Draft decision

TasNetworks transmission determination

2015-16 to 2018-19

Attachment 1: Maximum allowed revenue

November 2014

AUSTRALIAN
ENERGY
REGULATOR

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Note

This attachment forms part of the AER's draft decision on the transmission determination for TasNetworks' 2015–19 regulatory control period. It should be read in conjunction 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

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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
AASB	Australian Accounting Standards Board
ABS	Australian Bureau of Statistics
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARPC	Australian Reinsurance Pool Corporation
ASRR	aggregate service revenue requirement
AR	allowed revenue
ASX	Australian Stock Exchange
ATO	Australian Tax Office
augex	augmentation expenditure
Benchmarking report	AER, *Electricity transmission network service providers annual benchmarking report*, November 2014
capex	capital expenditure
capex incentive guideline	AER, *Capital Expenditure Incentive Guideline for Electricity Network Service Providers*, November 2013
CCP	Consumer Challenge Panel
CEG	Competition Economics Group
CESS	capital expenditure sharing scheme
CPI	consumer price index
DAE	Deloitte Access Economic
DRP	debt risk premium

Shortened form	Extended form
EBA	enterprise bargaining agreement
EBSS	efficiency benefit sharing scheme
EGWWS	electricity, gas, water and waste services
EMCa	Energy Market Consulting associates
EMRF	Energy Market Reform Forum
ERA	Economic Regulation Authority of Western Australia
ERP	equity risk premium
EUAA	Energy Users Association of Australia
Guideline	AER, *Expenditure forecast assessment guideline for electricity transmission*, November 2013
ICT	information and communications technology
JGN	Jemena Gas Networks
LME	London Metals Exchange
MAR	maximum allowed revenue
MEU	Major Energy Users
MJA	Marsden Jacob Associates
MRP	market risk premium
MTFP	multilateral total factor productivity
MW	megawatts
NEFR	national electricity forecasting report
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective

Shortened form	Extended form

Shortened form	Extended form
NER	national electricity rules
NERA	NERA Economic Consulting
NPV	net present value
NSP	network service provider
NTNDP	National Transmission Network Development Plan
NTSC	negotiated transmission service criteria
NSW	New South Wales
opex	operating expenditure
OTTER	Office of the Tasmanian Economic Regulator
PFP	partial factor productivity
POE	probability of exceedance
PPI	partial performance indicators
PPI	producer price index
PTRM	post-tax revenue model
QCA	Queensland Competition Authority
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
SFG	SFG Consulting
SLCAPM	Sharpe-Lintner capital asset pricing model

Shortened form	Extended form
STPIS	service target performance incentive scheme
TAB	tax asset base
TFP	total factor productivity
TNSP	transmission network service provider
TSBC	Tasmanian Small Business Council
TUoS	transmission use of system
version one of the EBSS	AER, *Electricity transmission network service providers: Efficiency benefit sharing scheme*, September 2007
version two of the EBSS	AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013
WACC	weighted average cost of capital
WPI	wage price index

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 TasNetworks' 2014–19 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 TasNetworks' 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 TasNetworks' 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 TasNetworks' annual building block revenue requirement.

We determine a total annual building block revenue requirement for TasNetworks of $920.4 million ($ nominal) for the 2014–19 period. This is a reduction of $52.5 million ($ nominal) or 5.4 per cent to TasNetworks' proposal and reflects the impact of our draft decisions on the various building block costs.

To account for TasNetworks' revenue target ($186.9 million) for 2014–15 which is lower than the amount we approved in our transitional determination, we have calculated the difference to be adjusted between the targeted revenue and our notional annual building block revenue requirement ($177.2 million) for 2014–15. Our draft decision is that this adjustment amounts to $9.7 million. We have applied this adjustment as part of the smoothing process to establish the annual expected MAR for the 2015–19 regulatory control period.

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 2015–19 regulatory control period is set out in Table 1-1. Our draft decision is to approve an estimated total revenue cap of $731.2 million ($ nominal) for TasNetworks for the 2015–19 regulatory control period. [2] Our approved X factor is 2.0 per cent per annum for 2016–17 to 2018–19.

Table 1-1 sets out our draft decision on TasNetworks' annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2014–19 period.

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[1]   NER, clauses 6A.4.2(a)(1)–(3), 6A.5.3(c) and 6A.6.8.
[2]   Our smoothing involves a 'true-up' for the 2014–15 (transitional regulatory control period) placeholder revenue as required under clauses 11.58.4(i) and (j) of the NER.

Table 1-1   **AER's draft decision on TasNetworks' annual building block revenue requirement, annual expected MAR, estimated total revenue cap and X factor ($ million, nominal)**

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	97.2	99.6	102.9	105.2	106.9	511.8
Regulatory depreciation[a]	17.9	21.4	24.6	24.9	26.1	115.0
Operating expenditure	45.1	45.6	47.0	48.4	49.1	235.2
Efficiency benefit sharing scheme (carryover amounts)	12.5	8.8	7.3	4.5	0.0	33.1
Net tax allowance	4.5	4.8	5.2	5.2	5.6	25.3
Annual building block revenue requirement (unsmoothed)	177.2	180.2	186.9	188.2	187.8	920.4
Annual expected MAR (smoothed)	**186.9**	**181.6**	**182.4**	**183.2**	**184.0**	**918.1**[b]
X factor (%)	n/a[c]	n/a[d]	2.0%[e]	2.0%[e]	2.0%[e]	n/a

Source: AER analysis.
(a)   Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
(b)   The estimated total revenue cap is equal to the total annual expected MAR.
(c)   TasNetworks is not required to apply an X factor for 2014–15 because we set the 2014–15 MAR in this decision. We have set the 2014–15 MAR equal to TasNetworks' targeted revenue ($186.9 million) for 2014–15. We note that TasNetworks applied a lower revenue than the placeholder MAR of $205.1 million for 2014–15 pricing purposes. The MAR for 2014–15 ($186.9 million) is around 26.4 per cent lower than the approved MAR ($247.9 million) in the final year of the 2009–14 regulatory control period (2013–14) in real terms, or 24.6 per cent lower in nominal terms.
(d)   TasNetworks is not required to apply an X factor for 2015–16 because we set the 2015–16 MAR in this decision. The MAR for 2015–16 is around 5.2 per cent lower than the approved MAR for 2014–15 in real terms, or 2.9 per cent lower in nominal terms.
(e)   The X factor will be revised to reflect the annual return on debt update.

1.2   TasNetworks' proposal

TasNetworks proposed a total (smoothed) revenue cap of $973.0 million ($ nominal) for the 2014–19 period.

Table 1-2 sets out TasNetworks' proposed annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap.

Table 1-2   TasNetworks' proposed annual building block revenue requirement, annual expected MAR, estimated total revenue cap and X factor ($ million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	107.1	109.8	113.6	116.8	119.6	567.0
Regulatory depreciation[a]	17.6	21.1	24.2	24.6	25.6	113.1
Operating expenditure	45.1	45.6	47.0	48.5	49.1	235.4
Efficiency benefit sharing scheme (carryover amounts)	11.7	10.1	6.9	5.5	0.0	34.1
Net tax allowance	4.1	4.4	4.8	4.8	5.2	23.3
Annual building block revenue requirement (unsmoothed)	185.6	191.1	196.4	200.2	199.5	972.9
Annual expected MAR (smoothed)	**186.9**	**190.7**	**194.5**	**198.4**	**202.4**	**973.0**[b]
X factor (%)	n/a	0.50	0.50	0.50	0.50	n/a

Source: Transend, *Post tax revenue model*, May 2014.
(a)   Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
(b)   The estimated total revenue cap is equal to the total annual expected MAR.

1.3   AER's assessment 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, including:

▪ the indexation of the regulatory asset base (RAB)

▪ the return on capital, which is a function of the rate of return and the opening RAB (including the addition of capital expenditure)

▪ the return of capital (depreciation), which is based on the straight-line method to calculating depreciation of the RAB

▪ the estimated cost of corporate income tax

▪ other amounts associated with any relevant schemes carried over from a previous regulatory control period

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3   NER, clauses 6A.5.1 and 6A.5.3.
4   NER, clauses 6A.5.3(c)(1) and (4).
5   NER, clause 6A.5.4.

- operating expenditure.[6]

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

The process for determining TasNetworks' total revenue cap for the 2014–19 period is affected by the transitional rules that apply to this determination. We previously approved an amount of $205.1 million as the placeholder revenue for 2014–15 for TasNetworks,[11] until a full assessment of costs for the 2014–15 year could be carried out in the current determination. TasNetworks subsequently applied a lower revenue target of $186.9 million for 2014–15 pricing purposes.

In this determination we first calculate annual building block revenue requirements for each year of the 2014–19 period, including the 2014–15 transitional year. To do this we consider the various costs

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[6] NER, clause 6A.5.4(a).
[7] NER, clause 6A.5.
[8] NER, clauses 6A.5.3 and 6A.6.8.
[9] NER, clause 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.
[11] See NER clause 11.58.4 and TasNetworks' placeholder determination for the transitional regulatory control period 2014–15.

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.[12] 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.

The difference between the annual building block revenue requirement we determine for 2014–15 and TasNetworks' targeted revenue gives rise to the required true-up adjustment amount under the transitional rules.[13] The true-up adjustment amount is applied as part of smoothing the annual building block revenue requirements to establish the annual expected MAR for each year of the 2015–19 regulatory control period.

Having determined the total annual building block revenue requirement for the 2014–19 period, the annual building block revenue requirements for each regulatory year are smoothed across the 2015–19 regulatory control period to reduce revenue variations between years and to come up with the expected MAR for each year.[14] This is done through the determination of the X factors and the application of our true-up adjustment.[15] The X factor must equalise (in net present value terms) the total revenue cap to be earned by the TNSP with the total building block revenue requirement for the 2014–19 period.[16] The X factor must usually 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.[17]

For this draft decision, the expected MAR in the last year of the regulatory control period are not required to be as close as reasonably possible to the annual building block revenue requirement for that year, due to the transitional provisions.[18] However, where practical we have sought to maintain this principle to avoid potential revenue shocks at the next reset. 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.

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12   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.
13   NER, clause 11.58.4(i)-(k).
14   For the purposes of operating the PTRM, TasNetworks' targeted revenue is set as the smoothed expected revenue for 2014–15.
15   NER, clause 6A.6.8(a).
16   NER, clause 6A.6.8(c)(1).
17   NER, clause 6A.6.8(c)(2).
18   NER, clause 11.58.4(c).

1.3.1 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)

1.3.2 Placeholder revenue true-up for 2014–15

The five regulatory years from 2014–19 are split over two regulatory control periods due to the transitional rules.[19] There is a 'transitional regulatory control period' for 2014–15, and a 'subsequent regulatory control period' for 2015–19. We are required to make both a decision on the transitional placeholder revenue for 2014–15 and then a decision on the revenues for the full 2014–19 period.

In March 2014, as required under the transitional rules, we conducted a high level review of TasNetworks' proposed revenue requirement for its transitional regulatory control period (2014–15). We determined a placeholder revenue allowance of $205.1 million ($ nominal) for TasNetworks in the transitional determination.[20]

In this draft decision, we make a full revenue determination for the 2014–19 period. The NER requires us to use an NPV neutral true-up mechanism to account for any difference between:

▪ the placeholder revenue for the transitional regulatory control period, and

▪ the revenue requirement for the transitional regulatory control period that is established through the full determination process.[21]

However, TasNetworks has set a 2014–15 revenue target for pricing purposes of $186.9 million which is about $18.2 million less than the placeholder revenue we determined.[22] To give effect to the true-up

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[19]   NER, clause 11.58.3-4.
[20]   AER, *TransGrid Transend, Transitional transmission determination 2014–15*, March 2014, p. 17.
[21]   NER, clause 11.58.4(i) to (k).

requirement of the NER, we have set TasNetworks' first year MAR in the PTRM equal to its targeted revenue for 2014–15 pricing purposes of $186.9 million.[23] We then estimate the expected MAR for each remaining year of the regulatory control period (2015–16 to 2018–19) by escalating the previous year's expected MAR using the CPI–X method, starting from the MAR for 2014–15. This has the effect of calculating the difference between the targeted revenue ($186.9 million) and the notional MAR, i.e. equal to the annual building block revenue requirement, for 2014–15 ($177.2 million) established in this draft decision and smoothing the expected MAR for the remaining four regulatory years to account for that difference. In this case, the difference of $9.7 million is the true-up amount to be returned to customers over the 2015–19 regulatory control period (adjusted for the time value of money).[24] We set the annual X factor (the smoothing factor) so that the NPVs of the annual building block revenue requirement (unsmoothed revenue) and the annual expected MAR (smoothed revenue) are equal.

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 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.

For this decision, we set:

$$AR_1 = \$186.9 \text{ million}$$

where:

$$AR_1 = \text{the allowed revenue for year 1 of TasNetworks' 2014–19 period.}$$

Applying the true-up to account for the above placeholder revenue determined for 2014–15 and the notional MAR for 2014–15 of $177.2 million, we set:

$$AR_2 = \$181.6 \text{ million}$$

where:

$$AR_2 = \text{the allowed revenue for year 2 of TasNetworks' 2014–19 period.}$$

1.3.3 Annual revenue adjustment process

The PTRM incorporates a forecast 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, we will update TasNetworks' return on debt annually. This means the actual MAR for each year will also be adjusted for revised X factors after the annual return on debt update. This annual revenue adjustment process is set out below.

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[22]   Transend, *Revenue proposal*, May 2014, pp. 113–114.
[23]   In response to an AER information request, TasNetworks stated its understanding that the difference between the placeholder revenue and the revenue amount targeted for recovery in 2014–15 ($18.2 million) would not be recovered in the future in order to give effect to the true-up outcome under the NER. TasNetworks *AER – Transend – Revenue 01 – revenue true up for 2014–15*, 21 August 2014.
[24]   The actual over or under-recovery of revenue depends on actual demand. However, for the purposes of operating the PTRM we must assume the placeholder revenue for 2014–15 was actually achieved. Because this amount is higher than our draft decision notional MAR, an over-recovery is expected before accounting for actual demand.

The MAR for the subsequent year of the regulatory control period requires an annual adjustment based on the previous year's AR.[25] That is, the subsequent year's AR is determined by adjusting the previous year's AR for actual inflation and the X factor determined after the annual return on debt update:

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

where:

AR	=	the allowed revenue
t	=	time period/financial year (for t = 3 (2016–17), 4 (2017–18), 5 (2018–19))
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 $t-1$[26]
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 AR:

- the service target performance incentive scheme revenue increment (or revenue decrement)[27]

- any approved pass through amounts.[28]

Table 1-4 sets out the timing of the annual calculation of the AR and performance incentive:

$$MAR_t \quad = \quad \text{(allowed revenue)} + \text{(performance incentive)} + \text{(pass through)}$$

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

where:

MAR	=	the maximum allowed revenue

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[25]   In the case of making the annual adjustment for year 3, the previous year's AR would be the same as the approved smoothed revenue for year 2 as contained in the PTRM.

[26]   In the transmission determination for TasNetworks' 2009–14 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. For this transmission determination we require TasNetworks to use the December quarter of the previous calendar year CPI for the annual MAR adjustment for its next 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 TasNetworks in 2019, 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 2014–15 for the TNSP). This is because the CPI for March quarter 2014 will be reflected in both 2013–14 and 2014–15. However, we consider this is only a transitional issue and does not have a material impact on the revenue to be recovered by the TNSP.

[27]   NER, clauses 6A.7.4.

[28]   NER, clauses 6A.7.2 and 6A.7.3.

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 (2015–16), 3 (2016–17), 4 (2017-18), 5 (2018–19))	
ct	=	time period/calendar year (for t = 2 (2014), 3 (2015), 4 (2016), 5 (2017)).	

Under the NER, a TNSP may also adjust the MAR for under or over recovery amounts.[29] 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 TasNetworks

t	Allowed revenue (financial year)	ct	Performance incentive (calendar year)
2	1 July 2015–30 June 2016	2	1 January 2014–31 December 2014
3	1 July 2016–30 June 2017	3	1 January 2015–31 December 2015
4	1 July 2017–30 June 2018	4	1 January 2016–31 December 2016
5	1 July 2018–30 June 2019	5	1 January 2017–31 December 2017

Note: The performance incentive for 1 January 2013–31 December 2013 is to be applied to the AR determined for 2014–15 (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 the revenue determination as discussed in section 1.4.3. Although we assess TasNetworks' proposed pricing methodology as part of this determination, actual transmission charges established at particular connection points are not determined by us. TasNetworks establish the transmission charges in accordance with its approved pricing methodology and the NER.[30]

1.4   Reasons for draft decision

We determine a total annual building block revenue requirement of $920.4 million ($ nominal) for TasNetworks for the 2014–19 period. This compares to TasNetworks' proposed total annual building block revenue requirement of $972.9 million ($ nominal) for this period.

[29]   NER, clauses 6A.23.3(c)(2)(iii) and 6A.24.4(c).
[30]   NER, clause 6A.24.1(d).

Figure 1-1 shows the building block components from our determination that make up the annual building block revenue requirement for TasNetworks, and the corresponding components from its proposal.

We have calculated the annual building block revenue requirement for TasNetworks based on our draft decision on each of these building block components. The revenues are affected by our changes to TasNetworks' proposed building blocks. These changes include:

- forecast operating expenditure (attachment 7)

- the rate of return (attachment 3)

- the opening RAB (attachment 2) and forecast capital expenditure (attachment 6)

- forecast regulatory depreciation (attachment 5)

- the estimated cost of corporate income tax (attachment 8).

Figure 1-1   AER's draft decision and TasNetworks' proposed annual building block revenue requirement ($ million, nominal)
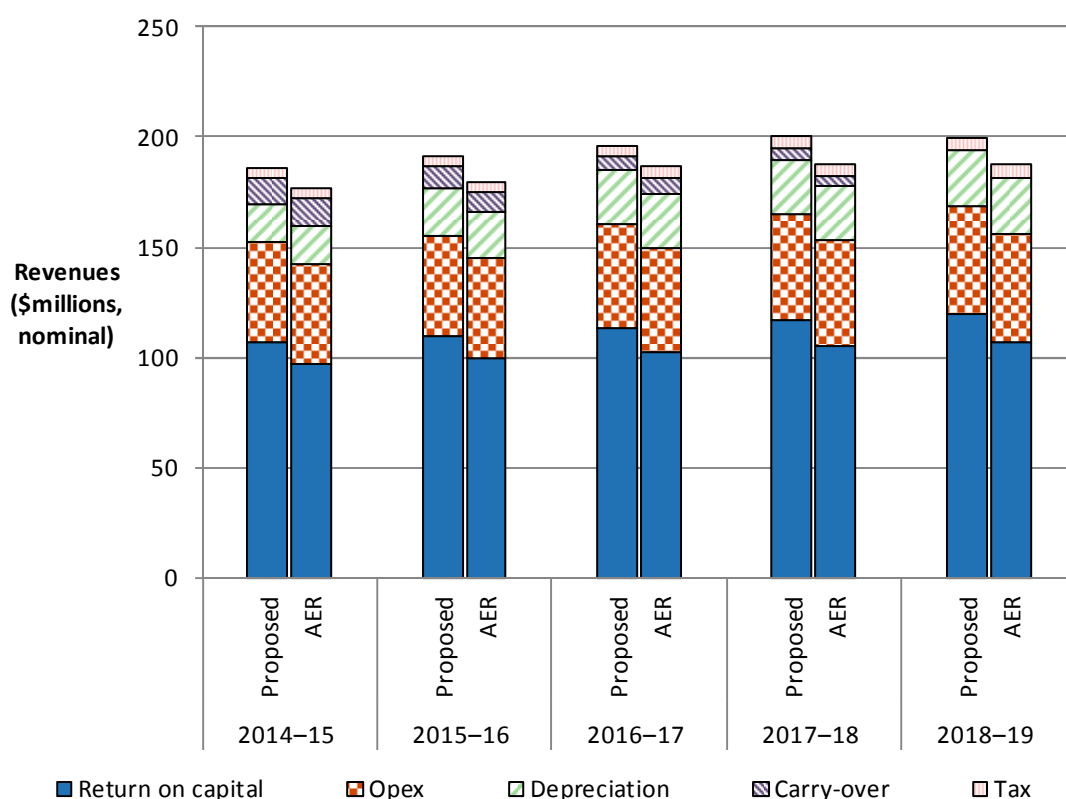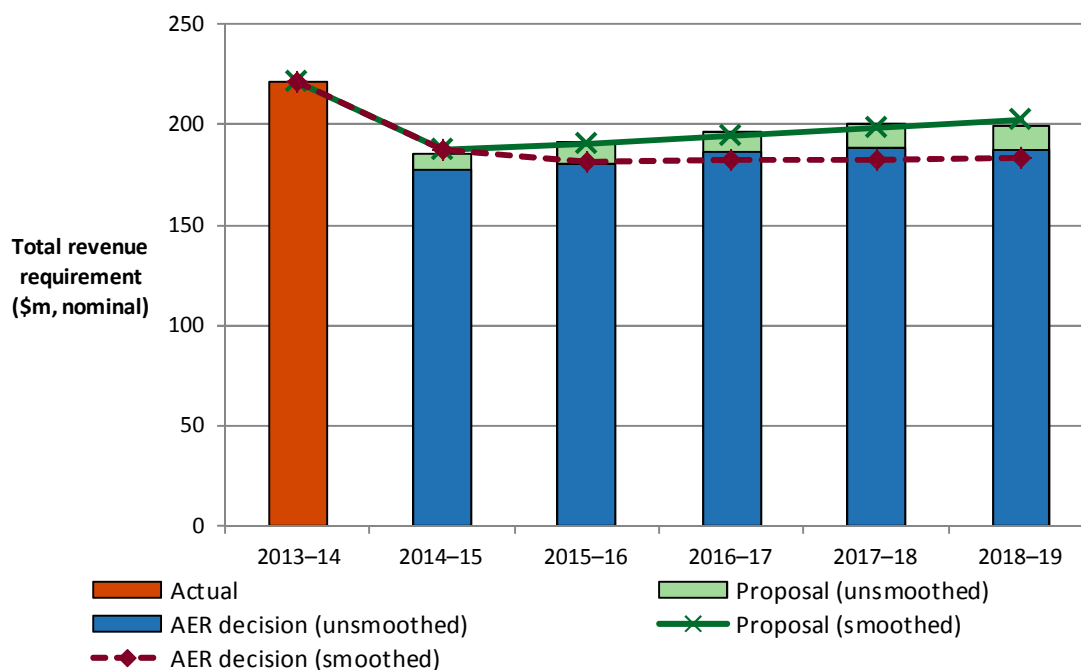

Source: AER analysis.

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

For this draft decision, we determine an X factor of 2.0 per cent per annum for the years 2016–17 to 2018–19 for TasNetworks. The NPV of the annual building block revenue requirement is $755.5 million ($ nominal) as at 1 July 2014. Based on this NPV and applying the CPI–X method (including the true-up requirement for the transitional regulatory control period), we determine that the annual expected MAR (smoothed) for TasNetworks decreases from $186.9 million in 2014–15 to

$184.0 million in 2018–19 ($ nominal). The resulting estimated total revenue cap for TasNetworks is $918.1 million for the 2014–19 period or $731.2 million ($ nominal) for the 2015–19 regulatory control period.

Figure 1-2 shows our draft decision on TasNetworks' annual expected MAR (smoothed revenue) and the annual building block revenue requirement (unsmoothed revenue) for the 2014–19 period.

Figure 1-2   AER's draft decision on TasNetworks' annual expected MAR (smoothed) and annual building block revenue requirement (unsmoothed) ($ million, nominal)

Source: AER analysis.

To determine the expected MAR for TasNetworks, we first set the MAR for the first regulatory year (2014–15) at $186.9 million ($ nominal). This is equal to the revenue being recovered by TasNetworks for 2014–15 pricing purposes, and is $9.7 million higher than the 2014–15 annual building block revenue requirement, i.e. the notional MAR for 2014–15. We then applied an X factor of 5.2 per cent for 2015–16 and 2.0 per cent per annum to determine the expected MAR in subsequent years.[31] This gives effect to the true-up requirements under the NER and ensures that the difference of $9.7 million is returned to customers over the 2015–19 subsequent regulatory control period (adjusted for the time value of money). This is achieved as part of the smoothing process to determine the appropriate X factors for the 2015–19 regulatory control period.

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.[32]

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[31]   NER, clause 6A.5.3(c)(3).
[32]   The transitional rules (clause 11.58.4(c)) do not require the expected MAR in the last year of the regulatory control period to be as close as reasonably possible to the annual building block revenue requirement for that year. However, where practical we have sought to maintain this principle to avoid potential revenue shocks at the next reset. 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 achieve smoother price changes for users over the

The average decrease in our approved expected MAR is 5.2 per cent per annum ($ nominal) over the 2014–19 period.[33] This consists an initial decrease of 24.6 per cent from 2013–14 to 2014–15, followed by another decrease of 2.9 per cent in 2015–16, and a subsequent average annual increase of 0.4 per cent during the remainder of the 2014–19 period.[34] Our draft decision results in a decrease of 21.8 per cent in real terms ($2013–14) to TasNetworks' total revenue relative to that in the 2009–14 regulatory control period. This decrease is primarily because of a lower rate of return and forecast capex applied in this draft decision for the 2014–19 period than were approved in the 2009–14 revenue cap decision.

Figure 1-3 compares our draft decision building blocks for TasNetworks' 2014–19 period with TasNetworks' proposed revenue requirement for that same period, and the approved revenue for the 2009–14 regulatory control period.

Figure 1-3 **Annual average of AER's draft decision building blocks compared to TasNetworks' proposed revenue requirement and approved revenue for 2009–14 ($ million, 2013–14)**
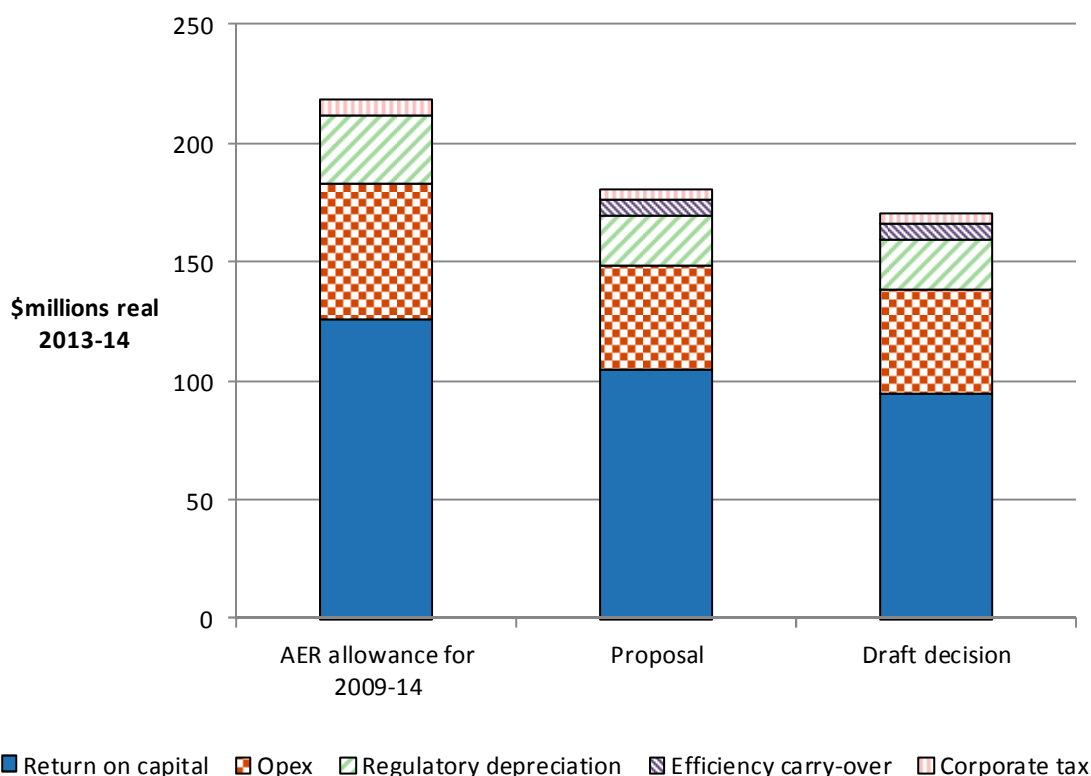
Source: AER analysis.

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regulatory control period. In the present circumstances, based on the X factors we have determined for TasNetworks, this divergence is around 2 per cent.

[33] This is based on the approved MAR of $247.9 million for 2013–14. TasNetworks' actual revenue to be recovered for 2013–14 is lower, at $221.5 million

[34] In real dollar terms, the average decrease in our approved expected MAR for TasNetworks is 7.5 per cent per annum over the 2014–19 period. This consists an initial decrease of 26.4 per cent from 2014–15 to 2015–16, followed by another decrease of 5.2 per cent in 2015–16, and a subsequent average annual decrease of 2.0 per cent during the remainder of the 2014–19 period.

1.4.2 Shared assets

Service providers, such as TasNetworks, may use assets to provide both prescribed transmission services we regulate and unregulated services. These assets are called 'shared assets'.[35] 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.[36] However, price 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 one per cent of its MAR for that regulatory year.

TasNetworks submitted that it earned shared asset unregulated revenues up to the end of the 2009–14 regulatory control period.[37] However, it further submitted that the contract under which this revenue was earned expires at the end of the 2013–14 regulatory year. TasNetworks submitted that it forecasts zero unregulated shared asset revenues in each regulatory year of the 2014–19 period.

We note that unregulated revenues from shared assets may in future become material. We will monitor TasNetworks' shared asset unregulated revenues and, if necessary, determine our own forecasts for future regulatory control periods.

1.4.3 Indicative transmission charges and impact on electricity bills

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

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

- taking TasNetworks' annual expected MAR determined in this draft decision, and

- dividing it by the forecast annual energy delivered in Tasmania.[38]

Based on this approach, we estimate that this draft decision will result in a decrease in annual average transmission charges from 2013–14 to 2018–19.[39] Figure 1-4 shows the indicative average transmission charges resulting from this draft decision compared with the average transmission charges from 2009 to 2014 in nominal dollar terms. The average transmission charges are forecast to decrease from around $21.9 per MWh in 2013–14 to $18.8 per MWh in 2018–19.

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[35]   NER, clause 6A.5.5.
[36]   AER, *Shared asset guideline*, November 2013.
[37]   TasNetworks, *Basis of Preparation Revenue reset regulatory information notice,* p. 61.
[38]   AEMO, *National electricity forecasting report for the national electricity market*, June 2014, table 12, Medium.
[39]   On average, the draft decision draft decision transmission revenues will decrease by 3.64 per cent ($ nominal) per annum from 2013–14 to 2018–19. The forecast energy delivered in Tasmania will decrease by an average of 0.67 per cent per annum across that period. As a result, the indicative transmission charge will decrease by 2.99 per cent ($ nominal) per annum from 2013–14 to 2018–19.

Figure 1-4   Indicative transmission price path from 2009–10 to 2018–19 for Tasmania ($/MWh, nominal)
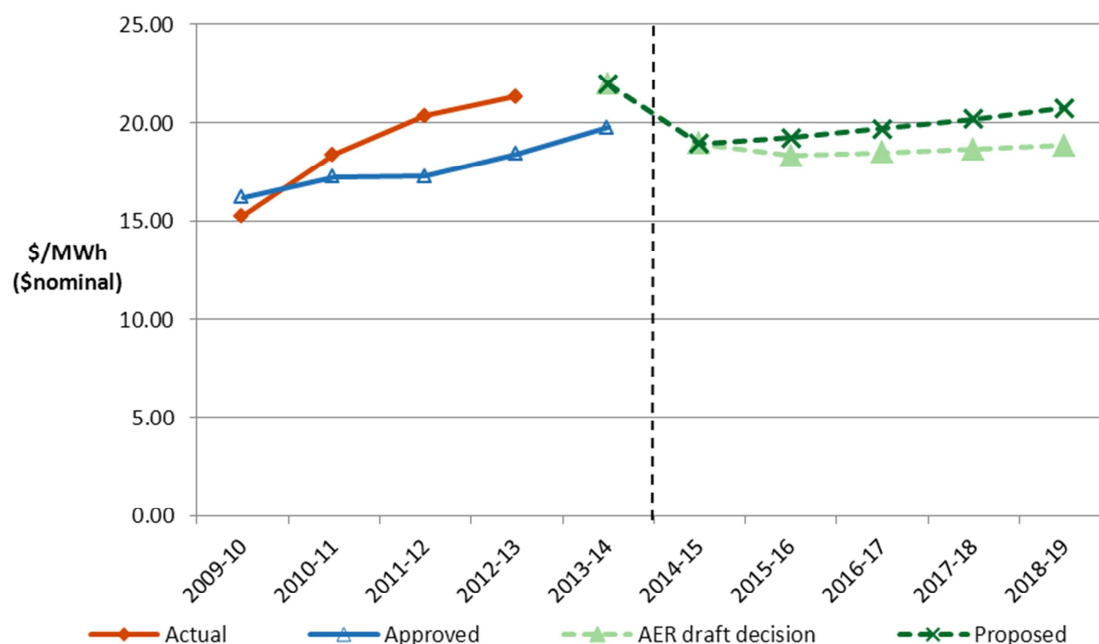
Source: AER analysis.

We then estimate the indicative impact of transmission charges on electricity bills. In Tasmania, transmission charges represent approximately 15 per cent on average of a typical customer's annual electricity bill.[40] We expect that our draft decision, other things being equal, will reduce the average residential customer's annual electricity bill in Tasmania. If the lower transmission charges from our transitional determination were passed through to end customers, the average residential customer's annual electricity bill in Tasmania could be expected to decrease by about $46 or 2.0 per cent ($ nominal) in 2014–15. If the lower transmission charges from our draft decision are passed through to customers, we would expect the average residential customer's annual electricity bill in Tasmania to decrease by a further $10 or 0.4 per cent ($ nominal) in 2015–16. This would be followed by increases of about $3 or 0.1 per cent ($ nominal) per annum from 2016–17 to 2018–19. In comparison, if TasNetworks' proposal was accepted by us, the average annual electricity bills for residential customers in Tasmania would decrease by approximately $4 or 0.2 per cent ($ nominal) per annum over the 2014–19 period.

Our estimated potential impact is based on the typical annual electricity usage of 8800 kWh per annum for a residential customer in Tasmania.[41] 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 an average small business customer in Tasmania that uses approximately 11 MWh of electricity per annum, our draft decision is expected to lead to lower average annual electricity bills.[42] We estimate that if the lower transmission charges arising from our transitional determination were

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[40]   OTTER, *Comparison of 2014 Australian standing offer energy prices*, March 2014, p. 3.
[41]   This represents the weighted average of the annual consumptions of the typical residential customers as published by OTTER. See OTTER, *Typical electricity customers 2010–information paper*, September 2010, pp. 8–10.
[42]   This represents the average of the annual consumptions of typical business customers using only tariff 22 (General) as published by OTTER. See OTTER, *Typical electricity customers 2010–information paper*, September 2010, p. 11.

passed through to end customers, the average small business customer's annual electricity bill could be expected to decrease by about $77 or 2.0 per cent ($ nominal) per annum in 2014–15. If the lower transmission charges from our draft decision are passed through to customers, we would expect the average small business customer's annual electricity bill in Tasmania to reduce by a further $16 or 0.4 per cent ($ nominal) in 2015–16. This would be followed by increases of about $4 or 0.1 per cent ($ nominal) per annum from 2016–17 to 2018–19. In comparison, if TasNetworks' proposal was accepted by us, the average annual electricity bills for small business customer in Tasmania would reduce by approximately $6 or 0.2 per cent ($ nominal) per annum over the 2014–19 period.

Table 1-5 shows our estimated impact of this draft decision over the 2014–19 period compared with TasNetworks' proposal on the average annual electricity bills for residential and small business customers in Tasmania.

Table 1-5 **AER's estimated impact of the draft decision on the average annual electricity bills for residential and small business customers in Tasmania over 2014–19 ($ nominal)**

	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
TasNetworks proposal						
Residential annual bill[a]	2256	2210	2215	2222	2229	2238
Annual change		–46 (–2.0%)	5 (0.2%)	7 (0.3%)	8 (0.3%)	8 (0.4%)
Small business annual bill[b]	3782	3705	3713	3724	3737	3751
Annual change		–77 (2.0%)	8 (0.2%)	12 (0.3%)	13 (0.3%)	14 (0.4%)
AER draft decision						
Residential annual bill[a]	2256	2210	2201	2203	2206	2208
Annual change		–46 (–2.0%)	–10 (–0.4%)	2 (0.1%)	3 (0.1%)	3 (0.1%)
Small business annual bill[b]	3782	3705	3688	3692	3696	3701
Annual change		–77 (–2.0%)	–16 (–0.4%)	4 (0.1%)	4 (0.1%)	5 (0.1%)

Source: OTTER, *2013 Aurora Pay As You Go price comparison report (APAYG rates from 27 July 2013)*, August 2013; *Comparison of 2014 Australian standing offer energy prices*, March 2014. OTTER, *Typical electricity customers 2010–information paper*, September 2010, pp. 11–12. AER, Energy Made Easy.

(a) Based on typical annual usage of 8800kWh. Our bill calculation reflects the weighted average of the typical regulated tariff customer's annual electricity bill (85 per cent) and typical Aurora PAYG tariff customer's annual electricity bill (15 per cent) as published by OTTER and the Energy Made Easy website. We also adjusted bills to reflect concession entitlements. In Tasmania, one in three regulated tariff customers will receive a concession and about 47 per cent of Aurora PAYG customers will receive a concession. See OTTER, *Comparison of 2014 Australian standing offer energy prices*, March 2014, p. 8; OTTER, *2013 Aurora Pay As You Go price comparison report (APAYG rates from 27 July 2013)*, August 2013, p. 4.

(b) Based on typical annual usage of 11 MWh and sourced from the Energy Made Easy website based on the annual consumptions of typical business customers using only tariff 22 (General) as published by OTTER.