DRAFT DECISION

TasNetworks
Transmission Determination
2019 to 2024

Attachment 1
Maximum allowed revenue

September 2018

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on TasNetworks' 2019–24 transmission determination. It should be read with all other parts of the draft decision.

The draft decision includes the following attachments:

Overview

Attachment 1 – Maximum allowed revenue

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

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 11 – Pricing methodology

Attachment 12 – Pass through events

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
ASRR	annual service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CCP13	Consumer Challenge Panel, sub panel 13
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIAM	demand management innovation allowance (mechanism)
DMIS	demand management incentive scheme
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
F&A	framework and approach
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure

Shortened form	Extended form
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
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 Maximum allowed revenue

This attachment sets out our draft decision on TasNetworks' maximum allowed revenue (MAR) for the provision of prescribed transmission services over the 2019–24 regulatory control period. Specifically, it sets out our draft decision on:[1]

- the estimated total revenue cap, which is the sum of the annual expected MAR
- the annual building block revenue requirement
- the annual expected MAR
- the X factor.

We determine TasNetworks' annual building block revenue requirement using a building block approach. We determine the X factors by smoothing the annual building block revenue requirement over the regulatory control period. The X factor is used in the CPI–X methodology to determine the annual expected MAR.

1.1 Draft decision

We determine a total annual building block revenue requirement of $787.8 million ($nominal) for TasNetworks for the 2019–24 regulatory control period. Our determination represents a reduction of $16.9 million ($nominal) or 2.1 per cent to TasNetworks' proposal and reflects the impact of our draft decisions on the various building block costs. For the reasons discussed in the attachments to this draft determination, our decisions on TasNetworks' proposed building block costs have a consequential impact on its annual building block revenue requirement.

We determine the annual expected MAR (smoothed) and X factor for each regulatory year of the 2019–24 regulatory control period by smoothing the annual building block revenue requirement. Our draft decision is to approve an estimated total revenue cap of $787.5 million ($nominal) for TasNetworks for the 2019–24 regulatory control period. Our approved X factor for 2020–21 to 2023–24 is 0.5 per cent per annum.[2]

Table 1.1 sets out our draft decision on TasNetworks' annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2019–24 regulatory control period.

Table 1.1 AER's draft decision on TasNetworks' annual building block revenue requirement, annual expected MAR, estimated total revenue cap and X factor ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total

[1] NER, cll. 6A.4.2(a)(1)–(3), 6A.5.3(c) and 6A.6.8.

[2] TasNetworks is not required to apply an X factor for 2019–20 because we set the 2019–20 MAR in this decision.

Return on capital	84.2	85.4	87.6	89.7	90.5	437.4
Regulatory depreciation[a]	18.1	22.1	24.4	27.8	31.2	123.5
Operating expenditure[b]	39.9	40.6	41.4	42.0	42.6	206.6
Revenue adjustments[c]	9.8	0.9	1.7	–4.3	1.2	9.3
Net tax allowance	1.5	1.8	2.1	2.5	3.0	10.9
Annual building block revenue requirement (unsmoothed)	153.5	150.8	157.2	157.7	168.6	787.8
Annual expected MAR (smoothed)	**151.5**	**154.5**	**157.4**	**160.5**	**163.6**	**787.5**[d]
X factor (%)[e]	n/a[f]	0.51%	0.51%	0.51%	0.51%	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 revenue adjustments from the efficiency benefit sharing scheme (EBSS) and the capital expenditure sharing scheme (CESS).

(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) TasNetworks is not required to apply an X factor for 2019–20 because we set the 2019–20 MAR in this decision. The MAR for 2019–20 is around 12.0 per cent lower than the approved MAR for 2018–19 in real terms, or 9.9 per cent lower in nominal terms.

1.2 TasNetworks' proposal

TasNetworks proposed a total (smoothed) revenue cap of $799.6 million ($nominal) for the 2019–24 regulatory control period.

Table 1.2 sets out TasNetworks' proposed annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap.

Table 1.2 TasNetworks' proposed annual building block revenue requirement, annual expected MAR, estimated total revenue cap and X factor ($million, nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	Total
Return on capital	86.4	87.7	90.4	93.2	94.7	452.4
Regulatory depreciation[a]	18.6	22.2	24.4	27.9	31.8	124.8
Operating expenditure[b]	39.9	40.6	41.4	42.0	42.6	206.6
Revenue adjustments[c]	7.1	–1.5	0.1	–5.3	0.3	0.7
Net tax allowance	3.1	3.5	3.9	4.5	5.1	20.1
Annual building block revenue requirement	155.1	152.5	160.2	162.3	174.5	804.7

(unsmoothed)						
Annual expected MAR (smoothed)	**168.4**	**164.1**	**159.8**	**155.7**	**151.6**	**799.6**[d]
X factor (%)	n/a[e]	4.92%	4.92%	4.92%	4.92%	n/a

Source: TasNetworks, *Transmission and Distribution Regulatory Proposal 2019–2024*, January 2018, p. 191.

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

(b) Includes debt raising costs.

(c) Includes revenue adjustments from EBSS and CESS.

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

(e) TasNetworks is not required to apply an X factor for 2019–20 because we set the 2019–20 MAR in this decision.

1.3 Assessment approach

In this section, we describe the building block approach used to determine TasNetworks' expected MAR. We also set out the annual revenue adjustment to be applied to TasNetworks' MAR over the 2019–24 regulatory control period.

1.3.1 The building block approach

The MAR is calculated using the post-tax revenue model (PTRM).[3] The PTRM must be such that the expected MAR for each year of the regulatory control period is equal to the net present value (NPV) of the annual building block revenue requirement.[4] The total revenue cap is the sum of the MARs for the period.[5] In turn, the annual building block revenue requirement must be determined using a building block approach.[6] Therefore, we adopt a building block approach when making our decision on TasNetworks' total revenue cap and expected MAR for each regulatory year of the regulatory control period. Under this approach we determine the value of the building block costs that make up the annual building block revenue requirement for each regulatory year. These building block costs are set out in section 1.3.2.

We developed the PTRM, which brings together the various building block costs and calculates the annual building block revenue requirement for each year of the regulatory control period.[7] The PTRM also calculates the X factors required under the CPI–X methodology which is used to escalate the MAR for each year (other than the first year) of the regulatory control period.[8] Using the X factors and annual building block revenue requirement, the annual expected MAR (smoothed) is forecast for each

3 NER, cll.6A.5.1 and 6A.5.3.

4 NER, cl. 6A.5.3(c)(1).

5 NER, cl. 6A.5.3(c)(4).

6 NER, cl. 6A.5.4.

7 NER, cl. 6A.5.

8 NER, cll. 6A.5.3 and 6A.6.8.

year of the regulatory control period. TasNetworks' revenue proposal must be prepared using our PTRM.[9]

The annual building block revenue requirement can be lumpy over the regulatory control period. To minimise price shocks, revenues are smoothed within a regulatory control period while maintaining the principle of cost recovery under the building block approach. Smoothing requires diverting some of the cost recovery to adjacent years within the regulatory control period so that the NPV of the annual expected MAR (smoothed revenues) is equal to the NPV of the annual building block revenue requirement (unsmoothed revenues). That is, a smoothed profile of the expected MAR is determined for the regulatory control period under the CPI–X methodology.

The expected MAR for the first year is generally set equal to the annual building block revenue requirement for the first year of the regulatory control period. It may be appropriate to set the expected MAR for the first year to align with the MAR from the last year of the previous regulatory control period to avoid any large revenue variation between periods (or P_0):[10]

$$MAR_1 = AR_1 \text{ or } MAR_L$$

where:

MAR_1 = the maximum allowed revenue for year 1 of the regulatory control period

AR_1 = the annual building block revenue requirement for year 1 of the regulatory control period

MAR_L ~ the maximum allowed revenue for the last year of the previous regulatory control period.

To enable the formula for the annual revenue adjustment process (discussed below in section 0) to operate correctly, we will refer to the MAR determined in this decision using the building block costs as the allowed revenue (AR). This is because the expected MAR determined using the building block costs do not incorporate performance incentive scheme revenue adjustments and pass through amounts that may apply to each regulatory year.

In this determination for TasNetworks, we first calculate annual building block revenue requirements for each year of the 2019–24 regulatory control period. To do this we consider the various costs facing TasNetworks and the trade-offs and interactions between these costs, service quality and across years. This reflects our holistic assessment of TasNetworks' proposal.

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9 NER, cl. 6A.5.1(a).

10 The MAR for year 1 of the next regulatory control period may include adjustment for the performance incentive that applied during the previous regulatory control period, and under or over recovery adjustments from previous regulatory years.

We understand the trade-offs that occur between building block costs and test the sensitivity of these costs to their various driver elements. These trade-offs are discussed in the interrelationships section of the various attachments to this draft decision and are reflected in the calculations made in the PTRM.[11] Such understanding allows us to exercise judgement in determining the final inputs into the PTRM and the annual building block revenue requirements that result from this modelling.

Having determined the total annual building block revenue requirement for the 2019–24 regulatory control period, we smooth the annual building block revenue requirements for each regulatory year across that period. This step reduces revenue variations between years, and calculates the expected MAR and X factor for each year.[12] The X factors equalise (in NPV terms) the total expected revenue cap to be earned by TasNetworks with the total building block revenue requirement for the 2019–24 regulatory control period.[13] They must minimise, as far as reasonably possible, the variance between the expected MAR and annual building block revenue requirement for the last regulatory year of the period.[14] By minimising this divergence, it helps to manage the prospect of a significant revenue change (and consequently prices) between the last year of the 2019–24 regulatory control period, and first year of the following 2024–29 regulatory control period. We consider a divergence of up to 3 per cent between the expected MAR and annual building block revenue requirement for the last year of the regulatory control period is reasonable, if this can promote smoother price changes over the regulatory control period.

The building block costs (and the elements that drive those costs) used to determine the unsmoothed annual building block revenue requirements are set out in section 1.3.2.

1.3.2 The building block costs

The efficient costs to be recovered by TasNetworks can be thought of as being made up of various building block costs. Our draft decision assesses each of the building block costs and the elements that drive these costs. The building block costs are approved reflecting trade-offs and interactions between the cost elements, service quality and across years.

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11 There are trade-offs that are not modelled in the PTRM but are reflected in the inputs to the PTRM. For example, service quality is not explicitly modelled in the PTRM, but the trade-offs between service quality and price are reflected in the forecast capex and opex inputs to the model. Other trade-offs are obvious from the calculations in the PTRM. For example, while someone may expect a lower regulatory asset base to also lower revenues, the PTRM shows that this will not occur if the reduction in the regulatory asset base is due solely to an increase in the depreciation rate. In such circumstances, revenues increase as the increased depreciation allowance more than offsets the reduction in the return on capital caused by the lower regulatory asset base.

12 NER, cl. 6A.6.8(a).

13 NER, cl. 6A.6.8(c)(1).

14 NER, cl. 6A.6.8(c)(2).

Table 1.3 shows the building block costs that form the annual building block revenue requirement for each year and where discussion on the elements that drive these costs can be found within this draft decision.

Table 1.3 Building block costs

Building block costs	Attachments where elements are discussed
Return on capital	Regulatory asset base (attachment 2)
	Rate of return (attachment 3)
	Capital expenditure (attachment 5)
Regulatory depreciation (return of capital)	Regulatory asset base (attachment 2)
	Regulatory depreciation (attachment 4)
	Capital expenditure (attachment 5)
Operating expenditure	Operating expenditure (attachment 6)
Estimated cost of corporate tax	Corporate income tax (attachment 7)
Other revenue adjustments	
Adjustment for shared assets	Maximum allowed revenue (attachment 1)
Operating efficiency benefits/penalties	Efficiency benefit sharing scheme (attachment 8)
Capital efficiency benefits/penalties	Capital expenditure sharing scheme (attachment 9)

1.3.3 Annual revenue adjustment process

The PTRM incorporates an expected inflation rate to calculate the expected MAR (excluding performance incentive scheme revenue adjustments and pass through amount that may apply to each regulatory year) in nominal dollar terms, whereas the actual MAR from the second year onwards is adjusted for actual inflation. As discussed in the return on debt appendix of attachment 3, we will update TasNetworks' return on debt annually. This means the actual MAR for each year will also be adjusted for revised X factors after the annual return on debt update. This annual revenue adjustment process is set out below.

The MAR for the subsequent year of the regulatory control period requires an annual adjustment based on the previous year's allowed revenue.[15] That is, the subsequent year's allowed revenue is determined by adjusting the previous year's allowed revenue for actual inflation and the X factor determined after the annual return on debt update:

$$\boldsymbol{AR_t} = \mathrm{AR}_{t-1} \times (1 + \Delta\mathrm{CPI}) \times (1 - \mathrm{X}_t)$$

where:

[15] In the case of making the annual adjustment for year 2, the previous year's AR would be the same as the approved smoothed revenue for year 1 as contained in the PTRM.

AR	=	the allowed revenue
t	=	time period/financial year (for *t* = 2 (2020–21), 3 (2021–22), 4 (2022–23), 5 (2023–24))
∆CPI	=	the annual percentage change in the ABS Consumer price index all groups, weighted average of eight capital cities from December in year *t* – 2 to December in year *t* – 1
X	=	the smoothing factor determined in accordance with the PTRM as approved in the AER's final decision, and annually revised for the return on debt update in accordance with the formula specified in the return on debt appendix calculated for the relevant year.[16]

The MAR is determined annually in accordance with the NER by adding to (or deducting from) the allowed revenue:

- the service target performance incentive scheme revenue increment (or revenue decrement)[17]
- any approved pass through amounts.[18]

Table 1.4 sets out the timing of the annual calculation of the AR and performance incentive:

MAR_t	=	(allowed revenue) + (performance incentive) + (pass through)
	=	$\mathrm{AR}_t + \left(\left(\mathrm{AR}_{t-2} \times \frac{1}{2}\right) + \left(\mathrm{AR}_{t-1} \times \frac{1}{2}\right)\right) \times \mathrm{S}_{ct} + \mathrm{P}_t$

where:

MAR	=	the maximum allowed revenue
AR	=	the allowed revenue
S	=	the revenue increment or decrement determined in accordance with the service target performance incentive scheme

16 Please see attachment 3 for details.

17 NER, cl. 6A.7.4.

18 NER, cll. 6A.7.2 and 6A.7.3.

P	=	the pass through amount (positive or negative) that the AER has determined in accordance with clauses 6A.7.2 and 6A.7.3 of the NER
t	=	time period/financial year (for *t* = 2 (2020–21), 3 (2021–22), 4 (2022–23), 5 (2023–24))
ct	=	time period/calendar year (for *t* = 2 (2019), 3 (2020), 4 (2021), 5 (2022)).

TasNetworks may also adjust the MAR for under or over-recovery amounts.[19] That is, if the revenue amounts earned from providing prescribed transmission services in previous regulatory years are higher or lower than the sum of the approved MAR for those years, the difference can be included in the subsequent year's MAR. In the case of an under-recovery, the amount is added to the subsequent year's MAR. In the case of an over-recovery, the amount is subtracted from the subsequent year's MAR.

Table 1.4 Timing of the calculation of allowed revenues and the performance incentive for TasNetworks

t	Allowed revenue (financial year)	*ct*	Performance incentive (calendar year)
2	1 July 2020– 30 June 2021	2	1 January 2019– 31 December 2019
3	1 July 2021– 30 June 2022	3	1 January 2020– 31 December 2020
4	1 July 2022– 30 June 2023	4	1 January 2021– 31 December 2021
5	1 July 2023– 30 June 2024	5	1 January 2022– 31 December 2022

Note: The performance incentive for 1 January 2018–31 December 2018 is to be applied to the AR determined for 2019–20 (AR_1).

1.3.4 Average transmission charges

We are not required to determine the transmission charges in this transmission determination for TasNetworks. Nonetheless, we provide the indicative transmission charges (and the resulting combined impact of transmission and distribution charges on annual electricity bills) that flow from the revenue determination as discussed in sections 1.4.3 and 1.4.4. Although we assess TasNetworks' proposed pricing methodology as part of this determination, actual transmission charges established at particular connection points are not determined by us. TasNetworks establishes the transmission charges in accordance with the approved pricing methodology and the NER.[20]

[19] NER, cl. 6A.23.3(e)(5).

[20] NER, cl. 6A.24.1(d).

1.4 Reasons for draft decision

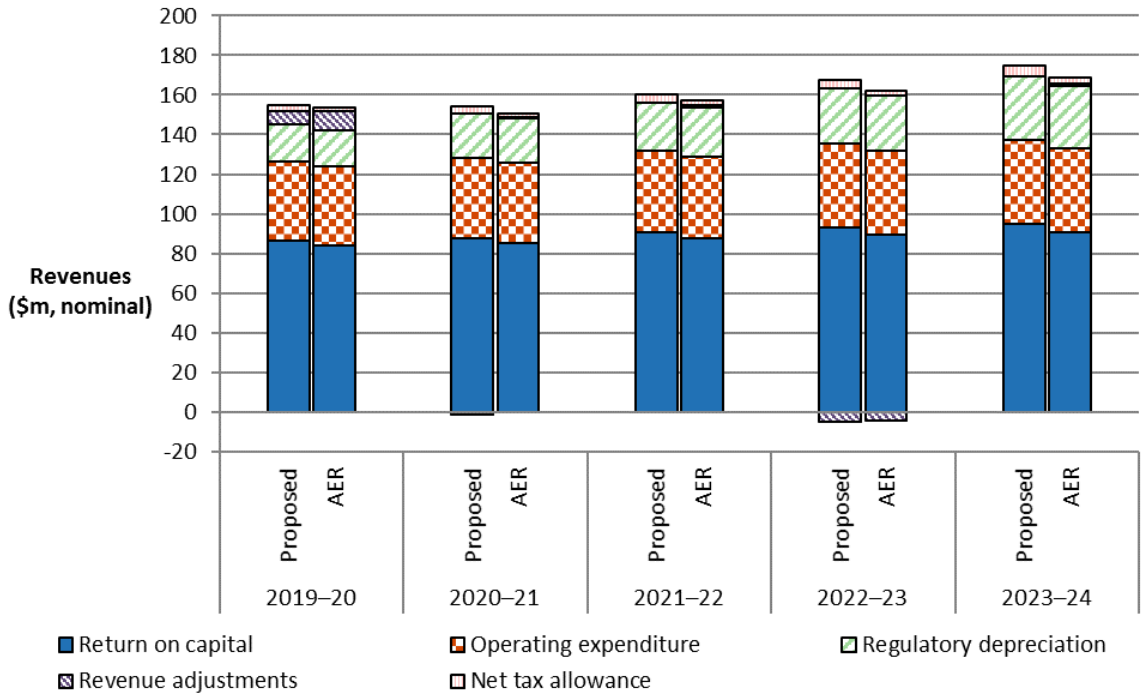
We determine a total annual building block revenue requirement of $787.8 million ($nominal) for TasNetworks for the 2019–24 regulatory control period. This is a reduction of $16.9 million ($nominal) or 2.1 per cent to TasNetworks' proposed total annual building block revenue requirement of $804.7 million ($nominal) for this period. This reflects the impact of our draft decision on the various building block costs.

Figure 1.1 shows the building block components from our determination that make up the annual building block revenue requirement for TasNetworks, and the corresponding components from its proposal.

The changes we made to TasNetworks' proposed building blocks include (in nominal terms):

- a reduction in the return on capital allowance of $14.9 million or 3.3 per cent (attachments 2, 3 and 5)
- a reduction in the regulatory depreciation allowance of $1.3 million or 1.0 per cent (attachment 2, 4 and 5)
- a reduction in the cost of corporate income tax allowance of $9.2 million or 45.7 per cent (attachment 7 and section 2.2 of the overview)
- an increase in the revenue adjustments of $8.6 million or 1173.2 per cent (attachments 1, 8 and 9).

Figure 1.1 AER's draft decision and TasNetworks' proposed annual building block revenue requirement ($million, nominal)



Source: AER analysis.

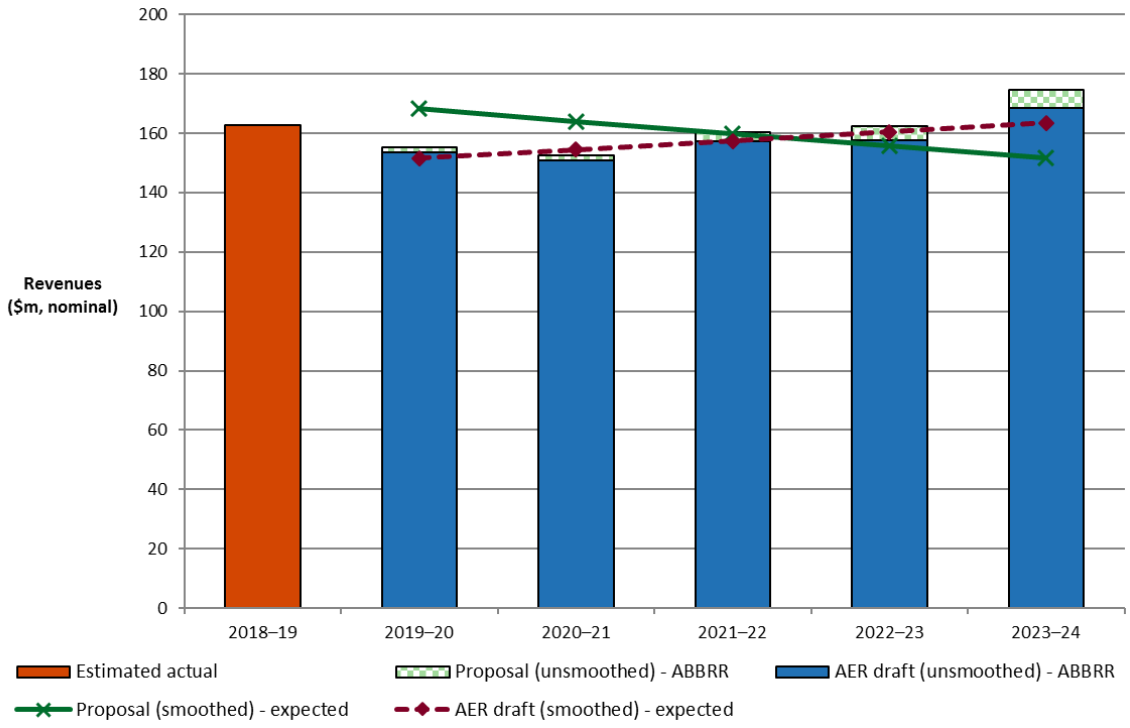
Note: Revenue adjustments include EBSS and CESS amounts. Opex includes debt raising costs.

1.4.1 X factor, annual expected MAR and estimated total revenue cap

For this draft decision, we determine an X factor for TasNetworks of 0.5 per cent per annum for the four years of the regulatory control period from 2020–21 to 2023–24.[21] The NPV of the annual building block revenue requirement is $666.2 million ($nominal) as at 1 July 2019. Based on this NPV and applying the CPI–X method, we determine that the annual expected MAR (smoothed) for TasNetworks is $151.5 million in 2019–20 increasing to $163.6 million in 2023–24 ($nominal). The resulting estimated total revenue cap for TasNetworks is $787.5 million for the 2019–24 regulatory control period.

Figure 1.2 shows our draft decision on TasNetworks' annual expected MAR (smoothed revenue) and the annual building block revenue requirement (unsmoothed revenue) for the 2019–24 regulatory control period.

Figure 1.2 AER's draft decision on TasNetworks' revenue for the 2019–24 regulatory control period ($million, nominal)



Source: AER analysis.

Note: Annual building block revenue requirement (ABBRR).

[21] TasNetworks is not required to apply an X factor for 2019–20 because we set the 2019–20 MAR in this decision.

The Tasmanian Small Business Council raised a submission on TasNetworks' smoothing profile, noting that it is possible customers prefer the certainty of lower charges up front.[22] To determine the expected MAR for TasNetworks, we have set the MAR for the first regulatory year at $151.5 million ($nominal) which is $2.0 million lower than the annual building block revenue requirement. We then apply an expected inflation rate of 2.45 per cent per annum and an X factor of 0.5 per cent per annum to determine the expected MAR in subsequent years.[23] We consider that our profile of X factors results in an expected MAR in the last year of the regulatory control period that is as close as reasonably possible to the annual building block revenue requirement for that year.[24]

Our draft decision results in an average decrease of 0.5 per cent per annum ($nominal) in the expected MAR over the 2019–24 regulatory control period.[25] This consists of an initial decrease of 9.9 per cent from 2018–19 to 2019–20, followed by average annual increases of 1.9 per cent during the remainder of the 2019–24 regulatory control period.[26] Our draft decision also results in a decrease of 17.9 per cent in real terms ($2018–19) to TasNetworks' average annual allowed revenue relative to that in the 2014–19 regulatory control period. This is primarily because we have determined a lower rate of return in this draft decision for the 2019–24 regulatory control period than that approved in the 2014–19 determination.

Figure 1.3 compares our draft decision building blocks for TasNetworks' 2019–24 regulatory control period with TasNetworks' proposed revenue requirement for the same period, and the approved revenue for the 2014–19 regulatory control period.

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22 Tasmanian Small Business Council, *TasNetworks transmission revenue and distribution regulatory proposal*, May 2018, p. 80.

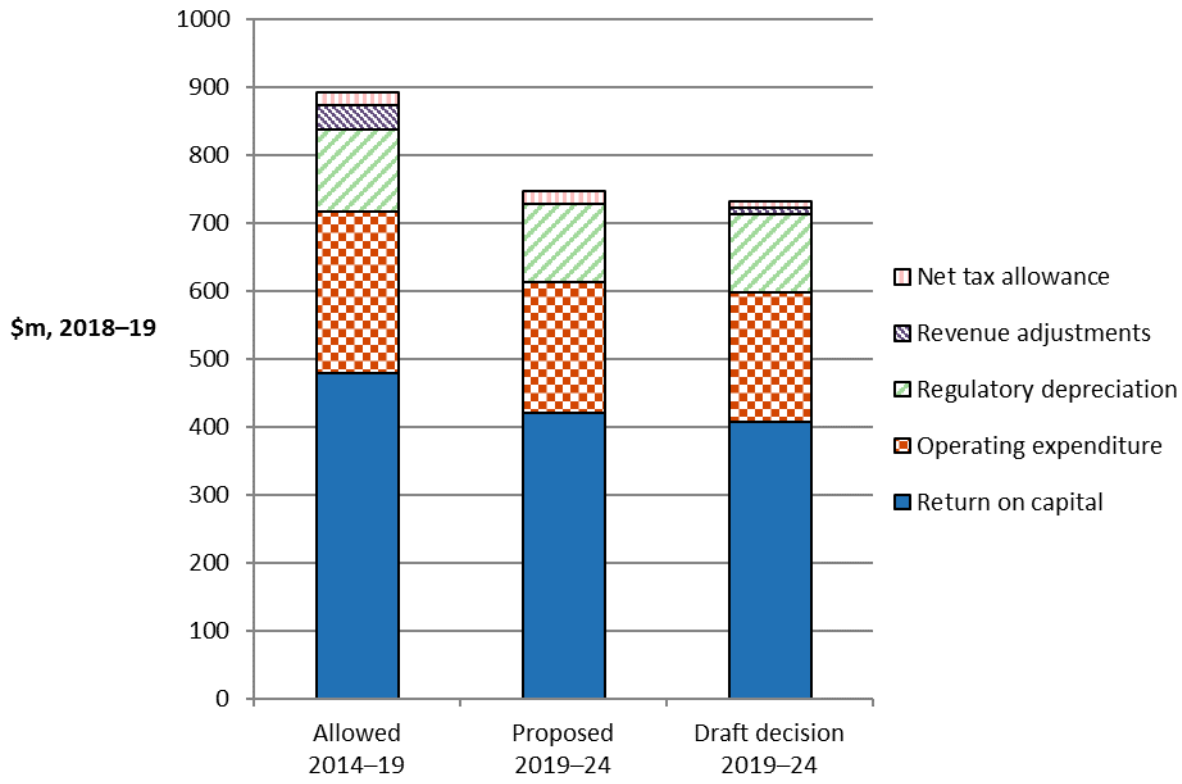
23 NER, cl. 6A.5.3(c)(3).

24 NER, cl. 6A.6.8(c)(2). We consider a divergence of up to 3 per cent between the expected MAR and annual building block revenue requirement for the last year of the regulatory control period is appropriate, if this can achieve smoother price changes for users over the regulatory control period. In the present circumstances, based on the X factors we have determined for TasNetworks, this divergence is around 3.0 per cent.

25 In real 2018–19 dollar terms, our approved expected MAR for TasNetworks results in an average decrease of 2.9 per cent per annum over the 2019–24 regulatory control period.

26 In real 2018–19 dollar terms, this consists an initial decrease of 12.0 per cent from 2018–19 to 2019–20, followed by annual average decreases of 0.5 per cent during the remainder of the 2019–24 regulatory control period.

Figure 1.3 Total revenue by building block components ($million, 2018–19)



Source: AER analysis.

1.4.2 Shared assets

Service providers, such as TasNetworks, may use assets to provide both prescribed transmission services we regulate and unregulated services. These assets are called 'shared assets'.[27] If the revenue from shared assets is material, ten per cent of the unregulated revenues that a service provider earns from shared assets will be used to reduce the service provider's revenue for prescribed transmission services.[28]

The shared asset principles establish that use of share assets should be material before cost reductions are applied.[29] The NER do not define materiality in this context. Our approach to what constitutes a material use of shared assets is that unregulated use of shared assets in a specific regulatory year is material when a service provider's annual average unregulated revenue from shared assets is expected to be greater than one per cent of its MAR for that regulatory year.[30]

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27 NER, cl. 6A.5.5.

28 AER, *Shared asset guideline*, November 2013, p. 15.

29 NER, cl. 6A.5.5(c)(3).

30 AER, *Shared asset guideline*, November 2013, p. 8.

TasNetworks forecasts zero unregulated shared asset revenues in each regulatory year of the 2019–24 regulatory control period.[31] We note that unregulated revenues from shared assets may in future become material. We will monitor TasNetworks' shared asset unregulated revenues.

1.4.3 Indicative average transmission charges

TasNetworks is the main transmission network service provider in Tasmania. Therefore, our draft decision on TasNetworks' expected MAR will ultimately affect the annual electricity bills paid by customers in Tasmania. There are several steps required to translate our revenue decision into indicative transmission charges.

Since we regulate TasNetworks' prescribed transmission services under a revenue cap, changes in the consumption of electricity will affect the transmission charges ultimately paid by consumers. We estimate the indicative effect of our draft decision on forecast average transmission charges in Tasmania by:

- taking TasNetworks' annual expected MAR determined in this draft decision, and
- dividing it by the forecast annual energy delivered in Tasmania published by AEMO.[32]

Based on this approach, we estimate that this draft decision will result in a decrease in annual average transmission charges from 2018–19 to 2023–24.[33]

Figure 1.4 shows the indicative average transmission charges over the period 2014–15 to 2023–24 in real 2018–19 dollar terms based on the expected revenues established in our draft decision compared to TasNetworks' proposed revenue requirement. The average transmission charges are expected to decrease from around $16.2 per MWh in 2018–19 to $13.9 per MWh in 2023–24.

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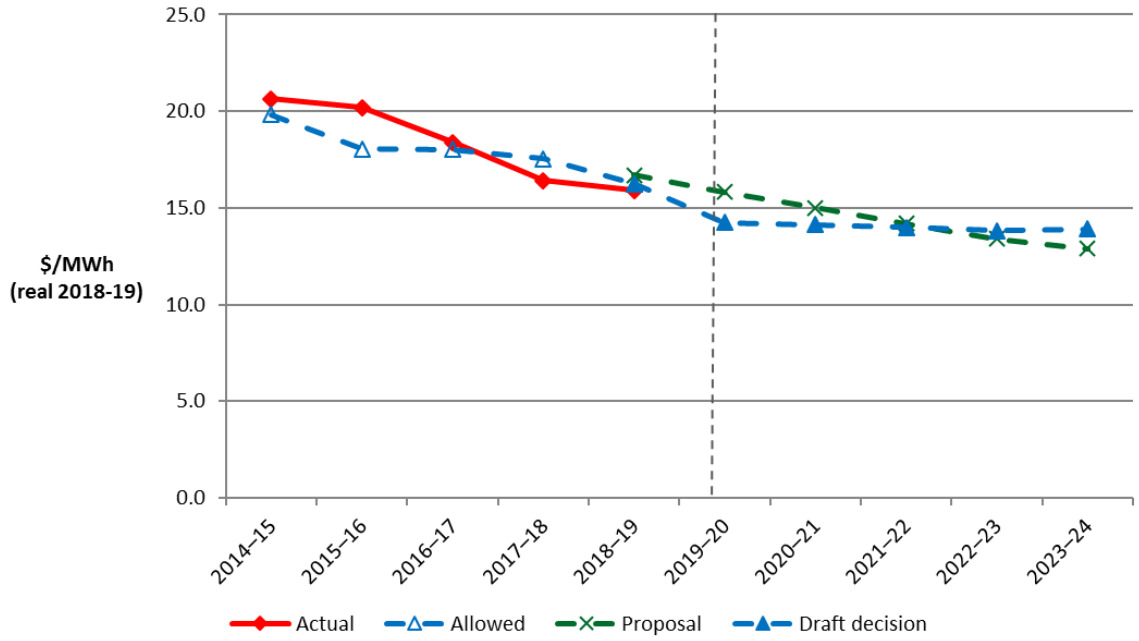
31 TasNetworks, *Reset RIN final template 1 - Revenue determination transmission*, January 2018. ,

32 AEMO, *National Electricity and Gas forecasting - 2018 Electricity Statement of Opportunities*, http://forecasting.aemo.com.au/Electricity/AnnualConsumption/Operational, accessed on 4 September 2018.

33 On average, the draft decision transmission revenues will decrease by 0.5 per cent ($nominal) per annum from 2018–19 to 2023–24. The forecast energy delivered in Tasmania will increase by an average of 0.1 per cent per annum across that period. As a result, the indicative transmission charge will decrease by 0.7 per cent ($nominal) per annum from 2018–19 to 2023–24.

Figure 1.4 Indicative transmission price path for Tasmania ($/MWh, 2018–19)



Source: AER analysis.

1.4.4 Expected impact of combined decisions on electricity bills

The annual electricity bill for customers in Tasmania reflects the combined cost of all the electricity supply chain components—wholesale energy generation, transmission, distribution, metering, and retail costs. This draft decision primarily relates to the transmission charges for prescribed transmission services. We also made a draft decision for TasNetworks' distribution determination for the 2019–24 regulatory control period which relates to the distribution charges for standard control services. The expected impact on electricity bills discussed in this section reflects the combined impact of both draft decisions.

TasNetworks' transmission and distribution charges represent approximately:

- 46 per cent on average for residential customers' annual electricity bill in Tasmania[34]
- 43 per cent on average for small business customers' annual electricity bill in Tasmania.[35]

[34] This can be broken down to 12 per cent and 34 per cent for transmission and distribution proportions of the annual customer bill respectively; AEMC, *2017 Residential electricity price trends – Tasmanian information sheet*, December 2017, p. 2; AER analysis.

We estimate the expected bill impact by varying the transmission and distribution charges in accordance with our draft decisions, while holding all other components—including the metering component—constant. This approach isolates the effect of our draft decision on the core network charges only. However, this does not imply that other components will remain unchanged across the regulatory control period.[36]

The networks component of the average annual residential electricity bill in 2019–20 is expected to decrease by about $11 ($nominal) from the 2018–19 level, followed by average annual increases of $23 ($nominal) over the remaining regulatory years of the 2019–24 regulatory control period (2020–21 to 2023–24).[37] By comparison, had we accepted TasNetworks' proposals, the average residential electricity bill in 2019–20 would increase by about $22 ($nominal) from the 2018–19 level, followed by average annual increases of $27 ($nominal) over the remaining regulatory years.[38]

Similarly, for an average small business customer in Tasmania, we expect the networks component of the average annual small business electricity bill in 2019–20 to decrease by about $35 ($nominal) from the 2018–19 level, followed by average annual increases of $72 ($nominal) over the remaining regulatory years of the 2019–24 regulatory control period (2020–21 to 2023–24).[39] By comparison, had we accepted TasNetworks' proposals, the average small business electricity bill in 2019–20 would increase by about $70 ($nominal) from the 2018–19 level, followed by average annual increases of $86 ($nominal) over the remaining regulatory years.[40]

Our estimated impact on TasNetworks' customers is based on an average annual electricity usage of around 7500 kWh for residential households[41] and 23700 kWh for small businesses.[42] Therefore, customers with different usage will experience different changes in their bills. We also note that there are other factors, such as metering, wholesale and retail costs, which affect electricity bills.

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35 This can be broken down to 11 per cent and 32 per cent for transmission and distribution proportions of the annual customer bill respectively; TasNetworks, *Reset RIN final template 1 - Regulatory determination distribution*, January 2018; TasNetworks, *Reset RIN final template 1 - Revenue determination transmission*, January 2018.

36 It also assumes that actual energy delivered will equal the forecast adopted in our draft decision. Since TasNetworks operates under a revenue cap, changes in energy delivered will also affect annual electricity bills across the 2019–24 regulatory control period. The 2017 AEMC price trends report for Tasmania forecasts the networks component making up an increasingly higher proportion of the total customer bills; AEMC, *2017 Residential electricity price trends – Tasmanian information sheet*, December 2017, p. 2.

37 This equates to a 0.6 per cent decrease in the average customer's total bill in 2019–20, followed by average annual increases of 1.2 per cent in the remaining regulatory years.

38 This equates to a 1.2 per cent increase in the average customer's total bill in 2019–20, followed by average annual increases of 1.4 per cent in the remaining regulatory years.

39 This equates to a 0.5 per cent decrease in the average small business' total bill in 2019–20, followed by average annual increases of 1.1 per cent in the remaining regulatory years.

40 This equates to a 1.1 per cent increase in the average customer's total bill in 2019–20, followed by average annual increases of 1.3 per cent in the remaining regulatory years.

41 This reflects the average annual consumption for residential customers using tariffs 31 and 41 in Tasmania. OTTER, *Typical electricity customers 2017*, April 2017, p. 4.

42 This reflects the average annual consumption for small business customers using tariff 22 in Tasmania. OTTER, *Typical electricity customers 2017*, April 2017, p. 4.

Table 1.5 shows our estimated impact of our draft decision and TasNetworks' proposal on the average annual electricity bills for residential and small business customers in Tasmania over the 2019–24 regulatory control period.

Table 1.5 Estimated impact of TasNetworks' revenue proposal and the AER's draft decision on average annual electricity bills for the 2019–24 regulatory control period—combined transmission and distribution ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
AER draft decision						
Residential annual bill	1916[a]	1905	1927	1948	1970	1996
Annual change[c]		–11 (–0.6%)	22 (1.1%)	21 (1.1%)	22 (1.1%)	26 (1.3%)
Small business annual bill	6485[b]	6450	6520	6587	6656	6739
Annual change[c]		–35 (–0.5%)	69 (1.1%)	68 (1%)	69 (1%)	83 (1.2%)
TasNetworks' proposal						
Residential annual bill	1916[a]	1938	1963	1988	2015	2047
Annual change[c]		22 (1.2%)	25 (1.3%)	25 (1.3%)	27 (1.3%)	32 (1.6%)
Small business annual bill	6485[b]	6555	6633	6713	6798	6898
Annual change[c]		70 (1.1%)	78 (1.2%)	80 (1.2%)	84 (1.2%)	101 (1.5%)

Source: AER analysis; AEMC, *2017 Residential electricity price trends – Tasmanian information sheet*, December 2017; TasNetworks, *Post Tax Revenue Model (PTRM) Transmission, January 2018*; TasNetworks, *Post Tax Revenue Model (PTRM) Distribution, January 2018;* and TasNetworks, *Response to information request #037 – Indicative bill impact information source*, January 2018.

(a) Based on tariff 31 and tariff 41 standing offers at 1 July 2018 from Aurora Energy for an average residential customer's consumption of 7500 kWh (3400 kWh and 4100 kWh allocated to each tariff respectively) per year.

(b) Based on tariff 22 standing offers at 1 July 2018 from Aurora Energy for an average small business customer in South Australia consuming 23700 kWh of electricity per year.

(c) Annual change amounts and percentages are indicative. They are derived by varying the networks component of the 2018–19 bill amounts in proportion to yearly expected revenue divided by TasNetworks' forecast energy delivered for Tasmania for transmission and distribution components respectively. The combined impact is calculated by summing the two transmission and distribution bill impacts together. Actual bill impacts will vary depending on electricity consumption and tariff class.