DRAFT DECISION
AusNet Services transmission determination 2017−18 to 2021−22

Attachment 1 – Maximum allowed revenue

July 2016

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Note

This attachment forms part of the AER's draft decision on AusNet Services' revenue proposal 2017–22. 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

Note 1-2

Contents 1-3

Shortened forms 1-4

1 Maximum allowed revenue 1-6

1.1 Draft decision 1-6

1.2 AusNet Services' proposal 1-7

1.3 AER's assessment approach 1-8

1.3.1 The building block approach 1-8

1.3.2 The building block costs 1-11

1.3.3 Annual revenue adjustment process 1-11

1.3.4 Average transmission charges 1-13

1.4 Reasons for draft decision 1-14

1.4.1 X factor, annual expected MAR and estimated total revenue cap1-15

1.4.2 Shared assets 1-17

1.4.3 Indicative transmission charges and impact on electricity bills... 1-19

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
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
NSP	network service provider

Shortened form	Extended form
NTSC	negotiated transmission service criteria
opex	operating expenditure
PPI	partial performance indicators
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 the AER's draft decision on the maximum allowed revenue (MAR) for the provision of prescribed transmission services for each year of AusNet Services' 2017–22 regulatory control period. Specifically, the attachment addresses:[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 the TNSP's 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 (smoothed).

1.1 Draft decision

We do not accept AusNet Services' proposed annual building block revenue requirement, annual expected MAR and total revenue cap. For the reasons discussed in the attachments to this draft determination, our decisions on AusNet Services' proposed building block costs have a consequential impact on its annual building block revenue requirement. We have calculated the X factor and the annual expected MAR (smoothed) to reflect our draft decision on AusNet Services' annual building block revenue requirement.

We determine a total annual building block revenue requirement for AusNet Services of $2694.3 million ($ nominal) for the 2017–22 regulatory control period. This is a reduction of $463.3 million ($ nominal) or 14.7 per cent to AusNet Services' proposal and reflects the impact of our draft decisions on the various building block costs.

As a result of our smoothing of the annual building block revenue requirement, our draft decision on the annual expected MAR and X factor for each regulatory year of the 2017–22 regulatory control period is set out in Table 1.1. Our draft decision is to approve an estimated total revenue cap of $2695.0 million ($ nominal) for AusNet Services for the 2017–22 regulatory control period. Our approved X factor for 2018–19 to 2021–22 is 1.08 per cent per annum.[2]

Table 1.1 sets out our draft decision on AusNet Services' annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2017–22 regulatory control period.

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

2 AusNet Services is not required to apply an X factor for 2017–18 because we set the 2017–18 MAR in this decision.

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

	2017–18	2018–19	2019–20	2020–21	2021–22	Total
Return on capital	196.9	200.7	202.4	202.8	202.7	1005.4
Regulatory depreciation[a]	102.0	102.5	109.4	112.2	95.2	521.3
Operating expenditure[b]	210.8	216.2	221.9	227.7	233.6	1110.2
Revenue adjustments[c]	–0.2	–0.2	–0.3	–1.8	–0.8	–3.3
Net tax allowance	13.4	10.9	12.6	14.3	9.4	60.6
Annual building block revenue requirement (unsmoothed)	523.1	530.0	546.0	555.0	540.2	2694.3
Annual expected MAR (smoothed)	**524.8**	**531.8**	**538.9**	**546.1**	**553.4**	**2695.0**[d]
X factor (%)[e]	n/a[f]	1.08%	1.08%	1.08%	1.08%	n/a

Source: AER analysis.

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

(b) Operating expenditure includes debt raising costs.

(c) Includes efficiency benefit sharing scheme and shared asset 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) AusNet Services is not required to apply an X factor for 2017–18 because we set the 2017–18 MAR in this decision. The MAR for 2017–18 is around 3.0 per cent lower than the approved MAR for 2016–17 in real terms, or 0.6 per cent lower in nominal terms.

1.2 AusNet Services' proposal

AusNet Services proposed a total (smoothed) revenue cap of $3160.5 million ($ nominal) for the 2017–22 regulatory control period.

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

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

	2017–18	2018–19	2019–20	2020–21	2021–22	Total
Return on capital	233.2	239.2	242.8	245.4	247.2	1207.8
Regulatory depreciation[a]	103.5	117.0	129.9	133.7	118.7	602.8
Operating expenditure[b]	227.3	227.6	234.6	242.6	249.8	1182.0
Revenue adjustments[c]	0.2	0.1	0.1	–1.3	–2.0	–2.8
Net tax allowance	31.2	31.7	35.8	37.8	31.5	167.9
Annual building block revenue requirement (unsmoothed)	595.4	615.7	643.2	658.2	645.1	3157.6
Annual expected MAR (smoothed)	**595.4**	**613.2**	**631.6**	**650.4**	**669.9**	**3160.5**[d]
X factor (%)	–10.17%	–0.62%	–0.62%	–0.62%	–0.62%	n/a

Source: AusNet Services, *Revenue proposal*, October 2015, pp. 323–324.

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

(b) Operating expenditure includes debt raising costs.

(c) Includes efficiency benefit sharing scheme and shared asset amounts.

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

1.3 AER's assessment approach

In this section, we describe the building block approach used to determine the TNSP's expected MAR. We also set out the annual revenue adjustment to be applied to AusNet Services' MAR over the 2017–22 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 for the TNSP for each year, and the total revenue cap is the sum of the MARs for each year.[4] In turn, the annual building block revenue requirement must be determined using a building block approach.[5] Therefore, we adopt a building block approach when making our decision on a TNSP's 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.

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

[4] NER, cll. 6A.5.3(c)(1) and (4).

[5] NER, cl. 6A.5.4.

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.[6] 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.[7] Using the X factors and annual building block revenue requirement, the annual expected MAR (smoothed) is forecast for each year of the regulatory control period. A TNSP's revenue proposal must be prepared using our PTRM.[8]

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):[9]

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

where:

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

AR_1 = the annual building block revenue requirement for year 1 of the next 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 1.3.3) 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

6 NER, cl. 6A.5.

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

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

9 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.

performance incentive scheme revenue adjustments and pass through amounts that may apply to each regulatory year.

In this determination we first calculate annual building block revenue requirements for each year of the 2017–22 regulatory control period. To do this we consider the various costs facing the TNSP and the trade-offs and interactions between these costs, service quality and across years. This reflects the AER's holistic assessment of the TNSP's proposal.

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 developed by the AER.[10] Such understanding allows the AER 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 2017–22 regulatory control period, the annual building block revenue requirements for each regulatory year are smoothed across that period to reduce revenue variations between years and to come up with the expected MAR for each year. This is done through the determination of the X factors.[11] The X factors must equalise (in NPV terms) the total expected revenue cap to be earned by the TNSP with the total building block revenue requirement for the 2017–22 regulatory control period.[12] The X factor 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.[13] We therefore 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 below.

10 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.

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

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

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

1.3.2 The building block costs

The efficient costs to be recovered by a TNSP 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.

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) Capex (attachment 6) Rate of return (attachment 3)
Regulatory depreciation (return of capital)	Regulatory asset base (attachment 2) Capex (attachment 6) Depreciation (attachment 5)
Operating expenditure (opex)	Opex (attachment 7)
Efficiency benefits/penalties	Efficiency benefit sharing scheme (attachment 9)
Estimated cost of corporate tax	Corporate income tax (attachment 8) Value of imputation credits (attachment 4)
Adjustment for shared assets	Maximum allowed revenue (attachment 1)

Source: AER analysis.

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 for each year is adjusted for actual inflation. As discussed in the return on debt appendix of attachment 3, we will update AusNet Services' 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.[14] 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:

$$AR_t = AR_{t-1} \times (1 + \Delta CPI) \times (1 - X_t)$$

where:

AR	=	the allowed revenue
t	=	time period/financial year (for t = 2 (2018–19), 3 (2019–20), 4 (2020–21), 5 (2021–22))
∆CPI	=	the annual percentage change in the ABS Consumer price index all groups, weighted average of eight capital cities from September in year *t* – 2 to September 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.

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)[15]
- any approved pass through amounts.[16]

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)

$$= AR_t + \left(\left(AR_{t-2} \times \frac{3}{12}\right) + \left(AR_{t-1} \times \frac{9}{12}\right)\right) \times S_{ct} + P_t$$

[14] 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.

[15] NER, cl. 6A.7.4.

[16] NER, cll. 6A.7.2 and 6A.7.3.

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
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 (2018–19), 3 (2019–20), 4 (2020–21), 5 (2021–22))
ct	=	time period/calendar year (for *t* = 2 (2017), 3 (2018), 4 (2019), 5 (2020)).

Under the NER, a TNSP may also adjust the MAR for under or over-recovery amounts.[17] That is, the revenue amounts recovered higher or lower than the approved MAR for each year would be included in the subsequent year's MAR. In the case of an under-recovery, the amount would be added to the future year's MAR. In the case of an over-recovery, the amount would be subtracted from the future year's MAR.

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

t	Allowed revenue (financial year)	*ct*	Performance incentive (calendar year)
2	1 April 2018– 31 March 2019	2	1 January 2017– 31 December 2017
3	1 April 2019– 31 March 2020	3	1 January 2018– 31 December 2018
4	1 April 2020– 31 March 2021	4	1 January 2019– 31 December 2019
5	1 April 2021– 31 March 2022	5	1 January 2020– 31 December 2020

Note: The performance incentive for 1 January 2016–31 December 2016 is to be applied to the AR determined for 2017–18 (AR_1).

1.3.4 Average transmission charges

The NER does not require an estimate of transmission charges for a revenue determination of a TNSP. Nonetheless, we typically provide some indicative transmission charges (and the resulting impact on annual electricity bills) flowing from

17 NER, cll 6A.23.3(c)(2)(iii) and 6A.24.4(c).

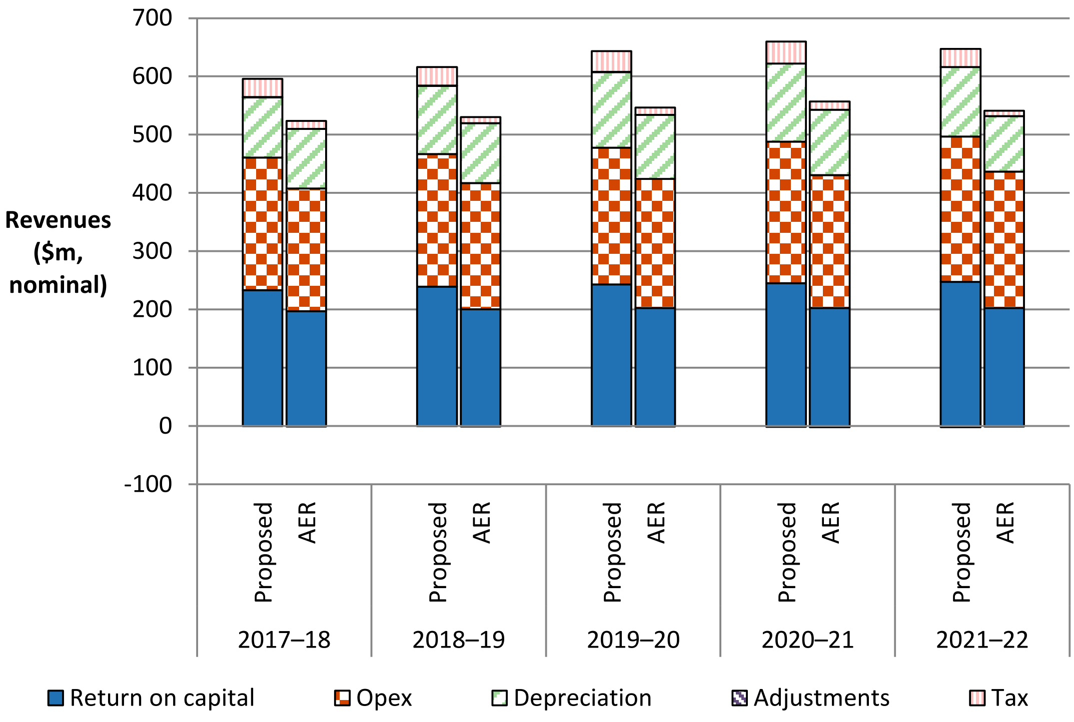
the revenue determination as discussed in section 1.4.3. Although we assess AusNet Services' proposed pricing methodology as part of this determination, actual transmission charges established at particular connection points are not determined by us. AusNet Services establishes the transmission charges in accordance with its approved pricing methodology and the NER.[18]

1.4 Reasons for draft decision

We determine a total annual building block revenue requirement of $2694.3 million ($ nominal) for AusNet Services for the 2017–22 regulatory control period. This compares to AusNet Services' proposed total annual building block revenue requirement of $3157.6 million ($ nominal) for this period.

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

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



Source: AER analysis.

The most significant changes to AusNet Services' proposal include:

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

- a reduction in the return on capital allowance of 16.8 per cent (attachments 2 and 3)
- a reduction in the regulatory depreciation allowance of 13.5 per cent (attachment 5)
- a reduction in the capex allowance of 23.7 per cent (attachment 6)
- a reduction in the opex allowance of 6.1 per cent (attachment 7)
- a reduction in the cost of corporate income tax allowance of 63.9 per cent (attachment 8).

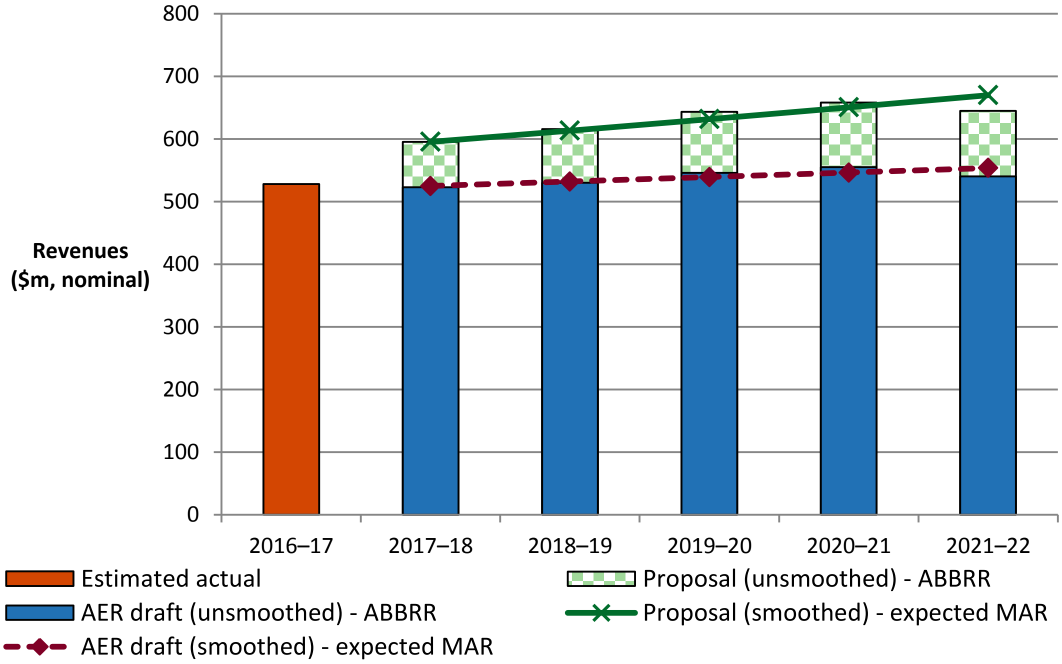
1.4.1 X factor, annual expected MAR and estimated total revenue cap

For this draft decision, we determine an X factor for AusNet Services of 1.08 per cent per annum for the four years of the regulatory control period from 2018–19 to 2021–22.[19] The NPV of the annual building block revenue requirement is $2256.8 million ($ nominal) as at 1 April 2017. Based on this NPV and applying the CPI–X method, we determine that the annual expected MAR (smoothed) for AusNet Services increases from $524.8 million in 2017–18 to $553.4 million in 2021–22 ($ nominal). The resulting estimated total revenue cap for AusNet Services is $2695.0 million for the 2017–22 regulatory control period.

Figure 1.2 shows our draft decision on AusNet Services' annual expected MAR (smoothed revenue) and the annual building block revenue requirement (unsmoothed revenue) for the 2017–22 regulatory control period.

[19] AusNet Services is not required to apply an X factor for 2017–18 because we set the 2017–18 MAR in this decision.

Figure 1.2 AER's draft decision on AusNet Services' annual expected MAR (smoothed) and annual building block revenue requirement (unsmoothed) ($ million, nominal)



Source: AER analysis.

To determine the expected MAR for AusNet Services, we have set the MAR for the first regulatory year at $524.8 million ($ nominal) which is $1.7 million higher than the annual building block revenue requirement. We then applied an X factor of 1.08 per cent per annum to determine the expected MAR in subsequent years.[20] 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.[21]

The average increase in our approved expected MAR is 0.9 per cent per annum ($ nominal) over the 2017–22 regulatory control period.[22] This consists of an initial decrease of 0.6 per cent from 2016–17 to 2017–18, followed by average annual increases of 1.3 per cent during the remainder of the 2017–22 regulatory control

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

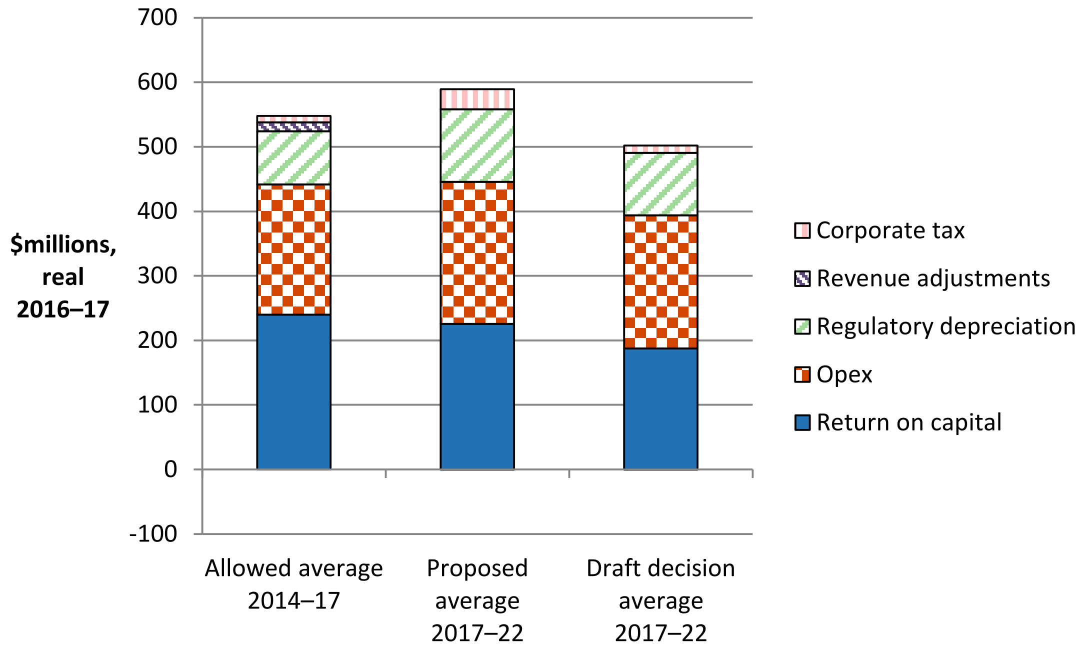
21 NER, cl. 6A.6.8(c)(2). We consider a divergence of up to 3 per cent between the expected MAR and annual building block revenue requirement for the last year of the regulatory control period is appropriate, if this can achieve smoother price changes for users over the regulatory control period. In the present circumstances, based on the X factors we have determined for AusNet Services, this divergence is around 2.4 per cent.

22 In real 2016–17 dollar terms, the average decrease in our approved expected MAR for AusNet Services is 1.5 per cent per annum over the 2017–22 regulatory control period.

period.[23] Our draft decision results in a decrease of 8.0 per cent in real terms ($2016–17) to AusNet Services' average annual allowed revenue relative to that in the 2014–17 regulatory control period. This decrease is primarily because of a lower rate of return and capex applied in this draft decision for the 2017–22 regulatory control period than were approved in the 2014–17 determination.

Figure 1.3 compares our draft decision building blocks for AusNet Services' 2017–22 regulatory control period with AusNet Services' proposed revenue requirement for the same period, and the approved revenue for the 2014–17 regulatory control period.

Figure 1.3 Annual average of AER's draft decision building blocks compared to AusNet Services' proposed revenue requirement and approved revenue for 2014–17 ($ million, 2016–17)



Source: AER analysis.

1.4.2 Shared assets

Service providers, such as AusNet Services, may use assets to provide both prescribed transmission services we regulate and unregulated services. These assets are called 'shared assets'.[24] Of the unregulated revenues a service provider earns from

23 In real 2016–17 dollar terms, this consists an initial decrease of 3.0 per cent from 2016–17 to 2017–18, followed by subsequent average annual decreases of 1.1per cent during the remainder of the 2017–22 regulatory control period.

24 NER, cl. 6A.5.5.

shared assets, 10 per cent will be used to reduce the service provider's prices for prescribed transmission services.[25]

Shared asset revenue reductions are subject to a materiality threshold. Unregulated use of shared assets is material when a service provider's unregulated revenues from shared assets in a specific regulatory year are expected to be greater than 1 per cent of its MAR for that regulatory year.[26]

AusNet Services submitted its shared asset unregulated revenues are forecast to be between 2.5 to 3.0 per cent of its proposed total revenues in each year of the 2017–22 regulatory control period.[27] AusNet Services therefore proposed reductions in its total revenues for each year of that period.

We consider AusNet Services' forecasts are reasonable, based on its reporting of historical shared assets revenue and our assessment of this revenue source for other service providers.[28] However, AusNet Services' forecast unregulated revenues must now be compared to the regulated revenues we determine, rather than those proposed by AusNet Services. Our draft decision sets lower expected MARs than AusNet Services' proposal, so we estimate that the unregulated revenues will be between 2.8 and 3.2 per cent of its expected MARs in each year of the 2017–22 regulatory control period. We are satisfied that AusNet Services' shared asset unregulated revenues meet the materiality threshold in each year of the 2017–22 regulatory control period.

For this draft decision, we therefore apply a shared asset revenue adjustment as shown in Table 1.5, consistent with the proposal from AusNet Services. The shared asset revenue adjustment is a total reduction of $8.7 million ($ nominal) across the 2017–22 regulatory control period.

Table 1.5 AER's draft decision on AusNet Services' shared asset revenue adjustment ($million, nominal)

	2017–18	2018–19	2019–20	2020–21	2021–22	Total
AusNet Services' proposed shared asset revenue adjustment	–1.5	–1.6	–1.7	–1.8	–2.0	–8.7
AER draft decision shared asset revenue adjustment	–1.5	–1.6	–1.7	–1.8	–2.0	–8.7

Source: AusNet Services, *Revenue proposal*, October 2015, p. 151.

25 AER, *Shared asset guideline*, November 2013.

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

27 AusNet Services, *Revenue proposal*, p. 150.

28 This was undertaken when we developed our shared asset guideline, during the 2013 calendar year, as part of our Better Regulation work program.

1.4.3 Indicative transmission charges and impact on electricity bills

Our draft decision on AusNet Services' expected MAR ultimately affects the annual electricity bills paid by customers in Victoria. There are several steps required to translate our revenue decision into indicative transmission charges, and then to estimate bill impact.

Since we regulate AusNet Services' 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 Victoria by:

- taking AusNet Services' annual expected MAR determined in this draft decision,[29] and
- dividing it by the forecast annual energy delivered in Victoria.[30]

Based on this approach, we estimate that this draft decision will result in a modest increase in annual average transmission charges from 2016–17 to 2021–22.[31] Figure 1.4 shows the indicative average transmission charges resulting from this draft decision compared with the average transmission charges from 2014 to 2017 in nominal dollar terms. The average transmission charges are forecast to increase from around $12.1 per MWh in 2016–17 to $12.3 per MWh in 2021–22.

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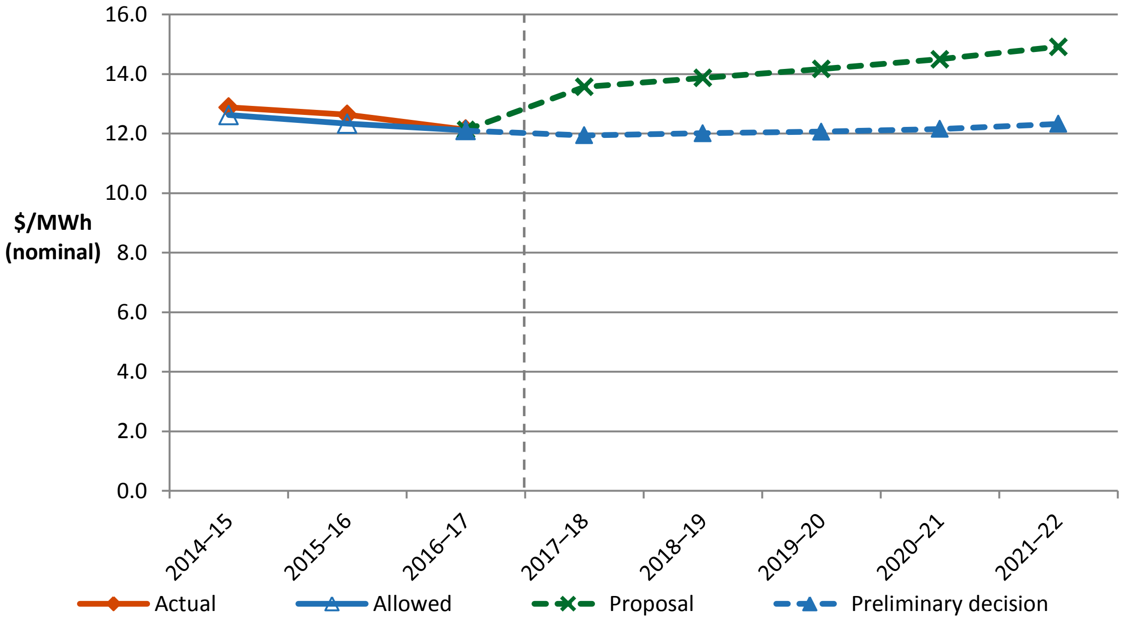
[29] This excludes the Murraylink portion of MAR allocated to Victorian customers. Historically, Murraylink's MAR is about 2.5 per cent of AusNet Services' MAR. Murraylink's reset for its next regulatory control period commences from 1 July 2018.

[30] AEMO, *National electricity forecasting report for the national electricity market - Update*, December 2015, table 3, Medium; AEMO, *Forecasting Dynamic Interface*, available at: http://forecasting.aemo.com.au/.

[31] On average, the draft decision transmission revenues will increase by 0.9 per cent ($ nominal) per annum from 2016–17 to 2021–22. The forecast energy delivered in Victoria will increase by an average of 0.6 per cent per annum across that period. As a result, the indicative transmission charge will increase by 0.4 per cent ($ nominal) per annum from 2016–17 to 2021–22.

Figure 1.4 Indicative transmission price path from 2014–15 to 2021–22 for Victoria ($/MWh, nominal)



Source: AER analysis.

We then estimate the indicative impact of transmission charges on electricity bills. In Victoria, transmission charges represent approximately 5 per cent on average of a typical residential customer's annual electricity bill.[32] This small percentage largely explains the relatively modest average annual electricity bill impacts arising from our draft decision. We expect that our draft decision will result in the transmission component of the average residential customer's annual electricity bill in Victoria remaining generally constant over the 2017–22 regulatory control period.

The transmission component of the average residential customer's annual electricity bill in 2021–22 is expected to be only about $1 above the 2016–17 level. By comparison, had we accepted AusNet Services' proposal, the expected transmission component of the average annual residential electricity bill in 2021–22 would increase approximately $16 ($ nominal) or 1.2 per cent above the 2016–17 level.

Our estimated potential impact is based on the typical annual electricity usage of 4000 kWh per annum for a residential customer in Victoria.[33] Customers with different usage will experience different changes. We also note that there are other factors, such as distribution network costs, wholesale and retail costs, which affect overall electricity bills.

[32] AusNet Services, *Reset RIN – Table 7.6.1*, October 2015.

[33] ESCV, *Energy Retailers Comparative Performance Report — Pricing 2014–15*, January 2016, p. XIII.

Similarly, for small business customers in Victoria—for which transmission charges represent approximately 4 per cent of a typical annual electricity bill—we have estimated the impact of our draft decision for two customer categories:[34]

- Small business (flat)—representing small business customers on a flat tariff using 12 000 kWh per annum
- Small business (TOU)—representing small business customers on a time-of-use tariff using 40 000 kWh per annum.

We expect our draft decision will result in the transmission component of the average small business (flat) customer's annual electricity bill in 2021–22 to be about $3 ($ nominal) or 0.1 per cent above the 2016–17 level. By comparison, had we accepted AusNet Services' proposal, the expected transmission component of the average annual small business (flat) electricity bill in 2021–22 would increase approximately $31 ($ nominal) or 0.9 per cent above the 2016–17 level. Likewise, the transmission component of the average small business (TOU) customer's annual electricity bill in 2021–22 is expected to be about $8 ($ nominal) or 0.1 per cent above the 2016–17 level as a result of our draft decision. By comparison, had we accepted AusNet Services' proposal, the expected transmission component of the average annual small business (TOU) electricity bill in 2021–22 would increase approximately $76 ($ nominal) or 0.9 per cent above the 2016–17 level.

Table 1.6 shows our estimated impact of this draft decision over the 2017–22 regulatory control period compared with AusNet Services' proposal on the average annual electricity bills for residential and small business customers in Victoria.

[34] AusNet Services, *Reset RIN – Table 7.6.1*, October 2015.

Table 1.6 AER's estimated impact of our final decision and AusNet Services' proposal on the average annual electricity bills for the 2017–22 regulatory control period ($ nominal)

	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
AER draft decision						
Residential annual bill	1419[a]	1418	1419	1419	1420	1421
Annual change[d]		–1 (–0.1%)	0 (0.0%)	0 (0.0%)	1 (0.0%)	1 (0.1%)
Small business (flat) annual bill	3332[b]	3330	3331	3331	3333	3335
Annual change[d]		–2 (–0.1%)	1 (0.0%)	1 (0.0%)	1 (0.0%)	2 (0.1%)
Small business (TOU) annual bill	8247[c]	8242	8244	8246	8249	8255
Annual change[d]		–5 (–0.1%)	2 (0.0%)	2 (0.0%)	3 (0.0%)	6 (0.1%)
AusNet Services proposal						
Residential annual bill	1419[a]	1428	1430	1431	1433	1436
Annual change[d]		8 (0.6%)	2 (0.1%)	2 (0.1%)	2 (0.1%)	2 (0.2%)
Small business (flat) annual bill	3332[b]	3348	3351	3354	3358	3363
Annual change[d]		16 (0.5%)	3 (0.1%)	3 (0.1%)	4 (0.1%)	5 (0.1%)
Small business (TOU) annual bill	8247[c]	8286	8295	8303	8312	8323
Annual change[d]		39 (0.5%)	8 (0.1%)	8 (0.1%)	9 (0.1%)	11 (0.1%)

Source: AER analysis; ESCV, *Energy Retailers Comparative Performance Report — Pricing 2014–15*, January 2016, p. XIII; AEMO, *National electricity forecasting report for the national electricity market - Update*, December 2015, table 3, Medium.

(a) Based on weighted average standing offers at June 2016 from SwitchOn comparison tool for DNSP service areas (postcodes: 3000, 3047, 3134, 3199, 3550) using consumption of 4000 kWh per annum converted to middle of year 2016–17 dollar terms.

(b) Based on weighted average of Victorian bills in ESCV, *Energy Retailers Comparative Performance Report — Pricing 2014–15*, January 2016, converted to middle of year 2016–17 dollar terms.

(c) Based on weighted average of Victorian bills in ESCV, *Energy Retailers Comparative Performance Report — Pricing 2014–15, January 2016*, converted to middle of year 2016–17 dollar terms.

(d) Annual change amounts and percentages are indicative. They are derived by varying the transmission component of 2016–17 bill amounts in proportion to yearly expected revenue divided by AEMO forecast demand (Victoria). Actual bill impacts will vary depending on electricity consumption and tariff class.