FINAL DECISION
ActewAGL distribution determination
2015−16 to 2018−19

Attachment 1 – Annual revenue requirement

April 2015

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Note

This attachment forms part of the AER's final decision on ActewAGL's regulatory proposal 2015–19. It should be read with other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 - Annual revenue requirement

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 - Demand management incentive scheme

Attachment 13 - Classification of services

Attachment 14 - Control mechanism

Attachment 15 - Pass through events

Attachment 16 - Alternative control services

Attachment 17 - Negotiated services framework and criteria

Attachment 18 - Connection policy

Attachment 19 - Pricing methodology

Attachment 20 - Analysis of Financial Viability

Contents

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	expenditure forecast assessment Guideline for electricity distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
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

Shortened form	Extended form
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

1 Annual revenue requirement

The annual revenue requirement (ARR) is the sum of the various building block costs for each year of the regulatory control period before smoothing. The ARRs are smoothed across the period to reduce fluctuations between years and to determine expected revenues for each year. The expected revenues are the amounts that ActewAGL will target for annual pricing purposes and recover from customers for the provision of standard control services for each year of the regulatory control period. This attachment sets out our final decision on ActewAGL's ARRs for the 2014–19 period and expected revenues for the 2015–19 regulatory control period. We consider these two periods to account for the 2014–15 transitional year that was set out in the transitional rules.

1.1 Final decision

We do not accept ActewAGL's revised proposed total revenue requirements[1] of $848.9 million for its distribution network and $186.4 million ($ nominal) for its transmission network over the 2014–19 period. This is because we have not accepted the building block costs that ActewAGL proposed in its revised proposal.

We determine total revenue requirements for the 2014–19 period, reflecting our final decision on the various building block costs, to be:

- $641.6 million ($ nominal) for ActewAGL's distribution network. This is a reduction of $207.4 million ($ nominal) or 24.4 per cent to ActewAGL's revised proposal.
- $129.3 million ($ nominal) for ActewAGL's transmission network. This is a reduction of $57.0 million or 30.6 per cent to ActewAGL's revised proposal.

We approved in our transitional determination placeholder revenues for 2014–15 of $145.2 million for ActewAGL's distribution network and $28.1 million for its transmission network.[2] Under the transitional rules, we are required to determine the ARRs for 2014–15 as part of this full determination process and do a true-up for the differences between the placeholder revenues and ARRs. We have now determined ARRs for 2014–15 of $117.2 million and $22.9 million respectively for ActewAGL's distribution and transmission networks. The differences are therefore $28.0 million and $5.2 million ($nominal) respectively. We have applied these differences as part of the smoothing process to establish the annual expected revenue for the 2015–19 regulatory control period.

As a result of our smoothing of the ARRs, our final decision on the annual expected revenue and X factor (distribution and transmission networks) for each regulatory year

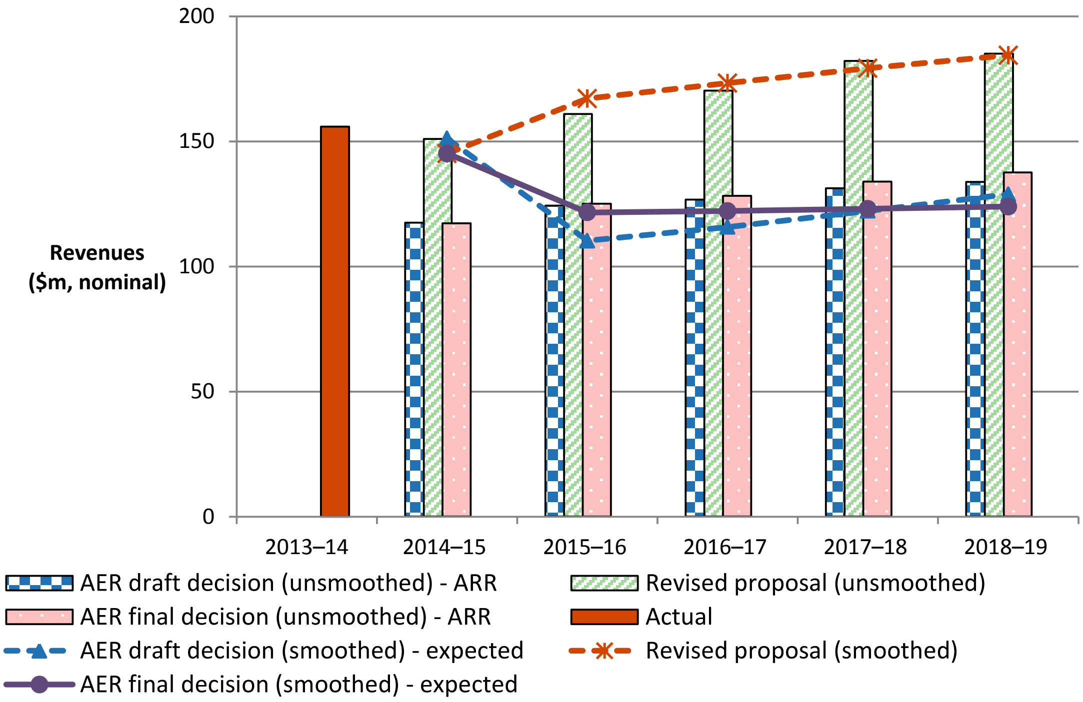
1 This is referred to in the transitional rules as a 'notional' revenue requirement. We have adopted the standard terminology in chapter 6 to avoid confusion, but it still gives effect to the transitional rules.

2 This is the amount determined in our transitional decision for 2014–15, see AER, *Ausgrid Endeavour Energy Essential Energy ActewAGL, Transitional distribution decision 2014–15*, April 2014, pp. 29–32.

of the 2015–19 regulatory control period is set out in Table 1.1 and Table 1.2. Our final decision is to approve total expected revenues (smoothed) of $490.7 million and $100.1 million ($ nominal) for the 2015–19 regulatory control period in relation to ActewAGL's distribution and transmission networks respectively.

Figure 1.1 shows the difference between ActewAGL's revised proposal and our decision (draft and final) for its distribution network. Figure 1.2 shows the same for its transmission network.

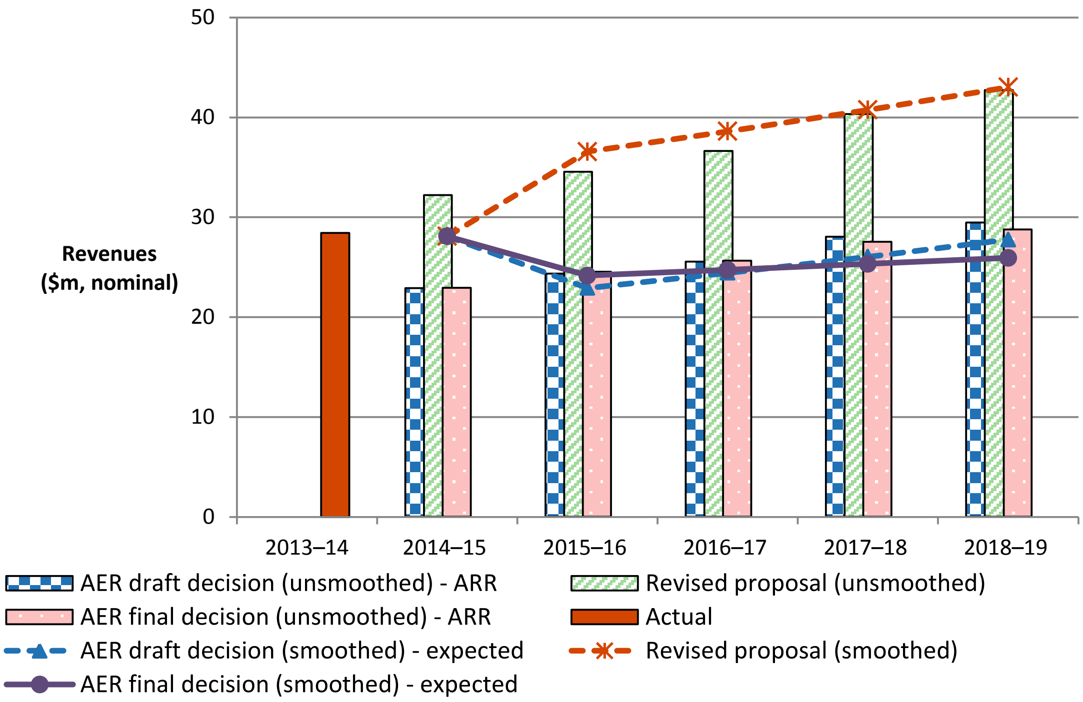
Figure 1.1 AER's final decision on ActewAGL's revenues for the 2014–19 period – distribution[a] ($million, nominal)



Source: AER analysis; ActewAGL, *Regulatory proposal*, July 2014, Attachment B2; ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H8.

(a) ActewAGL's distribution network estimated actual revenue for 2013–14 is calculated based on the RAB share attributable to ActewAGL's distribution RAB.

Figure 1.2 AER's final decision on ActewAGL's revenues for the 2014–19 period – transmission[a] ($million, nominal)



Source: AER analysis; ActewAGL, *Regulatory proposal*, July 2014, Attachment B5; ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H9.

(a) ActewAGL's transmission network estimated actual revenue for 2013–14 is calculated based on the RAB share attributable to ActewAGL's transmission RAB.

Table 1.1 shows our final decision on the building block costs for each year of the 2014–19 period for ActewAGL's distribution network. It also shows the ARR, annual expected revenue and X factor for each year of that period. Table 1.2 shows the same for ActewAGL's transmission network.

Table 1.1 AER's final decision on ActewAGL's revenues for the 2014–19 period – distribution ($million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	45.0	46.6	48.0	49.1	50.0	238.7
Regulatory depreciation	27.6	31.4	32.0	33.5	33.7	158.2
Operating expenditure	39.7	41.7	43.3	45.1	47.6	217.5
Revenue adjustments[a]	0.1	0.1	0.1	0.1	0.1	0.1
Net tax allowance	4.8	5.1	4.8	5.9	6.0	26.6
Annual revenue requirement (unsmoothed)	117.2	125.0	128.2	133.8	137.5	641.6
Energy forecast (MWh)	2781225	2755859	2788237	2813594	2824131	n/a

Revenue yield ($/MWh)	53.0	44.1	43.8	43.7	43.9	n/a
Annual expected revenue (smoothed)	**145.2**[b]	**121.6**	**122.2**	**123.1**	**123.9**	**635.9**
X factor[c]	19.59%	18.76%	3.00%	2.50%	2.00%	n/a

Source: AER analysis.

(a) Revenue adjustments include efficiency benefit sharing scheme carry-overs and forecast demand management incentive allowance (DMIA).

(b) In our transitional decision, we determined the placeholder revenue for 2014–15. In this final decision to update the 2014–15 revenue for our assessment of efficient costs we determined X factors for the final four years of the 2014–19 period. This is to adjust ActewAGL's total revenue requirement for the 2015–19 regulatory control period for the difference between the placeholder revenue and our decision on ActewAGL's efficient costs for 2014–15.

(c) The X factor from 2016–17 to 2018–19 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.

Table 1.2 AER's final decision on ActewAGL's revenues for the 2014–19 period – transmission ($million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	10.0	10.3	10.7	11.6	12.2	54.9
Regulatory depreciation	4.4	5.2	5.4	5.8	6.1	26.9
Operating expenditure	7.9	8.4	8.7	9.1	9.5	43.7
Revenue adjustments[a]	0.0	0.0	0.0	0.0	0.0	0.0
Net tax allowance	0.7	0.7	0.7	0.9	0.9	3.9
Annual revenue requirement (unsmoothed)	22.9	24.5	25.6	27.5	28.7	129.3
Annual expected revenue (smoothed)	**28.1**[b]	**24.2**	**24.7**	**25.3**	**25.9**	**128.2**
X factor[c]	2.02%	16.00%	0.00%	0.00%	0.00%	n/a

Source: AER analysis.

(a) Revenue adjustments include efficiency benefit sharing scheme carry-overs.

(b) In our transitional decision, we determined the placeholder revenue for 2014–15. In this final decision to update the 2014–15 revenue for our assessment of efficient costs we determined X factors for the final four years of the 2014–19 period. This is to adjust ActewAGL's total revenue requirement for the 2015–19 regulatory control period for the difference between the placeholder revenue and our decision on ActewAGL's efficient costs for 2014–15.

(c) The X factor from 2016–17 to 2018–19 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.

1.2 ActewAGL’s revised proposal

ActewAGL's revised proposal included a total revenue requirement over the 2014–19 period of $848.9 million ($ nominal) for its distribution network and $186.4 million ($ nominal) for its transmission network. Table 1.3 shows ActewAGL's revised proposed distribution building block costs, the ARR, expected revenue and X factor for each year of the 2014–19 period. Table 1.4 shows the same for its transmission network.

Table 1.3 ActewAGL's revised proposed revenues for the 2014–19 period ($million, nominal) – distribution

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	61.3	64.9	67.1	69.2	71.1	333.5
Regulatory depreciation	26.8	30.7	31.2	32.8	33.0	154.5
Operating expenditure	63.5	64.2	64.1	67.4	70.3	329.5
Efficiency benefit sharing scheme (carryover amounts)	–9.2	–8.1	–1.0	2.3	0.0	–16.1
Net tax allowance	8.6	9.2	8.8	10.3	10.6	47.6
Annual revenue requirement (unsmoothed)	150.9	160.9	170.2	182.0	185.0	848.9
Energy forecast (MWh)	2781225	2755859	2788237	2813594	2824131	n/a
Revenue yield ($/MWh)	53.0	60.6	62.1	63.7	65.3	n/a
Annual expected revenue (smoothed)	**145.2**	**167.1**	**173.3**	**179.2**	**184.4**	**849.1**
X factor	19.59%	–11.52%	0.00%	0.00%	0.00%	n/a

Source: ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H8.

Table 1.4 ActewAGL's revised proposed revenues for the 2014–19 period ($million, nominal) – transmission

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Return on capital	13.6	14.3	15.0	16.6	18.3	77.8
Regulatory depreciation	4.2	5.0	5.3	5.7	5.9	26.1
Operating expenditure	14.4	14.9	15.0	15.9	16.6	76.7
Efficiency benefit sharing scheme	–1.3	–1.2	–0.2	0.3	–	–2.3
Net tax allowance	1.4	1.5	1.5	1.8	1.9	8.1
Annual revenue requirement (unsmoothed)	32.2	34.5	36.6	40.3	42.7	186.3
Annual expected revenue (smoothed)	**28.1**	**36.6**	**38.6**	**40.7**	**43.0**	**187.0**
X factor	2.02%	–26.98%	–3.00%	–3.00%	–3.00%	n/a

Source: ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H9.

1.3 AER's assessment approach

We have updated our approach to smoothing the ARR in this final decision from our draft decision to account for a change in approach to give effect to the true-up of 2014–15 distribution revenues. All other aspects of our assessment approach of setting expected revenues remain unchanged. See section 1.3 of our draft decision for details.[3] We explain below the change to the true-up approach of 2014–15 distribution revenues.

1.3.1 True-up of 2014–15 distribution revenues

Under ActewAGL's average revenue cap form of control[4] the demand forecasts in kWh have a direct impact on the distribution revenues ActewAGL receives during the regulatory control period.[5] We did not review the proposed demand forecasts for the 2014–19 period during the transitional decision process.[6] Instead, in our draft decision,

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3 AER, *Draft decision ActewAGL distribution determination, Attachment 1: Annual revenue requirement*, November 2014, pp. 11–13.

4 No other business we regulate operates under what has been called a revenue yield (or average revenue cap) approach. The average revenue cap shares characteristics with both a revenue and price cap. In terms of demand, the average revenue cap is like a price cap in that the business is exposed to the risk that demand may be greater or less than forecast. No such risk exists under a revenue cap.

5 If actual demand is greater than forecast ActewAGL earns higher revenues than forecast and vice versa if actual demand is less than forecast.

6 In April 2014, as required under the transitional rules, we conducted a high level review of ActewAGL's proposed revenue requirement for the transitional regulatory year (2014–15) and in accordance with clause 11.56.3(15)(b) we approved a placeholder revenue amount for that year until a full assessment for 2014–15 could be undertaken when making our full determination for the subsequent regulatory control period. In our draft decision we proposed

we assessed and determined demand forecasts that covered the entire 2014–19 period, including the transitional 2014–15 year. Our revised forecast for 2014–15 was 4.1 per cent higher than that submitted by ActewAGL in its transitional proposal. In the draft decision, we applied our revised demand forecast for 2014–15 to true-up our placeholder revenue rather than using the forecast demand that was adopted in the transitional determination.

In its revised proposal, ActewAGL submitted that our true-up approach was not permitted under clause 11.56.4(i) of the NER transitional rules.[7] We agree that we were not clear in setting out our adjustments during the framework and approach process as required under the transitional rules. We have therefore not adjusted the placeholder revenue for 2014–15 for this final decision. Although we are concerned about this outcome as a matter of policy, under the NER we are unable to true-up the demand impact for 2014–15 against the placeholder revenue for that transitional year. Accordingly, we have not adjusted the 2014–15 placeholder revenue for our forecast of demand for that year.

However, in assessing ActewAGL's revised proposal we made reductions to other components such as opex and capex, to give effect to the National electricity objective. Under the NER, we must assess these costs as at the beginning of the 2014–19 period and adjust for any over or under-recovery from customers. The true-up assessment for both distribution and transmission is discussed in section 1.4.1.

1.4 Reasons for final decision

For this final decision, we determine total revenue requirements of $641.6 million and $129.3 million ($ nominal) over the 2014–19 period for ActewAGL's distribution and transmission networks respectively. This is $207.4 million ($ nominal) or 24.4 per cent below ActewAGL's revised proposal for its distribution network and $57.0 million ($ nominal) or 30.6 per cent below ActewAGL's revised proposal for its transmission network. These revenues reflect our final decision on the various building block costs. Figure 1.3 shows the difference between ActewAGL's revised proposed ARRs and our final decision for its distribution network. Figure 1.4 shows the same for ActewAGL's transmission network.

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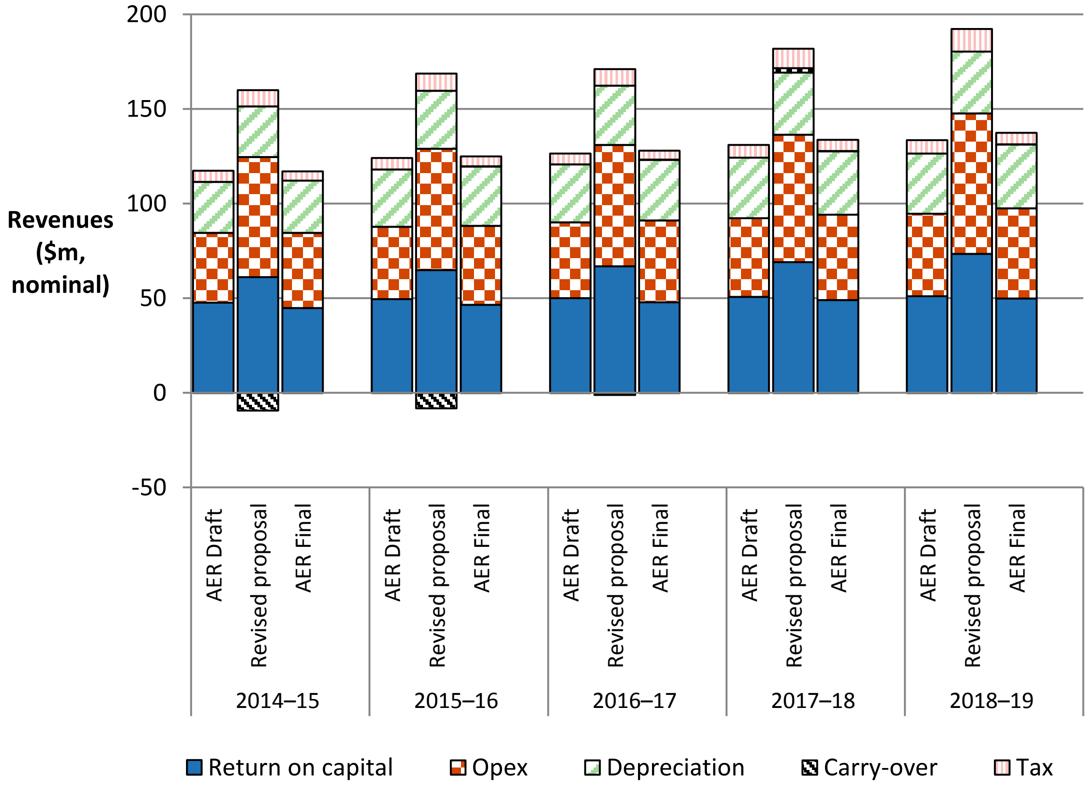
to apply a true-up mechanism to account for the difference in the placeholder revenue and the notional revenue for 2014–15 established through this full determination process.

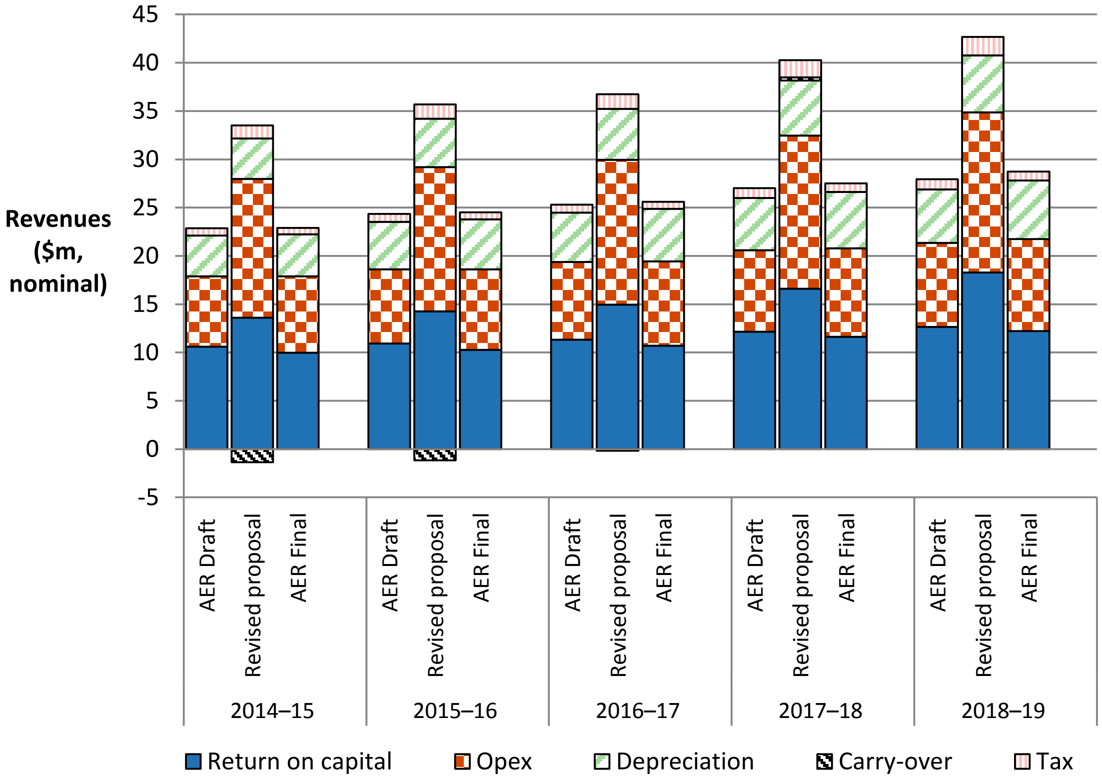
7 ActewAGL, *Revised regulatory proposal*, January 2015, Attachment F12, p 8; and NER, cl 11.56.4(i).

Figure 1.3 AER's final decision and ActewAGL's revised proposed annual revenue requirements – distribution ($million, nominal)



Source: AER analysis.

Figure 1.4 AER's final decision and ActewAGL's revised proposed annual revenue requirements – transmission ($million, nominal)



Source: AER analysis.

The most significant changes to ActewAGL's revised proposal include: a reduction in the rate of return of 2.4 per cent for 2014–15 and 2.5 per cent for 2015–19 (attachment 3), a reduction in the capex allowance of 11.2 per cent (attachment 6), and a reduction in the opex allowance of 35.2 per cent (attachment 7).

1.4.1 Revenue true-up for transitional year

The five regulatory years for 2014–19 are split over two regulatory control periods due to the transitional rules. There is a 'transitional regulatory control period' for 2014–15, and a 'subsequent regulatory control period' for 2015–19.[8] 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.[9]

In April 2014, as required under the transitional rules, we conducted a high level review of ActewAGL's proposed revenue requirement for its transitional regulatory control period (2014–15). We determined placeholder revenue allowances of $145.2 million ($

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8 NER cl. 11.55.1.

9 NER cll 11.56.1 and 11.56.4.

nominal) for ActewAGL's distribution network and $28.1 million ($ nominal) for ActewAGL's transmission network in the transitional determination.[10]

In our draft decision, we made a full regulatory determination for the years 2015–16 to 2018–19 for ActewAGL, and we accounted for a true-up of revenue related to the transitional regulatory control period (2014–15). For ActewAGL's distribution network this included our decision to update the transitional year revenue with regard to ActewAGL's approved average revenue cap and energy forecast for 2014–15. As part of this, we were required to determine the ARRs for each year of the five year period (2014–19) and use a net present value (NPV) neutral true-up mechanism to account for any difference between:[11]

- the placeholder revenue for the transitional regulatory control period, and
- the ARR for 2014–15 that is established through the full determination process.

ActewAGL's revised proposal did not adopt our draft decision approach to give effect to the updated demand forecast in determining the true-up of the distribution revenue for 2014–15.[12] As discussed above, we have accepted ActewAGL's revised proposal and not adjusted the 2014–15 placeholder revenue for its distribution network in this final decision. However, ActewAGL's revised proposal adopted our approach to give effect to the true-up for its transmission revenues.[13] Therefore, our true-up approach for ActewAGL's 2014–15 transmission revenue for this final decision is unchanged from the draft decision.

Our final decision approves 2014–15 ARRs of $117.2 million and $22.9 million for ActewAGL's distribution and transmission networks respectively. Therefore, the differences between the ARRs ($117.2 million and $22.9 million respectively) and the placeholder revenues ($145.2 million and $28.1 million respectively) should be returned to customers.

Based on the building block costs determined in this final decision and taking account of the need to do the true-up for ActewAGL when smoothing the expected revenues over the 2015–19 regulatory control period, we first set the expected revenue for the first regulatory year (2014–15) as follows:

- For ActewAGL's distribution network the expected revenue is set to $145.2 million ($ nominal).
- For ActewAGL's transmission network the expected revenue is set to $28.1 million ($ nominal).

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[10] AER, *Ausgrid Endeavour Energy Essential Energy ActewAGL, Transitional distribution decision 2014*‑*15*, April 2014, p. 17.

[11] NER, cll 11.56.4(h)–(i).

[12] ActewAGL*, Revised regulatory proposal*, January 2015, p. 502.

[13] ActewAGL, *Revised regulatory proposal*, January 2015, p. 502.

Applying the above, we calculated differences that are $28.0 million and $5.2 million ($ nominal) higher than the 2014–15 ARRs (unsmoothed) we have determined in this final decision for ActewAGL's distribution and transmission networks respectively. These differences represent the amounts to be returned to customers over the 2015–19 regulatory control period. We then applied a profile of X factors to determine the expected revenue in subsequent years.[14] This is achieved as part of the smoothing process to determine the appropriate X factors for the 2015–19 regulatory control period.[15]

1.4.2 Smoothing of revenues

The smoothing profile of revenues has been impacted significantly by the shortened subsequent regulatory control period and the requirement for a true-up of the 2014–15 placeholder revenue. The true-up for 2014–15 in particular has a significant impact on the decrease in revenues from 2014–15 to 2015–16.

For this final decision, the expected revenue in the last year of the regulatory control period is not required to be as close as reasonably possible to the ARR for that year, due to the transitional provisions.[16] Typically, we would target a divergence of less than 3 per cent between the expected revenue and ARR for the last year of the regulatory control period, if this can promote smoother price changes over the regulatory control period. However, as a result of the shortened regulatory control period and the required true-up for 2014–15, we consider that our profile of X factors is reasonable. We have allowed the difference between smoothed and unsmoothed revenues in the last year of the 2014–19 period to diverge more than would be usual, at up to 10 per cent. This approach smooths the revenues further than in the draft decision and allows for a more gradual path for lower revenues over the 2014–19 period.

Our final decision smoothing profiles result in differences between the expected revenues and ARRs for 2018–19 of around 10 per cent for both distribution and transmission.[17] While these divergences are significant, the smoothing avoids the situation of a larger price decrease in 2015–16 followed by price increases for the remaining three years of the regulatory control period.

Table 1.5 and Table 1.6 show the expected revenues (smoothed) of ActewAGL's revised proposal and our final decision expected revenues (smoothed) for ActewAGL's distribution and transmission networks respectively. Both use the 2014–15 placeholder revenues as a base to account for the true-up.

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[14] The X factors represent the rate of change in the real revenue path over the 2014–19 period under the CPI–X framework. They must equalise (in net present value terms) the total expected revenues to be earned by the service provider with the total revenue requirement for that period.

[15] This also accounts for the time value of money.

[16] NER, cl 11.56.4(c).

[17] Clause 11.56.4(c) of the NER removes the requirement under cl. 6.5.9(b)(2) of the NER, that the X factors be set to minimise the variance, as far as reasonably possible, between expected revenue and ARR of the last regulatory year of the regulatory control period .

Table 1.5 ActewAGL's revised proposal and AER's final decision smoothed expected revenues for the 2014–19 period – distribution ($million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19
ActewAGL's revised proposal	145.2	167.1	173.3	179.2	184.4
X factor	19.59%	–11.52%	–0.00%	–0.00%	–0.00%
AER final decision	145.2	121.6	122.2	123.0	123.9
X factor	19.59%	18.76%	3.00%	2.00%	2.00%

Source: ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H8.
AER analysis.

Table 1.6 ActewAGL's revised proposal and AER's final decision smoothed expected revenues for the 2014–19 period – transmission ($million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19
ActewAGL's revised proposal	28.1	36.6	38.6	40.8	43.0
X factor	2.02%	–26.98%	–3.00%	–3.00%	–3.00%
AER final decision	28.1	24.2	24.7	25.3	25.9
X factor	2.02%	16.00%	0.00%	0.00%	0.00%

Source: ActewAGL, *Revised regulatory proposal*, January 2015, Attachment H9.
AER analysis.

1.4.3 Shared assets

In the draft decision, we considered that ActewAGL's forecast shared asset unregulated revenues of zero do not meet the minimum threshold for adjustments to be made to its ARR.[18] We continue to maintain this view. Our final decision is therefore consistent with our draft decision.

1.4.4 Indicative average distribution price impact

Our final decision on ActewAGL's expected revenues ultimately affects the prices consumers pay for electricity. There are several steps required in translating our revenue decision to a price impact, and the steps are different depending on the network component:

18 AER, *Draft decision ActewAGL distribution determination – Attachment 1 – Annual revenue requirement*, November 2014, p. 23.

- For ActewAGL's distribution assets, we regulate standard control services under an average revenue cap form of control. The average revenue cap means that ActewAGL's revenue is set as a function of total consumption of electricity. Under the average revenue cap, changes in the total consumption of electricity will not affect the prices ultimately charged to consumers. We are not required to establish distribution prices for ActewAGL as part of this determination. However, we will assess ActewAGL's annual pricing proposals before the commencement of each regulatory year for the 2015–19 regulatory control period to administer the pricing requirements of this distribution determination.
- For ActewAGL's transmission assets, we are regulating transmission standard control services under a revenue cap. This means the adjustments that we have made to ActewAGL's expected revenues do not directly translate to price impacts. This is because ActewAGL's revenue is fixed under the revenue cap form of control, so changes in the consumption of electricity will affect the prices ultimately charged to consumers. Further, transmission charges are collected with regard to the entire transmission network across NSW/ACT, since the ActewAGL transmission assets are a small, embedded component of the broader transmission network. TransGrid, which is the coordinating transmission network service provider (TNSP) for this network region, establishes transmission charges and then provides ActewAGL with its portion of revenues.[19]

For this final decision, we have estimated some indicative average distribution and transmission price impacts flowing from our determination on the expected revenues for ActewAGL over the 2014–19 period. Figure 1.5 and Figure 1.6 show ActewAGL's indicative price paths (distribution and transmission) based on the expected revenues established in our final decision compared to its revised proposal. For ActewAGL's distribution network and consistent with the average revenue cap form of control, we can estimate average prices by dividing expected revenue with total forecast energy consumed (MWh) in the ACT to determine the movement in overall prices. In the case of ActewAGL's transmission network, we also estimated average prices using this method but the energy is based on the forecast for NSW by AEMO.[20] For presentation purposes, the prices are scaled so that the price index begins at 1.0 in 2013–14. The index provides a simple overall measure of the relative movement in expected distribution and transmission prices over the 2014–19 period.

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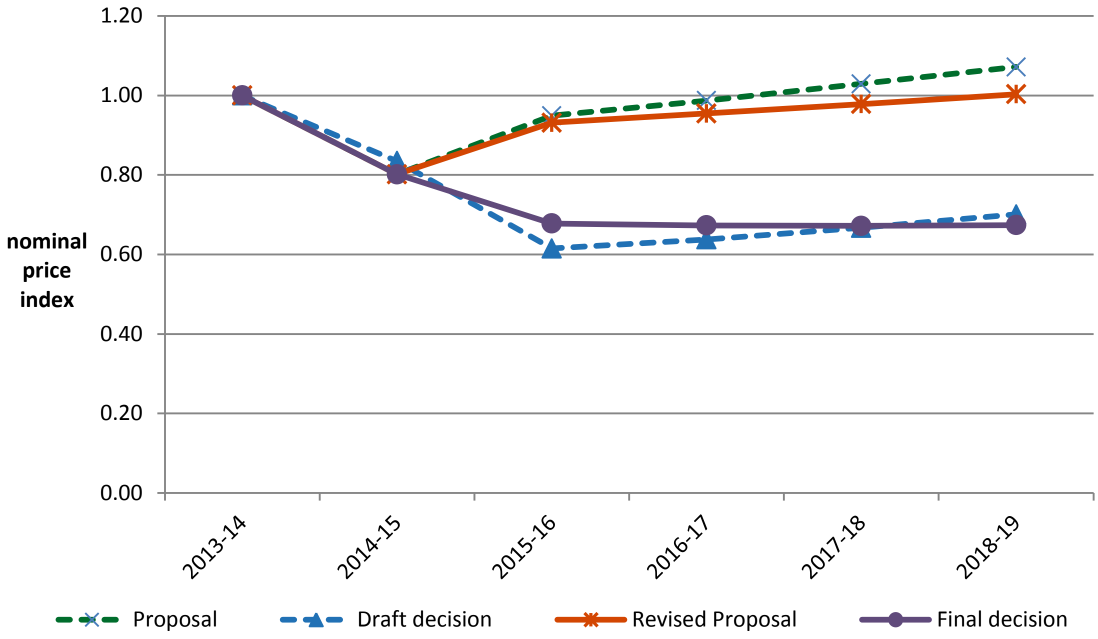
[19] See AER, *Final decision TransGrid transmission determination – Attachment 1 – Maximum allowed revenue*, April 2015, section 1.4.3.

[20] This approach is further discussed in the AER's final determination for TransGrid, see AER, *TransGrid transmission determination 2015–16 to 2017–18*, April 2015, Attachment 1.

Figure 1.5 AER's final decision and ActewAGL's revised proposed indicative price paths – distribution[21] (nominal price index)

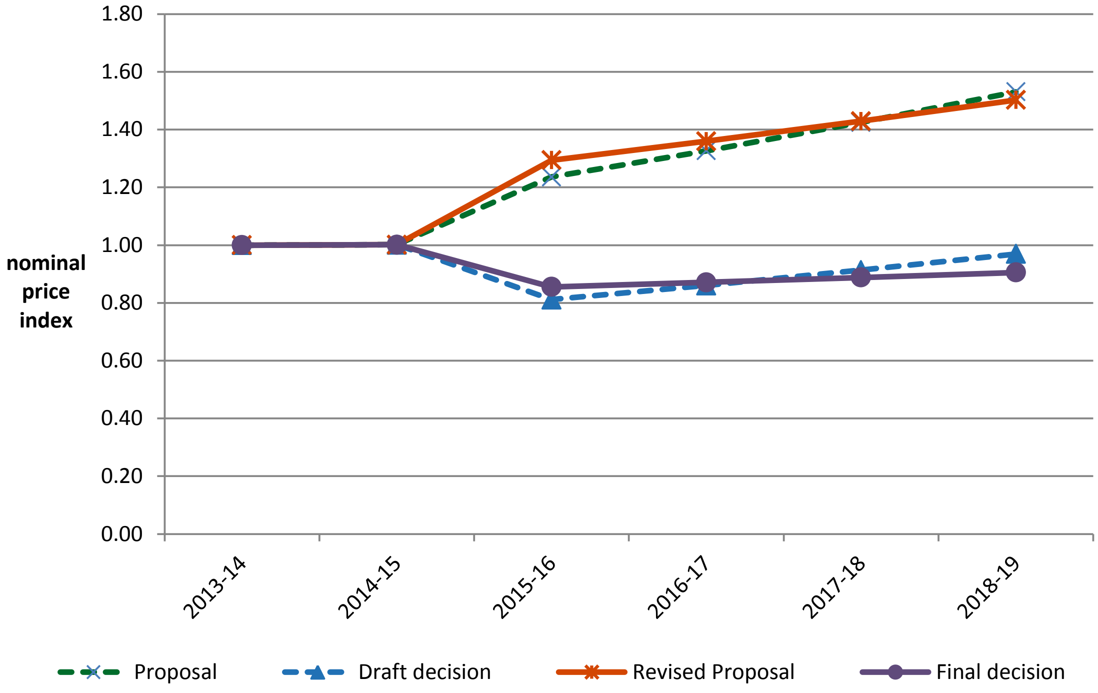


Source: AER analysis.

Notes: The nominal price index is calculated by the AER based on the average revenue yield calculations submitted by ActewAGL in its distribution PTRM, and (where relevant) adjusting for the change in overall revenue substituted by the AER.

[21] As identified in the AER's transitional determination, under the average revenue cap form of control applying to ActewAGL's distribution network, ActewAGL will need to apply an X factor of 19.59 per cent for 2014–15 in its control mechanism equation. This real decrease in average distribution charges reflects the transfer of previously classified distribution charges to transmission charges (14.75 per cent) and other distribution cost reductions (4.84 per cent).

Figure 1.6 AER's final decision and ActewAGL's revised proposed indicative price paths – transmission (nominal price index)



Source: AER analysis.

Notes: The nominal price index is calculated by the AER based on overall revenue and the (state wide) transmission network energy forecasts used for TransGrid (the NSW/ACT transmission network service provider).

We estimate that our final decision on ActewAGL's annual expected revenue will result in a decrease to average distribution charges by about 7.6 per cent per annum over the 2014–19 period in nominal terms. This amount includes a forecast inflation rate of 2.38 per cent per annum. In real terms we estimate average distribution charges to decline by 8.7 per cent per annum. This compares to a decline of 0.9 per cent per annum proposed by ActewAGL (based on ActewAGL's proposed forecast inflation rate of 2.50 per cent per annum). Our transitional determination resulted in an expected reduction in distribution charges of about 16.8 per cent in 2014–15. We estimate that our final decision will further reduce distribution charges by another 15.5 per cent in 2015–16, followed by modest reductions of about 0.2 per cent per annum from 2016–17 to 2018–19. This compares to the nominal average increase of 16.2 per cent in 2015–16, followed by increases of 2.5 per cent per annum between 2016–17 and 2018—19 in ActewAGL's revised proposal.

Table 1.7 and Table 1.8 display the comparison of the price impacts of ActewAGL's revised proposal and our final decision revenue allowance for its distribution and transmission networks respectively.

Table 1.7 Comparison of revenue and price impacts of ActewAGL's revised proposal and AER's final decision – distribution

	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
ActewAGL revised proposal						
Revenue ($m, nominal)	184.3	145.2	167.1	173.3	179.2	184.4
Price path (nominal index)	1.00	0.80	0.93	0.95	0.98	1.00
Revenue (change %)		–21.3%	15.1%	3.7%	3.4%	2.9%
Price path (change %)		–19.8%	16.2%	2.5%	2.5%	2.5%
AER final decision						
Revenue ($m, nominal)	184.3	145.2	121.6	122.2	123.1	123.9
Price path (nominal index)	1.00	0.80	0.68	0.67	0.67	0.67
Revenue (change %)		–21.3%	–16.2%	0.5%	0.7%	0.7%
Price path (change %)		–19.8%	–15.5%	–0.7%	–0.2%	0.3%

Source: ActewAGL, *Revised regulatory proposal*, July 2014, Attachment H8.
AER analysis.

Table 1.8 Comparison of revenue and price impacts of ActewAGL's revised proposal and AER's final decision – transmission

	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
ActewAGL revised proposal						
Revenue ($m, nominal)	28.4	28.1	36.6	38.6	40.8	43.0
Price path (nominal index)	1.00	1.00	1.29	1.36	1.43	1.50
Revenue (change %)		–1.2%	30.2%	5.6%	5.6%	5.6%
Price path (change %)		0.2%	29.2%	5.1%	5.1%	5.1%
AER final decision						
Revenue ($m, nominal)	28.4	28.1	24.2	24.7	25.3	25.9
Price path (nominal index)	1.00	1.00	0.86	0.87	0.89	0.91
Revenue (change %)		–1.2%	–14.0%	2.4%	2.4%	2.4%
Price path (change %)		0.2%	–14.6%	1.9%	1.9%	1.9%

Source: ActewAGL, *Regulatory proposal*, July 2014, Attachment H9.
AER analysis.

Distribution charges represent approximately 35 per cent on average of ActewAGL's typical customer's annual electricity bill.[22] We expect that our final decision, holding all other components of the bill constant, will reduce the average annual electricity bills for residential customers in ActewAGL's network. This is because we estimate that our final decision will result in lower distribution charges on average over the 2014–19 period compared to ActewAGL's revised proposal as discussed above.

Based on the lower distribution charges from our transitional determination passing through to customers, we estimate the average annual electricity bill for ActewAGL's residential customers could be expected to reduce by about $25 or 1.3 per cent ($ nominal) in 2014–15. Based on the distribution charges from our final decision passing through to customers, we would expect the average annual electricity bill for residential customers to reduce by a further $112 or 5.8 per cent in 2015–16, and remain at approximately the same level from 2016-17 to 2018–19. By comparison, had we accepted ActewAGL's revised proposal, the average annual electricity bill for residential customers would increase by approximately $95 or 4.9 per cent in 2015–16. This would be followed by increases of approximately $20 (1.0 per cent) per annum between 2016–17 and 2018–19.

Our estimate of the potential impact our final decision will have for ActewAGL's residential customers is based on the typical annual electricity usage of 8000 kWh per annum for a residential customer in the ACT.[23] Therefore, customers with different usage will experience different changes in their bills. We also note that there are other factors, such as transmission network costs, wholesale and retail costs, which affect electricity bills.

Similarly, for an average small business customer in the ACT that uses approximately 10 MWh of electricity per annum, our final decision for ActewAGL is expected to lead to lower average annual electricity bills. We estimate that if the lower distribution charges arising from our transitional determination were passed through to customers, the average annual electricity bill for small business customers in ActewAGL's network could be expected to reduce by about $38 or 1.3 per cent ($ nominal) in 2014–15. If the lower distribution charges from our final decision are passed through to customers, we would expect the average annual electricity bill for small business customers to reduce by a further $168 or 5.8 per cent in 2015–16 and remain at approximately the same level from 2016-17 to 2018–19. By comparison, had we accepted ActewAGL's revised proposal, the average annual electricity bill for small business customers would increase by approximately $143 or 4.9 per cent in 2015–16. This would be followed by increases of approximately $29 (1.0 per cent) per annum over the 2015–19 regulatory control period.

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22 ActewAGL, *Regulatory proposal*, July 2014, Attachment A3.

23 ICRC, *Final report-Standing offer electricity prices from 1 July 2014*, p. 60.

Table 1.9 shows the estimated average annual impact of our final decision for ActewAGL's distribution network over the 2014–19 period on the average residential and small business customers' annual electricity bills.

Table 1.9 Estimated impact of ActewAGL's revised proposal and AER's final decision on annual electricity bills for the 2014–19 period ($ nominal)

	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
ActewAGL revised proposal						
Residential annual bill[a]	1959	1934	2029	2048	2067	2087
Annual change		–25 (–1.3%)	95 (4.9%)	19 (0.9%)	19 (1.0%)	20 (1.0%)
Small business annual bill[b]	2939	2901	3044	3072	3102	3131
Annual change		–38 (–1.3%)	143 (4.9%)	29 (0.9%)	29 (1.0%)	30 (1.0%)
AER final decision						
Residential annual bill[a]	1959	1934	1822	1818	1817	1819
Annual change		–25 (–1.3%)	–112 (–5.8%)	–4 (–0.2%)	–1 (–0.1%)	2 (0.1%)
Small business annual bill[b]	2939	2901	2733	2728	2726	2729
Annual charge		–38 (–1.3%)	–168 (–5.8%)	–6 (–0.2%)	–1 (–0.1%)	3 (0.1%)

Source: AER analysis; ICRC, *Final report-Standing offer electricity prices from 1 July 2014*, pp. 60–61.

(a) For a typical consumption of 8000 kWh per year during the period 1 July 2013 to 30 June 2014.

(b) For a typical consumption of 10000 kWh per year during the period 1 July 2013 to 30 June 2014.

Our final decision revenues for ActewAGL's transmission network make up a relatively small proportion of the overall transmission revenues applicable to NSW and the ACT. TransGrid is the main transmission network service provider in NSW and the ACT, and we are setting its revenue requirements concurrent with this process. ActewAGL collects its transmission revenues from TransGrid, the coordinating TNSP for NSW/ACT. In estimating the indicative impact of our final decision on transmission charges, we include ActewAGL's transmission revenues with TransGrid's revenues.[24] We discuss the overall transmission price impact in our final decision for TransGrid.

[24] We also include Ausgrid's and Directlink's transmission revenues–they operate transmission assets in NSW.