decision and Murraylink's proposal relates principally to differences in estimating the return on equity.

Table 2.4 sets out our rate of return and Murraylink's proposed rate of return.

Table 2.4 AER draft decision on Murraylink's rate of return (per cent, nominal)

	AER previous decision (2013–18)	Murraylink proposal (2018–23)	AER draft decision (2018–23)	Allowed return over 2018–23 regulatory control period
Return on equity (nominal post–tax)	8.72	8.6	7.2*	Constant (7.2%)
Indicative return on debt (nominal pre–tax)	6.69	5.16	4.78**	Updated annually
Gearing	60	60	60	Constant (60%)
Nominal vanilla WACC	7.5	6.54	5.7	Updated annually for return on debt
Forecast inflation	2.5	2	2.5	Constant (2.5%)

Source: AER analysis; Murraylink, *Regulatory Proposal 2018–23*, January 2017, pp. 28–84.; AER, *Final Decision: Murraylink determination 2013–2018*, 30 April 2013.

* Number to be updated for the final agreed equity averaging period for the 2018–23 regulatory period

** Number to be updated for the final agreed debt averaging period for the 2018–19 regulatory year.

[15] NER, cl. 6A.6.2(b).

[16] NER, cl. 6A.6.2(c).

[17] Murraylink, *Regulatory Proposal 2018–23*, January 2017, p. 28.

Our return on equity estimate for this draft decision is 7.2 per cent. We derived this estimate by applying the same approach we applied to determine the allowed return on equity in our most recent decisions.[18] This is a six step process, where we have regard to a considerable amount of relevant information, including various equity models.

Our return on equity point estimate and the parameter inputs are set out in Table 2.5. Murraylink proposed departing from the approach in the Guideline. We are not satisfied that doing so would result in an outcome that better achieves the ARORO.[19] We consider that our method for determining the return on equity is consistent with achieving the ARORO.

We received a number of submissions on Murraylink's proposed return on equity. Business SA submitted that Murraylink's equity beta should be consistent with and no higher than ElectraNet's proposed equity beta of 0.7.[20] The Department of Premier and Cabinet of South Australia also noted that ElectraNet had proposed a lower rate of return than Murraylink.[21] The Central Irrigation Trust submitted that we should reduce Murraylink's return on equity to reflect the lower ranges in the AER guidelines.[22] CCP9 submitted that the AER should:

- reject Murraylink's proposed change in approach to the estimation of the return on equity and market risk premium
- maintain an MRP of 6.5% and Beta of 0.7.

Our draft decision is to apply our guideline return on equity parameters to Murraylink – which we note aligns with ElectraNet's proposed return on equity.

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18 For example, see AER, *Final decision: AusNet Services transmission determination 2017–2022, Attachment 3—Rate of return*, April 2017; AER, *Draft decision: Australian Gas Networks Victoria and Albury gas access arrangement 2018 to 2022, Attachment 3–Rate of return*, July 2017.

19 NER, cl. 6.2.8(c); cl.6A.2.3(c).

20 Business SA, *Submissions on Murraylink's Revenue Proposal for the regulatory period 2018–23*, May 2017, p. 3.

21 Government of South Australia Department of Premier and Cabinet, *Submission on the Murraylink electricity transmission revenue proposal for 1 July 2018 – 30 June 2023*, 17 May 2017, p. 2

22 Central Irrigation Trust, *Murraylink Revenue Proposal 2018 – 2023*, March 2017, p. 2.

Table 2.5 AER draft decision on Murraylink's return on equity (nominal)

	AER previous decision (2014–18)	Murraylink proposal (2018–23)[a]	AER draft decision (2018–23)
Indicative nominal risk free rate (return on equity only)	3.52%	2.82% [a]	2.68% [b]
Equity risk premium	5.2%	5.74%	4.55%
Market risk premium	6.5%	7.18%	6.50%
Equity beta	0.8	0.8	0.7
Nominal post–tax return on equity	8.72%	8.6%	7.2%

Source: AER analysis; Murraylink, Murraylink revenue proposal effective July 2018 to June 2023, January 2017;

(a) Based on Murraylink's indicative averaging period adopted for its proposal of 20 business days to 30 December 2016.

(b) Calculated with a placeholder averaging period of 20 business days up to 31 July 2017.

Murraylink proposed to apply our guideline approach to estimating the cost of debt, which we have accepted. The difference between our draft decision return on debt and Murraylink's in Table 2.4 reflects the use of more recent data. Our draft decision on the return on debt approach is to:

- estimate the return on debt using an on-the-day approach (that is, based on prevailing market conditions near the commencement of the regulatory control period) in 2018–19 of the 2018–23 regulatory control period, and
- gradually transition this approach into a trailing average approach (that is, a moving historical average) over 10 years.[23]

This gradual transition will occur through updating 10 per cent of the entire return on debt each year to reflect prevailing market conditions in that year (a full transition).[24] This approach is consistent with the approach we proposed in the Guideline and adopted in this draft decision. Our draft decision is to estimate the return on debt in each regulatory year by reference to:

- a benchmark credit rating of BBB+
- a benchmark term of debt of 10 years

[23] This draft decision determines the return on debt methodology for the 2018–23 regulatory control period. This period covers the first five years of the 10 year transition period. This decision also sets out our intended return on debt methodology for the remaining five years. However, we do not have the power to determine in this decision the return on debt methodology for those years. Under the NER, the return on debt methodology must be determined in future decisions that relate to that period.

[24] By entire return on debt, we mean 100% of the base rate and debt risk premium (DRP) components of the allowed return on debt.

- independent third party data series—specifically, a simple average of the broad BBB rated debt data series published by the Reserve Bank of Australia (RBA) and Bloomberg, adjusted to reflect a 10 year estimate and other adjustments[25]
- an averaging period for each regulatory year of between 10 business days and 12 months (nominated by the service provider), with that period being consistent with certain conditions that we proposed in the Guideline.[26]

Further detail on our draft decision regarding Murraylink's allowed rate of return is set out in attachment 3.

2.3 Value of imputation credits

Under the Australian imputation tax system, investors can receive an imputation credit for income tax paid at the company level.[27] We make an adjustment to our taxation building block to account for the value of imputation credits.

Our draft decision does not accept Murraylink's proposed value of imputation credits of 0.25. Instead, we adopt a value of imputation credits of 0.4. We consider that the use of a value for imputation credits of 0.4 will result in equity investors in the benchmark efficient entity receiving an ex ante total return (inclusive of the value of imputation credits) commensurate with the efficient equity financing costs of a benchmark efficient entity. CCP9 submitted that we should maintain the approach set out in the Rate of Return Guideline on gamma pending the result of the appeal to the Federal Court.[28] Our draft decision is consistent with this submission.

In coming to a value of imputation credits of 0.4:

- we adopt a conceptual approach consistent with the Officer framework, which we consider best promotes the objectives and requirements of the NER/NGR. This approach considers the value of imputation credits is a post-company tax value before the impact of personal taxes (and personal costs). As such, we view the value of imputation credits as the proportion of company tax returned to investors through the utilisation of imputation credits[29]

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25 For the RBA curve, our draft decision is to interpolate the monthly data points to produce daily estimates, to extrapolate the curve to an effective term of 10 years, and to convert it to an effective annual rate. For the Bloomberg curve, our draft decision is to extrapolate it to 10 years using the spread between the extrapolated RBA seven and 10 year curves (where Bloomberg has not published a 10 year estimate), and to convert it to an effective annual rate. While we do not propose estimating the return on debt by reference to the Reuters curve, we do not rule out including doing so in future determinations following a proper period of consultation.

26 AER, *Rate of return guideline*, December 2013, pp. 21–2; AER, *Explanatory statement—Rate of return guideline*, December 2013, p. 126.

27 *Income Tax Assessment Act 1997,* parts 3–6.

28 Consumer Challenge panel Sub-Panel 9, *Submission to the AER; Response to proposal from Murraylink for a revenue reset for the 2018–23 regulatory period*, 12 May 2017, p. 4.

29 This means one dollar of claimed imputation credits has a post (company) tax value of one dollar to investors before personal taxes and personal transaction costs.

- we consider our conceptual approach allows for the value of imputation credits to be estimated on a consistent basis with the allowed rate of return and allowed revenues under the post-tax framework in the NER/NGR[30]
- we use the widely accepted approach of estimating the value of imputation credits as the product of two sub-parameters: the 'distribution rate' and the 'utilisation rate'.

Overall, the evidence suggests a range of estimates for the value of imputation credits might be reasonable. With regard to the merits of the evidence before us, we choose a value of imputation credits of 0.4 from within a range of 0.3 to 0.5.

In considering the evidence on the distribution and utilisation rates, we have broadly maintained the approach set out in the Rate of Return Guideline (the Guideline), but have re-examined the relevant evidence and estimates. This re-examination, and new evidence and advice considered since the Guideline, led us to depart from the 0.5 value of imputation credits we proposed in the Guideline.

Further detail on our draft decision regarding the value of Murraylink's imputation credits is set out in attachment 4.

2.4 Regulatory depreciation (return of capital)

Depreciation is the allowance provided so capital investors recover their investment over the economic life of the asset (return of capital). In deciding whether to approve the depreciation schedules submitted by Murraylink, we make determinations on the indexation of the regulatory asset base (RAB) and depreciation building blocks for Murraylink's 2018–23 regulatory control period.[31] The regulatory depreciation allowance is the net total of the RAB depreciation less the inflation indexation adjustment of the RAB.

Our draft decision approves a regulatory depreciation allowance of $23.2 million ($nominal) for the 2018–23 regulatory control period. This is $3.6 million (or 13.3 per cent) lower than Murraylink's proposed value of $26.7 million ($nominal).

Table 2.6 shows our draft decision on Murraylink's depreciation allowance for the 2018–23 regulatory control period.

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30 In finance, the consistency principle requires that the definition of the cash flows in the numerator of a net present value (NPV) calculation must match the definition of the discount rate (or rate of return / cost of capital) in the denominator of the calculation (see Peirson, Brown, Easton, Howard, Pinder, *Business Finance*, McGraw-Hill, Ed. 10, 2009, p. 427). By maintaining this consistency principle, we provide a benchmark efficient entity with an ex ante total return (inclusive of the value of imputation credits) commensurate with the efficient financing costs of a benchmark efficient entity.

31 NER, cll. 6A.5.4(a)(1) and (3).

Table 2.6 AER's draft decision on Murraylink's depreciation allowance for the 2018–23 period ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Straight-line depreciation	6.7	7.0	7.3	7.7	9.5	38.3
Less: inflation indexation on opening RAB	2.9	2.9	3.1	3.2	3.1	15.1
Regulatory depreciation	**3.9**	**4.1**	**4.3**	**4.5**	**6.4**	**23.2**

Source: AER analysis.

In coming to this decision:

- We accept Murraylink's proposed straight-line method used to calculate the regulatory depreciation allowance. However, we do not accept the proposed standard asset life of 10 years for the 'Test equipment' asset class because we have not approved the proposed capex allocated to this asset class, as discussed in attachment 6.
- We accept Murraylink's proposed weighted average method to calculate the remaining asset lives as at 1 July 2018. This because the proposed method applies the approach as set out in the AER's roll forward model (RFM). In accepting the weighted average method, we have updated Murraylink's remaining asset lives as at 1 July 2018 to reflect our amendments to the RAB roll forward for the 2013–18 regulatory control period (attachment 2).
- We made determinations on other components of Murraylink's proposal that also affect the forecast regulatory depreciation allowance—the opening RAB as at 1 July 2018 (attachment 2), expected inflation rate (attachment 3) and forecast capital expenditure (attachment 6).

Further detail on our draft decision regarding depreciation is set out in attachment 5.

2.5 Capital expenditure

Capital expenditure (capex) refers to the capital expenses incurred in the provision of network services. The return on and return of forecast capex are two of the building blocks we use to determine a TNSP's total revenue requirement.

Our draft decision approves $26.6 million ($million 2017–18) total net forecast capex for the 2018–23 regulatory control period. This is 7.2 million (or 21.3 per cent) lower than Murraylink's proposed value of $33.8 million. Table 2.7 shows our decision compared to Murraylink's forecast.

Table 2.7 AER draft decision on total net capex ($million, 2017–18)

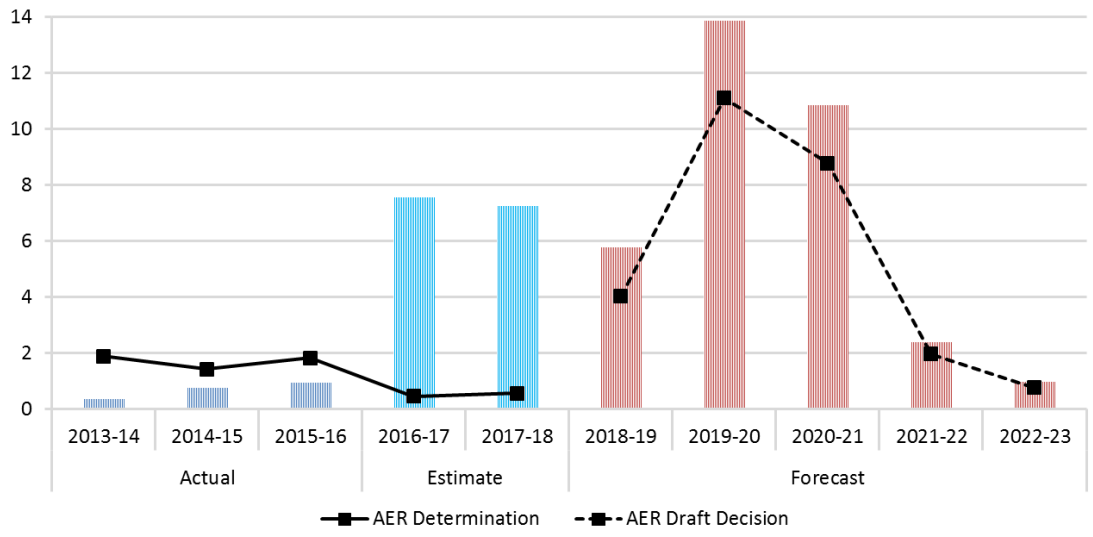
	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Murraylink proposal	5.8	13.9	10.8	2.4	1.0	33.8
AER draft decision	4.0	11.1	8.8	2.0	0.7	26.6
Difference	–1.8	–2.8	–2.1	–0.4	–0.2	–7.2
Percentage difference (%)	–30.3	–19.9	–19.0	–18.0	–21.3	–21.3

Source: Murraylink, *Revenue proposal 2018-23 Attachment 4.1 – Murraylink – Capex Model, 31* January 2017; AER analysis

Note: Numbers may not total due to rounding.

Figure 2.3 shows our capex decision compared to Murraylink's proposal, its past allowances and past actual expenditure.

Figure 2.3 Murraylink's total actual and forecast capex ($2017–18, million)



Source: Murraylink, *Revenue proposal Attachment 4.1 – Murraylink – Capex Model*, 31 January 2017; AER, *Final Decision – Murraylink Post Tax Revenue Model (PTRM)*, April 2013; AER analysis.

The key driver of Murraylink's capex over the 2018–2023 regulatory control period is the proposed replacement of its control systems. This amounted to $27 million ($2017–18) or around 80 per cent of the proposed capex. We have not accepted the proposed control system replacement costs as well as a number of other smaller components.

The key components of our draft decision include:

- a $4.5 million ($2017–18) reduction to forecast capex for 'Control System Upgrade' related to the scope of APA management costs and further information provided by Murraylink

- a $0.7 million ($2017–18) reduction to forecast capex to reflect the capex forecast that was not supported by a business case
- a $0.6 million ($2017–18) reduction to forecast capex for 'Spare IGBTs' that is consistent with historical unit costs to assess the estimated efficient costs for this project
- a $0.8 million ($2017–18) reduction to forecast capex for 'Spare Capacitors' on the basis that the 'step change' increase in the volume of these assets has not been supported; and
- removal of the $0.6 million ($2017–18) to forecast capex for 'Maintenance Surveillance Cameras' on the basis that the proposed costs have not been sufficiently supported by Murraylink and appear to be related to reliability improvements which should not be funded in the forecast capex.

The CCP9 submitted that Murraylink's proposed control system upgrade should be subject to a RIT-T.[32] The AEMC amended the NER in July 2017 to extend the coverage of the RIT-T to replacement capex, to take effect from 18 September 2017.[33] As such, Murraylink's proposed control system upgrade should be subject to a RIT-T.

Murraylink had proposed a $994 million contingent project to upgrade Murraylink to address constraints in regional transmission networks and enhance South Australia's interconnection capacity. We consider the project description and triggers put forward by Murraylink do not appear to meet the NER requirement for these triggers to be reasonably specific and capable of objective verification; and described in such terms that the occurrence of the event is all that is required for the revenue determination to be amended. Further, Murraylink has not consulted with, or made reference to, other parties that would necessarily be involved in any contingent project to augment the capacity of the Murraylink interconnection such as ElectraNet, TransGrid or AEMO.

We have amended the trigger events for Murraylink’s proposed contingent project to ensure the project is triggered only as part of an overall assessment of all credible options for augmenting South Australia’s interconnection capacity that maximises net market benefits.

Further detail on our draft decision regarding capex is set out in attachment 6.

2.6 Operating expenditure

Operating expenditure (opex) is the forecast of operating, maintenance and other non–capital costs incurred in the provision of prescribed transmission services.

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[32] Consumer Challenge panel Sub-Panel 9, *Submission to the AER; Response to proposal from Murraylink for a revenue reset for the 2018–23 regulatory period*, 12 May 2017, p. 4.

[33] AEMC, *National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017 No. 5*, dated 18 July 2017.

We accept Murraylink's opex forecast of $22.1 million ($2017–18).[34] We are satisfied that it reasonably reflects the opex criteria.[35] Table 2.8 shows the opex forecast.

Table 2.8 AER draft decision on total opex ($million, 2017–18)

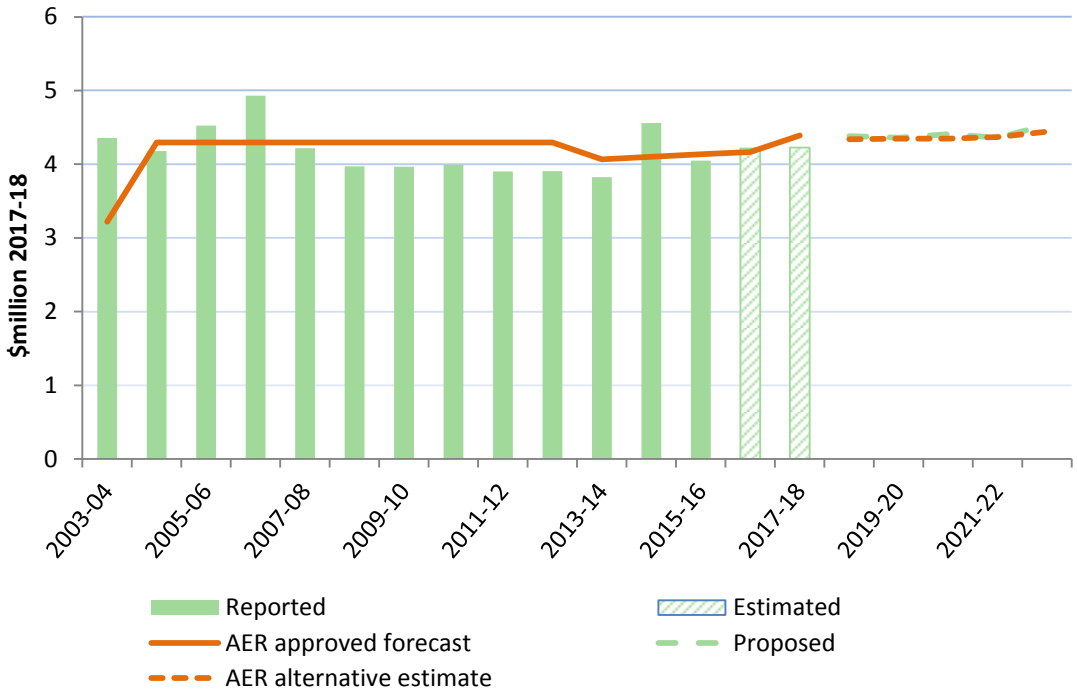
	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Murraylink proposal	4.4	4.4	4.4	4.4	4.5	22.1
AER draft decision	4.4	4.4	4.4	4.4	4.5	22.1
Difference	–	–	–	–	–	–

Source: Murraylink, *Revenue proposal–Attachment 8.1 Forecast operating expenditure model*; Murraylink, *Revenue proposal–Attachment 10.1 PTRM*; AER analysis.

Note: Includes debt raising costs.

Figure 2.4 shows our opex decision compared to Murraylink's proposal, its past allowances and past actual expenditure.

Figure 2.4 AER draft decision on total forecast opex ($million, 2017–18)



Source: Murraylink, *Regulatory accounts 2008–09 to 2014–15*; Murraylink, *Economic benchmarking – Regulatory information notice response 2006 to 2015*; Murraylink, *Revenue proposal–Attachment 8.1 Forecast operating expenditure model*; Murraylink, *Revenue proposal–Attachment 10.1 PTRM*; AER analysis.

[34] Including debt raising costs.

[35] NER, cl. 6A.6.6(c).

In reaching our draft decision we considered submissions received from the Business SA, the CCP9 and the Central Irrigation Trust. Business SA submitted that Increases in labour costs should be capped at CPI.[36] Central Irrigation Trust submitted that Murraylink's remote rural location should not lead to increased opex.[37] The CCP9 submitted that we should reject Murraylink's proposed step change unless efficiency can be more substantively demonstrated and Murraylink should be required to market test the Operating Agreement with part-owner APA Group.[38] We acknowledge the concerns raised in these submissions. We tested Murraylink's forecast opex against our own alternative forecast of opex. We have accepted Murraylink's total opex forecast because it is not materially different from our alternative forecast.

Further detail on our draft decision regarding opex is set out in attachment 7.

2.7 Corporate income tax

Our draft decision includes a decision on the estimated cost of corporate income tax for Murraylink's 2018–23 regulatory control period as part of our revenue determination.[39] It enables Murraylink to recover the costs associated with the estimated corporate income tax payable during the regulatory control period.

Our draft decision approves an estimated cost of corporate income tax of $2.5 million ($nominal) for Murraylink over the 2018–23 regulatory control period. This is $2.5 million (or 50.8 per cent) lower than Murraylink's proposed value of $5.0 million. The reduction reflects our amendments to Murraylink's proposed inputs for forecasting the cost of corporate income tax including the opening TAB, the remaining tax asset lives and the value of imputation credits—gamma (attachment 4). Our adjustments to the return on capital (attachments 2, 3 and 6)[40] and the return of capital (attachment 5) building blocks affect revenues, which in turn impact the tax calculation. The changes affecting revenues are discussed in attachment 1.

Table 2.9 shows our draft decision on Murraylink's corporate income tax allowance for the 2018–23 regulatory control period.

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36 Business SA, *Submissions on Murraylink's Revenue Proposal for the regulatory period 2018–23*, May 2017, p. 3.

37 Central Irrigation Trust, *Murraylink Revenue Proposal 2018–2023*, March 2017, p. 2.

38 Consumer Challenge panel Sub-Panel 9, *Submission to the AER; Response to proposal from Murraylink for a revenue reset for the 2018–23 regulatory period*, 12 May 2017, p. 4.

39 NER, cl. 6A.6.4.

40 The forecast capex amount is a key input for calculating the return of and return on capital building blocks. Attachment 6 sets out our draft decision on Murraylink's forecast capex.

Table 2.9 AER's draft decision on corporate income tax allowance for Murraylink ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Tax payable	0.7	0.7	0.8	0.9	1.0	4.1
Less: value of imputation credits	0.3	0.3	0.3	0.4	0.4	1.6
Net corporate income tax allowance	**0.4**	**0.4**	**0.5**	**0.5**	**0.6**	**2.5**

Source: AER analysis.

Further detail on our draft decision regarding corporate income tax is set out in attachment 8.

3 Incentive schemes

Incentive schemes are a component of incentive–based regulation and complement our approach to assessing efficient costs. The incentive schemes that will apply to Murraylink are:

- the efficiency benefit sharing scheme (EBSS)
- the capital expenditure sharing scheme (CESS)
- the service target performance incentive scheme (STPIS).

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. Incentives for opex and capex are balanced with the incentives under our STPIS. The incentive schemes encourage businesses to make efficient decisions on when and what type of expenditure to incur, and meet service reliability targets.

3.1 Efficiency benefit sharing scheme (EBSS)

The EBSS provides an incentive for service providers to pursue efficiency improvements in opex.

As opex is largely recurrent and predictable, opex in one period is often a good indicator of opex in the next period.[41] Where a service provider is relatively efficient, we use the actual opex it incurred in a chosen base year of the regulatory control period to forecast opex for the next regulatory control period. We call this the 'revealed cost approach'.

However, using a network business' past information to set future targets can reduce the incentives of the business to reduce its costs—since the business knows that any cut in its expenditure will decrease its revenue allowance in the future. It also provides an incentive to increase opex in any year expected to be used as the base year.

To encourage a business to become more efficient it is allowed to keep any difference between its approved forecast and its actual opex during a regulatory control period. Additional to this, the EBSS allows a business to retain efficiency savings, and requires it to carry efficiency losses, for a longer period of time. In this way, the EBSS can provide businesses with an additional reward for reductions in opex and additional penalties for increases in opex.

Under the EBSS, a business keeps the benefits of any efficiency gains for an additional five years after the year of the gain. After that all the gains are passed on to consumers in the form of lower network charges. In this way, businesses benefit from

[41] Step changes provide for increases/decreases where this is not the case.

efficiency gains made at the start of the regulatory period the same as if they were made at the end. This provides the business a continuous incentive to pursue efficiency gains over the regulatory control period. The EBSS also discourages a service provider from inflating its base year opex in order to receive a higher opex allowance in the following regulatory control period.[42]

Our draft decision is to approve EBSS carryover amounts totalling $0.4 million ($2017–18) from the application of the EBSS in the 2013–18 regulatory control period. This is $0.3 million lower than Murraylink's proposed carryover amounts of $0.7 million ($2017–18).[43] Our draft decision for the carryover amounts from the application of the EBSS in the 2013–18 regulatory period is outlined in Table 3.1.

Table 3.1 AER's draft decision on Murraylink EBSS carryover amounts ($million, 2017–18)

	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Murraylink proposal	–0.16	–0.17	0.52	–	0.5	0.71
AER draft decision	–0.02	–0.22	0.48	–	0.16	0.41

Source: Murraylink, *Revenue proposal 2018-23 PTRM*, January 2017; AER analysis.

Our draft decision is to apply version two of the EBSS to Murraylink in the 2018–23 regulatory control period. This is consistent with our final framework and approach paper[44] and Murraylink's proposal.

Further detail on our draft decision regarding the application of the EBSS, including proposed expenditure items to be excluded, is set out in attachment 9.

3.2 Capital expenditure sharing scheme (CESS)

The CESS provides an incentive for service providers to pursue efficiency improvements in capex. Similar to the EBSS, the CESS provides a network service provider with the same reward for an efficiency saving and the same penalty for an efficiency loss regardless of which year they make the saving or loss.

Under the CESS a service provider retains 30 per cent of the benefit or cost of an underspend or overspend, while consumers retain 70 per cent of the benefit or cost of an underspend or overspend. This means that for a one dollar saving in capex the service provider keeps 30 cents of the benefit while consumers keep 70 cents of the benefit. Conversely, in the case of an overspend, the service provider pays for 30 cents of the cost while consumers bear 70 cents of the cost.

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42 These concepts are explained more fully in the explanatory statement to the EBSS; AER, *Efficiency benefit sharing scheme for electricity network service providers – explanatory statement,* November 2013.

43 Murraylink, *Revenue proposal 2018–23*, January 2017, p. 24.

44 AER, *Final framework and approach for Murraylink transmission determination 2018–23,* April 2015, p. 16.

We will apply the CESS as set out in version 1 of the capital expenditure incentives guideline to Murraylink in the 2018–23 regulatory control period.[45] The guideline provides for the exclusion from the CESS of capex the service provider incurs in delivering a priority project approved under the network capability component of the STPIS for transmission network service providers. This is consistent with the proposed approach we set out in our framework and approach paper.[46]

3.3 Service target performance incentive scheme (STPIS)

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

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

Our draft decision is to apply all components of version 5 of the STPIS to Murraylink for the 2018–23 regulatory control period. The STPIS parameters applied in our draft decision are set out in attachment 11.

[45] AER, *Capex incentive guideline*, November 2013, pp. 5–9.

[46] AER, *Final framework and approach for Murraylink transmission determination 2018–23,* April 2015, p. 23.

4 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.[47] 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.[48] This is not delivered by any one of the NEO's factors in isolation, but rather by balancing them in reaching a regulatory decision.[49]

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.[50] 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. [51]

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.[52] 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.[53] There are also a range of outcomes that are unlikely to advance the NEO, or advance the NEO to the degree that 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.[54] 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.[55] 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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47 NEL, section 16(1)

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

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

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

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

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

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

54 NEL, s. 7A(7).

55 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.

4.1 Achieving the NEO to the greatest degree

Electricity transmission 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, [56] 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.[57]

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.

4.2 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 (see attachment 6 and 7)
- 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

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

[57] 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 (see attachments 3, 4 and 8)

- trade-offs between different components of revenue. For example, undertaking a particular capex project may affect the need for opex or vice versa (see attachments 6 and 7).

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5 Consumer engagement

The NEO requires Murraylink to operate its network in the long term interests of consumers. An important part of this is ensuring that regulatory proposals Murraylink puts to us for approval reflects the NEO, and that Murraylink 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 Murraylink working openly and collaboratively with consumers and providing opportunities for their views and preferences to be heard and to influence Murraylink'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, capital expenditure proposals and price structures.

In 2013 we published a guideline setting out what we consider to be the key components of good consumer engagement for network businesses.[58] The NER also requires us to consider the extent to which the proposed expenditure addresses consumers' relevant concerns identified during the network service provider's engagement with consumers.[59]

5.1 Murraylink's consumer engagement activities

In its revenue proposal, Murraylink submitted that it has no directly connected customers and only engages with AEMO, ElectraNet and AusNet Services, who have a stake in the way Murraylink manages the network.[60] Murraylink views our revenue determination process as the means to undertake stakeholder engagement.[61] Although Murraylink states that it's keen to engage with customers and their representatives, Murraylink has not undertaken any consumer engagement prior to submitting its regulatory proposal or before the making of this draft decision. We are not aware of any steps taken by Murraylink to engage with its direct connected customers or consumers more broadly notwithstanding our issues paper, highlighting the need to do so.[62]

5.2 Consumer submissions

We received a number of submissions on Murraylink's revenue proposal. These are listed in Appendix B. Business SA submitted that Murraylink:

- has not articulated the productivity improvements that would be delivered by its proposed control system replacement

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58 AER, Better Regulation: Consumer engagement guideline for network service providers, November 2013.

59 NER, cl. 6A.10.1(g)(2).

60 Murraylink, *Regulatory proposal 2018–23*, January 2017, pp. 10–11.

61 Murraylink, *Regulatory proposal 2018–23*, January 2017, pp. 10–11.

62 AER, *Issues Paper, Murraylink electricity transmission revenue proposal, 1 July 2018 – 30 June 2023*, May 2017.

- A beta of 0.8 – which is higher than ElectraNet's proposed beta of 0.7
- WACC that is half a percentage point above that proposed by ElectraNet.
- Increases in labour costs should be capped at CPI.[63]

The Central Irrigation Trust (CIT) submitted that Murraylink's proposal is not in the best interest of the end of system customers and strongly opposed the current proposal believing that there is justification for a significant reduction in the revenue proposals presented.[64] The CIT submitted that Murraylink should apply a lower WACC. CIT also submitted that Murraylink's proposed capital expenditure on a new control system for $27 million seems extravagant.[65]

Regarding consumer engagement, the CCP states:

> CCP9 has found Murraylink's approach to Consumer Engagement (CE) to be profoundly disappointing. Despite the requirements under the NER and the AER's Guideline, Murraylink has made no effort to engage stakeholders other than its business-as-usual process contacts. Moreover, Murraylink has shown no evidence of any attempt to measure the quality of even these BAU relationships.
>
> CCP9 has indicated to Murraylink that we understand there are special circumstances that face an interconnector and these circumstances and the relatively small size of the business mean that a CE program must be tailored carefully and made 'fit for purpose'. However, this does not mean that there should be no CE plan in place or in development.
>
> …
>
> CCP9 notes that Murraylink has proposed significant increases in expenditure. It is important to note that, under the National Electricity Rules, consumer engagement is a factor the AER must consider when deciding on Murraylink's expenditure proposals. In our view a significant factor in the AER's evaluation of Murraylink's proposal should be their lack of interest in engaging energy consumers.[66]

The South Australian Department of the Premier and Cabinet submitted that it is its experience that Murraylink has not conducted effective consumer engagement and that Murraylink has an obligation to engage not only with their direct customers, but also consumers and their representatives.[67]

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63 Business SA, *Submission on Murraylink's Revenue Proposal for the regulatory period 2018–23*, May 2017, p. 3.

64 Central Irrigation Trust, *CIT Submission to Murraylink Revenue Proposal 2018 – 2023*, May 2017, p. 1.

65 Central Irrigation Trust, *CIT Submission to Murraylink Revenue Proposal 2018 – 2023*, May 2017, pp. 2–3.

66 Consumer Challenge panel Sub-Panel 9, *Submission to the AER; Response to proposal from Murraylink for a revenue reset for the 2018–23 regulatory period*, 12 May 2017, p. 6.

67 Government of South Australia Department of Premier and Cabinet, *Submission on the Murraylink electricity transmission revenue proposal for 1 July 2018 – 30 June 2023*, 17 May 2017, p. 2

5.3 Our view of Murraylink's consumer engagement

We agree with the views of the CCP and the South Australian Department of the Premier and Cabinet. We consider that Murraylink has not taken any steps to engage with its customers, as required by the rules and consistent with our consumer engagement guideline. This demonstrates Murraylink's lack of commitment to ongoing and genuine consumer engagement on issues relevant to consumers. Murraylink should not ignore customers in Victoria and South Australia. As a regulated transmission network service provider connecting South Australia and Victoria, its costs are ultimately borne by customers in these States.[68] [69] We consider that Murraylink must do more consumer engagement, consistent with our consumer engagement guideline and not simply leave this to the regulatory determination process.

We have seen a similar lack of commitment to consumer engagement by the APA Group, which manages Murraylink, in our determinations for the Roma to Brisbane Gas Pipeline and Victorian gas Transmission System. We consider that these proposals would also have benefited from stakeholder engagement.[70] We consider that consumer engagement is important in regulatory processes as it supports regulatory outcomes that better align with consumers' long term interests.

The AER's Consumer Engagement Guideline for Network Service Providers (guideline) sets out how we expect service providers to engage with their consumers. As noted in our guideline, stronger consumer engagement can help us test service providers' expenditure proposals, and can raise alternative views on matters such as service priorities, capex proposals, and price structures. Although our guideline is not binding, we have stated that we expect all service providers to adopt the guideline and demonstrate a commitment to ongoing and genuine consumer engagement.

Our own consultation on Murraylink's proposal has shown that there is stakeholder interest in the proposal. These submissions have highlighted areas of our Murraylink's proposal that we have subsequently rejected such as Murraylink's proposed capital expenditure and WACC.[71] We consider that Murraylink's revenue proposal would have benefited from stakeholder engagement on these matters at an early stage.

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[68] Murraylink bills ElectraNet and AEMO as the 'coordinating network service providers' in the South Australian and Victorian regions, respectively. The role of the coordinating network service provider is to collect the revenue of all TNSPs operating in their region. They then distribute Murraylink's share back to it. The regulated tariffs charged by ElectraNet and AEMO fully recover Murraylink's regulated revenues

[69] The revenue split between regions is set out in the pricing methodologies we approve. Murraylink gets 45% of its revenue on the South Australia side (via ElectraNet) and 55% on the Victorian side (via AEMO). See; Murraylink pricing methodology – Effective July 2013 to June 2023, May 2012, p. 3. (http://www.aer.gov.au/system/files/Murraylink%20-%20Proposed%20Pricing%20Methodology%20-%20May%202012.pdf)

[70] AER, Overview , *Draft decision – APA VTS gas access arrangement 2018–22*, June 2017, p. 52.
AER, Overview , *Draft decision: Roma to Brisbane Gas Pipeline Access Arrangement 2017–22*, June 2017, p. 53.

[71] Business SA, *Submission on Murraylink's Revenue Proposal for the regulatory period 2018–23, May 2017,* p. 3.
Central Irrigation Trust, CIT Submission to Murraylink Revenue Proposal 2018 – 2023, May 2017, pp. 2–3.

A Constituent components

Our draft decision on Murraylink's transmission determination includes the following constituent components:[72]

Constituent component
In accordance with clause 6A.14.1(1)(i) of the NER, the AER does not approve the total revenue cap set out in Murraylink's revised building block proposal. Our draft decision on Murraylink's total revenue cap is $84.6 million ($nominal) for the 2018–23 regulatory control period. This decision is discussed in Attachment 1 of this draft decision.
In accordance with clause 6A.14.1(1)(ii) of the NER, the AER does not approve the maximum allowed revenue (MAR) for each regulatory year of the regulatory control period set out in Murraylink's building block proposal. Our decision on Murraylink's MAR for each year of the 2018–23 regulatory control period is set out in Attachment 1 of this draft decision.
In accordance with clause 6A.14.1(1)(iii) of the NER, the AER has decided to apply all components of version 5 of the STPIS to Murraylink for the 2018–23 regulatory control period. The values and parameters of the STPIS are set out in Attachment 11 of this draft decision.
In accordance with clause 6A.14.1(1)(iv) of the NER, the AER's decision on the values that are to be attributed to the parameters for the efficiency benefit sharing scheme (EBSS) that will apply to Murraylink in respect of the 2018–23 regulatory control period are set out in Attachment 9 of this draft decision.
In accordance with clause 6A.14.1(1)(v) of the NER, the AER has approved the commencement and length of the regulatory control period as Murraylink proposed in its revenue proposal. The regulatory control period will commence on 1 July 2018 and the length of this period is five years, expiring on 30 June 2023.
In accordance with clause 6A.14.1(2) and acting in accordance with clause 6A.6.7(d) of the NER, the AER has not accepted Murraylink's total forecast capital expenditure of $33.8 million ($2017–18). Our substitute estimate of Murraylink's total forecast capex for the 2018–23 regulatory control period is $26.6 million ($2017–18). This is discussed in Attachment 6 of this draft decision.
In accordance with clause 6A.14.1(3) and acting in accordance with clause 6A.6.6(d) of the NER, the AER has accepted Murraylink's total forecast operating expenditure exclusive of debt raising costs of $22.1 million ($2017–18).
In accordance with clause 6A.14.1(5A) of the NER, the AER has determined that version 1 of the capital expenditure sharing scheme (CESS) as set out the Capital Expenditure Incentives Guideline will apply to Murraylink in the 2018–23 regulatory control period. This is discussed in Attachment 10 of this draft decision.
In accordance with clause 6A.14.1(5B) and 6A.6.2 of the NER, the AER has decided that the allowed rate or return for the 2017–18 regulatory year is 5.7 per cent (nominal vanilla), as set out in Attachment 3 of this draft decision. The rate of return for the remaining regulatory years 2018–23 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 6A.14.1(5C) of the NER the AER has decided that the return on debt is to be estimated using a methodology referred to in clause 6A.6.2(i)(2), and using the formula to be applied in accordance with clause 6A.6.2(l). The methodology and formula are set out in Attachment 3 of this draft decision.
In accordance with clause 6A.14.1(5D) of the NER the AER has decided that the value of imputation credits as referred to in clause 6A.6.4 is 0.4. This is set out in Attachment 4 of this draft decision.
In accordance with clause 6A.14.1(5E) of the NER the AER has decided, in accordance with clause 6A.6.1 and schedule 6A.2, that the opening regulatory asset base (RAB) as at the commencement of the 2018–23 regulatory control period, being 1 July 2018, is $114.3 million ($nominal). This is set out in Attachment 2 of this draft decision.

Government of South Australia Department of Premier and Cabinet, *Submission on the Murraylink electricity transmission revenue proposal for 1 July 2018 – 30 June 2023*, 17 May 2017, p. 2.

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

Constituent component
In accordance with clause 6A.14.1(5F) of the NER the AER has decided that the depreciation approach based on forecast capex (forecast depreciation) is to be used to establish the RAB at the commencement of Murraylink's regulatory control period as at 1 July 2023. This is discussed in Attachment 2 of this draft decision.
In accordance with clause 6A.14.1(6) of the NER the AER has approved Murraylink's proposed negotiating framework. This is set out in Attachment 14 of this draft decision.
In accordance with clause 6A.14.1(7) of the NER the AER has specified the negotiated transmission services criteria for Murraylink. This is set out in Attachment 14 of this draft decision.
In accordance with clause 6A.14.1(8) of the NER the AER has approved Murraylink's proposed pricing methodology. This is set out in Attachment 12 of this draft decision.
In accordance with clause 6A.14.1(9) of the NER the AER has approved the following nominated pass through event to apply to Murraylink for the 2018–23 regulatory control period in accordance with clause 6A.6.9: • Connection cost event The definition of this event is as set out in Attachment 13 of this draft decision.

B List of submissions

We received five submissions in response to Murraylink's revenue proposal. These are listed below.

Submission from	Date received
Central Irrigators Trust	2 March 2017
Murraylink	12 May 2017
Consumer Challenge Panel (CCP9)	12 May 2017
Business SA	12 May 2017
South Australian Department of Premier and Cabinet	17 May 2017