FINAL DECISION
AusNet Services transmission determination 2017−2022

Attachment 1 – maximum allowed revenue

April 2017

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165

Email: AERInquiry@aer.gov.au

AER reference: 56417

Note

This attachment forms part of the AER's final decision on AusNet Services' revenue proposal 2017–22. It should be read with other parts of the final decision.

The final 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

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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 final 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 Final decision

We do not accept AusNet Services' revised proposed annual building block revenue requirement, annual expected MAR and total revenue cap. This is because we have not accepted the building block costs that AusNet Services proposed in its revised proposal. We have calculated the X factors and the annual expected MAR (smoothed) to reflect our final decision on AusNet Services' annual building block revenue requirement.

We determine a total annual building block revenue requirement for AusNet Services of $2742.8 million ($ nominal) for the 2017–22 regulatory control period. This is a reduction of $223.8 million ($ nominal) or 7.5 per cent to AusNet Services' revised proposal and reflects the impact of our final decisions on the various building block costs.

As a result of our smoothing of the annual building block revenue requirement, our final 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 final decision is to approve an estimated total revenue cap of $2741.7 million ($ nominal) for AusNet Services for the 2017–22 regulatory control period. Our approved X factor for 2018–19 to 2021–22 is 1.12 per cent per annum.[2]

Table 1.1 sets out our final 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.

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[1] NER, cl. 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 final 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	183.9	189.2	193.2	196.3	198.1	960.7
Regulatory depreciation[a]	96.7	99.0	106.7	110.2	93.3	505.9
Operating expenditure[b]	232.4	238.5	244.8	251.2	257.8	1224.7
Revenue adjustments[c]	–0.2	–0.2	–0.3	–1.8	–5.4	–7.9
Net tax allowance	13.2	10.6	12.4	14.0	9.2	59.5
Annual building block revenue requirement (unsmoothed)	526.1	537.1	556.8	569.9	553.1	2742.8
Annual expected MAR (smoothed)	**534.8**	**541.5**	**548.3**	**555.1**	**562.1**	**2741.7**[d]
X factor (%)[e]	n/a[f]	1.12%	1.12%	1.12%	1.12%	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) Revenue adjustments include 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 for 2018–19 to 2021–22 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 1.1 per cent lower than the approved MAR for 2016–17 in real terms, or around 1.3 per cent higher in nominal terms.

1.2 AusNet Services' revised proposal

AusNet Services' revised proposal included a total (smoothed) revenue cap of $2967.5 million ($ nominal) for the 2017–22 regulatory control period.

Table 1.2 sets out AusNet Services' revised proposed annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap. AusNet Services proposed a smoothing profile that results in a large increase in expected revenues in 2017–18 followed by a reduction (in real dollar terms) for the subsequent years of the regulatory control period.

Table 1.2 AusNet Services' revised 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	235.9	233.9	225.1	218.5	213.2	1126.5
Regulatory depreciation[a]	120.8	123.0	130.3	133.5	116.7	624.2
Operating expenditure[b]	219.2	216.6	220.6	225.4	229.2	1111.0
Revenue adjustments[c]	–0.2	–0.2	–0.3	–1.8	–5.2	–7.7
Net tax allowance	24.7	21.1	23.1	25.1	18.6	112.6
Annual building block revenue requirement (unsmoothed)	600.4	594.3	598.8	600.7	572.5	2966.7
Annual expected MAR (smoothed)	**600.4**	**596.9**	**593.5**	**590.1**	**586.7**	**2967.5**[d]
X factor (%)	–11.84%	2.19%	2.19%	2.19%	2.19%	n/a

Source: AusNet Services, *Revised revenue proposal*, pp. 17–20.

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

(b) Operating expenditure includes debt raising costs.

(c) Revenue adjustments include 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

We did not change our assessment approach for the MAR from our draft decision. Section 1.3 of our draft decision details that approach.

1.4 Reasons for final decision

For this final decision, we determine a total annual building block revenue requirement of $2742.8 million ($ nominal) for AusNet Services for the 2017–22 regulatory control period. This compares to AusNet Services' revised proposed total annual building block revenue requirement of $2966.7 million ($ nominal) for this period.

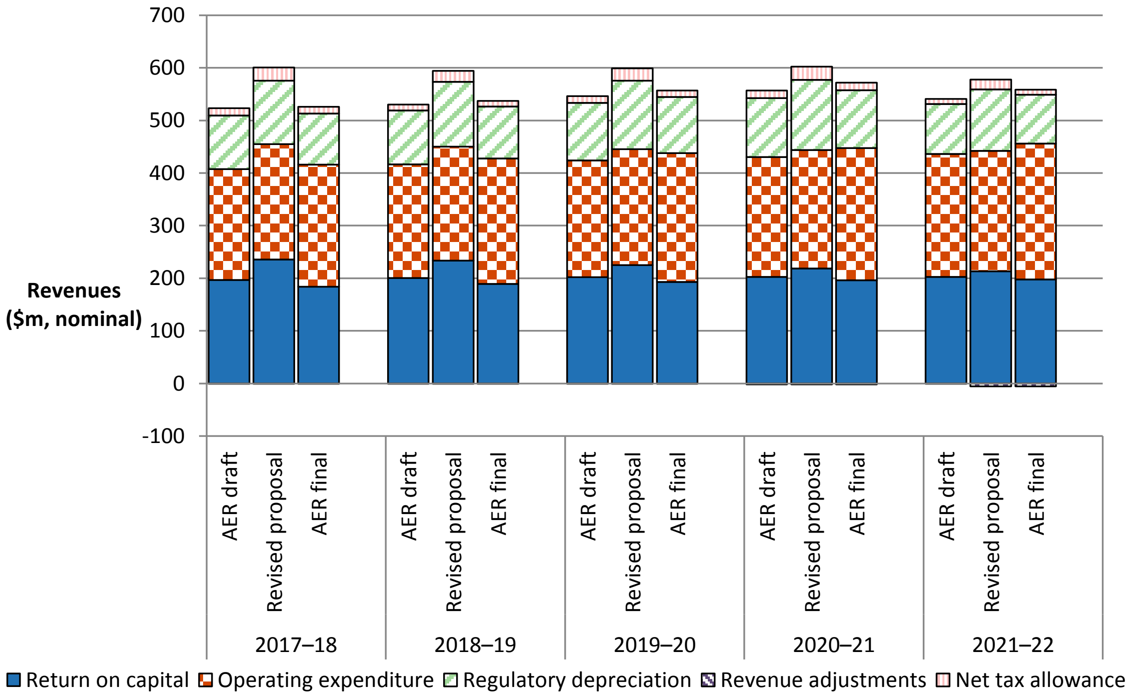
Figure 1.1 shows the building block components from our final determination that make up the annual building block revenue requirement for AusNet Services, and the corresponding components from its revised proposal and our draft decision.

We have calculated the annual building block revenue requirement for AusNet Services based on our final decision on each of these building block components. The revenues are affected by our changes to AusNet Services' revised proposed building blocks:

- a reduction in the return on capital allowance of 15 per cent (attachments 2 and 3)
- a reduction in the regulatory depreciation allowance of 19 per cent (attachment 5)
- a reduction in the capex allowance of 3 per cent (attachment 6)

- a reduction in the opex allowance of 10 per cent (attachment 7)
- a reduction in the cost of corporate income tax allowance of 47 per cent (attachment 8).

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



Source: AER analysis.

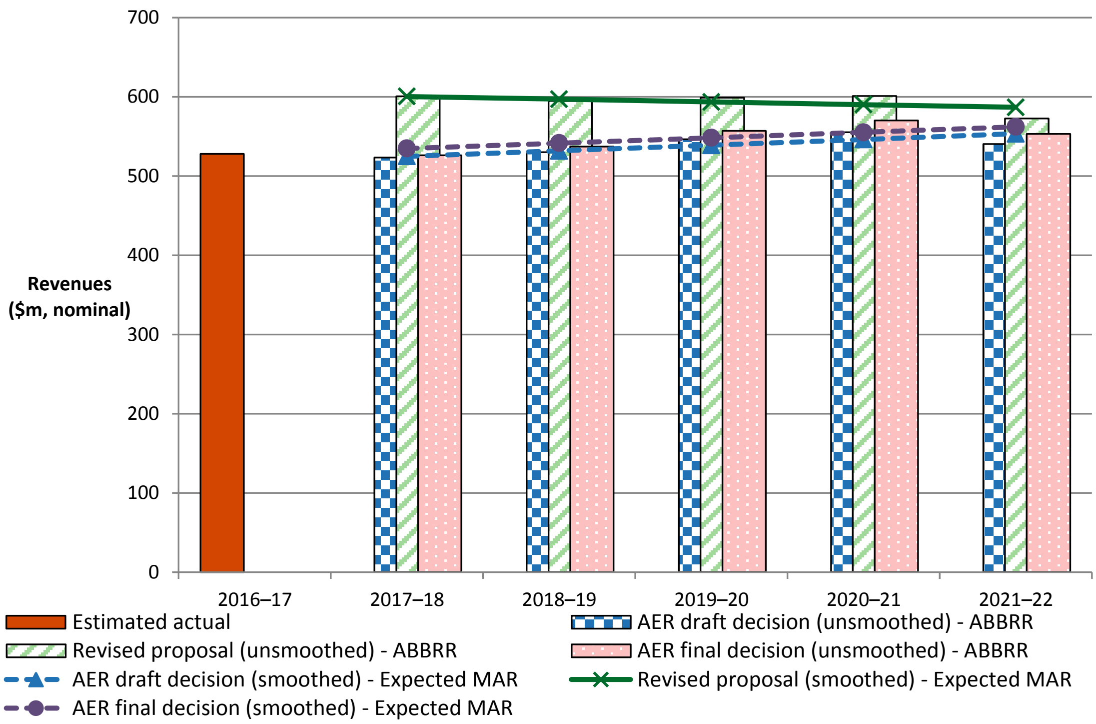
1.4.1 X factor, annual expected MAR and estimated total revenue cap

For this final decision, we determine an X factor for AusNet Services of 1.12 per cent per annum for the four years of the regulatory control period from 2018–19 to 2021–22.[3] The net present value (NPV) of the annual building block revenue requirement is $2319.1 million ($ 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 $534.8 million in 2017–18 to $562.1 million in 2021–22 ($ nominal). The resulting estimated total revenue cap for AusNet Services is $2741.7 million ($ nominal) for the 2017–22 regulatory control period.

[3] The X factors represent the rate of change in the real revenue path over the 2017–22 regulatory control period under the CPI–X framework. They must equalise (in net present value terms) the total expected MAR to be earned by the service provider with the total building block revenue requirement for that period.

Figure 1.2 shows our final 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.

Figure 1.2 AER's final 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 $534.8 million ($ nominal) which is $8.7 million higher than the annual building block revenue requirement. This results in the first year MAR being 1.3 per cent (P-naught) higher than the 2016–17 MAR in nominal terms. We then applied expected inflation of 2.40 per cent per annum and an X factor of 1.12 per cent per annum to determine the expected MAR in subsequent years.[4] 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.[5]

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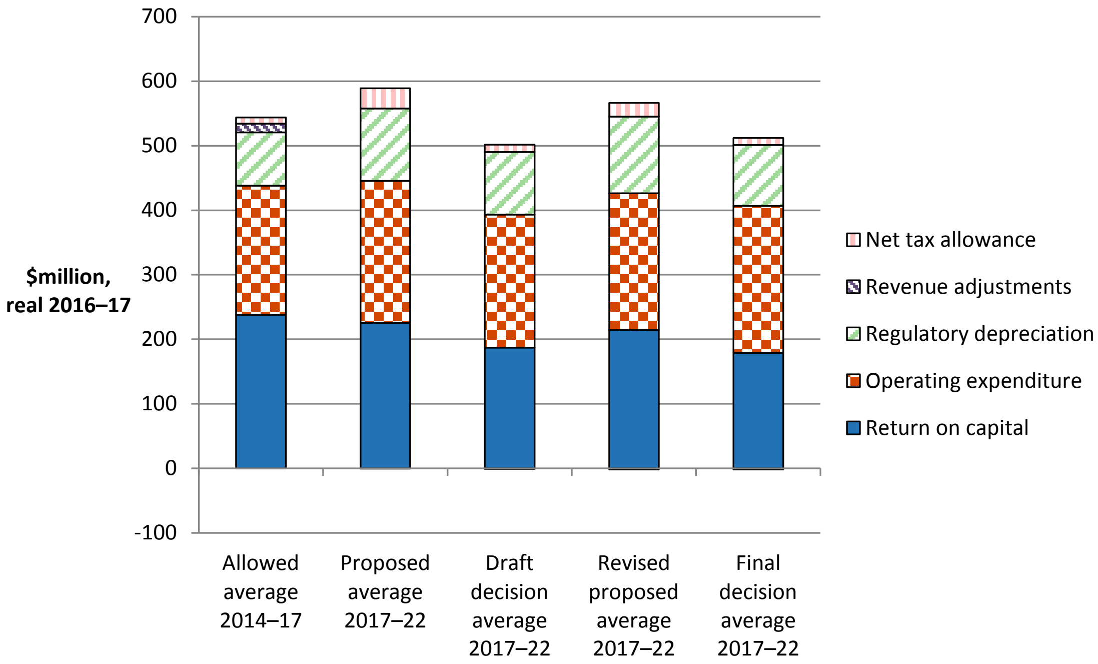
4 NER, clause 6A.5.3(c)(3).

5 NER, clause 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 1.6 per cent.

The average increase in our approved expected MAR is 1.3 per cent per annum ($ nominal) over the 2017–22 regulatory control period.[6] This change is spread evenly across each year of the regulatory control period. Our final decision results in a decrease of 6.1 per cent in real terms ($2016–17) to AusNet Services' average annual revenue relative to that in the 2014–17 regulatory control period. This decrease is primarily because of a lower rate of return in this final decision for the 2017–22 regulatory control period than were approved in the 2014–17 determination.[7]

Figure 1.3 compares our final decision building blocks for AusNet Services' 2017–22 regulatory control period with AusNet Services' revised 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 final decision building blocks compared to AusNet Services' revised proposed revenue requirement and approved revenue for 2014–17 ($ million, 2016–17)



Source: AER analysis.

6 In real 2016–17 dollar terms, the average change in our approved expected MAR for AusNet Services is –1.2 per cent per annum over the 2017–22 regulatory control period.

7 The allowed rate of return for the 2014–17 regulatory control period was 7.87 per cent, compared to 5.80 per cent in this final decision.

1.4.2 Shared assets

Our final decision is to maintain our position set out in the draft decision on the shared asset adjustments for AusNet Services.

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'.[8] Of the unregulated revenues a service provider earns from shared assets, 10 per cent will be used to reduce the service provider's prices for prescribed transmission services.[9]

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.[10]

AusNet Services submitted its shared asset unregulated revenues are forecast to be between 2.5 to 3 per cent of its revised proposed total revenues in each year of the 2017–22 regulatory control period.[11] AusNet Services therefore proposed reductions in its total revenues for each year of that period.

In the draft decision, we accepted AusNet Services' proposed shared asset revenue adjustments using an updated assessment of the materiality threshold based on the draft decision revenues.[12] AusNet Services' revised proposal adopted the shared asset revenue adjustments in our draft decision. AusNet Services submitted that its shared asset unregulated revenues will meet the shared asset threshold in each year of the 2017–22 regulatory control period. However, as noted in the draft decision, AusNet Services' forecast unregulated revenues must be compared to the regulated revenues we determine, rather than those proposed by AusNet Services. Our final decision sets lower expected MARs than AusNet Services' revised proposal, so we estimate that the unregulated revenues will be between 3.0 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 final decision, we therefore apply a shared asset revenue adjustment as shown in Table 1.3, consistent with the revised proposal from AusNet Services. The shared asset revenue adjustment is a total reduction of $8.1 million ($ 2016–17) across the 2017–22 regulatory control period.

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8 NER, cl. 6A.5.5.

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

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

11 AusNet Services, *Revised Revenue proposal*, p. 21

12 AER, *Draft decision AusNet Services transmission determination - Attachment 1 - Maximum allowed revenue*, July 2016, pp. 17–18.

Table 1.3 AER's final decision on AusNet Services' shared asset revenue adjustment ($million, 2016–17)

	2017–18	2018–19	2019–20	2020–21	2021–22	Total
AusNet Services revised proposed shared asset revenue adjustment	–1.5	–1.6	–1.6	–1.7	–1.7	–8.1
AER final decision shared asset revenue adjustment	–1.5	–1.6	–1.6	–1.7	–1.7	–8.1

Source: AusNet Services, *Revised revenue proposal*, p. 21.

1.4.3 Indicative transmission charges and impact on electricity bills

Our final 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 the impact on bills.

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 final decision on forecast average transmission charges in Victoria by:

- taking AusNet Services' annual expected MAR determined in this final decision,[13] and
- dividing it by the forecast annual energy delivered in Victoria.[14]

Based on this approach, we estimate that this final decision will result in a small increase in annual average transmission charges from 2016–17 to 2021–22.[15] Figure 1.4 shows the indicative average transmission charges resulting from this final decision compared with the average transmission charges from 2014–15 to 2016–17 in nominal dollar terms. The average transmission charges are forecast to increase from around $12.2 per MWh in 2016–17 to $12.9 per MWh in 2021–22.

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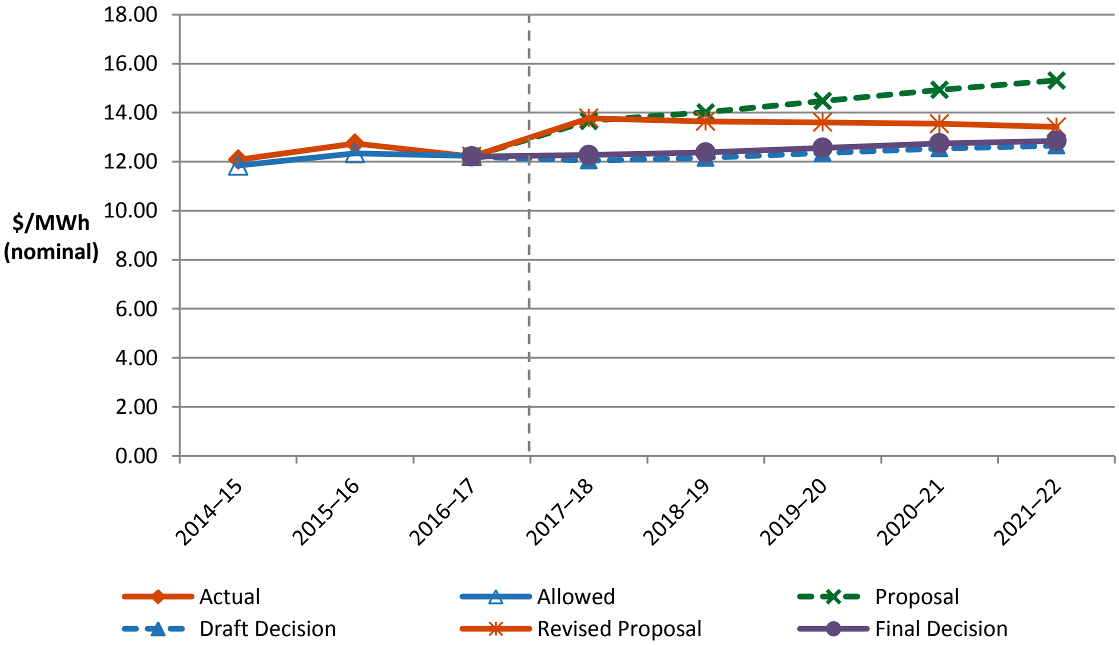
13 This excludes the Murraylink portion of MAR allocated to Victorian customers. Historically, Murraylink's MAR is about 2.5 per cent of AusNet Service's MAR. Murraylink's reset for its next regulatory control period commences from 1 July 2018

14 AEMO, *Electricity Annual Consumption Operational*, available at: http://forecasting.aemo.com.au/Electricity/-AnnualConsumption/Operational 2016 NEFR Revised Publication Neutral scenario, data revision 19 July 2016, accessed 2 December 2016

15 On average, the final decision transmission revenues will decrease by 1.3 per cent ($ nominal) per annum from 2016–17 to 2021–22. The forecast energy delivered in Victoria will increase by an average of 0.2 per cent per annum across that period. As a result, the indicative transmission charge will decrease by 1.0 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 estimate the expected bill impact by varying the transmission charges in accordance with our final decision, while holding all other components constant. This approach isolates the effect of our final decision on the core transmission charges that represent approximately 5 per cent on average of a typical customer's annual electricity bill in Victoria.[16] This small percentage largely explains the relatively modest impact this final decision is likely to have on average annual electricity bills. However, our approach does not imply that other components will remain unchanged across the regulatory control period.[17] We note that in its recent electricity price trends report for Victoria, the AEMC has indicated that wholesale costs are expected to rise following the closure of the Hazelwood power station.[18] However, as discussed below we do not expect the transmission charges flowing from this final decision will be a contributor to the overall bill changes.

Based on this approach in our final decision, we expect that the transmission component of the average annual residential electricity bills in Victoria to remain 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

16 AusNet Services, *Reset RIN – Table 7.6.1*, October 2015.

17 It also assumes that actual energy demand will equal the forecast adopted in our final decision. Since AusNet Services operates under a revenue cap, changes in demand will also affect annual electricity bills across the 2017–22 regulatory control period.

18 AEMC, *2016 Residential Electricity Price Trends: Final Report – Victoria*, December 2016, p. 3.

expected to be about $4 ($ nominal) above the 2016–17 level. This equates to a 0.3 per cent increase in the average residential customer's total bill over 5 years.

By comparison, had we accepted AusNet Services' revised proposal, the transmission component of the average annual residential electricity bill in 2021–22 would be expected to increase approximately $7 ($ nominal) above the 2016–17 level. This equates to a 0.5 per cent increase in the average residential customer's total bill over 5 years.

Our estimated potential impact is based on the typical annual electricity usage of 4000 kWh per annum for a residential customer in Victoria.[19] Customers with different usage will experience different changes in their bills. We also note that there are other factors, such as distribution network costs, wholesale and retail costs, which affect electricity bills.

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 final decision for two customer categories:

- 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 final decision will result in the transmission component of the average small business (flat) customer's annual electricity bill in 2021–22 to be about $7 ($ nominal) above the 2016–17 level. This equates to a 0.2 per cent increase in the average customer's total bill over 5 years. By comparison, had we accepted AusNet Services' revised proposal, the expected transmission component of the average annual small business (flat) electricity bill in 2021–22 would increase approximately $12 ($ nominal) above the 2016–17 level. This equates to a 0.4 per cent increase in the average customer's total bill over 5 years.

Likewise, the transmission component of the average small business (TOU) customer's annual electricity bill in 2021–22 is expected to be about $17 ($ nominal) above the 2016–17 level. This equates to a 0.2 per cent increase in the average customer's total bill over 5 years. By comparison, had we accepted AusNet Services' revised proposal, the expected transmission component of the average annual small business (TOU) electricity bill in 2021–22 would increase approximately $32 ($ nominal) above the 2016–17 level. This equates to a 0.4% per cent increase in the average customer's total bill over 5 years.

Table 1.4 shows our estimated impact of this final decision over the 2017–22 regulatory control period compared with AusNet Services' revised proposal on the average annual electricity bills for residential and small business customers in Victoria.

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19 ESCV, *Victorian Energy Market Report 2015–16*, December 2016, Part 2.3.

Table 1.4 AER's estimated impact of our final decision and AusNet Services' revised 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 final decision						
Residential annual electricity bill	1514[a]	1515	1515	1517	1518	1518
Annual change[d]		1 (0.0%)	0 (0.0%)	2 (0.1%)	1 (0.1%)	0 (0.0%)
Small business (flat) annual bill	3129[b]	3130	3131	3133	3134	3136
Annual change[d]		1 (0.0%)	1 (0.0%)	2 (0.1%)	1 (0.1%)	2 (0.0%)
Small business (TOU) annual bill	8147[c]	8148	8151	8156	8161	8164
Annual change[d]		1 (0.0%)	3 (0.0%)	5 (0.1%)	5 (0.1%)	3 (0.0%)
AusNet Services revised proposal						
Residential annual electricity bill	1514[a]	1524	1523	1523	1523	1522
Annual change[d]		10 (0.6%)	–1 (–0.1%)	–0 (–0%)	–0 (–0%)	–1 (–0.1%)
Small business (flat) annual bill	3129[b]	3145	3144	3143	3143	3141
Annual change[d]		16 (0.5%)	–1 (–0.0%)	–1 (–0.0%)	–0 (–0.0%)	–2 (–0.0%)
Small business (TOU) annual bill	8147[c]	8189	8185	8184	8182	8179
Annual change[d]		42 (0.5%)	–4 (–0.0%)	–1 (–0.0%)	–2 (–0.0%)	–3 (–0.0%)

Source: AER analysis; ESCV, *Victorian Energy Market Report 2015–16*, December 2016, Part 2.3; AEMO, *Electricity Annual Consumption Operational (Victoria)*, available at: http://forecasting.aemo.com.au/Electricity/-AnnualConsumption/Operational 2016 NEFR Revised Publication Neutral scenario, data revision 19 July 2016, accessed 2 December 2016

(a) Based on weighted average standing offers at March 2017 from SwitchOn comparison tool for DNSP service areas (postcodes: 3000, 3047, 3134, 3199, 3550) using consumption of 4000 kWh per annum.

(b) Based on weighted average of Victorian bills in ESCV, *Victorian Energy Market Report 2015–16, Part 2.3*, December 2016, converted to middle of year 2016–17 dollar terms.

(c) Based on weighted average of Victorian bills in ESCV*, Victorian Energy Market Report 2015–16, Part 2.3*, December 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 energy demand (Victoria). Actual bill impacts will vary depending on electricity consumption and tariff class.