# DRAFT DECISION
# ElectraNet transmission determination
# 2018 to 2023

# Attachment 1 – Maximum allowed revenue

October 2017

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: (03) 9290 1444
Fax: (03) 9290 1457

Email: AERInquiry@aer.gov.au

# Note

This attachment forms part of the AER's draft decision on ElectraNet's transmission determination for 2018–23. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Value of imputation credits

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 7 – Operating expenditure

Attachment 8 – Corporate income tax

Attachment 9 – Efficiency benefit sharing scheme

Attachment 10 – Capital expenditure sharing scheme

Attachment 11 – Service target performance incentive scheme

Attachment 12 – Pricing methodology

Attachment 13 – Pass through events

Attachment 14 – Negotiated services

# Contents

# Shortened forms

| Shortened form | Extended form |
|---|---|
| AARR | aggregate annual revenue requirement |
| AEMC | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| ASRR | annual service revenue requirement |
| augex | augmentation expenditure |
| capex | capital expenditure |
| CCP | Consumer Challenge Panel |
| CESS | capital expenditure sharing scheme |
| CPI | consumer price index |
| DMIA | demand management innovation allowance |
| 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 |
| 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 |

| Shortened form | Extended form |
|---|---|
| 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 ElectraNet's maximum allowed revenue (MAR) for the provision of prescribed transmission services over the 2018–23 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 ElectraNet'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 ElectraNet's 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 ElectraNet's 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 ElectraNet's annual building block revenue requirement.

We determine a total annual building block revenue requirement for ElectraNet of $1592.1 million ($ nominal) for the 2018–23 regulatory control period. This is a reduction of $143.6 million ($ nominal) or 8.3 per cent to ElectraNet's proposal and reflects the impact of our draft decisions on the various building block costs.

We determine the annual expected MAR and X factor for each regulatory year of the 2018–23 regulatory control period by smoothing of the annual building block revenue requirement. Our draft decision is to approve an estimated total revenue cap of $1588.4 million ($ nominal) for ElectraNet for the 2018–23 regulatory control period. Our approved X factor for 2019–20 to 2022–23 is 0.0 per cent per annum.[2]

Table 1.1 sets out our draft decision on ElectraNet's annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2018–23 regulatory control period.

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

2 ElectraNet is not required to apply an X factor for 2018–19 because we set the 2018–19 MAR in this decision.

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

| | 2018–19 | 2019–20 | 2020–21 | 2021–22 | 2022–23 | Total |
|---|---|---|---|---|---|---|
| Return on capital | 147.7 | 151.1 | 153.6 | 156.6 | 159.1 | 768.1 |
| Regulatory depreciation[a] | 42.5 | 63.0 | 67.7 | 70.5 | 70.8 | 314.6 |
| Operating expenditure[b] | 89.0 | 91.6 | 94.8 | 98.0 | 101.0 | 474.4 |
| Revenue adjustments[c] | –1.4 | –1.4 | –1.7 | 0.0 | 2.3 | –2.1 |
| Net tax allowance | 4.4 | 6.8 | 7.9 | 8.7 | 9.3 | 37.2 |
| Annual building block revenue requirement (unsmoothed) | 282.2 | 311.2 | 322.4 | 333.9 | 342.5 | 1592.1 |
| **Annual expected MAR (smoothed)** | **302.2** | **309.7** | **317.5** | **325.4** | **333.6** | **1588.4**[d] |
| X factor (%)[e] | n/a[f] | 0.00% | 0.00% | 0.00% | 0.00% | 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).

(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) ElectraNet is not required to apply an X factor for 2018–19 because we set the 2018–19 MAR in this decision. The MAR for 2018–19 is around 15.7 per cent lower than the approved MAR for 2017–18 in real terms, or 13.6 per cent lower in nominal terms.

## 1.2 ElectraNet's proposal

ElectraNet proposed a total (smoothed) revenue cap of $1735.7 million ($ nominal) for the 2018–23 regulatory control period.

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

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

| | 2018–19 | 2019–20 | 2020–21 | 2021–22 | 2022–23 | Total |
|---|---|---|---|---|---|---|
| Return on capital | 153.6 | 156.4 | 158.2 | 160.5 | 162.2 | 790.9 |
| Regulatory depreciation[a] | 55.3 | 75.6 | 80.2 | 83.2 | 84.5 | 378.7 |
| Operating expenditure[b] | 87.8 | 89.9 | 92.6 | 95.2 | 97.6 | 463.1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Revenue adjustments[c] | 3.7 | 3.6 | 3.5 | 5.4 | 7.6 | 23.7 |
| Net tax allowance | 11.9 | 15.1 | 16.5 | 17.5 | 18.2 | 79.3 |
| Annual building block revenue requirement (unsmoothed) | 312.3 | 340.6 | 350.9 | 361.9 | 370.0 | 1735.7 |
| **Annual expected MAR (smoothed)** | **312.3** | **329.1** | **346.7** | **365.3** | **384.9** | **1738.2**[d] |
| X factor (%) | n/a[f] | –3.33% | –3.33% | –3.33% | –3.33% | n/a |

Source: ElectraNet, *Revenue proposal, Attachment 1 Maximum Allowed Revenue*, March 2017, p. 13.

(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 network capability incentive parameter action plan (NCIPAP).

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

(e) ElectraNet is not required to apply an X factor for 2018–19 because we set the 2018–19 MAR in this decision.

## 1.3 Assessment approach

In this section, we describe the building block approach used to determine ElectraNet's expected MAR. We also set out the annual revenue adjustment to be applied to ElectraNet's MAR over the 2018–23 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 ElectraNet'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.

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

[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.

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 year of the regulatory control period. ElectraNet's 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 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 performance incentive scheme revenue adjustments and pass through amounts that may apply to each regulatory year.

In this determination for ElectraNet, we first calculate annual building block revenue requirements for each year of the 2018–23 regulatory control period. To do this we

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

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.

consider the various costs facing ElectraNet and the trade-offs and interactions between these costs, service quality and across years. This reflects the AER's holistic assessment of ElectraNet'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.[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 2018–23 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 ElectraNet with the total building block revenue requirement for the 2018–23 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] 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 ElectraNet 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)<br>Rate of return (attachment 3)<br>Capex (attachment 6) |
| Regulatory depreciation (return of capital) | Regulatory asset base (attachment 2)<br>Depreciation (attachment 5)<br>Capex (attachment 6) |
| Operating expenditure (opex) | Opex (attachment 7) |
| Efficiency benefits/penalties | Efficiency benefit sharing scheme (attachment 9) |
| Estimated cost of corporate tax | Value of imputation credits (attachment 4)<br>Corporate income tax (attachment 8) |
| Adjustment for shared assets | Maximum allowed revenue (attachment 1) |

## 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,[15] we will update ElectraNet's 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.[16] 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:

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

where:

[15] Please see appendix B of attachment 3 for details.

[16] 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 (2019–20), 3 (2020–21), 4 (2021–22), 5 (2022–23)) |
| ΔCPI | = | 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[17] |
| 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.[18] |

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)[19]
- any approved pass through amounts.[20]

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:

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17 In the transmission determination for ElectraNet's 2013–18 regulatory control period, the CPI required for the annual MAR adjustment process reflects the March quarter CPI, which is typically published by the ABS in late April each year. For this transmission determination we require ElectraNet to use the December quarter of the previous calendar year CPI for the annual MAR adjustment for its 2018–23 regulatory control period. December quarter CPI is typically released by the ABS towards the end of January of the following year. As the same set of CPI will be used for the RAB roll forward at the next reset for ElectraNet in 2023, this change will allow us to update the actual CPI for RAB roll forward purposes well before the publication date of the AER's final decision at the next reset. We note that there will be an overlapping issue of the March quarter CPI when the transition to the December quarter CPI occurs (this will be in the year 2018–19 for ElectraNet). This is because the CPI for March quarter 2018 will be reflected in both 2017–18 and 2018–19. However, we consider this is only a transitional issue and unlikely to have a material impact on the revenue to be recovered by ElectraNet.

18 Please see attachment 3 for details.

19 NER, cl. 6A.7.4.

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

| | | |
|---|---|---|
| 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 (2019–20), 3 (2020–21), 4 (2021–22), 5 (2022–23)) |
| *ct* | = | time period/calendar year (for *t* = 2 (2018), 3 (2019), 4 (2020), 5 (2021)). |

ElectraNet may also adjust the MAR for under or over-recovery amounts.[21] 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 ElectraNet

| *t* | Allowed revenue (financial year) | *ct* | Performance incentive (calendar year) |
|---|---|---|---|
| 2 | 1 July 2019– 30 June 2020 | 2 | 1 January 2018– 31 December 2018 |
| 3 | 1 July 2020– 30 June 2021 | 3 | 1 January 2019– 31 December 2019 |
| 4 | 1 July 2021– 30 June 2022 | 4 | 1 January 2020– 31 December 2020 |
| 5 | 1 July 2022– 30 June 2023 | 5 | 1 January 2021– 31 December 2021 |

Note: The performance incentive for 1 January 2017–31 December 2017 is to be applied to the AR determined for 2018–19 ($AR_1$).

## 1.3.4 Average transmission charges

We are not required to determine the transmission charges in this transmission determination for ElectraNet. Nonetheless, we provide the indicative transmission charges (and the resulting impact on annual electricity bills) that flow from the revenue

[21] NER, cll 6A.23.3(e)(5) and 6A.24.4(c).

determination as discussed in section 1.4.4. Although we assess ElectraNet's proposed pricing methodology as part of this determination, actual transmission charges established at particular connection points are not determined by us. ElectraNet establishes the transmission charges in accordance with the approved pricing methodology and the NER.[22]

## 1.4 Reasons for draft decision

We determine a total annual building block revenue requirement of $1592.1 million ($ nominal) for ElectraNet for the 2018–23 regulatory control period. This compares to ElectraNet's proposed total annual building block revenue requirement of $1735.7 million ($ nominal) for this period.

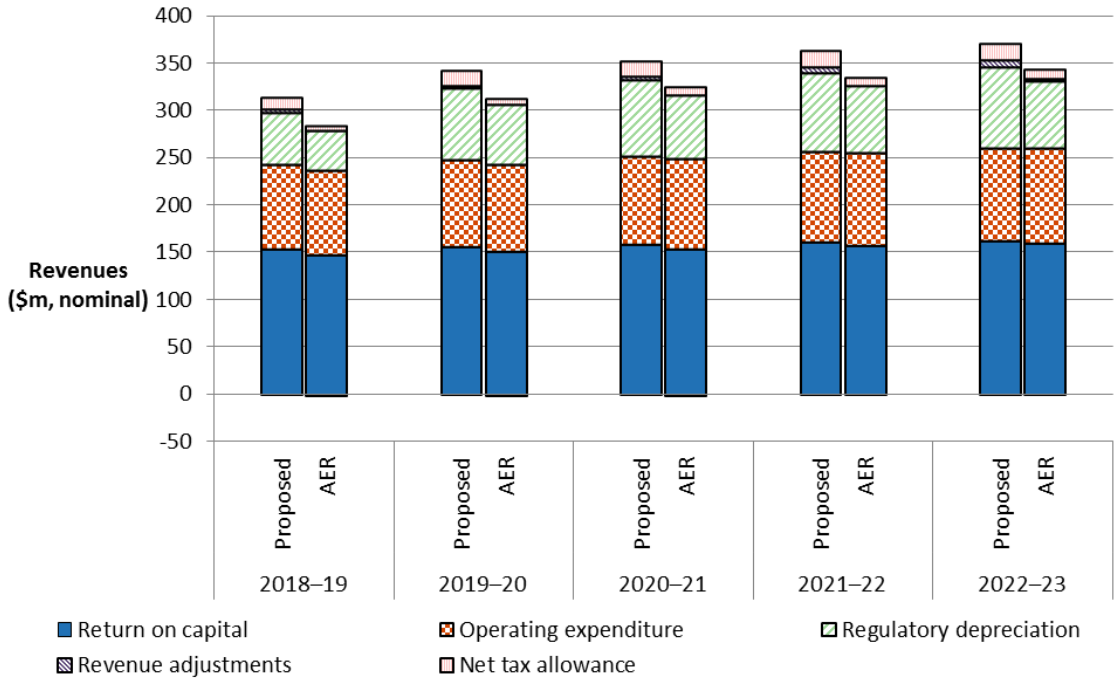
Figure 1.1 shows the building block components from our determination that make up the annual building block revenue requirement for ElectraNet, and the corresponding components from its proposal.

The most significant changes we made to ElectraNet's proposal ($ nominal) include:

- a reduction in the return on capital allowance of 2.9 per cent (attachments 2 and 3)
- a reduction in the regulatory depreciation allowance of 17.0 per cent (attachment 5)
- a reduction in the cost of corporate income tax allowance of 53.1 per cent (attachment 8)
- a reduction in the EBSS revenue increments of 12.7 per cent (attachment 9).
- removal of all forecast network capability incentive component revenue adjustment (attachment 11)

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

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




Source: AER analysis.

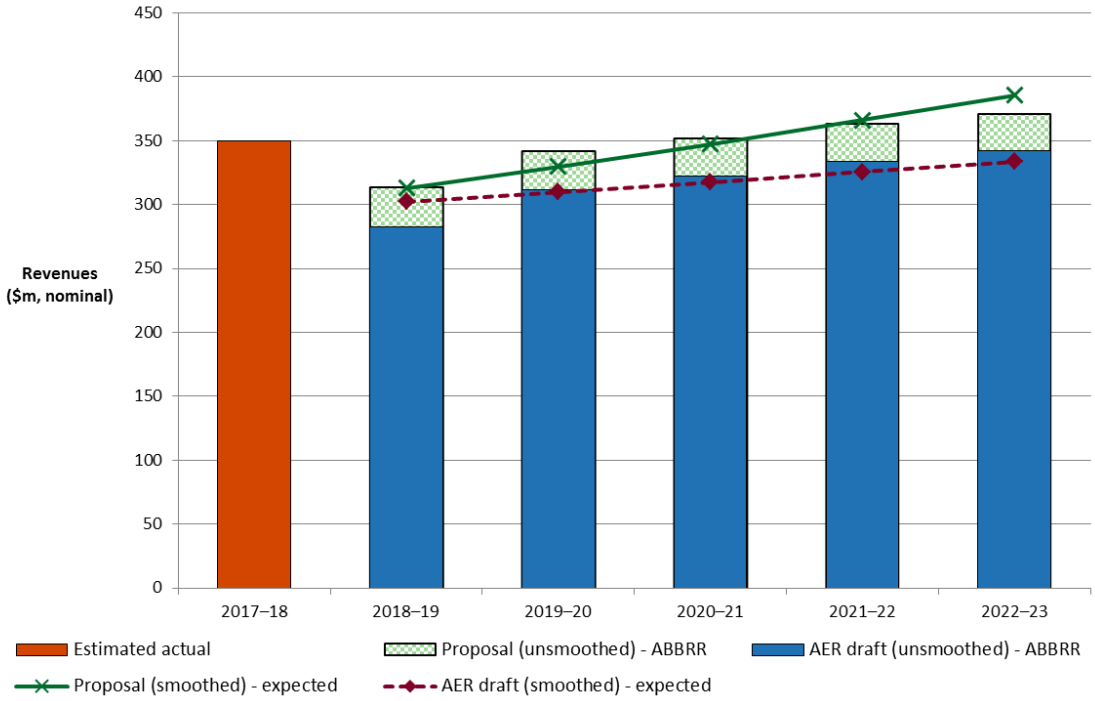
### 1.4.1 X factor, annual expected MAR and estimated total revenue cap

For this draft decision, we determine an X factor for ElectraNet of 0.0 per cent per annum for the four years of the regulatory control period from 2019–20 to 2022–23.[23] The NPV of the annual building block revenue requirement is $1343.7 million ($ nominal) as at 1 July 2018. Based on this NPV and applying the CPI–X method, we determine that the annual expected MAR (smoothed) for ElectraNet is $302.2 million in 2018–19 increasing to $333.6 million in 2022–23 ($ nominal). The resulting estimated total revenue cap for ElectraNet is $1588.4 million for the 2018–23 regulatory control period.

Figure 1.2 shows our draft decision on ElectraNet's annual expected MAR (smoothed revenue) and the annual building block revenue requirement (unsmoothed revenue) for the 2018–23 regulatory control period.

[23] ElectraNet is not required to apply an X factor for 2018–19 because we set the 2018–19 MAR in this decision.

## Figure 1.2 AER's draft decision on ElectraNet's revenue for the 2018–23 regulatory control period ($ million, nominal)




Source: AER analysis.

Note: Annual building block revenue requirement (ABBRR).

To determine the expected MAR for ElectraNet, we have set the MAR for the first regulatory year at $302.2 million ($ nominal) which is $20.0 million higher than the annual building block revenue requirement. We then apply an expected inflation rate of 2.5 per cent per annum and an X factor of 0.0 per cent per annum to determine the expected MAR in subsequent years.[24] 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.[25]

Our draft decision results in an average decrease of 0.93 per cent per annum ($ nominal) in the expected MAR over the 2018–23 regulatory control period.[26] This consists of an initial decrease of 13.6 per cent from 2017–18 to 2018–19, followed by average annual increases of 2.5 per cent during the remainder of the 2018–23

[24] NER, cl. 6A.5.3(c)(3).

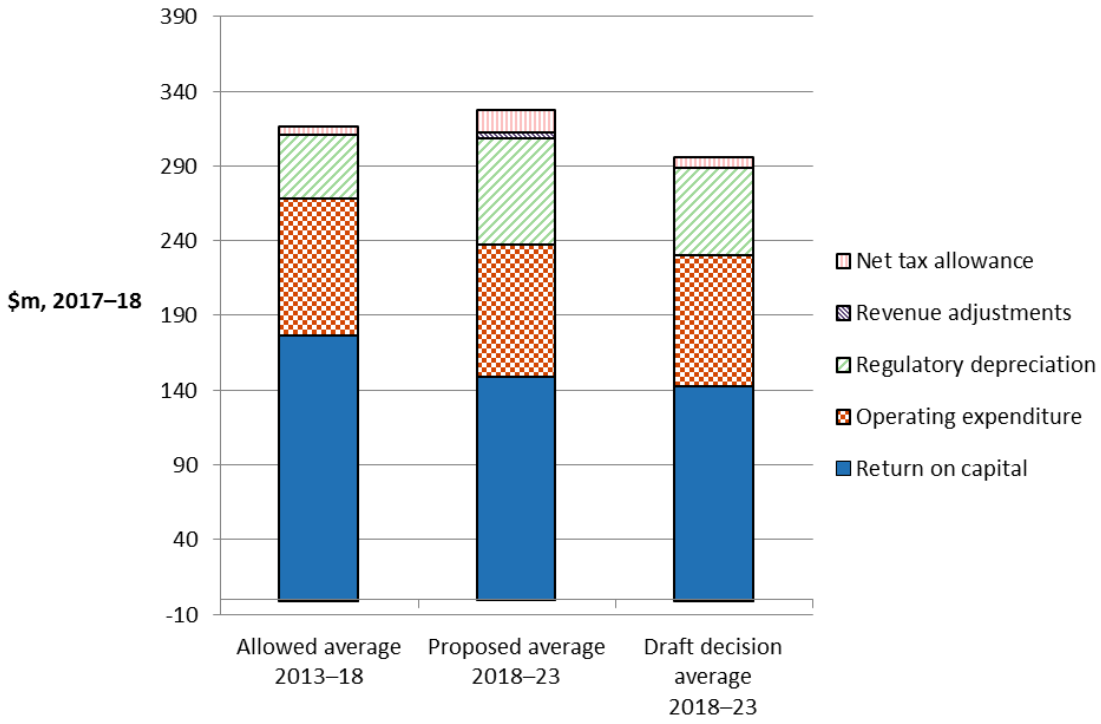
[25] NER, cl. 6A.6.8(c)(2). We consider a divergence of up to 3 per cent between the expected MAR and annual building block revenue requirement for the last year of the regulatory control period is appropriate, if this can achieve smoother price changes for users over the regulatory control period. In the present circumstances, based on the X factors we have determined for ElectraNet, this divergence is around 2.6 per cent.

[26] In real 2017–18 dollar terms, our approved expected MAR for ElectraNet results in an average decrease of 3.1 per cent per annum over the 2018–23 regulatory control period.

regulatory control period.[27] Our draft decision also results in a decrease of 6.7 per cent in real terms ($2017–18) to ElectraNet's average annual allowed revenue relative to that in the 2013–18 regulatory control period. This is primarily because we have determined a lower rate of return in this draft decision for the 2018–23 regulatory control period than that approved in the 2013–18 determination.

Figure 1.3 compares our draft decision building blocks for ElectraNet's 2018–23 regulatory control period with ElectraNet's proposed revenue requirement for the same period, and the approved revenue for the 2013–18 regulatory control period.

**Figure 1.3 Annual average revenue by building block components ($ million, 2017–18)**




Source: AER analysis.

## 1.4.2 Shared assets

Service providers, such as ElectraNet, may use assets to provide both prescribed transmission services we regulate and unregulated services. These assets are called 'shared assets'.[28] If the revenue from shared assets is material, ten per cent of the

[27] In real 2017–18 dollar terms, this consists an initial decrease of 15.7 per cent from 2017–18 to 2018–19, followed by a flat revenue profile (0.0 per cent change) during the remainder of the 2018–23 regulatory control period.

[28] NER, cl. 6A.5.5.

unregulated revenues that a service provider earns from shared assets will be used to reduce the service provider's revenue for prescribed transmission services.[29]

The shared asset principles establish that use of share assets should be material before cost reductions are applied.[30] The NER does 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 1 per cent of its MAR for that regulatory year.[31]

ElectraNet submitted its shared asset unregulated revenues are forecast to be around 0.2 per cent of its proposed total revenues in each year of the 2018–23 regulatory control period.[32] ElectraNet therefore proposed no reduction in its total revenues for each year of that period.

We consider ElectraNet's forecast unregulated revenues are reasonable, based on its reporting of historical shared assets revenue and our assessment of this revenue source for other service providers.[33] However, ElectraNet's forecast unregulated revenues must be compared to the regulated revenues we determine, rather than those proposed by ElectraNet. Our draft decision sets lower expected MARs than ElectraNet's proposal, as such we estimate that the unregulated revenues will remain around 0.2 per cent of its expected MARs in each year of the 2018–23 regulatory control period. This is because the reductions in the expected MARs in our draft decision from those in ElectraNet's proposal do not have a material impact on the comparison. Therefore, the materiality threshold is not met in any year of the 2018–23 regulatory control period and we do not apply a shared asset revenue adjustment.

We note unregulated revenues from shared assets may in future become material. We will monitor ElectraNet's shared asset unregulated revenues for future regulatory control periods. We will also reassess the materiality of the forecast shared asset unregulated revenues at the final decision stage to reflect our final decision revenue determination.

### 1.4.3 Network capability incentive component revenue adjustment

ElectraNet proposed to include the network capability incentive parameter action plan (NCIPAP) forecast payments of $24.1 million ($ 2017–18) as part of the building block revenue adjustment in the PTRM. We do not accept ElectraNet's proposal because such treatment means it would recover the cost of NCIPAP on an *ex ante* basis in the

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

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

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

32 ElectraNet, *Revenue proposal*, March 2017, p.110.

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

building block revenue determination over the 2018–23 regulatory control period. Under the service target performance incentive scheme, NCIPAP incentive payments for an approved plan are subject to annual approval by us and true-up at the end of the regulatory control period. As such, it becomes part of the approved MAR at the time of the annual revenue adjustment process as set out in section 1.3.3. It is therefore not appropriate to recognise the forecast incentive payments for projects that have not occurred or approved in the PTRM.[34] For this reason, our draft decision is to remove from the PTRM the proposed NCIPAP forecast payments for the 2018–23 regulatory control period.

### 1.4.4 Indicative transmission charges and impact on electricity bills

ElectraNet is the main transmission network service provider for South Australia. Therefore, our draft decision on ElectraNet's expected MAR will ultimately affect the annual electricity bills paid by customers in South Australia. Other than ElectraNet, Murraylink also operates a transmission network linking Red Cliffs in Victoria and Berri in South Australia which makes up a small component of the broader transmission networks that serves South Australia and Victoria.[35] The South Australian portion of Murraylink's annual expected MAR is 45 per cent.[36] We are currently assessing Murraylink's revenue proposal for the 2018–23 regulatory control period, which coincides with ElectraNet's period. For this reason, in this attachment we provide an estimate of the combined effect of the draft decisions for the ElectraNet and Murraylink transmission determinations on forecast average transmission charges in South Australia over the 2018–23 regulatory control period.

There are several steps required to translate our revenue decisions into indicative transmission charges, and then to estimate bill impact. Since we regulate ElectraNet's and Murraylink's 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 South Australia by:

- taking the sum of ElectraNet's annual expected MAR determined in this draft decision and Murraylink's annual expected MAR apportioned to South Australia, and

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34 Please see section 11.6 in attachment 11 of this draft decision for further details.

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

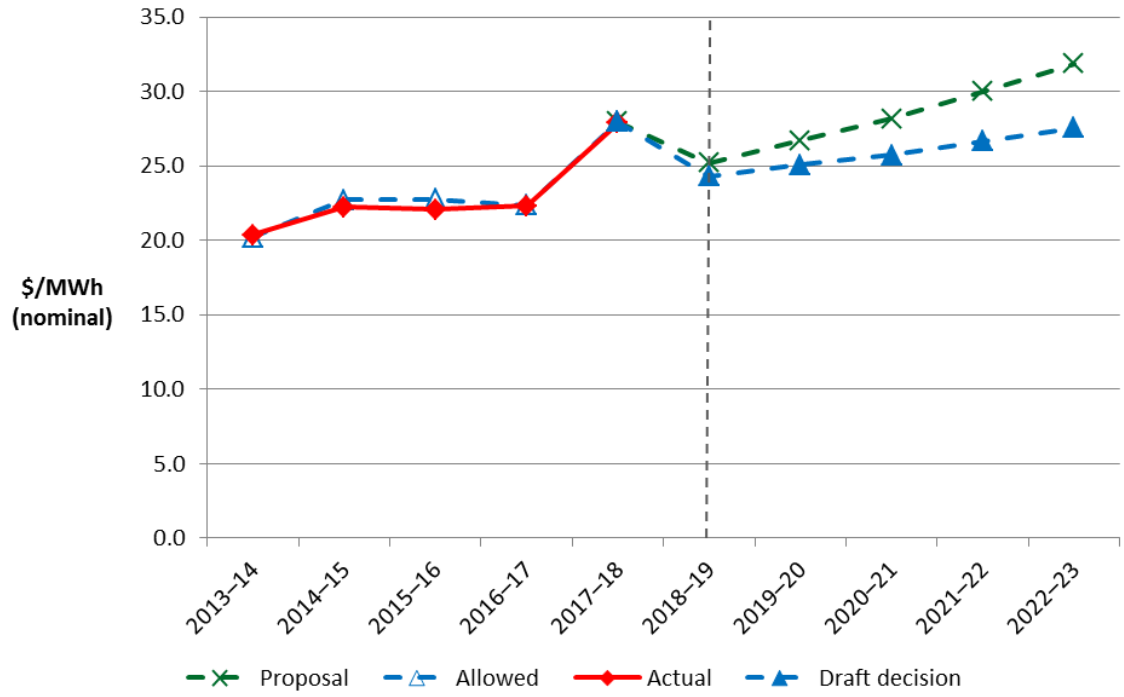
36 ElectraNet, as coordinating network service provider for South Australia, takes the portion of Murraylink's expected MAR for developing the applicable transmission charges to apply to customers; Murraylink, *Revenue proposal 2018–23—Attachment 12.1—Pricing Methodology*, January 2017, pp. 5 and 6. Based on Murraylink's current pricing methodology, 45 per cent of its regulated revenue will be recovered through transmission charges from South Australian customers; Murraylink, *Pricing methodology Effective July 2013 to June 2023*, May 2012, p. 3.

- dividing it by the forecast annual energy delivered in South Australia published by AEMO.[37]

Based on this approach, we estimate that our draft decisions will result in a decrease in annual average transmission charges from 2017–18 to 2022–23.[38]

Figure 1.4 shows the indicative average transmission charges over the period 2013–14 to 2022–23 in nominal dollar terms. The average transmission charges are forecast to decrease from around $27.9 per MWh in 2017–18 to $27.5 per MWh in 2022–23.

## Figure 1.4 Indicative transmission price path for South Australia ($/MWh, nominal)




Source: AER analysis.

We then calculate the expected bill impact by varying the transmission charges in accordance with our draft decision, while holding all other components constant. This approach isolates the effect of our draft decision on the core transmission charges that represent approximately 7.0 per cent on average of a typical residential customer's

[37] AEMO, *National Electricity and Gas forecasting - 2017 Electricity Forecasting Insights*, http://forecasting.aemo.com.au/Electricity/AnnualConsumption/Operational, accessed 25 August 2017.

[38] On average, the draft decision transmission revenues will decrease by 0.7 per cent ($ nominal) per annum from 2017–18 to 2022–23. The forecast energy delivered in South Australia will increase by an average of 0.6 per cent per annum across that period. As a result, the indicative transmission charge will decrease by 0.1 per cent ($ nominal) per annum from 2017–18 to 2022–23.

annual electricity bill in South Australia.[39] This small percentage largely explains the relatively modest impact this draft decision is likely to have on average annual electricity bills.

However, our approach does not imply that components other than transmission will remain unchanged across the regulatory control period.[40] We note that in its recent electricity price trends report for South Australia, the AEMC has indicated that wholesale costs are expected to rise on average, largely driven by the closure of Hazelwood power station and variations in inter-regional electricity flows.[41]

Based on this approach in our draft decision, we expect that the transmission component of the average residential customer's annual electricity bill in 2022–23 is expected to reduce by about $2 ($ nominal) from the 2017–18 level. This equates to a 0.1 per cent decrease in the representative annual bill over 5 years. By comparison, had we accepted ElectraNet's proposal, the expected transmission component of the average annual residential electricity bill in 2022–23 would increase by approximately $24 ($ nominal) from the 2017–18 level. This equates to a 1.0 per cent increase in the representative annual bill over 5 years.

Our estimated potential impact is based on the typical annual electricity usage of 5000 kWh per annum for a residential customer in South Australia.[42] 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 a small business customer in South Australia that uses 10 MWh of electricity per annum, the transmission charges represent approximately 7.0 per cent of a typical annual electricity bill. We expect our draft decision will result in the transmission component of the average annual electricity bill for a small business customer in 2022–23 to reduce by about $5 ($ nominal) from the 2017–18 level. This equates to a 0.1 per cent decrease in the representative annual bill over 5 years. By comparison, had we accepted ElectraNet's proposal, the expected transmission component of the average annual electricity bill for this type of small business customer in 2022–23 would increase by approximately $44 ($ nominal) from the 2017–18 level. This equates to a 1.0 per cent increase in the representative annual bill over 5 years.

Table 1.5 shows our estimated impact of our draft decision and ElectraNet's proposal on the average annual electricity bills for residential and small business customers in South Australia over the 2018–23 regulatory control period.

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39 ElectraNet, *Reset RIN – Table 7.6.1*, October 2015.

40 It also assumes that actual energy delivered will equal the forecast adopted in our final decision. Since ElectraNet operates under a revenue cap, changes in energy delivered will also affect annual electricity bills across the 2018–23 regulatory control period.

41 AEMC, *Final Report: 2016 Residential Electricity Price Trends*, December 2016, pp. 150–151.

42 AEMC, *2016 Residential Electricity Price Trends*, December 2016, p. xii.

## Table 1.5 Estimated impact of ElectraNet's revenue proposal and the AER's draft decision on average annual electricity bills for the 2018–23 regulatory control period ($ nominal)

| | 2017–18 | 2018–19 | 2019–20 | 2020–21 | 2021–22 | 2022–23 |
|---|---|---|---|---|---|---|
| **AER draft decision** | | | | | | |
| Residential annual bill | 2463[a] | 2440 | 2445 | 2449 | 2455 | 2460 |
| Annual change[c] | | –22 (–0.9%) | 5 (0.2%) | 4 (0.2%) | 6 (0.2%) | 6 (0.2%) |
| Small business annual bill | 4634[b] | 4592 | 4601 | 4608 | 4619 | 4629 |
| Annual change[c] | | –42 (–0.9%) | 9 (0.2%) | 8 (0.2%) | 11 (0.2%) | 10 (0.2%) |
| **ElectraNet proposal** | | | | | | |
| Residential annual bill | 2463[a] | 2445 | 2455 | 2464 | 2475 | 2487 |
| Annual change[c] | | –17 (–0.7%) | 9 (0.4%) | 9 (0.4%) | 11 (0.5%) | 12 (0.5%) |
| Small business annual bill | 4634[b] | 4601 | 4619 | 4636 | 4657 | 4679 |
| Annual change[c] | | –33 (–0.7%) | 17 (0.4%) | 17 (0.4%) | 21 (0.5%) | 22 (0.5%) |

Source: AER analysis; AEMC, *2016 Residential electricity price trends*, December 2016, p. xxii; and ElectraNet, *Attachment 10.1 – PTRM – 20170131*.

(a) Based on standing offers at 1 July 2017 from Energy Made Easy for an average residential customer's consumption of 5000 kWh per year.

(b) Based on standing offers at 1 July 2017 from Energy Made Easy for a small business customer in South Australia consuming 10000 kWh of electricity per year;

(c) Annual change amounts and percentages are indicative. They are derived by varying the transmission component of 2017–18 bill amounts in proportion to yearly expected revenue divided by AEMO's forecast energy delivered for South Australia. Actual bill impacts will vary depending on electricity consumption and tariff class.