Final Decision

SP AusNet

Transmission determination

2014–15 to 2016–17

January 2014

AUSTRALIAN ENERGY REGULATOR

Inquiries about this document 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

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Contents

Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
ACCC	Australian Competition & Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
capex	capital expenditure
DRP	debt risk premium
DTSO	declared transmission system operator
DNSP	distribution network service provider
CGS	Commonwealth Government securities
CPI	consumer price index
DAE	Deloitte Access Economics
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
EGW	electricity, gas and water
EGWWS	electricity, gas, water and waste services
EMCa	Energy Market Consulting associates and Strata Energy Consulting Ltd
EUCV	Energy Users Coalition of Victoria
EUAA	Energy Users Association of Australia
kW	kilowatt
LPI	labour price index
LME	London Metals Exchange
MAR	maximum allowed revenue
MRP	market risk premium
MW	megawatt
MWh	megawatt hour
NCIPAP	network capability incentive parameter action plan
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective

NER	National Electricity Rules
NTSC	negotiated transmission service criteria
opex	operating expenditure
PTRM	post–tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
RFM	roll forward model
STPIS	service target performance incentive scheme
TAB	tax asset base
TNSP	transmission network service provider
TUOS	transmission use of system
WACC	weighted average cost of capital
WPI	wage price index

Part 1 – Overview

1 About this review

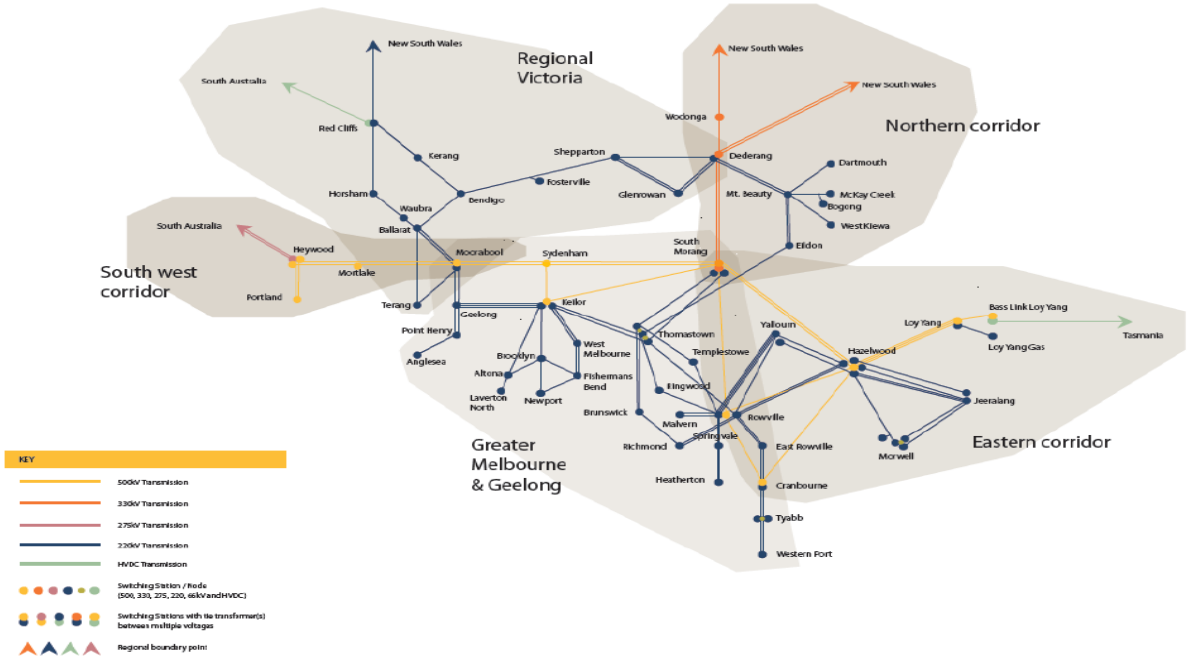
We, the Australian Energy Regulator (AER), are responsible for regulating the revenues of transmission network service providers (TNSPs) operating in the National Electricity Market (NEM). The National Electricity Law (NEL) and the National Electricity Rules (NER) provide the overarching framework under which we operate. In particular, chapter 6A of the NER provides for our economic regulation of TNSPs. As a TNSP operating in the NEM, SP AusNet is subject to full regulation by us. We must make a transmission determination that determines how much revenue SP AusNet can recover from its customers. This final decision contains the reasons for our transmission determination that will apply to SP AusNet during the 2014–17 regulatory control period.

A new version of the NER came into effect just before SP AusNet submitted its initial revenue proposal. However, transitional arrangements were put into place resulting in the previous version of the NER (version 52) continuing to apply to SP AusNet on an interim basis for the regulatory control period under review. In particular, the transitional arrangements shortened the regulatory control period to three years from 1 April 2014 to 31 March 2017 whereas the current period was for six years from 2008–14.[1]

1.1 Overview of SP AusNet

SP AusNet owns and operates the electricity transmission network in Victoria. This network consists of more than 6500 kilometres of transmission lines connecting power stations to electricity distributors and large customers (Figure 1.). It is centrally located among the five eastern states that form the NEM, so it provides key connections between South Australia, New South Wales and Tasmania's transmission networks.

Figure 1. Victorian electricity transmission network



Source: SP AusNet, *Revenue proposal*, p. 37.

[1] NER, clause 11.59.3(a).

1.2 AER final decision

We do not approve SP AusNet's revised revenue proposal. Our final decision is that SP AusNet will recover revenue (smoothed) of $1600 million ($ nominal) over the 2014–17 regulatory control period. This allowance is an increase of 0.4 per cent from SP AusNet's revised proposed total revenue forecast, when adjustments are made for upward movements in the market based parameters used to determine SP AusNet's cost of capital.

We made our final decision in accordance with the relevant sections of the NEL and NER. The key elements that reduced SP AusNet's revised proposal total revenue forecast were a 5 per cent reduction to SP AusNet's revised revenue proposal capital expenditure (capex) forecast and a 7 per cent reduction to SP AusNet's revised revenue proposal operating expenditure (opex) forecast. These reductions reflect our assessment of SP AusNet's efficient costs.

For our final decision, we determined the cost of capital to be 7.87 per cent compared with SP AusNet's revised proposed 7.43 per cent. The higher than proposed cost of capital reflected current market based parameters. We have developed new guidelines to determine the cost of capital for network service providers,[2] but transitional arrangements provided that these new guidelines would not apply to SP AusNet's 2014–17 regulatory control period. Accordingly, we applied our 2009 review of the weighted average cost of capital (WACC) when setting the key parameters of SP AusNet's cost of capital.[3]

We are satisfied that this decision will, or is likely to, contribute to the achievement of the national electricity objective (NEO) to the greatest degree. Our reasons are set out in this decision.

In reaching our final decision, we:

- analysed SP AusNet's revised revenue proposal and supporting information
- continuously engaged with SP AusNet including a two day onsite review
- considered submissions from interested parties
- considered views expressed at public forums and other stakeholder engagement meetings
- considered advice and analysis provided by AER commissioned experts.

1.3 National Electricity Law and National Electricity Rules requirements

The NEL contains two overarching principles that we must apply when performing our economic regulatory functions or powers. Under section 16(1)(a) of the NEL the AER must act in a manner that will or is likely to contribute to the achievement of the NEO. The NEO is set out in section 7 of the NEL:

> The objective of this law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interest of consumers of electricity with respect to –
>
> a) price, quality, safety, reliability and security of supply of electricity; and
>
> b) the reliability, safety and security of the national electricity system.

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2 AER, *Rate of return guidelines*, December 2013.
3 AER, *Electricity transmission and distribution WACC parameter review*, 1 May 2009: http://www.aer.gov.au/node/510

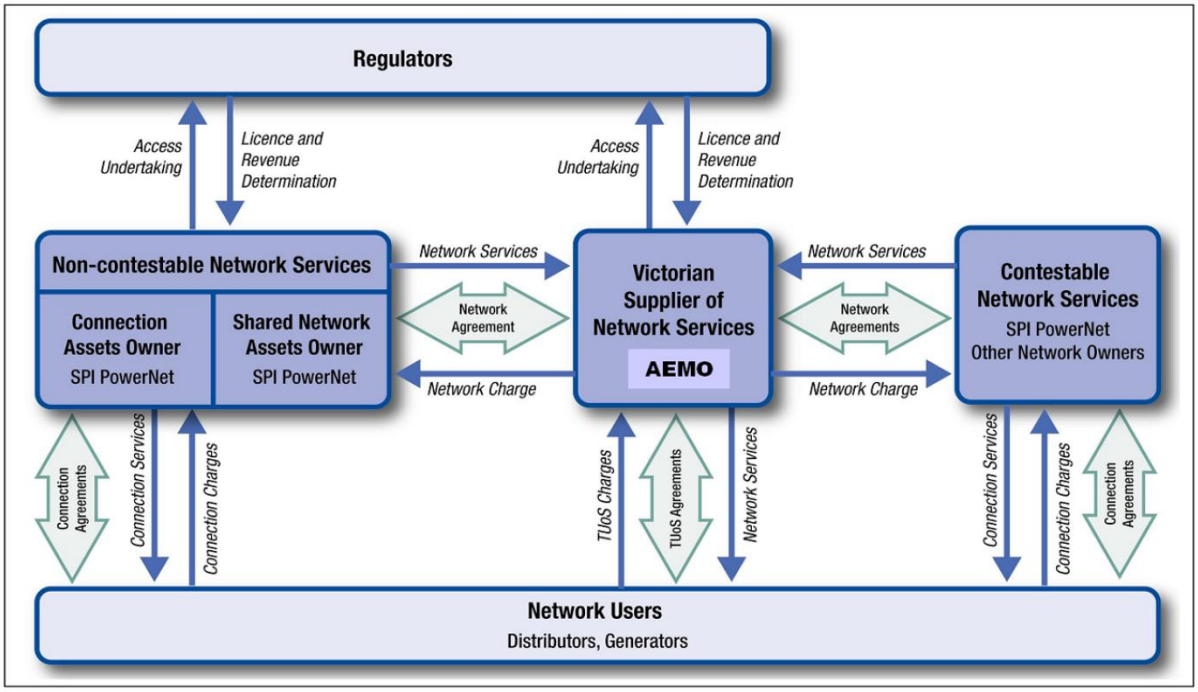
We must also take into account the revenue and pricing principles when making a transmission determination.[4] These principles require a TNSP to be provided with an opportunity to recover at least its efficient costs, and incentives to promote economic efficiency.

In assessing SP AusNet's revenue proposal, we reviewed SP AusNet's business and governance practices, including its asset management and maintenance strategies. In doing so, we sought to understand how SP AusNet operates and manages its transmission network to inform our final decision.

1.4 Victorian transmission arrangements

SP AusNet did not include an allowance for augmentation capex or forecast demand for prescribed transmission services. This is consistent with the Victorian transmission arrangements (Figure 1.). In Victoria, SP AusNet, Murraylink and other declared transmission system operators (DTSO) own and operate the transmission network. However, a separate corporate entity, the Australian Energy Market Operator (AEMO), has planning and augmentation responsibilities.

Figure 1. Institutional arrangements for Victorian transmission



Source: SP AusNet, *Revenue proposal*, 28 February 2013, p. 29.

Network services can be contestable and non-contestable. When AEMO identifies a network constraint that is contestable, it calls for tenders for the construction, ownership and maintenance of the network solution. If the network constraint is non-contestable, then the incumbent DTSO (which is usually SP AusNet) undertakes the work. The test for contestability is whether the network solution is 'separable' from the existing network.

The Victorian transmission arrangements have implications for the roll forward of SP AusNet's regulatory asset base (RAB). When an augmentation is deemed contestable and procured through a

[4] NEL, clause 16(2)(a)(i). The revenue and pricing principles are set out in section 7A of the NEL.

competitive tender process, the assets remain outside SP AusNet's RAB. However, assets relating to non-contestable network augmentations that AEMO initiated,[5] or that the Victorian distribution network service providers (DNSPs) requested,[6] are rolled into the RAB at the end of the period.

1.5 Review process

Our review process comprises several stages. These stages include considering the TNSP's revenue proposal and revised revenue proposal, submissions from interested parties on both proposals and the draft decision, and making the final decision and transmission determination. We engaged with SP AusNet and other stakeholders during this process. Submissions and expert advice received during the review process are available on our website: www.aer.gov.au/node/19819.

Table 1. Key dates in the AER's decision making process

Key stages in the decision making process	Date
Submission of SP AusNet's revenue proposal to the AER	28 February 2013
Publication of SP AusNet's revenue proposal	5 April 2013
Public forum on SP AusNet's revenue proposal	24 April 2013
Publication of AER's issues paper	1 May 2013
Submissions on SP AusNet's revenue proposal due	17 May 2013
Publication of AER draft decision	30 August 2013
Predetermination conference	18 September 2013
Submission of SP AusNet's revised revenue proposal to the AER	11 October 2013
Closing date for submissions on AER's draft decision / SP AusNet's revised proposal	1 November 2013
Publication of AER's final decision and transmission determination	31 January 2014

1.5.1 Submissions of revised revenue proposal and the AER's final decision

SP AusNet submitted its revised revenue proposal on 11 October 2013. It did not submit a revised pricing methodology or revised negotiating framework. Both of these were accepted in our draft decision.[7]

We commissioned the following independent consultants for our final decision:

- Energy Market Consulting associates (EMCa) and Strata Energy Consulting Ltd for advice on technical aspects of SP AusNet's past and forecast expenditure (capex/opex)
- Deloitte Access Economics for advice on forecast growth in labour costs
- AM Actuaries for advice on insurance and self-insurance forecasts.

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5 In its capacity as the planner of the shared transmission network in Victoria.
6 In their capacity as planners of the transmission connection assets that connect the transmission network with the Victorian distribution networks.
7 AER, *Draft decision: SP AusNet transmission determination*, August 2013.

1.5.2 Public consultation

Effective consultation with stakeholders is essential to the performance of our regulatory functions. Our engagement prior to the receipt of the revised revenue proposal is set out in the draft decision. Since receiving the revised revenue proposal, we have further engaged by:

- Considering submissions made on SP AusNet's revised revenue proposals and our draft decision. We received 5 submissions from:
  - Energy Users Coalition of Victoria (EUCV)
  - Energy Users Association of Australia (EUAA)
  - Transend
  - TransGrid
  - ElectraNet.
- Holding a number of discussions with the EUCV and EUAA representatives to better understand their submissions and underlying concerns.
- Regularly discussing matters relating to the revised revenue proposal with AEMO.
- Inviting the CEO of SP AusNet to present key issues from SP AusNet's revised revenue proposal to the AER chairman and board members on 8 November 2013.
- Hosting a predetermination conference in Melbourne on 18 September 2013 where the AER Chairman presented the draft decision and directly engaged with interested stakeholders. Bruce Mountain made a presentation on behalf of the EUAA at this conference.
- Arranging meetings between the AER's review team, EMCa, and the SP AusNet staff responsible for developing SP AusNet's proposals and managing the network. This involved on-site meetings over a 2 day period in November which enabled the AER to test material and information that underpins the proposals.
- Engaging in ongoing discussions with SP AusNet to better understand its proposals, seek clarification on issues, receive and offer feedback, and to arrive at a well informed decision. During this process, the AER and EMCa considered over 40 responses to information requested from SP AusNet in addition to over 90 responses prior to the draft decision.

1.5.3 Protected information submitted to the AER

We are committed to treating protected information received from TNSPs and other stakeholders in accordance with the NEL. The NEL allows us to disclose protected information in certain circumstances.[8] For this decision, we have three appendices that contain sensitive information relating to contingent projects, insurance and self-insurance premiums, and the security of critical infrastructure opex step change. These appendices have not been published.

1.5.4 Structure of this document

This final decision is set out as follows:

[8] NEL, part 3, division 6.

Part 1: AER's final decision overview—our final decision on SP AusNet's revenue proposal, along with a summary of our reasons

Part 2: attachments—a detailed analysis of the components of the final decision

Part 3: appendixes—a discussion of technical matters and sensitive information that is not published.

2 AER's approach

The National Electricity Law (NEL) and National Electricity Rules (NER) establish the regulatory framework under which we regulate transmission network service providers (TNSPs). They require TNSPs to submit revenue proposals to us.[9] Our determination in response applies to a specific regulatory control period, and sets the maximum allowed revenue (MAR) that a TNSP can recover.[10]

2.1 SP AusNet's electricity transmission services

SP AusNet provides three types of services: prescribed transmission services, negotiated transmission services, and unregulated services. We treat each service differently.

We regulate prescribed transmission services in accordance with a revenue cap that sets the MAR that a TNSP can recover each year through its network tariffs. This revenue recovers the economic cost of providing prescribed transmission services to customers. Broadly, prescribed transmission services are services that a TNSP must provide, that are necessary to ensure the integrity of the transmission network, and that usually do not exceed standard network performance requirements.[11]

For negotiated services, we do not set the revenue that the TNSP can recover. Instead, we approve a negotiating framework and negotiated transmission service criteria (NTSC). These facilitate SP AusNet's negotiations with service applicants. The NER sets out the types of service that are classified as negotiated services.[12] These types include shared transmission services that exceed the network performance requirements of a TNSP and connection services that are provided to service one user, or a small group of users, at a single connection point.[13]

Unregulated services are outside our jurisdiction. They are services that a TNSP provides in a competitive market, so the revenue derived from them is not regulated by us.

2.2 Maximum allowed revenue

SP AusNet recovers revenue from its customers via its network tariffs. Its pricing methodology prescribes the way in which it recovers this revenue from users. To determine SP AusNet's revenue for the 2014–17 regulatory control period, we assessed the total revenue that SP AusNet requires to provide prescribed transmission services for each year of the period. This annual revenue requirement reflects the efficient costs of providing prescribed transmission services across the Victorian electricity transmission network. In accordance with the NER, we used the building block approach to determine the annual revenue requirement—that is, we based the revenue requirement on the estimated efficient costs that SP AusNet is likely to incur in providing prescribed transmission services. The underlying cost elements include:[14]

- a return on the regulatory asset base (RAB) (return on capital)
- depreciation of the RAB (return of capital)
- forecast opex

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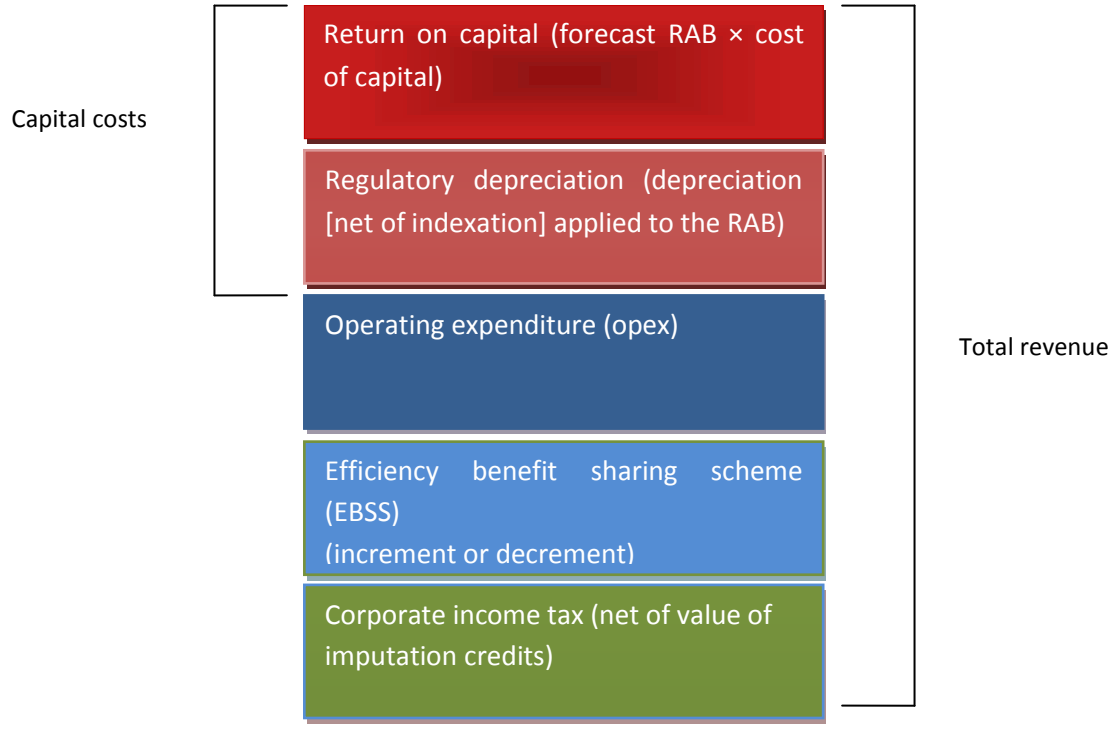
9 NER, clause 6A.10.1.
10 NER, clause 6A.2.2.
11 NER, chapter 10.
12 NER, chapter 10.
13 NER, chapter 10.
14 NER, clause 6A.5.4(a).

- increments or decrements resulting from the efficiency benefit sharing scheme (EBSS)
- the estimated cost of corporate income tax.

Our assessment of capex directly affects the size of the RAB and, therefore, the return on capital and return of capital building blocks. Figure 2. sets out the building block approach.

Figure 2. The building block approach for determining total revenue



Note: s–factors determined under the STPIS are external to the revenue building blocks. The s–factor can add or subtract revenue from a TNSP's annual revenue depending on its service performance. STPIS s–factors are determined annually during the annual STPIS review.

2.3 NER objectives for capex and opex forecasts

The NER sets out the following objectives for SP AusNet's forecasts of total capex and opex:[15]

- meeting expected demand
- complying with all applicable regulatory obligations or requirements
- maintaining the quality, reliability and security of supply
- maintaining the reliability, safety and security of the transmission system.

We must determine whether SP AusNet's forecast capex and opex reflect the efficient costs required to meet these objectives, based on a realistic expectation of transmission services demand and cost inputs.[16]

[15] NER, clauses 6A.6.6(a) and 6A.6.7(a).
[16] NER, clauses 6A.6.6(c) and 6A.6.7(c).

3 Total revenue requirements and impact on price

SP AusNet's total revenue cap represents our forecast of the efficient costs of providing prescribed transmission services. We determined the total revenue cap set out in this final decision by assessing the elements of SP AusNet's revised revenue proposal. That is, we assessed the proposed building blocks for whether they reflect the efficient costs of providing prescribed transmission services in Victoria. This chapter sets out the revenue requirement of SP AusNet. It also summarises the likely impact of this final decision on average electricity bills for Victorian customers.

3.1 Final decision

Our final decision on SP AusNet's total revenue cap (smoothed revenue) over the 2014–17 regulatory control period is $1600 million ($ nominal). This amount is $6.2 million (or 0.4 per cent) higher than SP AusNet's revised revenue proposal.[17] Our approved X–factor is 3.24 per cent per annum for 2015–16 and 2016–17.[18]

Our final decision on forecast opex and capex reduced SP AusNet's revised revenue. However this reduction is offset by a higher cost of capital due to an increase to the market based parameter used to determine SP AusNet's cost of capital. Table 3. shows our final decision on SP AusNet's building blocks and total revenue. Attachments to this final decision discuss the key elements in detail.

Table 3. AER's final decision on SP AusNet's revised proposed revenue requirements ($ million, nominal)

	2014–15	2015–16	2016–17	Total
Return on capital	226.5	233.0	242.0	701.4
Regulatory depreciation[a]	75.1	81.0	86.6	242.7
Operating expenditure	189.7	199.2	202.2	591.1
Efficiency benefit sharing scheme (carryover amounts)	18.4	16.1	4.9	39.4
Net tax allowance	9.5	9.3	9.8	28.6
Annual building block revenue requirement (unsmoothed)	519.0	538.7	545.4	1603.1
Annual expected maximum allowed revenue (smoothed)	538.1	533.4	528.8	1600.3[b]
X factor (%)	n/a[c]	3.24	3.24	n/a

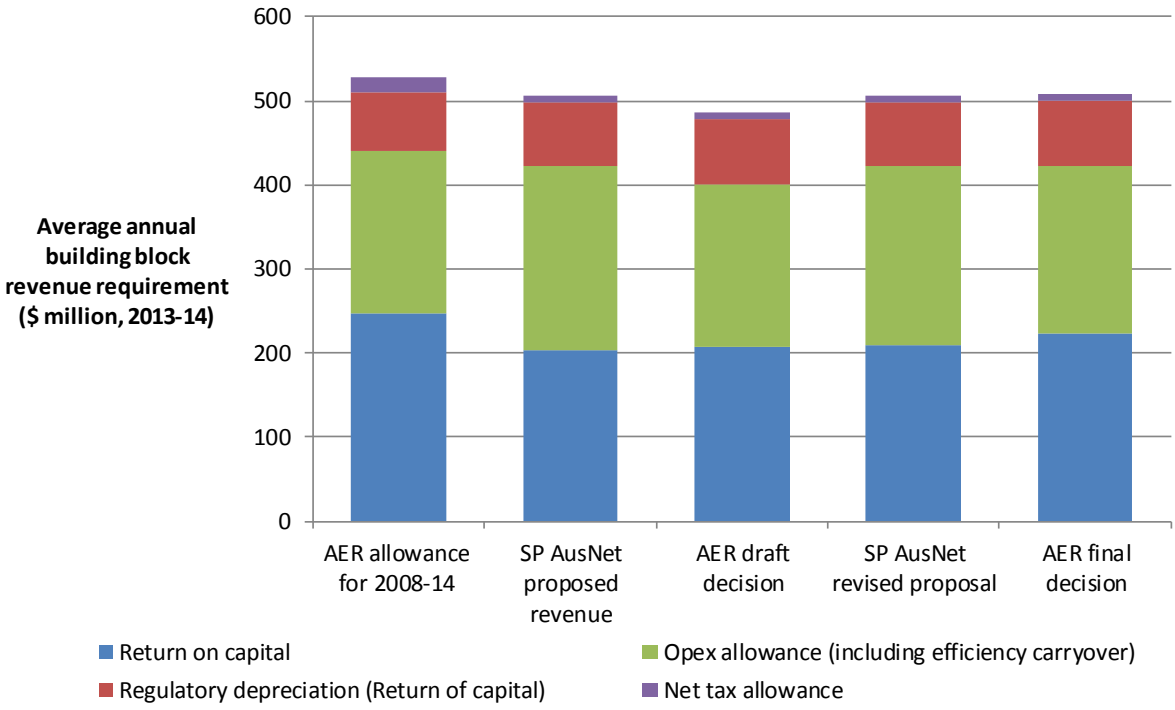
Source: AER analysis.
(a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
(b) The estimated total revenue cap is equal to the total annual expected MAR.
(c) SP AusNet is not required to apply an X factor for 2014–15 because the MAR for 2014–15 will be that set in this final decision. The MAR for 2014–15 is around 3.8 per cent lower than the MAR in the final year of the 2008–14 regulatory control period (2013–14) in real terms, or 1.5 per cent lower in nominal terms. The MAR for 2013–14 is $546.2 million ($ nominal).

[17] SP AusNet's revised proposal total revenue cap is $1594 million ($ nominal). SP AusNet, *Revised revenue proposal*, p. 129.

[18] Consistent with SP AusNet's revised proposal, we have determined a constant X factor to apply over the 2014–17 regulatory control period.

Figure 3. compares our draft and final decision building blocks for SP AusNet's 2014–17 regulatory control period with SP AusNet's proposed and revised revenue requirement for that same period, as well as with the approved revenue for the 2008–14 regulatory control period.[19] It shows our final decision results in a decrease of 3.7 per cent in real terms ($2013–14) on SP AusNet's average annual revenue relative to that in the 2008–14 regulatory control period. This decrease in revenue is primarily because we applied a lower WACC to this final decision for the 2014–17 regulatory control period than was approved for the 2008–14 regulatory control period.[20]

Figure 3. Annual average of AER's draft and final decisions compared with SP AusNet's proposed and revised revenue requirement and approved revenue for 2008–14 ($ million, 2013–14)



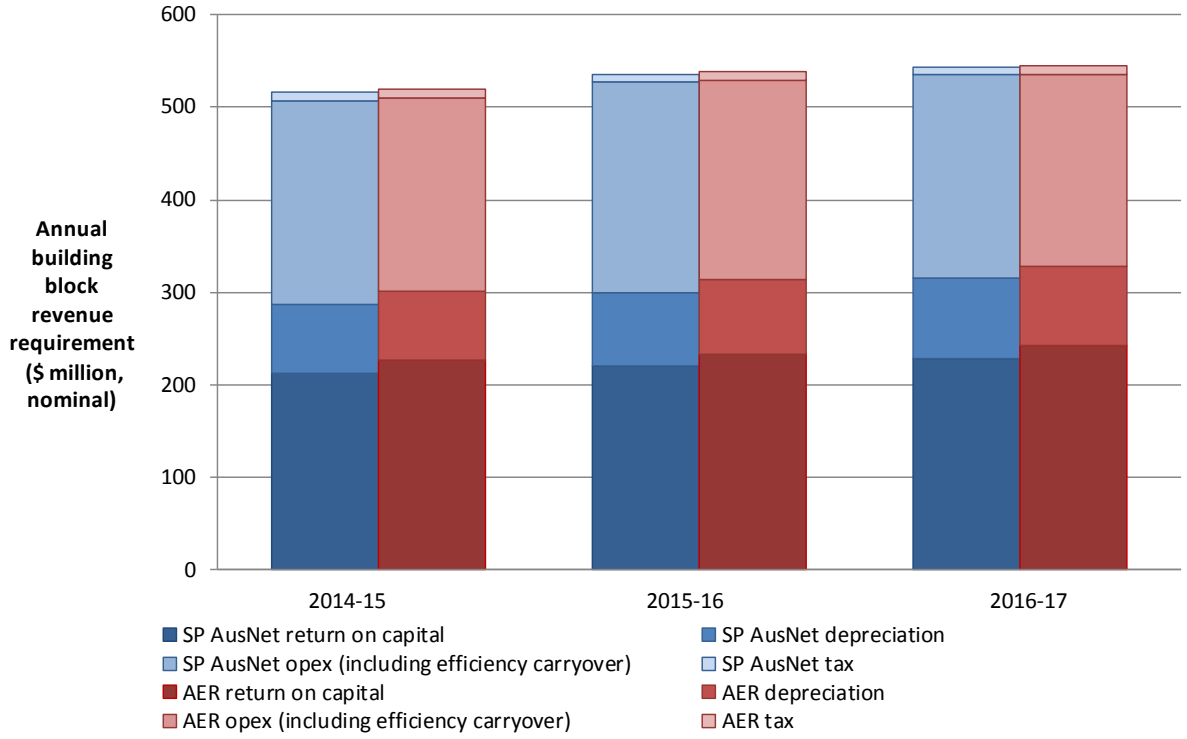
Source: AER analysis.

Figure 3. shows the effect of our final decision adjustments on SP AusNet's revised proposal building blocks. It shows our final decision will reduce SP AusNet's revised proposal for the opex building block.

[19] Because the regulatory control periods compared are of different lengths, we calculated the annual average revenues for the relevant regulatory control periods for comparison.

[20] Our final decision WACC is 7.87 per cent and the approved WACC for 2008–14 was 9.76 per cent.

Figure 3. AER's final decision and SP AusNet's revised proposed annual building block revenue requirement ($ million, nominal)



Source: AER analysis.

3.2 Sensitivity analysis

We assessed the impact of key aspects of our final decision on SP AusNet's revised revenue proposal. These include our final decision on forecast opex, forecast capex and the cost of capital. Our final decision on each is:

- forecast capex of $513.1 million ($2013–14), compared with SP AusNet's proposed $541.7 million ($2013–14) in its revised proposal;[21] a reduction of 5.3 per cent.
- forecast opex of $560.0 million ($2013–14), compared with SP AusNet's proposed $599.6 million ($2013–14) in its revised proposal;[22] a reduction of 6.6 per cent.
- a cost of capital of 7.87 per cent, compared with SP AusNet's proposed 7.43 per cent in its revised proposal.[23]

Table 3. shows SP AusNet's revised total revenue (unsmoothed) would be $2.1 million ($ nominal) or 0.1 per cent lower if our final decision on forecast capex is adopted. It also shows SP AusNet's revised total revenue (unsmoothed) would be $36.8 million ($ nominal) or 2.3 per cent lower if our final decision on forecast opex is adopted. In addition, SP AusNet's revised total revenue

[21] SP AusNet, *Post-tax revenue model*, October 2013. The value of $541.7 million ($2013–14) differs from the revised revenue proposal of $546.7 million ($2013–14) (SP AusNet, *Revised revenue proposal*, p. 54) because SP AusNet subsequently reduced its forecast capex associated with the Richmond terminal station by $5 million (SP AusNet, *Capex update*, 5 December 2013).

[22] This reflects SP AusNet's amended revised controllable opex of $275.6 million ($2013–14) on 29 November 2013. SP AusNet, *Post-tax revenue model*, October 2013. SP AusNet, *Amended revised proposed opex model [confidential]*, 29 November 2013.

[23] SP AusNet, *Revised revenue proposal*, p. 112.

(unsmoothed) would be $46.9 million ($ nominal) or 2.9 per cent higher if our final decision on the cost of capital is adopted.

Table 3. Changes to SP AusNet's total proposed unsmoothed revenue, when adopting the AER's final decision on the capex forecast, opex forecast and WACC

	SP AusNet's revised proposal ($ million, 2013–14)	AER's final decision ($ million, 2013–14)	Revenue change ($ million, nominal)	Revenue change (per cent)
Capex	541.7	513.1	–2.1	–0.1
Opex	599.6	560.0	–36.8	–2.3
WACC	7.43%	7.87%	46.9	2.9

Source: SP AusNet, *Post-tax revenue model*, October 2013; AER analysis.

3.3 Indicative impact on transmission charges and electricity bills in Victoria

The NER does not require us to estimate transmission price changes for a revenue determination of a TNSP. Nonetheless, we typically provide some indicative transmission price impacts flowing from the revenue determination. Although we assess SP AusNet's and AEMO's proposed pricing methodologies, actual transmission charges established at particular connection points are not determined by us. SP AusNet and AEMO establish the transmission charges in accordance with their approved pricing methodologies and the NER.[24] In Victoria, transmission charges represent approximately 5 per cent on average of a typical customer's electricity bill.[25] We note that there are other factors that affect electricity bills.[26]

We estimated the effect of this final decision on forecast average transmission charges in Victoria by:

- taking the sum of SP AusNet's annual expected MAR determined in this final decision and the proportion of Murraylink's annual expected MAR for 2014–17 that is allocated to Victorian customers (55 per cent),[27] and
- dividing it by the forecast annual energy delivered in Victoria.[28]

Based on this approach, we estimated our final decision would result in average transmission charges falling by 4.8 per cent per annum ($2013–14) from 2013–14 to 2016–17.[29] If these lower transmission charges were passed through to end customers, then average residential electricity bills in Victoria could reduce by about $12 in total ($2013–14) or 0.2 per cent per annum during the 2014–17

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24 NER, clause 6A.24.1(d).

25 This is based on the average proportion of the transmission charges on a typical residential bill from 2001 to 2012. Oakley Greenwood, *Causes of residential electricity bill increases in Victoria, 2001 to 2012*, March 2013, p. 11.

26 For example, usage, retail costs, wholesale costs, distribution network costs and green and carbon costs.

27 Murraylink, *Pricing methodology*, May 2012, p. 3. AER, *Final decision: Murraylink transmission determination 2013–18*, April 2013, p. 9. Murraylink is an interconnector that provides a path for the flow of electricity to the limit of its 220MW capacity, in both directions, between the South Australian and Victorian transmission networks. About 55 per cent of Murraylink's revenue is from Victorian customers.

28 AEMO, *National electricity forecasting report*, June 2013, table 6-1, Medium.

29 The average decrease in our final decision MAR ($2013–14) is 3.4 per cent per annum, whereas the average increase in the forecast energy delivered in Victoria is about 1.5 per cent per annum from 2013–14 to 2016–17. The reason for the transmission charge decrease being larger than the revenue decrease is because our final decision annual MAR ($2013–14) is decreasing on average from 2013–14 to 2016–17 and the annual forecast energy delivered in Victoria is increasing over this period. In nominal terms, this final decision will result in a decrease in average transmission charges of 2.5 per cent per annum from 2013–14 to 2016–17.

regulatory control period. In comparison, SP AusNet's revised proposal would result in an average bill reduction of approximately $10 in total or 0.2 per cent per annum. Table 3. shows the estimated impact of our final decision and SP AusNet's revised proposal on the average Victorian residential electricity bills, by tariff type.[30]

Table 3. AER estimated impact of the final decision for SP AusNet on the average residential electricity bills in Victoria over 2014–17 ($2013–14)

Tariff type[a]	Average annual bill[b]	Total reduction over 2014–17 — SP AusNet's revised proposal	Total reduction over 2014–17 — AER's final decision	Impact on annual bill—SP AusNet's revised proposal (per cent, per annum)	Impact on annual bill—AER's final decision (per cent, per annum)
Single rate	$1347	–$8	–$9	–0.2	–0.2
Two-rate	$1743	–$10	–$12	–0.2	–0.2
Time-of-use	$2231	–$12	–$15	–0.2	–0.2

Source: Essential Services Commission Victoria, *Energy retailers comparative performance report—pricing*, October 2013, p. 17; AER analysis.

(a) The single rate tariff is based on 4000 kilowatt hours (kWh) peak consumption per year. This use is typical of a customer who has gas hot water and heating.
The two-rate tariff is based on 4000 kWh peak and 2500 kWh off-peak consumption per year (off-peak is between 11 pm and 7 am). This use is typical of a customer with no gas supply who has off peak electric hot water.
The time-of-use tariff is based on 3000 kWh peak and 6000 kWh off-peak consumption per year. Off-peak includes the whole weekend and between 11 pm and 7 am Monday to Friday. This use is typical of a customer who uses the off-peak time for any purpose over the weekend in addition to hot water and heating overnight.

(b) The average annual bills reflect a weighted average of the market offers and standing offers as shown on the Victorian Government's electricity and gas comparator website at 3 July 2013 (http://yourchoice.vic.gov.au/). They also reflect the average offers across all the distribution zones in Victoria. Retailers that have fewer than 1000 customers in Victoria are not included in this analysis.

Similarly, for an average electricity bill for businesses in Victoria, our final decision is expected to on average lead to lower bills.[31] If the lower transmission charges arising from this final decision were passed through to end customers, then average business electricity customer bills could be expected to reduce by about $48 in total ($2013–14) or 0.2 per cent per annum during the 2014–17 regulatory control period. In comparison, SP AusNet's revised proposal would result in an average bill reduction of approximately $40 in total, or 0.2 per cent per annum. Table 3. shows the estimated impact of our final decision and SP AusNet's revised proposal on average Victorian business electricity bills by tariff type.

30 Our final decision on SP AusNet's revenue requirements resulted in a slightly larger reduction to a typical residential electricity bill than SP AusNet's revised proposed revenue. This is because our final decision revenue path (smoothed) is differently to that of SP AusNet's revised proposal (figure 4.2). Figure 4.4 in attachment 4 shows our final decision revenue path results in a more steady decrease in prices over the 2014–17 regulatory control period when compared to that of SP AusNet's revised proposal.

31 We note that there are other factors that may also impact on electricity bills.

Table 3. AER estimated impact of the final decision for SP AusNet on the average electricity bills of businesses in Victoria over 2014–17 ($2013–14)

Tariff type[a]	Average annual bill[b]	Total reduction over 2014–17 — SP AusNet's revised proposal	Total reduction over 2014–17 — AER's final decision	Impact on annual bill— SP AusNet's revised proposal (per cent, per annum)	Impact on annual bill— AER's final decision (per cent, per annum)
Single rate	$3777	–$21	–$25	–0.2	–0.2
Time-of-use	$10661	–$60	–$72	–0.2	–0.2

Source: Essential Services Commission Victoria, *Energy retailers comparative performance report—pricing*, October 2013, p. 17; AER analysis.

(a) The single rate business tariff is based on 12000 kWh peak consumption per year. This use is typical of a business that is closed on weekends.
The time-of-use business tariff is based on 25000 kWh peak and 15000 kWh off-peak consumption per year. Off-peak includes the whole weekend. This use is typical of a larger business that is open more than five days a week.

(b) The average annual bills reflect a weighted average of the market offers and standing offers as shown on the Victorian Government's electricity and gas comparator website as at 3 July 2013 (http://yourchoice.vic.gov.au/). They also reflect the average offers across all the distribution zones in Victoria. Retailers that have fewer than 1000 customers in Victoria are not included in this analysis.

3.4 AER decision

Decision 3.1: We determine a total revenue cap of $1600 million for SP AusNet for the 2014–17 regulatory control period.

Decision 3.2: We determine SP AusNet's annual building block revenue requirement, X factor and annual expected MAR over the 2014–17 regulatory control period to be as set out in Table 3..

Decision 3.3: We determine SP AusNet's annual adjustment process for the MAR over the 2014–17 regulatory control period to be as set out in the transmission determination for SP AusNet for the 2014–17 regulatory control period.

4 Regulatory asset base

The regulatory asset base (RAB) is the value of SP AusNet's assets that are used to provide prescribed transmission services. These include transmission lines, substations, IT systems, land and easements, motor vehicles and buildings. The RAB is the value on which SP AusNet earns a return on capital. Further, SP AusNet is allowed to earn a depreciation allowance (or a return of capital) on its RAB. Hence, the RAB is an important input for the return on capital and depreciation building blocks and, consequently, the revenue requirement.

As part of this final decision, we are required to assess SP AusNet's opening value for the RAB for each year of the 2008–14 and 2014–17 regulatory control periods in its revised proposal.[32] This involves:

- rolling forward the opening RAB as at 1 April 2008 to determine the closing RAB as at 31 March 2014[33]
- using our final decision on forecast depreciation, capex, disposals and inflation for the 2014–17 regulatory control period to roll forward SP AusNet's forecast RAB for each year of that period.

4.1 Final decision

We accept SP AusNet's method in its revised proposal for determining its revised opening RAB value as at 1 April 2014 and its forecast RAB for the 2014–17 regulatory control period, subject to some modelling input updates. SP AusNet adopted all aspects of our draft decision on the opening RAB.[34] The difference between our final decision and SP AusNet's revised proposal mainly reflects updates to inputs in SP AusNet's revised roll forward model (RFM) and post–tax revenue model (PTRM).

Table 4. and Table 4. set out our final decisions on the roll forward of SP AusNet's RAB during the 2008–14 regulatory control period and the forecast RAB for the 2014–17 regulatory control period respectively.

4.2 Summary of analysis and reasons

We determine SP AusNet's opening RAB value as at 1 April 2014 to be $2876 million ($ nominal). This value is $6.7 million (0.2 per cent) higher than SP AusNet's value of $2869 million ($ nominal) in its revised proposal. This is because we updated the inflation input for 2013–14 using the actual December 2013 consumer price index (CPI) published by the Australian Bureau of Statistics (ABS). We also corrected a minor cell reference error in SP AusNet's revised RFM associated with the provisions adjusted as-commissioned capex values. This reflects our draft decision to adjust actual capex value to reverse movements in provisions.[35] SP AusNet has agreed to this error correction.[36]

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32 NER, clause 6A.6.1.
33 This closing RAB value is also used to determine the value of the opening RAB as at 1 April 2014 for the 2014–17 regulatory control period.
34 SP AusNet, *Revised revenue proposal*, p. 105.
35 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 139.
36 SP AusNet, *Response to information request AER RRP 27, Correction of modelling error in RFM 'SPI dep'*, 20 January 2014.

We forecast SP AusNet's RAB to be $3186 million ($ nominal) by 31 March 2017. This forecast represents a reduction of $31.8 million (1.0 per cent) to SP AusNet's revised proposal.[37] The main reasons for this reduction are our adjustments to:

- forecast capex (attachment 2)
- the opening RAB as at 1 April 2014 (in this chapter)
- forecast regulatory depreciation (chapter 6).

Table 4. AER's final decision on SP AusNet's RAB for 2008–14 ($ million, nominal)

	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14[a]
Opening RAB	2191.2	2260.2	2309.8	2365.6	2452.2	2554.4
Capital expenditure[b]	95.4	114.8	113.4	136.9	177.8	131.7
CPI indexation on opening RAB	80.8	47.7	61.3	73.4	54.1	70.1
Straight-line depreciation[c]	–107.1	–112.9	–118.9	–123.7	–129.6	–127.4
Closing RAB as at 31 March	2260.2	2309.8	2365.6	2452.2	2554.4	2628.8
Difference between estimated and actual capex (2007–08)						5.1
Return on difference for 2007–08 capex						3.9
Difference between estimated and actual assets under construction (2007–08)						22.2
Return on difference for 2007–08 assets under construction						17.0
Difference between estimated and actual Group 3 assets as at 1 April 2008						0.7
Return on difference for Group 3 assets as at 1 April 2008						0.5
Group 3 assets as at 1 April 2014[d]						144.4
Equity raising costs (2003–08)						53.4
Opening RAB as at 1 April 2014						2876.0

Source: AER analysis.
(a) Based on estimated capex. An update for actual capex will be made at the next reset.
(b) As incurred, net of disposals, and adjusted for actual CPI and weighted average cost of capital (WACC).
(c) Adjusted for actual CPI. Based on as-commissioned capex.
(d) As discussed in our draft decision, we accepted SP AusNet's proposed Group 3 asset roll-in of $144.4 million as at 1 April 2014 (AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 137–8).

[37] SP AusNet's revised forecast RAB as at 31 March 2017 is $3218 million ($ nominal).

Table 4. AER's final decision on SP AusNet's RAB for the 2014–17 regulatory control period ($ million, nominal)

	2014–15	2015–16	2016–17
Opening RAB as at 1 April 2014	2876.0	2958.9	3073.2
Capital expenditure[a]	157.9	195.3	199.1
Inflation indexation on opening RAB	70.5	72.5	75.3
Straight-line depreciation[b]	–145.5	–153.5	–161.9
Closing RAB	2958.9	3073.2	3185.7

Source: AER analysis.
(a) As incurred, and net of disposals. In accordance with the timing assumptions of the post-tax revenue model (PTRM), the forecast capex includes a half-WACC allowance to compensate for the six month period before capex is added to the RAB for revenue modelling.
(b) Based on as-commissioned capex.

4.2.1 Opening RAB as at 1 April 2014

We determine SP AusNet's opening RAB as at 1 April 2014 to be $2876 million ($ nominal). The difference between this amount and SP AusNet's revised proposal is due to indexation for 2013–14 in the opening RAB roll forward and an error correction associated with the 2008–09 to 2013–14 as-commissioned capex values in the RFM.

As outlined in our draft decision, our intention was to update the forecast inflation input for 2013–14 with actual inflation using the December 2013 CPI for the final decision.[38] The December 2013 CPI was not available at the time SP AusNet submitted its revised proposal.

In our draft decision, we accepted SP AusNet's proposed method for determining its opening RAB value as at 1 April 2014, subject to a number of changes.[39] These changes included adjusting actual capex values to reverse the movements in provisions and reducing SP AusNet's proposed adjustment for the difference between estimated and actual capex for 2007–08. We converted SP AusNet's equity raising costs allowance to a lump sum for capitalising in its RAB and made corrections to minor input errors in the RFM. We also added $144.4 million ($ nominal) Group 3 assets that were completed during the 2008–14 regulatory control period to SP AusNet's opening RAB as at 1 April 2014.[40]

In its revised proposal, SP AusNet adopted all aspects of our draft decision in relation to the opening RAB.[41] SP AusNet updated its forecast capex and disposals for 2012–13 with actual capex and

38 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 133.
39 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 137.
40 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 137–8. During a regulatory control period, AEMO or a distribution business may request SP AusNet to provide augmentations to the transmission network or distribution connection services. While the assets constructed due to these requests provide prescribed transmission services, the forecast capex associated with these assets sit outside of the revenue determination. This is because SP AusNet is not responsible for the planning of these capex. SP AusNet refers to these services as 'excluded prescribed services', and the assets which provide these services are referred to as 'Group 3' assets. Group 3 assets sit outside of the RAB and are governed by commercial contracts until such time as they are rolled into the RAB, usually at the next revenue reset. (SP AusNet, *Revenue proposal*, p. 30.)
41 SP AusNet, *Revised revenue proposal*, pp. 102–6.

disposals for that year in its revised RFM. SP AusNet also updated its estimated capex for 2013–14 in the revised RFM.

We accept SP AusNet's actual capex and disposals for 2012–13. These figures have been checked against SP AusNet's audited regulatory accounting data for that year. We also accept SP AusNet's revision of the estimated capex for 2013–14. We consider the estimated capex amounts to be reasonable. This amount is lower than those approved in our draft decision and reflect the best forecast available. The financial impact of any difference between actual and estimated capex for 2013–14 will be accounted for at the next reset.[42]

In addition, we corrected a minor cell reference error in SP AusNet's revised RFM associated with the provisions adjusted as-commissioned capex values. This reflects our draft decision to adjust actual capex to reverse movements in provisions.[43] SP AusNet has agreed to this error correction.[44]

Equity raising costs

We determine that including $53.4 million ($ nominal) in SP AusNet's opening RAB as at 1 April 2014 is appropriate. This approach allows SP AusNet to recover the previously approved equity raising costs allowance associated with SP AusNet's opening RAB as at 1 January 2003 and capex incurred over the 2003–08 regulatory control period.

In our draft decision, we decided to capitalise SP AusNet's allowance for equity raising costs into the RAB, which had been treated as an opex item in perpetuity as approved in the ACCC's 2002 revenue cap decision.[45] We determined the approach in the draft decision would improve transparency and ensure future revenue resets for SP AusNet would be administratively simpler. We consider treating the equity raising cost allowance in perpetuity as opex or in the RAB must be net present value (NPV) neutral. In converting the equity raising cost allowance from a perpetuity approach to a capitalisation approach, we took the following steps:[46]

1. We applied the benchmark equity raising transaction cost approved in the ACCC's 2002 revenue cap decision to the equity component of SP AusNet's 2003 opening RAB and capex incurred over the 2003–08 regulatory control period.

2. We adjusted the sum of the amounts calculated in step 1 for the perpetuity allowances SP AusNet received over previous regulatory control periods and the foregone returns as at 1 April 2014 if the equity raising costs were instead capitalised.

In its revised proposal, SP AusNet adopted our approach to capitalising the equity raising costs into its RAB and incorporated our draft decision amount into its revised RFM.[47]

The Energy Users Association of Australia (EUAA) made a submission on our draft decision disagreeing with our approach to capitalising the equity raising costs that were previously funded as opex.[48] EUAA submitted that by taking this approach the AER was effectively re-writing a regulatory decision that occurred in 2002. The EUAA submitted that only the equity raising costs allowed in the

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42 NER, clause S6A.2.1(f)(3).
43 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 139.
44 SP AusNet, *Response to information request AER RRP 27, Correction of modelling error in RFM 'SPI dep'*, 20 January 2014.
45 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 140.
46 We applied the same approach in the 2008 final decision for ElectraNet.
47 SP AusNet, *Revised revenue proposal*, p. 105.
48 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, pp. 5–6.

2013–14 regulatory year should be capitalised based on the allowed rate of return determined for the 2014–17 regulatory control period.

We acknowledge the EUAA's concerns and have considered its proposed approach to capitalising the equity raising costs. However, after careful assessment of the issue we consider our draft decision approach to be the most appropriate under the circumstances for the following reasons:

- NPV neutrality—EUAA's approach to capitalising only the equity raising costs allowed in the 2013–14 regulatory year is not NPV neutral with the ACCC's 2002 decision to recover the equity raising costs as opex in perpetuity. This results in SP AusNet experiencing a loss in moving from treating the equity raising costs as opex in perpetuity to capitalising the equity raising costs into the RAB. Our draft decision approach ensures that there is no difference in NPV terms between capitalising the equity raising costs and leaving it as opex in perpetuity.
- Additional benefits—EUAA submitted that the AER should leave the equity raising costs as opex in perpetuity if it did not accept EUAA's alternative approach. We consider our method of capitalising the equity raising costs to be an equivalent approach in NPV terms with additional benefits of increased transparency and lower administrative costs.

Therefore, we do not agree with the EUAA's submission on the capitalisation amount of SP AusNet's equity raising costs. We consider our approach to determine the amount for capitalisation reflects the assumptions underlying the ACCC's 2002 decision and therefore is NPV neutral in terms of treating the equity raising costs as an opex allowance in perpetuity.

4.2.2 Forecast closing RAB as at 31 March 2017

We forecast SP AusNet's closing RAB to be $3186 million ($ nominal) by 31 March 2017.[49] The difference between this amount and SP AusNet's revised proposal reflects our final decision inputs for determining the forecast RAB in the PTRM. To determine the forecast RAB value for SP AusNet, we made the following amendments in the revised PTRM:

- We reduced SP AusNet's revised forecast capex by $28.6 million or 5.3 per cent (attachment 2)
- We increased SP AusNet's revised opening RAB as at 1 April 2014 by $6.7 million or 0.2 per cent (section 4.2.1)
- We increased SP AusNet's revised forecast regulatory depreciation allowance by $2.9 million or 1.2 per cent (chapter 6).

4.3 AER decision

Decision 4.1 We determine that SP AusNet's opening RAB as at 1 April 2014 is $2876 million ($ nominal) as set out in Table 4..

Decision 4.2 We determine that SP AusNet's forecast opening RAB for each year of the 2014–17 regulatory control is as set out in Table 4..

[49] At the next reset, the RAB roll forward for establishing SP AusNet's opening RAB value as at 1 April 2017 will be based on actual capex during the 2014–17 regulatory control period and actual depreciation values calculated for that period.

5 Return on capital

As part of making a determination on the annual building block revenue requirement for a TNSP, we are required to make a decision on the return on capital building block.[50] The return on capital building block is calculated as the product of the weighted average cost of capital (or rate of return) and the value of the RAB.

This chapter discusses the cost of capital element of the return on capital building block. As noted in chapter, transitional arrangements provide that an older version of the NER (version 52) continues to apply to SP AusNet on an interim basis. Under this version of the NER, the key parameters used to calculate the cost of capital must be consistent with our 2009 WACC review.[51]

5.1 Final decision

We accept SP AusNet's proposed method for estimating the weighted average cost of capital (WACC). Consistent with this method, we have updated SP AusNet's revised proposal WACC to reflect the agreed averaging period.[52] This results in a WACC of 7.87 per cent, as set out in Table 5..

Our final decision on WACC only differs from SP AusNet's revised proposal due to the use of different averaging periods for estimating the risk free rate and the debt risk premium (DRP). Specifically, SP AusNet's WACC in its revised proposal was based on market data from 24 June 2013 to 19 July 2013.[53] Our final decision, however, is based on market data from the agreed averaging period (18 November 2013 to 13 December 2013). We agreed to the averaging period proposed by SP AusNet in its initial proposal. We consider a 7.87 per cent rate of return has been determined in accordance with the requirements of the NER and provides SP AusNet with a reasonable opportunity to recover at least the efficient costs of capital financing. Consequently, we expect SP AusNet will be able to attract funds to support the efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers.

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50 NER, clause 6A.5.4(a)(2).

51 AER, *Electricity transmission and distribution WACC parameter review*, 1 May 2009: http://www.aer.gov.au/node/510.

52 SP AusNet proposed an averaging period of 20 business days from 18 November to 13 December 2013. We agreed on this averaging period. SP AusNet, *Revenue proposal appendix 9A: letter on WACC averaging period*, p. 2.

53 This is because SP AusNet adopted our draft decision WACC parameters for its revised revenue proposal. SP AusNet, *Revised revenue proposal*, p. 111.

Table 5. AER's final decision on WACC parameters

Parameter	AER draft decision	SP AusNet revised proposal	AER final decision
Nominal risk free rate	3.54%	3.54%	4.31%
Equity beta	0.8	0.8	0.8
Market risk premium	6.5%	6.5%	6.5%
Debt risk premium	3.00%	3.00%	2.48%
Gearing level	60%	60%	60%
Inflation forecast	2.5%	2.5%	2.45%
Gamma	0.65	0.65	0.65
Nominal post-tax cost of equity	8.74%	8.74%	9.51%
Nominal pre-tax cost of debt	6.55%	6.55%	6.79%
Nominal vanilla WACC	7.43%	7.43%	7.87%

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 112.
Note: The parameters published in our draft decision and SP AusNet's revised revenue proposal were calculated on an indicative averaging period from 24 June 2013 to 19 July 2013. Our final decision reflects data from 18 November 2013 to 13 December 2013.

5.2 Summary of analysis and reasons

We did not change our assessment approach for individual parameters from our draft decision. Section 4.3 of attachment 4 of our draft decision details that approach.[54]

Consistent with the NER, in estimating the rate of return we must use the values and credit rating determined in the WACC review.[55] SP AusNet's proposed method for determining the WACC adopted the values and credit rating determined in the WACC review, specifically:

- the equity beta
- the MRP
- the level of gearing
- credit rating for estimating the cost of debt
- the value of the assumed utilisation of imputation credits (gamma).[56]

We therefore accept SP AusNet's proposed values for these parameters.

In establishing the WACC, we also accept SP AusNet's proposed methods for determining the DRP, the nominal risk free rate and inflation forecasts. Consistent with the accepted methods, we have

54 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 126–128.
55 NER, clause 6A.6.2(h).
56 The assumed utilisation of imputation credits (gamma) affects the corporate income tax building block allowance. Although gamma is not directly included in the determination of the WACC, it was determined in the WACC review.

updated SP AusNet's revised proposal WACC to reflect the agreed averaging period. Our reasons for accepting these methods are consistent with those adopted in our draft decision.

5.2.1 Debt risk premium

In the draft decision, we accepted SP AusNet's proposed benchmark assumption and method for determining the DRP.[57] For this final decision, we have updated SP AusNet's DRP in its revised proposal to reflect the agreed averaging period.[58] This results in a DRP of 2.48 per cent.

The DRP is the margin above the nominal risk free rate that a debt holder would require to invest in the debt issued by a benchmark efficient service provider. Combined with the nominal risk free rate, the DRP represents the return on debt and is an input for calculating the WACC.

We accept SP AusNet's proposed method for establishing the DRP, in particular, its proposal to estimate the benchmark DRP solely on the Bloomberg BBB fair value curve.[59] We also accept SP AusNet's proposed method to extrapolate the Bloomberg BBB fair value curve from seven to 10 years, based on PricewaterhouseCooper's (PwC)[60] analysis of paired bonds.[61] We accepted this DRP method and PwC's paired bonds approach in the recent ElectraNet's 2013–18 transmission determination.[62] For this final decision, our update to estimate the DRP using the agreed averaging period resulted in us identifying four bond pairs that satisfy the PwC criteria used to select paired bonds. They are:

- a pair of GPT bonds
- a pair of Commonwealth Property bonds
- a pair of Sydney airport bonds, and
- a pair of SPI bonds.

In forming this final decision, we considered submissions by EUCV[63] and EUAA[64] that the use of the Bloomberg BBB fair value curve to estimate the DRP overcompensates SP AusNet for its actual cost of debt.[65] We stated in the draft decision that we are mindful of the Australian Competition Tribunal's recommendation to undertake a public consultation process before selecting an alternative DRP method.[66] We recently published our Rate of return guideline in December 2013. This guideline process provided us with an opportunity to develop and consult on both our method to estimating the return on debt and how to implement that method. In this guideline, we proposed that future regulatory decisions would employ a return on debt estimate using a trailing average portfolio approach with annual update.[67] We will use this guideline to inform the next revenue reset for SP AusNet starting 1 April 2017.

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57 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 129.
58 The agreed averaging period was from 18 November 2013 to 13 December 2013.
59 SP AusNet, *Revenue proposal*, pp. 174–175.
60 PwC, *SP AusNet: Debt risk premium for the 2013 Victorian transmission revenue review*, March 2013, pp. 9, 13–14.
61 Seven years is the maximum term currently published for the Bloomberg BBB fair value curve.
62 AER, *Final decision: ElectraNet transmission determination 2013–14 to 2017–18*, April 2013, pp. 133–134.
63 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp. 15–19
64 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 15.
65 We note that our final decision benchmark DRP estimate of 248 basis points is close to the EUAA's calculated value of 235 basis points for SP AusNet's 10 year bond issue. EUAA. *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 15.
66 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 130.
67 AER, *Better regulation rate of return guideline,* December 2013, p. 19.

5.2.2 Expected inflation rate

We accepted SP AusNet's proposed method for forecasting inflation in the draft decision.[68] This method is consistent with what we have previously adopted. In applying the method for this final decision, we updated SP AusNet's proposed inflation estimate to reflect the latest Reserve Bank of Australia's forecasts. These estimates, shown in Table 5., result in an inflation forecast of 2.45 per cent per annum.

Table 5. AER's decision on inflation forecast (per cent)

	2014–15	2015–16	2016–17 to 2023–24	Geometric average
Forecast inflation	2.50[a]	2.00[a]	2.50	2.45

Source: RBA, *Statement on Monetary Policy*, November 2013, p. 65.
(a) The RBA published a range of 2.0–3.0 per cent and a range of 1.5–2.5 per cent for its December 2014 and December 2015 inflation forecasts respectively. We have selected the mid-point of 2.5 per cent and 2 per cent respectively for the purposes of this decision.

5.3 AER decision

Decision 5.1: We determine a WACC of 7.87 per cent for SP AusNet as set out in Table 5..

[68] AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 131.

6 Regulatory depreciation

We are required to decide on SP AusNet's indexation of the RAB and depreciation building blocks over the 2014–17 regulatory control period.[69] We use regulatory depreciation to model the nominal asset values over the regulatory control period, and set the depreciation allowance in the annual building block revenue requirement. The regulatory depreciation allowance (or return of capital) is the net total of the straight-line depreciation (negative) amount and the amount from indexation of the RAB (positive).

SP AusNet is required to submit a proposed depreciation schedule for its RAB in its revised proposal.[70] The depreciation schedule sets out the basis on which the RAB is to be depreciated for the purpose of determining the regulatory depreciation allowance. We must assess whether the revised depreciation schedule complies with the relevant requirements of the NER.[71]

6.1 Final decision

We accept SP AusNet's proposed depreciation approach set out in its revised proposal. SP AusNet adopted all aspects of our draft decision.[72] However, our final decision on SP AusNet's annual regulatory depreciation allowance for the 2014–17 regulatory control period differs from SP AusNet's revised proposal because of our determinations on other components of SP AusNet's revised proposal. Table 6. sets out our final decision on SP AusNet's annual regulatory depreciation allowance for the 2014–17 regulatory control period.

Table 6. AER's final decision on SP AusNet's depreciation allowance for the 2014–17 regulatory control period ($ million, nominal)

	2014–15	2015–16	2016–17	Total
Straight-line depreciation	145.5	153.5	161.9	460.9
Less: inflation indexation on opening RAB	70.5	72.5	75.3	218.2
Regulatory depreciation	75.1	81.0	86.6	242.7

Source: AER analysis.

6.2 Summary of analysis and reasons

We determine SP AusNet's regulatory depreciation allowance to be $242.7 million ($ nominal) for the 2014–17 regulatory control period. Our final decision represents an increase of $2.9 million (or 1.2 per cent) to SP AusNet's revised proposal. This is because of our determinations on other components of SP AusNet's revised proposal, which affect the regulatory depreciation allowance.[73] These determinations include the forecast capex (attachment 2), the opening RAB as at 1 April 2014 (chapter 4) and the forecast inflation (chapter 5).

69 NER, clauses 6A.5.4(a)(1) and (3).
70 NER, clause S6A.1.3(7).
71 NER, clauses 6A.6.3(b)(1) and (2).
72 SP AusNet, *Revised revenue proposal*, p. 108.
73 NER, clause 6A.6.3(a)(1).

6.3 AER decision

Decision 6.1: We determine SP AusNet's forecast regulatory depreciation allowance to be $242.7 million ($ nominal) over the 2014–17 regulatory control period as set out in Table 6..

Revision 6.2: We determine SP AusNet's standard asset lives as at 1 April 2014 for the 2014–17 regulatory control period to be as set out in Table 6.3 of the draft decision.[74]

[74] AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 146.

7 Capital expenditure

Forecast capex is the forecast expenditure to fund new assets and replace or refurbish existing assets that a network business is likely to require during a regulatory control period for the efficient operation of the network. We used the final approved forecast capex in conjunction with the opening RAB, rate of return and depreciation to determine the return on capital building block.

We must accept SP AusNet's forecast capex if we are satisfied it reasonably reflects the capex criteria. Otherwise, we must not accept SP AusNet's forecast capex and we must substitute our own. Attachment 2 sets out the detailed reasons for our final decision on SP AusNet's forecast capex.

7.1 Final decision

We do not approve SP AusNet's total forecast capex of $541.7 million ($2013–14).[75] Instead, we forecast the capex requirements at $513.1 million ($2013–14), which is 5.3 per cent less than SP AusNet's forecast. Table 7. shows our final decision compared with SP AusNet's total forecast capex.

Table 7. AER's final decision capex and SP AusNet's revised forecast capex ($ million, 2013–14)

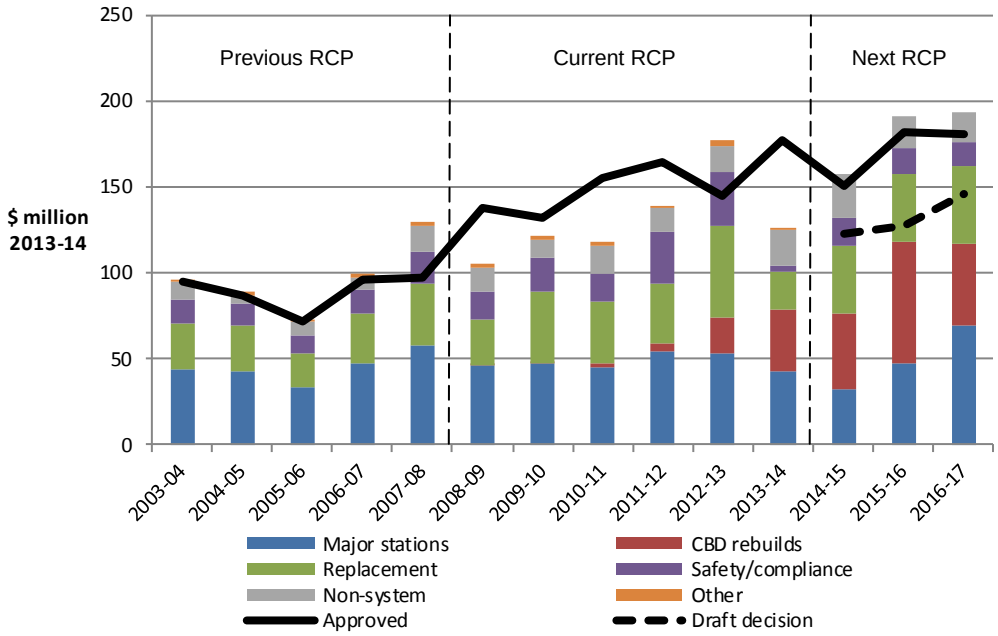
Category	2014–15	2015–16	2016–17	Total	SP AusNet	Difference
Major stations:						
Richmond	31.4	22.1	18.9	72.4	73.3	-0.9
West Melbourne	11.3	32.9	23.8	68.0	68.8	-0.8
Relocate distributors' assets	1.5	12.9	3.7	18.1	20.7	-2.6
Other stations	31.3	46.3	64.5	142.2	148.5	-6.4
Total major stations	75.5	114.2	110.9	300.7	311.4	-10.7
Asset replacement	35.5	35.6	40.9	112.0	124.2	-12.3
Safety and compliance	14.9	13.4	12.2	40.5	44.9	-4.3
Non-system	24.6	18.5	16.8	59.9	61.2	-1.3
Total	**150.6**	**181.8**	**180.8**	**513.1**	**541.7**	**-28.6**

Source: SP AusNet, *Revised revenue proposal*, p. 54; AER analysis. Numbers may not add up due to rounding.

Figure 7. compares our approved capex with SP AusNet's revised forecast capex for the 2014–17 regulatory control period and actual capex for the previous two periods. It also shows our final decision capex for the 2014–17 regulatory control period.

[75] SP AusNet, *Revised revenue proposal*, p. 54.

Figure 7. Comparison of AER's approved capex and SP AusNet's actual and forecast capex ($ million, 2013–14)



Source: SP AusNet, *Revised revenue proposal*, p. 54; AER analysis.
Note: RCP—regulatory control period.

7.2 Summary of analysis

We do not approve SP AusNet's proposed total forecast capex because it does not reasonably satisfy the requirements of the NER and NEO for the reasons outlined in attachment 2. We consider SP AusNet's proposed forecast capex is above its reasonable requirements. The following findings led to this determination:

- In its total forecast capex for its projects and programs of work, SP AusNet did not adequately account for prudent changes the we expect it will make during the 2014–17 regulatory control period ($19.6 million ($2013–14) reduction).
- SP AusNet's proposed real cost escalators do not reasonably reflect a realistic expectation of cost inputs required to achieve the capex objectives ($9.0 million ($2013–14) reduction).

Other key components that comprise our substitute forecast capex are:

- $68.0 million ($2013–14) to rebuild the West Melbourne Terminal Station (WMTS).
- $18.1 million ($2013–14) for SP AusNet to relocate assets owned by distributors at the Richmond terminal station (RTS) and WMTS, which SP AusNet did not include in its initial revenue proposal.
- $3.7 million ($2013–14) for SP AusNet to extend the life of four transformers at the RTS and WMTS.
- IT capex of $46.0 million ($2013–14) (in our draft decision we reduced SP AusNet's forecast IT capex by $16.8 million ($2013–14)).

West Melbourne terminal station

SP AusNet forecasts capex of $68.8 million ($2013–14) for the 2014–17 regulatory control period to rebuild the WMTS. SP AusNet intends to seek compensation from the Linking Melbourne Authority (LMA) for the additional project costs resulting from the LMA's intention to acquire part of the land on which the WMTS is situated as part of the East West Link road project. We agree with SP AusNet that road users, and not electricity users, should fund those additional costs.[76]

For the purposes of the NER, we consider SP AusNet's prudent and efficient costs of the WMTS rebuild project is net of any compensation it receives from the LMA. However, the timing and amount of compensation is uncertain and it is possible SP AusNet will not receive any compensation in the 2014–17 regulatory control period. Given this uncertainty we have included $68.0 million ($2013–14) in our total substitute forecast capex (SP AusNet's forecast capex of $68.8 million ($2013–14) adjusted for differences between SP AusNet's proposed real cost escalators and ours.) If SP AusNet does receive some compensation in the 2014–17 regulatory control period, the capex we will roll into the opening regulatory asset base (RAB) at the start of the 2017–22 regulatory control period will be net of any compensation it receives. We have adopted this approach instead of the one proposed by SP AusNet, which is to return the compensation to consumers via a negative cost pass through event (less 10 per cent which SP AusNet would retain as an incentive to seek compensation from the LMA). We do not consider the amount of compensation would pass the materiality threshold.

We consider it is important SP AusNet has an incentive to seek compensation from the LMA and electricity users should not have to pay the additional project costs caused by the LMA's actions. We expect SP AusNet to take all necessary action to obtain compensation from LMA. Under our approach SP AusNet still has a strong incentive to seek compensation because the early receipt of compensation would provide benefits similar to capex underspends under the current incentive framework.

Prudency adjustment

We reduced SP AusNet's forecast capex by $19.6 million ($2013–14) to account for prudent changes we expect SP AusNet will make to its capex program during the 2014–17 regulatory control period. We consider SP AusNet's forecast capex does not adequately account for its commitment to continuous improvement in delivering its capex program. We consider SP AusNet's asset management framework will lead SP AusNet to find economies and make prudent changes to certain projects during 2014–2017. That is, SP AusNet should be able to identify projects that it could prudently defer, or for which it would be prudent to change the scope, optimise the design and specification, and/or integrate with other projects. We consider that in developing a portfolio of capex projects that make up the total capex forecast, SP AusNet should consider these prudent adjustments.

SP AusNet's forecast capex is built up from cost estimates of its individual projects and programs of work. However, taking account of the continuous improvement to its capex delivery program, at a portfolio level we consider SP AusNet's total efficient and prudent capex requirements will be less that it has forecast. To account for this portfolio level outcome we have applied a prudency adjustment.

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[76] SP AusNet, *Revised revenue proposal*, pp. 46–47.

Real cost escalators

We do not accept that SP AusNet's revised proposed real cost escalators reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives over the 2014–17 regulatory control period. However, there are parts we do accept. We have determined substitute escalators, which reflect our considerations that:

- where applicable, labour cost forecasts based on SP AusNet's enterprise agreements (EA) reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- in all other instances, labour cost forecasts derived from the average of the forecasts of BIS Shrapnel and Deloitte Access Economics (DAE) reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- forecast inputs and exchange rates for material escalation should be updated to reflect most recent data.

Attachment 1 contains our assessment of SP AusNet's proposed real cost escalators. Table 7. shows the impact of our real cost escalators on SP AusNet's forecast capex.

Table 7. Impact of the AER's real cost escalators on forecast capex ($ million, 2013–14)

	2014–15	2015–16	2016–17	Total
SP AusNet's revised revenue proposal	3.0	5.4	7.4	15.8
AER's final decision	1.2	2.2	3.4	6.8
Difference	1.7	3.2	4.1	9.0

Source: AER analysis. Numbers may not add up due to rounding.

Information technology capex

Our total substitute forecast capex includes information technology (IT) capex of $46.0 million ($2013–14). In our draft decision we reduced SP AusNet's forecast capex by $16.8 million ($2013–14).[77] We considered this represented strategic IT capex for which SP AusNet had not justified or quantified the benefits. We accepted the component we considered to be replacement capex, because it was consistent with the expected IT asset replacement cycle. In its revised revenue proposal, SP AusNet has now submitted the capex we identified as strategic IT capex is replacement capex, which is needed to maintain the resilience of its IT systems, otherwise customers would be exposed to substantial risk and potential costs.[78] It also submitted it included only the replacement capex component and not the strategic component of its capex program. In this way SP AusNet will fund the strategic component and will not seek to recover the costs from users. It would also retain any benefits associated with the strategic component, such as opex savings, it achieves in the 2014–17 regulatory control period.

[77] AER, *Draft decision: SP AusNet transmission determination*, pp. 87–89.
[78] SP AusNet, *Revised revenue proposal*, Appendix O.

7.3 AER decision

Decision 7.1: Table 7. shows our final decision on total forecast capital expenditure for the 2014–17 regulatory control period.

8 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital costs, including labour costs, incurred in the provision of network services. Opex is one of the building blocks used to determine SP AusNet's total revenue requirement.

8.1 Final decision

On 14 October 2013 SP AusNet submitted its revised total opex forecast of $594.6 million ($2013–14).[79] However, on 29 November 2013 it resubmitted its controllable opex model, which effectively revised its total opex to $599.6 million.[80] From herein, all references to SP AusNet's "revised proposed opex" refer to the 29 November 2013 revision.

We are not satisfied that the total of the forecast opex for the regulatory control period reasonably reflects each of the opex criteria and we therefore do not accept the forecast.[81] We estimate the total required opex for the regulatory control period that we are satisfied does reasonably reflects opex criteria, taking into account the opex factors, is $560.0 million.[82] Our final decision is therefore to approve a substitute total opex forecast of $560.0 million and forecast opex for each regulatory year as set out in Table 8. which we are satisfied reasonably reflects the opex criteria.[83] Our final decision is $39.6 million less than SP AusNet's revised proposal (Table 8.)

Table 8. AER's final decision and SP AusNet's revised proposal, total opex ($ million 2013–14)

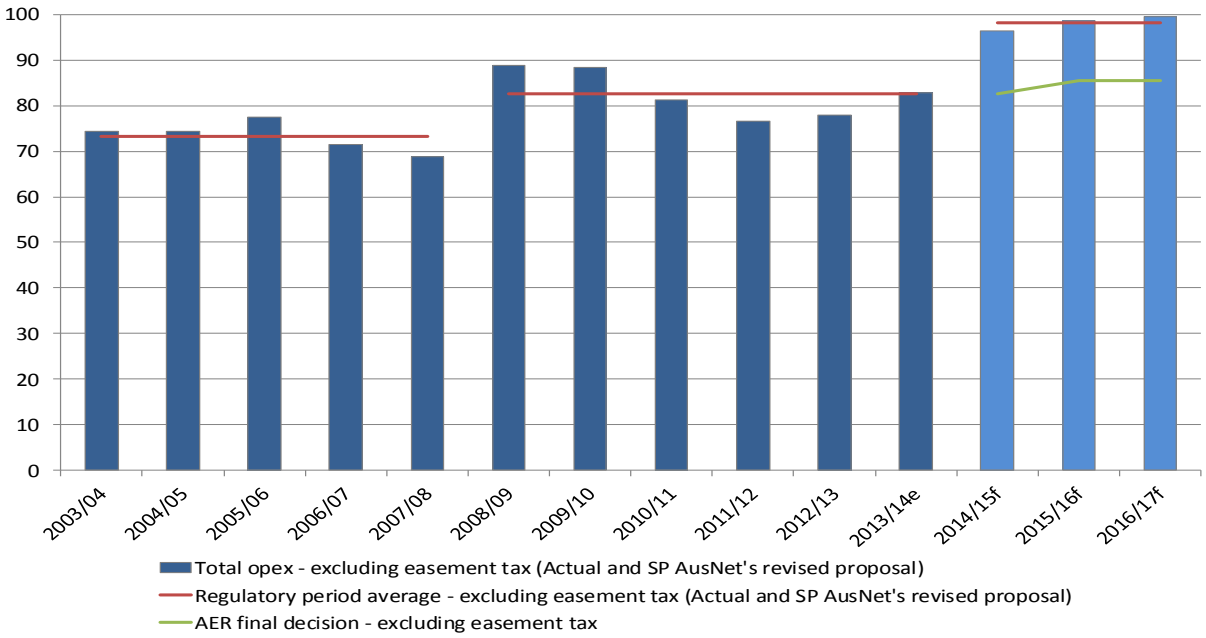
	2014–15	2015–16	2016–17	Total
SP AusNet revised proposal	197.3	202.0	200.3	599.6
AER final decision	184.2	188.8	187.0	560.0
Difference	–13.1	–13.2	–13.3	–39.6

Source: AER Analysis.
Note: excludes equity raising costs (ERC).

Our final decision is a 2.2 per cent real increase on SP AusNet's total average expenditure in the 2008–14 regulatory period. Figure 8. shows the actual and average expenditure over the last two regulatory control periods, compared with the forecast period. We use annual averages because the regulatory periods are different lengths.

79 Unless otherwise stated, all controllable opex in this chapter is in $2013–14 mid-year dollars. SP AusNet's revised proposal total opex forecast was $598.0 million (SP AusNet, *Revised revenue proposal*, p. 94). This figure includes $274.1 million of controllable opex ($2013–14 end–year dollars). The revised revenue proposal total opex forecast of $594.6 million includes $270.7 million of controllable opex ($2013–14 mid–year dollars).
80 Controllable opex increased from $270.7 million to $275.6 million.
81 NER cl.6A.6.6(c) and (d).
82 NER cl.6A.14.1(3)(ii).
83 NER cl.6A.13.2(b).

Figure 8. AER's final decision, total opex (less easement land tax)* ($ million, 2013–14)



Source: AER analysis.
Note: Easement land tax is excluded from non-controllable opex in this chart because, positive or negative variations (>1% MAR) between the actual tax paid and the forecast approved by us will be recovered/reimbursed via an annual recovery mechanism. It comprises 51% of the proposal. (e) 2013-14 data is a budget estimate (f) refers to forecast.

Table 8. AER final decision, 2014–15 to 2016–17 ($ million, 2013–14)

	2014-15	2015-16	2016-17	Total
Controllable opex				
Base opex	70.9	70.9	70.9	212.6
Step changes	1.9	2.4	2.1	6.4
Trend	5.0	6.5	7.6	19.1
Subtotal: controllable	**77.7**	**79.8**	**80.6**	**238.2**
Non-controllable opex				
Self-insurance	1.7	1.7	1.6	5.0
Availability incentive scheme	2.3	2.3	2.3	6.8
Debt raising costs	1.5	1.6	1.6	4.7
Easement land tax	100.9	103.4	100.9	305.3
Subtotal: non-controllable	**106.4**	**109.0**	**106.4**	**321.8**
TOTAL	**184.2**	**188.8**	**187.0**	**560.0**

Source: AER analysis.

8.2 Summary of reasons for final decision

This summary provides an overview of the key factors in reaching our conclusions and final decision. The summary follows the structure of the attachment, with cross references to the sections within the attachment that provide a more detailed discussion of our reasoning.

What are we required to decide?

SP AusNet proposed a total forecast opex for the regulatory control period of $599.6 million in order to achieve the opex objectives set out in the NER.[84] We must accept SP AusNet's total forecast opex if we are satisfied that it reasonably reflects the opex criteria: that is, the efficient costs that a prudent operator in SP AusNet's circumstances would require, given a realistic expectation of the demand forecast and cost inputs, to achieve the opex objectives.[85] We must have regard to the opex factors when making that decision.[86]

If we are not satisfied that SP AusNet's proposed total forecast opex reasonably reflects the opex criteria, we must not accept the forecast.[87] We must estimate the total required opex that, in our view, does reasonably reflect the opex criteria taking into account the opex factors.[88]

What are the main components of SP AusNet's opex forecast?

In its revised revenue proposal, SP AusNet classified opex under two main categories – controllable opex and non-controllable opex.

In general terms, controllable opex is opex over which SP AusNet's management has a degree of discretion or control. Controllable opex includes costs for maintenance, support, asset works, network operations, insurance, corporate costs and human resources. Controllable opex, at a total level, tends to be relatively stable from one period to the next. SP AusNet proposed a total controllable opex of $275.6 million for the 2014–17 period.[89]

In contrast, non-controllable opex is opex that is not necessarily subject to the same level of management discretion.[90] Non-controllable opex includes easement land tax, debt raising costs, self-insurance and costs incurred under AEMO's availability incentive scheme (AIS). SP AusNet proposed a total forecast of non-controllable opex of $324.0 million for the 2014–17 period.

We discuss SP AusNet's revised proposal in detail in section 3.3 of attachment 3.

Are we satisfied that the total opex forecast reasonably reflects the opex criteria?

We consider that much of the total opex proposed by SP AusNet in its revised proposal is consistent with the requirements of the NER.

In particular, we largely agree with SP AusNet's revised proposal for non-controllable opex. Our main concern with SP AusNet's opex proposal centres on the controllable opex forecast. SP AusNet's revised proposal amounts to an 18 per cent (real) increase on its average controllable opex over the

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84 NER, cl 6A.6.6(a).
85 NER, cl 6A.6.6(c).
86 NER, cl 6A.6.6(e).
87 NER cl 6A.6.6(d).
88 NER cll 6A.13.2(b) and 6A.14.1(3).
89 SP AusNet, *Amended revised proposal opex model*, 29 November 2013 [confidential].
90 With the exception of self-insurance.

current regulatory control period (2008–14). Consumer submissions raised concerns with the proposed level of controllable opex that SP AusNet had forecast, and our analysis of SP AusNet's initial proposal in our draft decision had found that the controllable opex forecast was more than would reasonably reflect the opex criteria.

We therefore gave considerable attention to understanding and testing the reasons and justification SP AusNet put forward for its revised proposal forecast, engaging closely with SP AusNet to investigate the drivers of this proposed increase. We also engaged appropriate consultants to provide expert reports about relevant elements of the proposal.

Our overall assessment process and the methods we used to make our assessments are set out in more detail in section 3.4 of the opex attachment.

The results of our assessment of controllable opex

We assessed controllable opex using two primary methods – a top-down revealed costs method and a bottom-up technical engineering review.

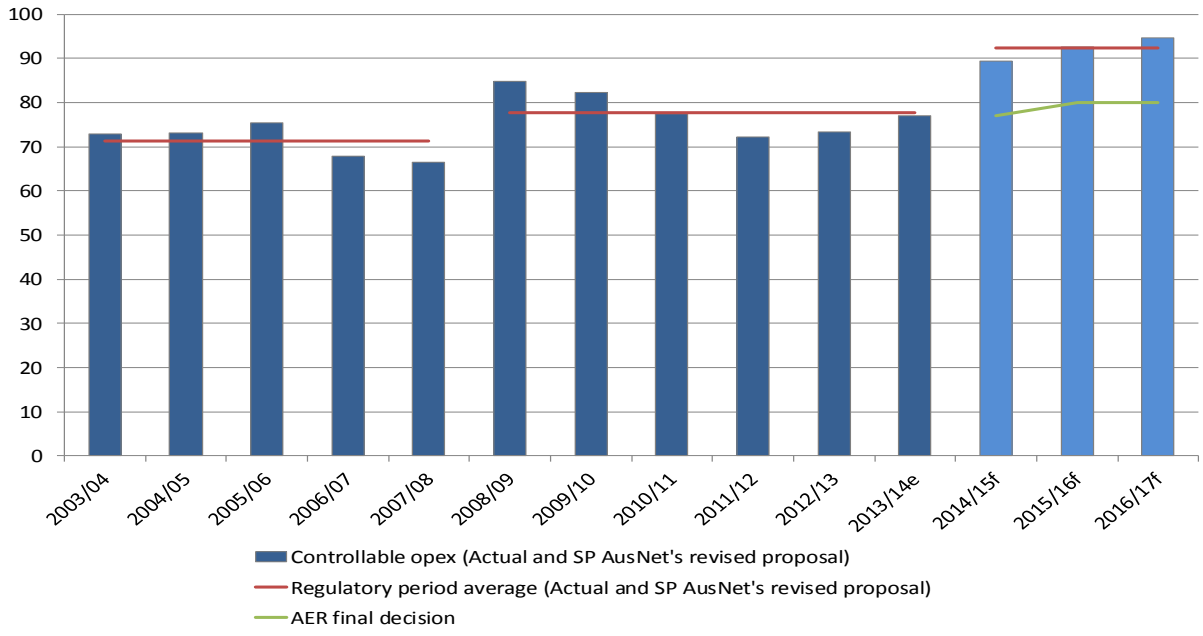
Our top down analysis is discussed in detail in section 3.5 of this attachment. The bottom up review of costs is set out in detail in section 3.5.6 of attachment 3.

Both the top-down and bottom-up assessments of controllable opex are aimed at arriving at a total opex forecast that reasonably reflects the opex criteria. They employ different methodologies and may arrive at different amounts for individual categories of expenditure in arriving at that total but they have the same goal of reaching a total that reasonably reflects the opex criteria.

In our top down analysis we examine revealed controllable costs in a recent year for which we have audited accounts (2011–12). We then extrapolate the likely expenditure that SP AusNet would need to incur over the 2014–17 regulatory period using those revealed costs. We make any necessary adjustments to be satisfied that the base year reasonably reflects the opex criteria. We consider any new drivers of expenditure and apply real cost escalators to project likely costs. We refer to this method as the base-step-trend method and we discuss it in detail in section 3.4 of the opex attachment.

Our top-down analysis indicates that SP AusNet's proposed forecast controllable opex is $37.4 million too high and we determined a substitute controllable opex allowance of $238.2 million (Figure 8.).

Figure 8. AER's final decision, controllable opex ($ million, 2013–14)



Source: AER analysis.
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

While our full conclusions are set out in the opex attachment at section 3.5, there were two major areas in which our analysis indicated that SP AusNet's proposed forecast was overstated. One major area is the step changes SP AusNet proposed. We found that some of the step changes were not new drivers of expenditure that reasonably reflected the opex criteria and we therefore did not approve them. Our reasons are set out in detail in section 3.5 of the opex attachment and Appendix A.

The second main area of difference concerns a sub-category of opex which SP AusNet refers to as asset works opex. A key concern noted by SP AusNet in its revised proposal was that our top-down approach, being based on a single year of expenditure, does not take account of the variability of asset works opex from year to year.[91] SP AusNet was concerned that a failure to take into account the variability of spending in this category of costs from year to year would leave it with insufficient funds to carry out necessary works during the 2014–17 period. SP AusNet proposed a modification to the base-step-trend method on the basis that the asset works opex forecast developed on the 2011–12 base year was insufficient. In short, its proposal was for this one sub-category of opex to be averaged over a period of six years and for this average to be substituted for the equivalent asset works component of the base year.[92]

We engaged Frontier Economics to provide a report on SP AusNet's proposed modified base-step-trend approach.[93] Frontier Economics recommended, and we accept, that the proposed modification was not justified or appropriate. Making a special adjustment for one subcategory of opex, without making similar adjustments for other subcategories of opex which also vary from year to year (sometimes more significantly than asset works opex), is not appropriate as it is not internally consistent. Frontier Economics advised that our single year base-step-trend method was appropriate

91 SP AusNet, *Revised revenue proposal*, pp. 63–72.
92 SP AusNet, *Revised revenue proposal*, pp. 68–9.
93 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013.

in the particular circumstances of SP AusNet to give effect to the NER requirements. We discuss this in more detail in section 3.5.2 of attachment 3. Nevertheless, we understand that our role is to provide a total opex allowance that reasonably reflects the opex criteria over the next regulatory control period (2014–17). Hence, it is necessary for us to consider whether the proposed total opex forecast, and any amount we might substitute, is sufficient for SP AusNet to meet the opex objectives set out in the NER and that it does sufficiently take into consideration SP AusNet's specific circumstances.

We engaged engineering consultants, EMCa,[94] to examine SP AusNet's revised opex proposal from a technical engineering, governance and asset management perspective. EMCa used a bottom-up method to analyse and test SP AusNet's proposed opex forecast against the requirements of the NER. We discuss this analysis, and EMCa's findings, in detail at section 3.5.5 of attachment 3.

Significantly, EMCa concluded that SP AusNet's forecast was about $39 million above an amount that would reasonably reflect the opex criteria.[95] EMCa therefore concluded that an allowance of $236 million for controllable opex would be sufficient to reasonably reflect the opex criteria.[96]

We also observe that:

- Over the past 10 years, SP AusNet's controllable opex has been relatively stable from year to year and from regulatory period to regulatory period in real terms. This is what we would expect from an efficient service provider that has undertaken substantial capital expenditure on replacement of aging assets, and proposes to continue to replace aging assets at significant levels.[97] We observe that the proposed controllable opex would represent a substantial departure from this trend (Figure 8.), given the level of past and future capex investment aimed at managing the risk of aging assets through replacement and refurbishment.
- SP AusNet has substantially overestimated the controllable opex it requires to achieve the opex objectives in each of the past two determination processes (the orange line in Figure 8.).
- SP AusNet has proposed step changes to fund works in the 2014–17 regulatory control period on a very similar basis to which it sought funding for essentially similar works in the 2008–14 regulatory control period. SP AusNet did not undertake the spending it had forecast during the 2008–14 regulatory control period. By deferring these works, SP AusNet will be rewarded through the application of the efficiency benefit sharing scheme in the 2014–17 regulatory control period. The total opex allowance approved by us for the 2008–14 period was sufficient to undertake the works in the 2008–14 regulatory control period, but deferred, and it is proposing to now undertake in the 2014–17 regulatory control period. We discuss this issue, in the context of the step changes SP AusNet has proposed in detail in appendix A and section 3.5.3 of attachment 3.

The results of both our top-down analysis and an independent consultant's bottom-up analysis produced very similar conclusions. While each methodology is quite different in its application, the results of both corroborate the findings in the other. That is, the total controllable opex forecast

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94 EMCa refers to Energy Market Consulting associates/Strata Energy Consulting.

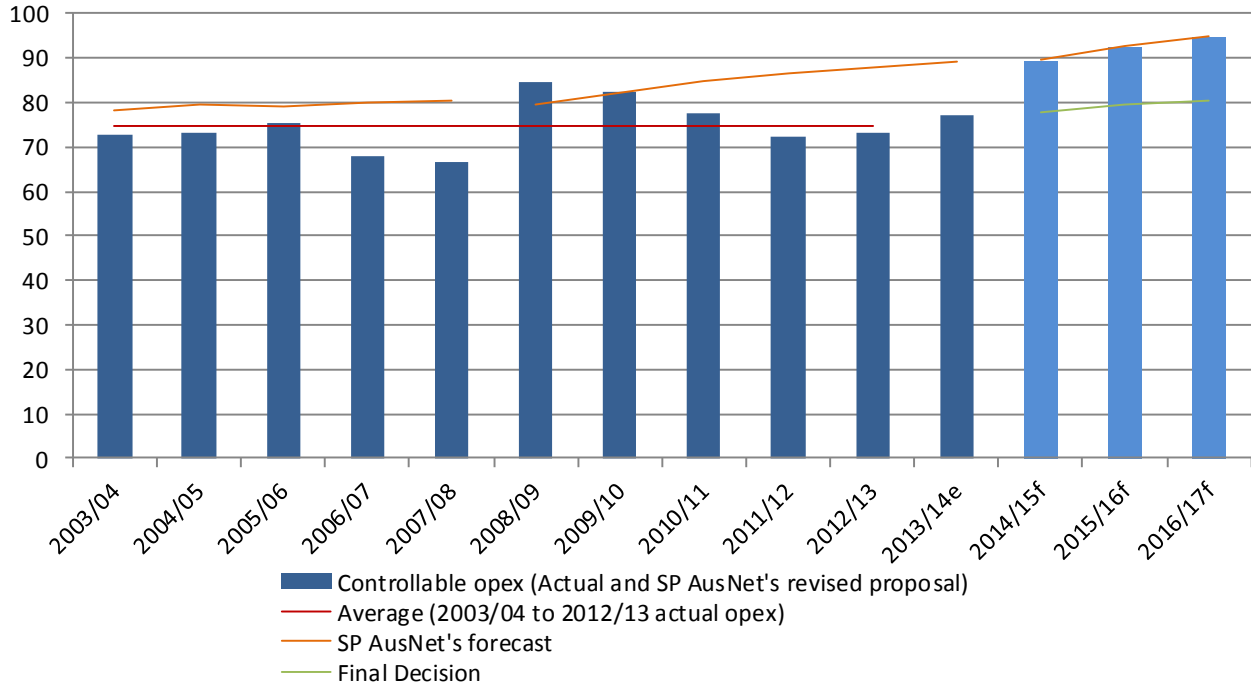
95 EMCa concluded that a total controllable opex allowance of $236 million is a reasonable total, which is a reduction of $35 million on the proposed opex of $270.7 million in SP AusNet's revised revenue proposal opex model of 11 October 2013. However, SP AusNet subsequently revised its opex model on 29 November 2013 which increased its proposed controllable opex to $275.6 million. EMCa did not consider the change SP AusNet made to its model warranted it changing its own (a) assessment of the proposed asset works allowance, or (b) the proposed increase in the step change for SF6 (the remaining changes were for items not within EMCa's technical review scope). Therefore, EMCa's assessment implies that SP AusNet's total controllable opex is $39 million too high (relative to SP AusNet's 29 November 2013 revised forecast).

96 EMCa, *SP AusNet technical review*, January 2014, para 39.

97 SP AusNet, *Revenue proposal*, pp.20–22.

proposed by SP AusNet does not reasonably reflect the opex criteria and is overstated by $37.4 million (AER) to $39.5 million (EMCa). When added to our assessment of non-controllable opex, the total opex forecast is $39.7 million to $41.7 million too high.

Figure 8. SP AusNet's past controllable opex forecasts ($ million, 2013–14)



Source: AER analysis.
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

Our review of non-controllable opex

While we largely accept SP AusNet's proposal for non-controllable opex, we are of the view that SP AusNet's proposal for non-controllable opex should be reduced by $2.2 million in order to reasonably reflect the opex criteria. Our assessment of non-controllable costs is set out in detail in section 3.6 of attachment 3.

- We do not approve SP AusNet's revised proposed self-insurance allowance of $5.5 million because it included insurer default risk margin and a 10 per cent risk margin which we do not approve. Instead we substitute a self-insurance allowance of $5.0 million. We discuss the reasons for our decision in more detail in Appendix B which is a confidential appendix.
- We do not accept SP AusNet's AIS opex forecast of $8.6 million because it is well above the 10 year average and does not reflect a reasonable expectation of likely cost inputs. Instead, we have substituted a total AIS opex forecast of $6.9 million on the basis of the average actual AIS payments, from December 2003 to November 2013. SP AusNet agreed to this method, providing the most recent 6 months of data are included.[98]
- Our draft decision accepted SP AusNet's proposed method for determining its benchmark debt raising costs allowance associated with its forecast opex.[99] We consider this method provides

[98] SP AusNet , *Response to AER RRP 018*, 4 December 2013.
[99] AER *Draft decision: SP AusNet transmission determination*, August 2013, pp. 116–7.

estimates of the debt raising costs that a prudent service provider acting efficiently would incur. We updated SP AusNet's proposed debt raising cost allowance to reflect our final decisions on the opening RAB (debt component) and weighted average cost of capital (WACC). Our final decision, therefore, is to provide SP AusNet with an allowance for debt raising costs of $4.7 million ($2013–14).

- Victoria's land tax regime extends to easements held by SP AusNet. SP AusNet is required to forecast its easement land tax liability as part of the forecast opex. Where the forecast we accept in this determination differs (higher or lower) from the actual tax paid, SP AusNet is entitled to apply for a pass through.[100] Under the pass through rules, a materiality threshold (one per cent of SP AusNet's maximum allowed revenue (MAR)) must be met before a pass through is granted.[101] SP AusNet proposed an easement land tax forecast of $305.3 million for the 2014–17 regulatory control period. We are satisfied that this forecast reflects a realistic expectation of the easement land tax likely to be incurred in the 2014–17 regulatory control period.

  We note that a TNSP must submit a negative cost pass through within 60 business days of becoming aware of the event (this moves to 90 business days under the new rules) (see NER 6A.7.3(f)). However, if, during the next regulatory period, we become aware that an event has occurred that will trigger a negative cost pass through, (such as a change to the easement land tax assessment or valuation base resulting in an actual easement land tax obligation that is less than our allowance), then we can take action to instigate the negative cost pass through under NER 6A.7.3(g).[102]

Specific concerns with our draft decision raised by SP AusNet

In our draft decision, we proposed not to accept SP AusNet's initial forecast. We proposed a substitute total opex forecast based on similar considerations to those set out in this final decision.

SP AusNet criticised our draft decision on the basis that it would be exposed to an unacceptable level of risk if we maintained the approach set out in our draft decision. We have carefully reviewed the claims SP AusNet made in support of this contention.

We have concluded that these concerns are essentially misplaced. In particular, we engaged EMCa to review SP AusNet's network risk profile. EMCa found that SP AusNet should be able to manage its identified and emerging network risks within the total opex forecast that we have decided in this final decision. A chart illustrating historical and projected risk levels for SP AusNet is produced below. It shows SP AusNet's time-profile for transmission network asset risk, from 2008–20. The scale of this graph is an index, and shows a declining risk level, including over the period from 2011–14 when asset works expenditure was significantly reduced. This risk profile can also be set against the overall controllable opex profile, which shows a similar (though less prominent) expenditure reduction over the same period. The forecast risk profile shown in this diagram is on the basis of SP AusNet's proposal, but EMCa found that our forecast will not materially alter the result.

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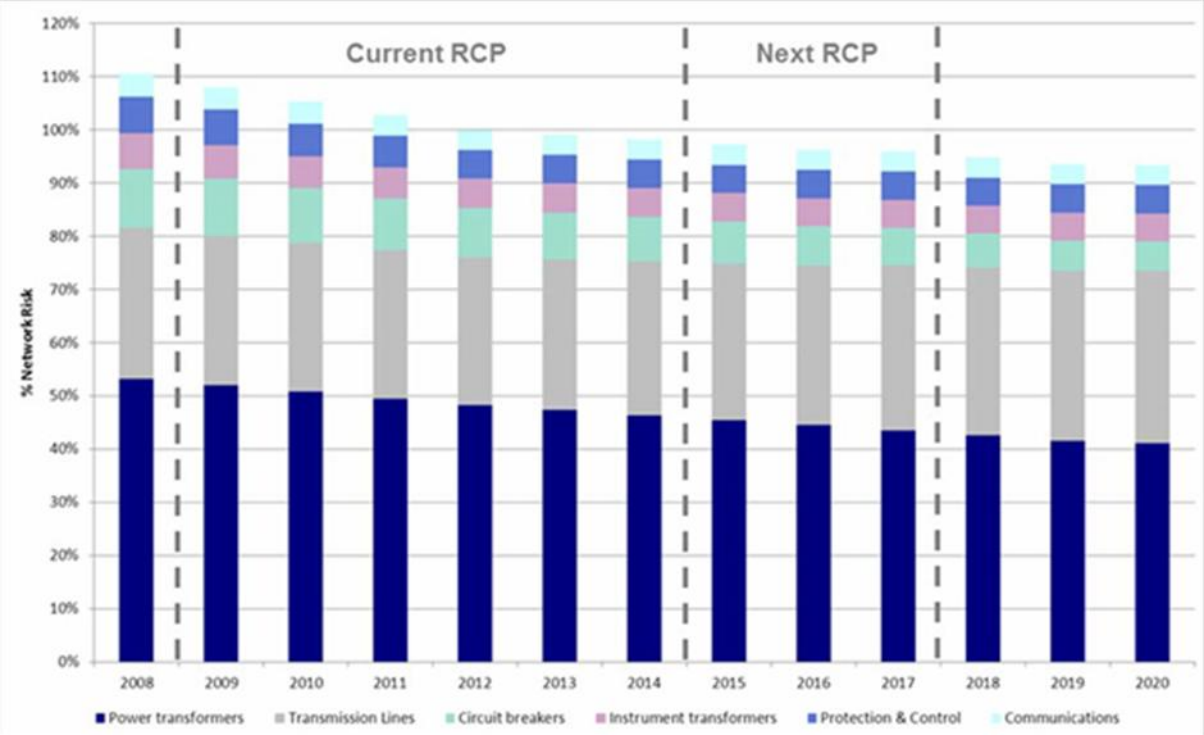
100 NER, clauses 6A.7.3 and 11.6.21.
101 NER, definition of 'materially' in chapter 10.
102 Under the new rules there is an additional requirement for the AER to notify the TNSP that the issue has come to its attention before making a pass through decision under NER 6A.7.3(g).

Figure 8. SP AusNet network risk profile



Source: SP AusNet, Revenue proposal – Appendix 2A, Transmission asset management strategy 10-01, Figure 9, 28 February 2013, p. 23.

Note: For clarity, starting from the bottom, the bars represent: power transformers, transmission lines, circuit breakers instrument transformers, protection & control and communications

What is our decision?

We are not satisfied that SP AusNet's total forecast opex reasonably reflects the opex criteria. We consider that a prudent operator in SP AusNet's circumstances (given a realistic expectation of the demand forecast and the cost inputs) could achieve the opex objectives with less opex than proposed.

We have estimated a substitute total opex that we consider reasonably reflects the opex criteria, having regard to the opex factors. We have estimated the substitute based on our top-down analysis of SP AusNet's proposed controllable opex and our assessment of SP AusNet's proposed non-controllable opex. This provides a total forecast opex of $560.0 million over the forthcoming regulatory control period. It reduces SP AusNet's proposed total forecast opex only to the extent necessary to comply with the NER.

We are satisfied this amount reasonably reflects the opex criteria for the reasons we discuss in support of our decision not to accept the total opex forecast proposed by SP AusNet.

8.3 AER decision

AER decision 8.1: Table 8. shows our final decision on total forecast operating expenditure for the 2014–17 regulatory control period.

9 Efficiency benefit sharing scheme

The efficiency benefit sharing scheme (EBSS) aims to provide a continuous incentive for NSPs to pursue efficiency improvements in opex and to share efficiency gains between NSPs and network users. We must decide:

- the carryover amounts that accrued to SP AusNet from applying the EBSS during the 2008–14 regulatory control period
- how the EBSS will apply to SP AusNet in the 2014–17 regulatory control period.[103]

The EBSS that applied to SP AusNet during the 2008–14 regulatory control period was the first proposed EBSS (January 2007).[104] The scheme that will apply to SP AusNet during the 2014–17 regulatory control period is the EBSS for electricity TNSPs (September 2007).[105]

In its revenue proposal, SP AusNet proposed an EBSS carryover amount of $47 million from the application of the EBSS during the 2008–14 regulatory control period, with a carryover period of six years. In our draft decision we did not approve SP AusNet's proposal because the length of the EBSS carryover period specified in the first proposed EBSS is five years. We also said that forecast and actual opex should be adjusted to reverse movements in provisions. Accordingly, we substituted a carryover of $37 million.[106]

SP AusNet's revised revenue proposal adopted our draft decision on the EBSS carryover it accrued during the 2008–14 regulatory control period. However, it also corrected our data for provisions which increased the carryover to $37.8 million.[107] SP AusNet's revised revenue proposal adopted our draft decision about how the EBSS will apply during the 2014–17 regulatory control period.[108]

9.1 Final decision

Carryover amounts from the 2008–14 regulatory control period

We accept the EBSS carryover of $37.8 million in SP AusNet's revised revenue proposal because it complies with the scheme's requirements.[109] Table 9. outlines the carryover amounts we will include as building blocks to determine SP AusNet's revenue requirement.

Table 9. AER's final decision on the EBSS carryover amount ($ million, 2013–14)

	2014-15	2015-16	2016-17	Total
EBSS carryover	17.9	15.4	4.5	37.8

Source: AER analysis.

Application of the EBSS in the 2014–17 regulatory control period

When we calculate the carryover amounts accrued during the 2014–17 regulatory control period:

103 NER, clauses 6A.4.2(a)(6) and 6A.14.1(1)(iv).
104 AER, *First proposed electricity transmission network service providers efficiency benefit sharing scheme*, January 2007.
105 AER, *Electricity transmission network service providers efficiency benefit sharing scheme*, September 2007.
106 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 195-197.
107 SP AusNet's revised EBSS adopted our draft decision but included an adjustment to actual 2012–13 movements in provisions to remove the capex portion. This increased the carryover amount by $0.6 million.
108 SP AusNet, Revised revenue proposal, pp. 114-6.
109 We updated the NPV calculation for 2013–14 to reflect the final decision WACC. This had an immaterial impact on the carryover.

- We will not adjust forecast opex for changes in demand.
- We will exclude the following cost categories:
  - easement land tax
  - self-insurance
  - rebates made under the Availability Incentive Scheme
  - debt raising costs
  - the cost of priority projects approved under the network capability component of the STPIS.
- We will adjust actual opex to reverse movements in provisions.
- The length of the carryover period for efficiency gains (or losses) realised in the 2014–17 regulatory control period will be the same as the length of the regulatory control period commencing in 2017.
- We will calculate the efficiency gain in 2014–15 (year 7) using the formula set out in our draft decision.[110]

Table 9. shows the forecast opex that we will use to calculate efficiency gains and losses in the 2014–17 regulatory control period.

Table 9. AER's final decision on forecast opex for the EBSS ($ million, 2013–14)

	2014-15	2015-16	2016-17	Total
Total forecast opex	185.1	189.8	188.0	563.0
Easement land tax	-100.9	-103.4	-100.9	-305.3
Self-insurance	-1.7	-1.7	-1.6	-5.0
Rebates under the Availability Incentive Scheme	-2.3	-2.3	-2.3	-6.8
Debt raising costs	-1.5	-1.6	-1.6	-4.7
Forecast opex for the EBSS target	**78.7**	**80.8**	**81.6**	**241.1**

Source: AER analysis.
Note: Figures quoted above are in end of year terms for EBSS purposes.

9.2 AER decision

Decision 9.1: We approve the carryover amount of $37.8 million from the application of the EBSS in the 2008–14 regulatory control period.

Decision 9.2: We will apply the EBSS in the 2014–17 regulatory control period as specified in section 9.1.

[110] AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 197.

10 Corporate income tax

The estimated cost of corporate income tax is one of the building blocks used to determine the total revenue requirements for SP AusNet over the 2014–17 regulatory control period.[111] Total revenue requirements are calculated on a post–tax basis using our post–tax revenue model (PTRM).

We use the PTRM to produce an estimate of the taxable income that would be earned by an efficient company operating the Victorian transmission network. All tax expenses are offset against SP AusNet's forecast revenue to estimate the taxable income. The statutory income tax rate of 30 per cent is then applied to the estimated taxable income to arrive at a notional amount of tax payable. We then apply a discount to this to account for the assumed utilisation of imputation credits. This estimated tax amount is then included as a separate building block to determine SP AusNet's total revenue. This amount enables SP AusNet to recover the costs associated with the estimated corporate income tax payable during the 2014–17 regulatory control period.

10.1 Final decision

We do not accept SP AusNet's proposed corporate income tax allowance of $24.9 million ($ nominal) set out in its revised proposal. SP AusNet adopted all aspects of our draft decision.[112] However, our determinations on other building block components results in a difference on the corporate income tax allowance between our final decision and SP AusNet's revised revenue proposal. Table 10. shows our final decision on SP AusNet's corporate income tax allowance for the 2014–17 regulatory control period.

Table 10. AER's final decision on SP AusNet's corporate income tax allowance ($ million, nominal)

	2014–15	2015–16	2016–17	Total
Tax payable	27.1	26.5	27.9	81.6
Less: value of imputation credits	17.6	17.3	18.2	53.0
Net corporate income tax allowance	9.5	9.3	9.8	28.6

Source: AER analysis.

10.2 Summary of analysis and reasons

We do not accept SP AusNet's revised proposed corporate income tax allowance of $24.9 million ($ nominal) for the 2014–17 regulatory control period. We determine a substitute forecast of $28.6 million ($ nominal), which represents an increase of $3.6 million (or 14.6 per cent) on the revised proposal. This increase reflects our determinations on other building blocks, including forecast opex (attachment 3), forecast capex (attachment 2) and cost of capital (chapter 5), which impact the estimated corporate income tax allowance.[113]

We accept SP AusNet's revised opening tax asset base (TAB) as at 1 April 2014 of $2219 million ($ nominal).[114] We also accept SP AusNet's weighted average method to calculate the remaining tax

111 NER, clause 6A.5.4(a)(4).
112 SP AusNet, *Revised revenue proposal*, p. 113.
113 NER, clause 6A.6.4.
114 SP AusNet, *Roll forward model*, October 2013.

asset lives at 1 April 2014 in its revised proposal. This weighted average method was accepted in our draft decision.[115]

10.3 Tax asset base as at 1 April 2014

We accept SP AusNet's revised opening TAB as at 1 April 2014 of $2219 million ($ nominal).

In our draft decision we accepted SP AusNet's proposed method of establishing the opening TAB as at 1 April 2014.[116] However, we increased SP AusNet's proposed TAB as at 1 April 2014 to $2199 million ($ nominal) from $2171 million. This increase was due to some adjustments we made to the RFM. As discussed in chapter 4, we capitalised into the RAB the equity raising costs provided for SP AusNet in the ACCC's 2002 revenue cap decision. Therefore, we included $53.4 million ($ nominal) to the opening TAB to be consistent with the opening RAB. Our adjustments to actual capex values in the RFM also affected SP AusNet's proposed opening TAB value.[117]

In its revised proposal SP AusNet adopted all aspects of our draft decision in relation to its opening TAB as at 1 April 2014.[118] SP AusNet also updated its revised opening TAB to reflect changes to actual capex for 2012–13 and estimated capex for 2013–14, which we accept for the reasons discussed in chapter 4.

Table 10. sets out our final decision on the roll forward of SP AusNet's TAB for the 2008–14 regulatory control period.

Table 10. AER's final decision on SP AusNet's tax asset base roll forward ($ million, nominal)

	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14[b]
Opening TAB	1888.5	1858.2	1869.6	1897.8	1933.5	2002.1
Capital expenditure[a]	38.9	82.8	105.1	117.9	156.8	136.7
Tax depreciation	–69.3	–71.3	–76.9	–82.3	–88.2	–93.6
Opening Group 3 tax asset value as at 1 April 2014						120.2
Equity raising costs (2003–08)						53.4
Closing TAB						2218.8

Source: AER analysis.
(a) As commissioned, net of disposals.
(b) Based on estimated capex.

10.4 Standard and remaining tax asset lives

We accept SP AusNet's standard tax asset lives and remaining tax asset lives as at 1 April 2014 in its revised proposal.

115 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 48.
116 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 151.
117 At the time of the draft decision, the capex values for 2012–13 and 2013–14 were estimated values.
118 SP AusNet, *Revised revenue proposal*, p. 113.

In our draft decision we accepted SP AusNet's proposed standard tax asset lives and determined a standard tax asset life of 5 years for SP AusNet's equity raising costs asset class for tax depreciation purposes as required by the Australian Tax Office. We also accepted SP AusNet's proposed weighted average method to calculate the remaining tax asset lives as at 1 April 2014.[119] In accepting the weighted average method, we updated the proposed remaining tax asset lives to reflect our adjustments to SP AusNet's actual capex in the RFM.[120] This is because the actual capex values are inputs for calculating the weighted average remaining tax asset lives in the RFM.

In its revised proposal SP AusNet adopted all aspects of our draft decision in relation to its standard and remaining tax asset lives.[121] SP AusNet also updated its remaining tax asset lives to reflect changes to actual capex for 2012–13 and estimated capex for 2013–14, which we accept for the reasons discussed in chapter 4.

Table 10. sets out our final decision on SP AusNet's standard and remaining tax asset lives for the 2013–17 regulatory control period.

Table 10. AER's final decision on SP AusNet's standard tax asset lives and remaining tax asset lives as at 1 April 2014

Asset class	Standard tax asset life (years)	Remaining tax asset life at 1 April 2014 (years)[a]
Secondary	12.5	15.2
Switchgear	40.0	28.8
Transformers	40.0	26.8
Reactive	40.0	18.7
Towers and conductor	47.5	26.4
Establishment	40.0	33.0
Communications	12.5	9.8
Inventory	n/a	n/a
IT	3.5	2.7
Vehicles	8.0	6.5
Other	10.0	7.3
Premises	20.0	10.1
Land	n/a	n/a
Easements	n/a	n/a
Equity raising costs (2003–08)	5.0	5.0

Source: AER analysis.
n/a: not applicable.
(a) The remaining tax asset life is a weighted average of the remaining tax asset life for the Group 3 assets that were completed during the 2008–14 regulatory control period and the assets that are in the opening RAB as at 1 April 2008. The Group 3 assets have different standard tax asset lives to the assets that are in the RAB as at 1 April 2008.

119 AER, *Draft decision: SP AusNet transmission determination,* August 2013, pp. 151–152.
120 At the time of the draft decision, the capex values for 2012–13 and 2013–14 were estimated values.
121 SP AusNet, *Revised revenue proposal*, p. 113.

10.5 AER decision

Decision 10.1: We determine SP AusNet's estimated cost of corporate income tax allowance to be $28.6 million ($ nominal) over the 2014–17 regulatory control period, as set out in Table 10..

Decision 10.2: We determine SP AusNet's total opening TAB as at 1 April 2014 to be $2219 million ($ nominal), as set out in Table 10..

Decision 10.3: We determine SP AusNet's standard and remaining tax asset lives at the beginning of the 2014–17 regulatory control period to be those set out in Table 10..

11 Contingent projects

Contingent projects are significant capital expenditure (capex) projects that may arise in the regulatory control period. Expenditure for contingent projects is not included in a TNSP's forecast capex. This is because contingent projects are linked to unique investment drivers known as trigger events.

The occurrence of the trigger event must be probable.[122] Also, the event or the costs associated with the event must be uncertain.[123] If a trigger event occurs during a regulatory control period, we will assess the contingent project's costs on application by the TNSP.[124] If we approve the contingent project's costs at that time, we will amend the TNSP's revenue determination to account for the increased costs associated with the contingent project.

The description of the trigger event must be in such terms that the occurrence of that event or condition is all that is required for the amendment of the revenue determination.[125] For this reason, the definition of the trigger event must be adequate and the proposed contingent capex must reasonably reflect the capex criteria.[126]

SP AusNet's revised revenue proposal contains two proposed contingent projects, compared with three proposed contingent projects in its initial revenue proposal. SP AusNet accepted our draft decision that the South Morang transformer replacement stage 2 project should not be a contingent project.[127] However, SP AusNet did not accept our draft decision to disallow the other two proposed contingent projects.[128]

11.1 Final decision

We do not accept the two contingent projects SP AusNet proposed for the 2014–17 regulatory control period in its revised revenue proposal. We consider for each proposed contingent project:

- it is not reasonably required to meet the capex objectives
- the occurrence of the trigger event is not probable during the 2014–17 regulatory control period.[129]

Information relating to our assessment of the two proposed contingent projects is commercially sensitive and they are not discussed in this attachment. We provided a sensitive information appendix to SP AusNet with our reasons for not accepting the two contingent projects.

11.2 AER decision

Decision 11.1: We do not approve the two contingent projects SP AusNet proposed in its revised revenue proposal for the 2014–17 regulatory control period.

122 NER, clause 6A.8.1(c)(5).
123 NER, clause 6A.8.1(c)(5)(i).
124 NER, clause 6A.8.2.
125 NER, clauses 6A.8.1(c)(4); 6A.8.2.
126 NER, clause 6A.8.1(b)(2)(ii).
127 SP AusNet, *Revised revenue proposal*, pp. 52.
128 SP AusNet, *Revised revenue proposal*, pp. 52–53 [confidential].
129 NER, clause 6A.8.1(b).

12 Service target performance incentive scheme

We released a new service target performance incentive scheme (STPIS) in December 2012, which will apply to SP AusNet for the 2014–17 regulatory control period.[130] The new STPIS comprises three components: a service component, a market impact component and a network capability component. The service and market impact components provide a financial incentive to improve and maintain its service performance. This counters the incentive under revenue regulation to reduce costs at the expense of service performance. Under the service component, SP AusNet's performance is compared against the performance target for each parameter during the regulatory control period. It may receive a financial bonus for service improvements, or a financial penalty for deteriorations in service performance. The financial bonus (or penalty) is limited to 1 per cent of its MAR for the relevant calendar year.[131]

Under the market impact component, SP AusNet can earn an additional increment up to 2 per cent of its MAR for the relevant calendar year.[132] Unlike the service component, no financial penalty is associated with the market impact component.

The network capability component funds and incentivises TNSPs to identify and implement incremental changes that would improve the capability of the network when it is needed most. Each year, SP AusNet will receive an incentive payment equal to 1.5 per cent of its MAR for each year except the final year of the 2014–17 regulatory control period. If it achieves its priority project improvement target for each priority project, then it will receive an incentive payment of 1.5 per cent of its MAR in the final year. If it does not achieve each priority project improvement target, then we may reduce the incentive payment in the final year. We can reduce the final payment to –2 per cent of MAR if it does not achieve any of its proposed priority project improvement targets.[133]

Attachment 5 sets out our detailed reasons for the final decision on the STPIS.

12.1 Final decision

12.1.1 Service component

We accept SP AusNet's revised proposal service component parameter values because they comply with the requirements of clauses 3.3 and 3.5 of the STPIS. Table 12. sets out our draft decision on SP AusNet's service component parameter values.

130 AER, *Final – Service target performance incentive scheme*, December 2012.
131 AER, *Final – Service target performance incentive scheme*, December 2012, clause 3.4.
132 AER, *Final – Service target performance incentive scheme*, December 2012, clause 4.3(a). It would obtain an additional 2 per cent of MAR if it had a market impact performance count of zero binding dispatch intervals in a calendar year.
133 AER, *Final – Service target performance incentive scheme*, December 2012, clause 5.2(k).

Table 12. AER's final decision on SP AusNet's parameter values for the service component of the STPIS

	Collar	Target	Cap	Weighting (% of MAR)
Average circuit outage rate (%)				
Line outage – fault	42.0	25.9	14.8	0.2
Transformer outage – fault	31.7	16.1	7.4	0.2
Reactive plant – fault	43.8	32.5	23.4	0.1
Line outage – forced	17.7	14.9	12.3	0.0
Transformer outage – forced	17.6	12.0	6.2	0.0
Reactive plant – forced	28.3	14.8	3.7	0.0
Loss of supply event frequency				
>0.05 system minutes	6	2	0	0.15
>0.3 system minutes	2	1	0	0.15
Average outage duration				
Average outage duration	293.5	98.0	5	0.2
Proper operation of equipment				
Failure of protection system	n/a	n/a	n/a	0.0
Material failure of SCADA	2	1	0	0.0
Incorrect operational isolation of primary or secondary equipment	n/a	n/a	n/a	0.0

12.1.2 Market impact component

Under the latest version of the STPIS, we are not required to determine a market impact parameter target because it will be set as a rolling average during the 2014–17 regulatory control period. The target for the 2014 calendar year, for example, will be an average of SP AusNet's 2011, 2012 and 2013 market impact performance, while actual performance in 2014 will be measured as an average of the TNSP's 2013 and 2014 performance.

While we were not required to make a final decision on a market impact component performance target, we did audit and adjust SP AusNet's 2011 and 2012 performance, which will be used to calculate the 2014 target in the future.

12.1.3 Network capability component

We do not accept SP AusNet's proposed priority projects and improvement targets set out in its revised network capability incentive parameter action plan (NCIPAP). We have removed one project from the NCIPAP (the Dederang–Wodonga No. 1 330kV project) because it was unlikely that the benefits would outweigh the cost of the project. We considered AEMO's review of the NCIPAP when

making our decision.[134] Table 12. sets out our final decision on SP AusNet's priority projects, improvement targets and project rankings.

Table 12. AER's final decision on SP AusNet's network capability priority projects ($ 000s, 2013–14)

Rank	Project circuit / injection point	Project cost
1	220kV switchyards at HTS, KTS, MLTS, ROTS, RTS, RWTS, SVTS, TTS and WMTS	5 300
2	Altona TS	14
3	Templestowe TS	377
4	Both Dederang –Murray 330kV lines	3 261
5	Both Dederang–South Morang 330kV lines	4 241
6	Rowville–East Rowville No 1 & 2 and Rowville–Springvale No 2 220kV circuits	999
7	Eleven 220 kv and 330 kV circuits	400
8	Rowville–Malvern No 1 & 2 220kV circuits	400
9	Moorabool–Mortlake–Heywood–Portland Aluminium customer substation No 2 500 kV circuit	920
10	Hazelwood–Loy Yang No 1, 2 and 3 500 kV circuits	2
11	Moorabool–Mortlake No 2 and Moorabool–Tarrone 500 kV circuits	0
12	Keilor–Sydenham No 1 and Keilor–South Morang No 1 500 kV circuits	0
13	Geelong TS	0
14	Ringwood TS	0
Total		15 914

12.2 Summary of analysis and reasons

12.2.1 Service component

SP AusNet adopted our draft decision for all sub–parameters except for two sub–parameters. It stated that the data in its revenue proposal for the reactive plant sub–parameters did not correctly apply the 'capacitor banks and reactors operating at less than 66 kV' exclusion. We assessed how SP AusNet

[134] AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

had applied the new exclusion and we are satisfied that SP AusNet applied the exclusion correctly.[135] We therefore accept SP AusNet's revised proposal service component parameter values.

12.2.2 Market impact component

We have not made a decision on SP AusNet's performance target for 2014, as SP AusNet's 2013 data is not yet available for this calculation.[136] However, we have audited SP AusNet's 2011 and 2012 performance, which will be used to calculate the 2014 target in the future.

We have audited this data and made minor adjustments to the performance values that were submitted. We adjusted SP AusNet 2011 performance from 3329 to 3322 dispatch intervals and its 2012 performance from 2560 to 2608 dispatch intervals.

12.2.3 Network capability component

In making our final decision decision, we worked further with AEMO and SP AusNet to take further steps to address concerns raised in submissions by consumer groups. In particular:

1. we added another project to SP AusNet's NCIPAP which will help ensure benefits for consumers from the network capability component are maximised
2. AEMO conducted further work assessing the benefits of the NCC projects
3. we have addressed the specific concerns raised in submissions (section 5.4.3).

We consider these additional steps will help to maximise the benefit to consumers from the implementation of the NCC, and better define the benefits arising from NCC projects. Of note, AEMO estimated that the implementation of SP AusNet's NCIPAP could result in $80 million of net market benefits.[137] As such, we consider that the application of the network capability component during SP AusNet's 2014–17 regulatory control period will benefit consumers.

We also removed one project (Dederang–Wodonga) from SP AusNet's NCIPAP because its expected benefits were unlikely to outweigh the cost.

12.3 AER decision

Decision 12.1: We determine that the service component parameter values that will apply to SP AusNet during the 2014–17 regulatory control period are those set out in table 5.1.

Decision 12.2: We accept the priority projects and improvement targets set out in table 5.2 of attachment 5.

135 SP AusNet, *Response to AER RRP 03*, 6 November 2013.
136 The 2013 data will be submitted on 1 February 2014.
137 AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

13 Pricing methodology and negotiated services

We must approve a pricing methodology, negotiating framework, and negotiated transmission service criteria (NTSC). The pricing methodology relates to prescribed transmission services, while the negotiating framework and NTSC relate to negotiated services.

A pricing methodology provides a 'formula, process or approach'[138] for recovering a TNSP's maximum allowed revenue (MAR). In effect, it answers the question 'who should pay how much'[139] in order for a TNSP to recover its MAR from transmission customers.

Negotiated services typically involve a new generator seeking to connect to the network or a customer with a large load.[140] The allowed revenue from negotiated services is not subject to the MAR we set in a transmission determination. Rather, the terms and conditions of access are negotiated between a TNSP and the service applicant. To facilitate these processes we approve a negotiating framework and determine the NTSC.

13.1 Final decision

We uphold our draft decision approving the pricing methodology and negotiating framework SP AusNet proposed. We also determine that the NTSC we accepted in our draft decision will apply in the 2014–17 regulatory control period.

13.2 SP AusNet's revised proposal

Our draft decision was to accept the negotiating framework and pricing methodology SP AusNet proposed. SP AusNet did not propose any amendments in its revised proposal to us. It stated that 'SP AusNet accepts the Draft Decision on the Negotiating Framework and Pricing Methodology'.[141]

13.3 Assessment approach

We considered SP AusNet's proposed negotiating framework and pricing methodology using the assessment approach outlined in our draft decision.[142] We did not receive submissions on the pricing methodology or negotiated framework SP AusNet proposed or the NTSC.

13.4 Reasons for final decision

We approve the pricing methodology SP AusNet proposed because it meets the requirements under the NER. It gives effect to, and complies with, the pricing principles for prescribed transmission services and complies with the information requirements of the AER's pricing methodology guidelines.[143] We approve SP AusNet's proposed negotiating framework because it specifies the minimum requirements in the NER.[144] Those requirements include a statement that SP AusNet will negotiate in good faith and a description of procedures for dealing with disputes.

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138 NER, clause 6A.24.1(b).
139 AEMC, *Rule determination: National electricity amendment (Pricing of prescribed transmission services) rule 2006 No 22*, 21 December 2006, p. 1.
140 AEMO, *Revenue methodology for Victoria's electricity transmission system,* 1 July 2011, p.5.
141 SP AusNet, *Revised revenue proposal,* p. 132.
142 SP AusNet, *Revised revenue proposal*, pp. 205–206 and p. 214.
143 NER, clause 6A.14.3(g)(1)–(2).
144 NER, clause 6A.9.5(c).

13.5 Negotiated transmission service criteria

We uphold our draft decision that the NTSC we published in April 2013 will apply to SP AusNet's 2014–17 regulatory control period. The NTSC is published in our determination. We did not receive submissions on the NTSC.

13.6 AER decision

Decision 13.1: We approve the pricing methodology and negotiating framework SP AusNet proposed.

Decision 13.2: We determine that the NTSC we published in April 2013 (reproduce in section 3 of our transmission determination) will apply in the 2014–17 regulatory control period.

14 Cost pass throughs

The pass through mechanism of the NER recognises that a TNSP can be exposed to risks beyond its control, which may have a material impact on its costs. A cost pass through enables a business to recover (or pass through) the costs of defined unpredictable, high cost events that are not built into the transmission determination. We must decide which of the pass through events nominated by SP AusNet will apply for the 2014–17 regulatory control period.[145]

14.1 Final decision

The following cost pass throughs, as defined below, will apply to SP AusNet for this determination:

- a natural disaster event
- a terrorism event
- an insurance cap event.

We do not accept the West Melbourne Terminal Station (WMTS) compensation event.

14.2 Summary of analysis and reasons

In its revenue proposal SP AusNet nominated a natural disaster event, a terrorism event and an insurance cap event. In our draft decision we required SP AusNet to amend each of the three definitions, which it did in its revised revenue proposal. SP AusNet also made a minor modification to the definition of an insurance cap event which we accept in this final decision. It proposed substituting the words 'a payment' with the words 'the benefit of a payment'. This does not change the meaning of the event.

WMTS compensation event

SP AusNet added a new cost pass through event in its revised revenue proposal which was not included in its revenue proposal. The event is the WMTS compensation event. The Linking Melbourne Authority (LMA) informed SP AusNet in July 2013 that it intends to acquire part of the WMTS site for the East West Link. As a result SP AusNet will incur additional costs to revise the project design for redeveloping the WMTS. It intends to seek compensation for the costs from the LMA and in the event it is successful it proposes to pass back the majority of any compensation it receives to customers. Accordingly, SP AusNet is seeking approval to include a negative change event in its determination.

We agree with SP AusNet that electricity consumers should not have to pay for any additional project costs caused by the LMA's actions. However, given the expected amount of the compensation, we consider the proposed compensation event would not satisfy the requirements of a negative change event. In particular, the compensation event would not *materially* decrease the costs to SP AusNet of providing prescribed transmission services.[146]

We form this view by applying the definition of *materially* set out in chapter 10 of the NER for a cost pass through event. That is, an event results in a TNSP incurring materially lower costs if the change in costs (as opposed to the revenue impact) that the TNSP incurs in any regulatory year, as a result of

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145 NER, clause 6A.6.9(b).
146 NER, chapter 10, nominated pass through event consideration (e).

that event, exceeds 1 per cent of the MAR for the TNSP for that regulatory year.[147] We consider the building block cost savings (rather than the full compensation) may not exceed 1 per cent of SP AusNet's MAR, which is about $5 million. This is our preferred interpretation of 'costs' for the purposes of assessing the materiality of cost pass through events.

The interaction of the proposed cost pass through with the WMTS capex allowance is discussed in our capex decision (section 2.4.2).

14.3 AER decision

Decision 14.1: The following three nominated pass through events will apply to SP AusNet in the 2014–17 regulatory control period:

Natural disaster event

Any major fire, flood, earthquake or other natural disaster beyond the reasonable control of SP AusNet that occurs during the 2014–17 regulatory control period and materially increases the costs to SP AusNet of providing prescribed transmission services.

The term 'major' in the above paragraph means an event that is serious and significant. It does not mean material as that term is defined in the NER (that is, 1 per cent of the TNSP's maximum allowed revenue in that year).

Note: In assessing a natural disaster event pass through application, the AER will have regard to the:

i. insurance premium proposal submitted by SP AusNet in its revenue proposal

ii. forecast expenditure allowances approved in the AER's final decision; and

iii. reasons for that decision.

Terrorism event

An act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear) and which materially increases the costs to SP AusNet of providing prescribed transmission services.

147 NER, Chapter 10 Glossary, definition of materially.

Insurance cap event

Whereby:

1. SP AusNet makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy,

2. SP AusNet incurs costs beyond the relevant policy limit, and

3. the costs beyond the relevant policy limit materially increase the costs to SP AusNet of providing prescribed transmission services.

For this insurance cap event:

4. the relevant policy limit is the greater of:

a. SP AusNet's actual policy limit at the time of the event that gives rise to the claim, and

b. the policy limit that is explicitly or implicitly commensurate with the allowance for insurance premiums that is included in the forecast operating expenditure allowance approved in the AER's final decision for the regulatory control period in which the insurance policy is issued.

5. A relevant insurance policy is an insurance policy held during the 2014–17 regulatory control period or a previous regulatory control period in which SP AusNet was regulated.

Note: For the avoidance of doubt, in assessing an insurance cap event cost pass through application under rule 6A.7.3, the AER will have regard to:

i. the insurance premium proposal submitted by SP AusNet in its revenue proposal

ii. the forecast operating expenditure allowance approved in the AER's final decision, and

iii. the reasons for that decision.

Decision 14.2: The WMTS compensation event will not apply to SP AusNet in the 2014–17 regulatory control period.

Part 2 – Attachments

1 Real cost escalation

Real cost escalation accounts for expected changes in the costs of key input factors for the opex and capex forecasts. Due to market forces, these costs may not increase at the same rate as inflation.

1.1 Final decision

Overall, we do not accept the real cost escalators proposed by SP AusNet reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives over the 2014–17 regulatory control period.[148] However, there are aspects we do accept.

We have determined substitute escalators (Table 1. and Table 1.) which reflect our considerations that:

- where applicable, labour cost forecasts based on SP AusNet's Enterprise Agreement (EA) reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- in all other instances, labour cost forecasts derived from the average of BIS Shrapnel and DAE's forecasts reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- forecast inputs and exchange rates for material escalation should be updated to reflect most recent data.

Table 1. AER's final decision on real cost escalation—inputs (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016-17
Labour					
Internal	0.87	2.27	2.20	2.45	2.31
External	1.2	2.25	0.75	1.0	1.75
Materials					
Aluminium	–15.27	–1.51	5.76	5.45	5.35
Copper	–7.99	–0.96	2.48	–0.45	–0.21
Steel	–13.14	7.89	3.22	2.86	0.92
Crude oil	–6.04	16.97	–1.07	–3.02	–3.09
Construction costs	0.27	–1.7	–1.24	–0.39	–0.32

Source: AER analysis.

[148] NER, clauses 6A.6.6(c) and 6A.6.7(c).

Table 1. AER's final decision on real cost escalation (indices)

	2012–13	2013–14	2014–15	2015–16	2016–17
Asset classes					
Secondary	1.000	0.948	1.001	0.998	0.997
Switchgear	1.000	0.961	1.017	1.004	1.009
Transformers	1.000	1.028	1.030	1.008	1.014
Reactive	1.000	1.028	1.030	1.008	1.014
Overhead lines	1.000	1.014	1.016	1.016	1.011
Underground cables	1.000	1.013	1.012	1.001	1.002
Establishment	1.000	0.983	0.988	0.996	0.997
Communications (buildings, towers and site infrastructure)	1.000	1.000	1.000	1.000	1.000
Non-system other	1.000	1.032	1.005	1.000	0.995
Vehicles	1.000	1.000	1.000	1.000	1.000
Premises	1.000	1.000	1.000	1.000	1.000
Network switching centre	1.000	1.000	1.000	1.000	1.000
IT	1.000	1.000	1.000	1.000	1.000

Source: AER analysis; SP AusNet, *Response to AER RRP 13*, 4 December 2013.

1.2 SP AusNet revised revenue proposal

SP AusNet did not accept our draft decision on real cost escalation.[149] Table 1. and Table 1. provides SP AusNet's revised proposal real cost escalation forecasts.

[149] SP AusNet, *Revised revenue proposal*, pp. 16–25.

Table 1. SP AusNet's revised proposal real cost escalation forecast—inputs (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
Labour					
Internal	0.87	2.27	2.20	2.45	2.35
External	1.20	2.25	1.15	1.80	2.30
Materials					
Aluminium	–15.13	3.07	7.92	5.28	4.74
Copper	–8.02	0.13	3.33	0.76	0.55
Steel	–12.42	5.80	6.97	1.48	3.23
Crude oil	–5.98	16.65	0.70	–1.49	1.62
Construction costs	9.27	4.87	2.96	2.93	2.93

Source: SP AusNet, *Revised revenue proposal*, pp. 21, 22 and 24.

Table 1. SP AusNet's revised proposal real cost escalation forecast (indices)

	2012–13	2013–14	2014–15	2015–16	2016–17
Asset classes					
Secondary	1.000	0.951	1.004	0.999	1.003
Switchgear	1.000	0.965	1.017	1.004	1.009
Transformers	1.000	1.029	1.030	1.008	1.014
Reactive	1.000	1.029	1.030	1.008	1.014
Overhead lines	1.000	1.036	1.043	1.022	1.027
Underground cables	1.000	1.023	1.019	1.007	1.010
Establishment	1.000	1.049	1.030	1.029	1.029
Communications (buildings, towers and site infrastructure)	1.000	1.000	1.000	1.000	1.000
Non-system other	1.000	1.028	1.019	1.000	1.012
Vehicles	1.000	1.000	1.000	1.000	1.000
Premises	1.000	1.000	1.000	1.000	1.000
Network switching centre	1.000	1.000	1.000	1.000	1.000
IT	1.000	1.000	1.000	1.000	1.000

Source: SP AusNet, *Revised revenue proposal*, p. 25.

SP AusNet's initial proposal applied labour cost forecasts based on the wage price index (WPI) unadjusted for productivity for both its internal and external labour.[150] It engaged BIS Shrapnel for advice on the labour cost outlook and applied its forecast growth for the Victorian:

- electricity, gas and water (EGW) industry for internal labour,
- construction industry for external labour.

However, SP AusNet's revised proposal applied a different basis for establishing its internal labour cost forecast. Rather than relying solely on the BIS Shrapnel forecasts, SP AusNet proposed a forecast based on:

- its recent Enterprise Agreement (EA) outcomes to October 2016

[150] SP AusNet, *Revenue proposal*, pp. 116–8.

- BIS Shrapnel's electricity, gas, water and waste services (EGWWS) WPI forecast for the five month period from October 2016 to March 2017.

In addition, SP AusNet's revised proposal considered that the DAE forecast we applied in our draft decision contained some data inconsistencies.[151] SP AusNet proposed that if DAE updated its forecast to account for these inconsistencies then the final five month period should be an average of the BIS Shrapnel and DAE forecasts.

Consistent with its initial proposal, SP AusNet's revised proposal applied BIS Shrapnel's updated construction industry WPI forecast for its external labour cost escalators.[152]

SP AusNet's revised proposal also contained updated material escalators based on revised inputs and exchange rates to reflect more recent data.[153] In response to our draft decision, SP AusNet clarified its proposal does not contain double counting of future labour costs as labour is not an input into the material escalators. SP AusNet also noted its forecast material escalators contained carbon price inputs as the timing of the carbon tax repeal is unknown. However, SP AusNet stated that if the carbon price no longer applies then our final decision should reflect this in the material escalation forecast.

1.3 Assessment approach

We adopted a similar approach to our draft decision in our assessment of the real cost escalation forecast. In addition to our draft decision approach, we have added the assessment of SP AusNet's EAs. The following is a summary of our draft decision approach with the EA assessment. For more detail of our overall approach see section 1.3 of our draft decision.[154]

We assessed SP AusNet's revised proposal real cost escalators against the requirements in the NER. We must accept SP AusNet's opex and capex forecasts if satisfied the total forecasts reasonably reflect the opex and capex criteria.[155] To do this we must be satisfied those forecasts reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives.[156] In forming views, we have regard to the opex and capex factors.

In our assessment of labour cost escalation, we:

- assessed SP AusNet's EA's against other comparable EAs
- reviewed the BIS Shrapnel report commissioned by SP AusNet[157]
- considered advice from our commissioned consultant, DAE[158]
- tested the expert's forecasts against each other.

In our assessment of material cost escalation, we:

- reviewed the SKM report commissioned by SP AusNet[159]

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151 SP AusNet, *Revised revenue proposal*, pp. 19–20.
152 SP AusNet, *Revised revenue proposal*, pp. 21–2.
153 SP AusNet, *Revised revenue proposal*, pp. 22–5.
154 AER, *Draft decision, SP AusNet transmission determination*, August 2013.
155 NER, clauses 6A.6.6(c) and 6A.6.7(c).
156 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
157 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013.
158 DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013.

- forecast the price changes from prices traded in futures markets, such as contracts traded on the London Metal Exchange (LME) as well as forecasts from Consensus Economics, which derives an average from forecasts by a number of economic forecasters
- tested the input price changes against each other.

In forming our views, we also considered submissions by stakeholders.[160]

1.4 Reasons for final decision

Our draft decision acknowledged that there is no perfect predictor of escalators.[161] Expert forecasters and stakeholders share this opinion.[162] Some forecasts are, however, likely to be more reliable than others. Consequently, we consider a range of material and views in reaching our conclusion. Based on our assessment, we are not satisfied that the forecasts proposed by SP AusNet satisfy the requirements of the rules.[163] In these instances we have substituted an alternative forecast.

1.4.1 Labour cost escalators

Overall we do not accept SP AusNet's revised proposal labour cost escalators as they overstate a realistic expectation of the cost inputs required to achieve the opex and capex objectives.[164] However, we consider part of the proposal is reflective of future labour costs given SP AusNet's circumstances. This is because we consider:

- there is evidence to support SP AusNet's contention that a forecast based on its recent EA outcomes are a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- in all other instances, labour cost forecasts derived from the average of BIS Shrapnel and Deloitte Access Economics (DAE) forecasts reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives.[165]

The reasons for our considerations are set out below.

We also note our draft decision contained a misunderstanding regarding the BIS Shrapnel report submitted with SP AusNet's initial proposal. Through our discussions with DAE we understood that the BIS Shrapnel report had inaccurately reflected the 2011–12 ABS construction industry data.[166] In our draft decision we gave some weight to this apparent inconsistency in BIS Shrapnel's report.[167]

However, DAE has acknowledged that its report inaccurately represented the 2011–12 ABS construction industry data. DAE has provided corrected March report tables in its recent December

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159 SKM, *Annual real material cost escalation forecast 2014/15–2016/17*, 1 October 2013.
160 EUCV, *Victorian Electricity Transmission Revenue Reset, AER draft decision and SP AusNet revised application, A response by the EUCV*, October 2013; TransGrid, SP AusNet draft decision and revised revenue proposal, 1 November 2013.
161 AER, *Draft decision, SP AusNet transmission determination*, August 2013, pp. 61–2.
162 DAE, *Response SP AusNet regulatory proposal*, 20 May 2013, p. 2; BIS Shrapnel, *Labour cost escalation forecast to 2017/18—Australia and South Australia*, April 2012, pp. i–iii; SKM, *Annual real material cost escalation forecast 2014/15–2016/17*, 1 October 2013, p. 1 and 5; EUCV, *Victorian Electricity Transmission Revenue Reset, AER draft decision and SP AusNet revised application, A response by the EUCV*, October 2013, pp. 9–11.
163 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
164 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
165 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
166 AER, *Draft decision, SP AusNet transmission determination*, August 2013, p. 66.
167 AER, *Draft decision, SP AusNet transmission determination*, August 2013, p. 66.

report.[168] DAE also noted that the inaccurate presentation of the 2011–12 data did not affect its forecast.[169]

Adjustments for expected labour productivity gains

The EUCV submitted that we are required to only provide efficient allowances and therefore, where there is an expectation of increased productivity, a productivity adjustment should be made. [170]

We agree with the EUCV that efficient expenditure forecasts should include productivity adjustments. SP AusNet did not propose such an adjustment. In our draft decision we noted that in theory labour productivity adjustments should apply to more appropriately reflect labour costs. However, given the difficulty in estimating quality adjusted labour productivity with a sufficient level of certainty, we did not make such an adjustment to the labour cost escalators in our draft decision.[171]

We do not agree with the EUCV's proposition that while we were developing better approaches to forecasting efficient costs, it was "bizarre" that we had opted out of applying future improvements in productivity to SP AusNet in our draft decision. The EUCV's statement is incorrect as we have included economies of scale and prudency adjustments to SP AusNet's opex and capex forecasts which capture some expected productivity improvements.

Since our draft decision, we have further considered this issue under our Better Regulation program of work, where we stated:

> When assessing the impact of labour price changes, it is important to distinguish between labour price changes and labour cost changes. To the extent labour prices increase to compensate workers for increased productivity, labour costs will not increase at the same rate since less labour is required to produce the same output. Consequently, unless labour productivity improvements are captured elsewhere in NSPs' expenditure forecasts, forecasts of changes in labour prices should be productivity adjusted. For the reasons discussed in section 5.3, our preferred approach is to apply a single productivity measure in the forecast rate of change. This productivity measure would include forecast labour productivity changes. Consequently forecast increases in the labour price would not need to be productivity adjusted under this approach.[172]

Consequently, our preferred approach (more fully explained in section 5.3 of *Better Regulation, Expenditure Forecast Assessment Guideline, Explanatory Statement)* is to incorporate a single productivity measure/adjustment to forecast efficient expenditures.[173] Hence, going forward we do not propose to adjust labour cost escalators for productivity. However, we do not currently have the requisite data to derive a productivity factor, and as such we have not applied a single productivity factor in this decision. We are currently collecting data to calculate productivity factors for future determinations.

We have not explicitly made an adjustment to reflect productivity improvements in the forecast expenditures for this decision. However, consistent with the expenditure forecast assessment approach outlined in Better Regulation, we applied a prudency adjustment to the capex forecast and economies of scale adjustments to the opex forecast to derive efficient forecast expenditures. These

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168 DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, Appendix D.
169 DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 108.
170 EUCV, *Victorian Electricity Transmission Revenue Reset, AER draft decision and SP AusNet revised application, A response by the EUCV*, October 2013, p. 12.
171 AER, *Draft decision, SP AusNet transmission determination*, August 2013, pp. 63–65; SP AusNet, *Revised revenue proposal*, p. 62.
172 AER, *Better Regulation – Explanatory statement: Expenditure Forecast Assessment Guideline*, November 2013, pp.49–50.
173 AER, *Better Regulation – Explanatory statement: Expenditure Forecast Assessment Guideline*, November 2013, section 5.3.

adjustments are unlikely to capture all future productivity gains. However, if we applied a productivity adjustment on top of the economies of scale and prudency adjustments we would double count future productivity gains. As such, consistent with our draft decision, we have not made any adjustments to the forecast labour cost escalators to account for expected productivity gains.

Internal labour

We accept SP AusNet's revised proposal internal labour cost escalators based on its most recent EA outcomes until they expire in October 2016. We consider these escalators reasonably reflect a realistic expectation of the cost inputs SP AusNet requires to meet the opex and capex objectives.[174]

We also consider that an average of the BIS Shrapnel and DAE forecasts reasonably reflect a realistic expectation of SP AusNet's future labour costs.

Thus we have applied SP AusNet's revised proposal labour cost escalators until October 2016 and then the average of the two independent expert EGWWS forecasts for the remainder of the 2014–17 regulatory control period. Our final decision forecast is presented in Table 1..

Table 1. AER final decision internal labour cost escalators (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
AER final decision	0.9	2.3	2.2	2.5	2.31

Source: AER analysis; BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 13–4; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013.

SP AusNet proposed to escalate its internal labour costs using two different bases:[175]

- its most recent EA outcomes until they expire in October 2016, and
- either BIS Shrapnel's EGWWS forecast or an average of this forecast and DAE's EGWWS forecast for the final five months of the 2014–17 regulatory control period.

Our consideration for each of these forecasts is set out below.

Use of negotiated wage rate agreements

We accept the use of SP AusNet's recent EA outcomes as the basis to forecast its internal labour cost escalators until they expire in October 2016.

We note that SP AusNet considered that its internal labour cost escalators be accepted because it reflects its actual wage costs. SP AusNet's revised proposal stated that:[176]

> These forecasts reasonably reflect SP AusNet's efficient internal labour costs, and are consistent with the labour costs a prudent TNSP in SP AusNet's circumstances would require. The fact that SP AusNet uses actual wage costs for the majority of the regulatory control period is expected to give the AER greater comfort that the labour forecasts reasonably reflect the operating and capital expenditure criteria.

174 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
175 SP AusNet, *Revised revenue proposal*, pp. 18–20.
176 SP AusNet, *Revised revenue proposal*, p. 20.

In the context of using labour price escalators as a proxy for forecasting the labour component of efficient costs, network service providers have relied to some extent on actual wages (represented by EAs) to support their expenditure proposals. While labour price escalators are an important consideration, we have concerns with the use of EAs to set real labour cost escalation. Although EA's may be a good proxy for labour price escalator rates, their use may not necessarily result in an efficient forecast of labour costs required by the NER.[177] Further, the revenue and pricing principles state that a service provider should be provided with effective incentives to promote economic efficiency with respect to the services the operator provides.[178] We consider that, if a service provider negotiates an EA in the knowledge that the AER will use the EA to set its opex and capex forecasts it diminishes the incentive to minimise wage rate increases during the regulatory control period. As such, using an EA may promote inefficient wage agreements in the future.

We agree with the Office of Gas and Electricity Markets (OFGEM) that there is a risk in using actual negotiated labour costs as compared to using an independent objective measure of labour cost escalations:[179]

> If we were to use network companies' pay settlement data, there is a risk that we would reward companies for inefficient wage settlements. We prefer to use data which are comparable but independent of companies' labour costs.

This view is supported by the EUCV who stated:[180]

> The risk to consumers if the AER allows an EBA to be used as the basis for future wage movements would allow a specific firm to agree on wage growths above what an efficient firm would allow, in the full knowledge that the regulator will include such increases without demur.

We note that the ongoing strength in wage increases in SP AusNet's recent EA outcomes appears to be in contrast to the expectation of easing in the overall competition for labour in Victoria over the 2014–17 regulatory control period.[181] SP AusNet's EA outcomes, nevertheless, reflect the presumably free negotiations between SP AusNet, its employees and representative unions and we are not privy to these negotiations.

To gain a better understanding of SP AusNet's EA outcomes we compared them against other comparable EAs. Table 1. compares SP AusNet's EA outcomes against collective wage agreement outcomes of other Victorian electricity, gas and water service providers.

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177 NER, clause 6A.6.6(c).
178 NEL, s.7A.
179 OFGEM, *RIIO-T1/GD1: Real price effects and ongoing efficiency appendix*, 17 December 2012, p. 7.
180 EUCV, *Victorian Electricity Transmission Revenue Reset, AER draft decision and SP AusNet revised application, A response by the EUCV*, October 2013, p. 13.
181 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 13–4.

Table 1. Comparison of collective wage agreements—wage increases (nominal, per cent)

	2010	2011	2012	2013	2014	2015	2016
SP AusNet (APESMA/ASU)[182]	4.5*	4.5	4.0	4.5*	4.5	4.5	
SP AusNet (ETU)[183]	5.0*	4.0	4.0	4.5*	4.5	4.5	
CitiPower (CEPU)[184]	4.5	4.5*	4.5	5.0			
CitiPower(ASU; APESMA; NUW)[185]	4.5	4.5*	4.5	4.5			
Powercor (CEPU)[186]	4.5	4.5*	4.5	5.0			
Powercor(ASU; APESMA; NUW)[187]	4.5	4.5*	4.5	4.5			
Jemena Asset Management (ETU)[188]	4.0*	4.0	4.0				
Jemena Asset Management (VIC)[189]	5.0	5.0	4.0*	4.0	4.0		
Jemena Gas and Water[190]	4.0*	4.0	4.0*[191]	3.5	3.5	2.0[192]	
APA GasNet[193]	4.5	4.5	4.0*	4.0	4.0		
Melbourne Water[194]	4.0*	4.0	4.0				
Yarra Valley Water[195]	3.5	4.0	3.25*	3.25	3.25	3.5	
City West Water[196]	3.5	4.0*	4.0	4.0			
South East Water[197]	4.0	4.0*	3.25	3.25			

Source: Fair Work Commission, http://www.fwc.gov.au/.
Note: The asterisks denote the start of a new collective agreement.

As is evident from this analysis, SP AusNet's EA outcomes are comparable to the other Victorian electricity, gas and water service provider's agreements. Further, there is evidence the wage

182 SP AusNet/APESMA/ASU enterprise agreement 2010–2013; SP AusNet/ASU/EPESMA enterprise agreement 2013.
183 SPI Powernet & SPI Electricity – ETU enterprise agreement 2010–2013 (This EA gave salary increases bi-annually. For comparative reasons we have shown them as an annual increase without the compounding effects); SPI Powernet & SPI Electricity – ETU enterprise agreement 2013.
184 CitiPower Pty (CEPU) workplace agreement 2007; CitiPower Pty (CEPU) workplace agreement 2011.
185 CitiPower Pty (ASU; APESMA; NUW) workplace agreement 2007; CitiPower Pty (ASU; APESMA; NUW) workplace agreement 2011.
186 Powercor Australia Pty (CEPU) workplace agreement 2007; Powercor Australia Pty (CEPU) workplace agreement 2011.
187 Powercor Pty (ASU; APESMA; NUW) workplace agreement 2007; Powercor Pty (ASU; APESMA; NUW) workplace agreement 2011.
188 Jemena Asset Management - ETU Victorian electricity enterprise agreement 2010.
189 Jemena Asset Management collective agreement (VIC) 2009; Jemena Asset Management collective agreement (VIC) 2013.
190 Jemena Gas and Water enterprise agreement 2010; Jemena Gas and Water enterprise agreement 2012.
191 The 4.0 per cent is made up of 2.0 per cent from the 2010 enterprise agreement and 2.0 per cent from the 2012 enterprise agreement. We have not accounted for compounding effects.
192 The 2.0 per cent may only be representative of part year.
193 APA transmission pipelines national workplace agreement 2008–2011; APA transmission pipelines (Vic, SA, WA, NT & Qld) enterprise agreement 2011–2014.
194 Melbourne water corporation enterprise agreement 2010; this was set to expire in June 2013, however, we have not been able to locate a public version of the new agreement.
195 Yarra valley water enterprise agreement 2009; Yarra valley water enterprise agreement 2012 (wage increases were 3 per cent per annum plus additional 1 per cent contingent on meeting key performance indicators).
196 City west water enterprise agreement 2009;
197 South east water employees collective agreement 2009 (wage increase in 2010 was 3.5 per cent plus additional 0.5 per cent contingent on meeting key performance indicators); South east water employees collective agreement 2011 (conditional on meeting key performance indicators).

increases in SP AusNet's EAs were comparable to other Victorian EGWWS industry EAs entered into around the same time.[198]

Thus on balance, our final decision is to accept SP AusNet's recent EA outcomes as the basis to forecast its internal labour cost escalators until they expire in October 2016.

Review of independent expert's forecasts

We do not accept SP AusNet's revised proposal that BIS Shrapnel's EGWWS forecast apply as the internal labour cost escalators for the final five months of the 2014–17 regulatory control period not covered by its EA. We consider this forecast is not a realistic expectation of the cost inputs required by SP AusNet to meet the opex and capex objectives.[199] On the information before us for this decision, we consider that an average of the BIS Shrapnel and DAE's EGWWS forecasts provides a realistic expectation of the cost inputs required to meet the opex and capex objectives.[200]

We reviewed the Victorian EGWWS WPI forecasts provided by BIS Shrapnel and DAE. Both SP AusNet and ourselves consider that a forecast based on the Victorian EGWWS WPI is a reliable forecast.[201] BIS Shrapnel was engaged by SP AusNet as an expert to forecast its labour cost changes over the 2014–17 regulatory period. We engaged DAE as an expert to undertake the same forecasts.

We note that both experts expect an easing in the overall competition for labour in Victoria relative to that experienced in recent years. This is largely due to the modest outlook for the Victorian economy. Unemployment in Victoria has gradually risen over recent years towards 6 per cent with little improvement predicted in the short term.[202] The Victorian Government has reduced its public spending both in terms of investment and ongoing expenditure.[203] Further, the relative high Australian dollar continues to hinder the Victorian manufacturing and financial services industries which has seen the imminent closure of Ford manufacturing plants.[204]

As noted in our draft decision because Victoria has relatively fewer natural resources it has not experienced the same wage pressures from the mining sector as other states and as such is not effected by the easing in this sector. However, where some of these states are now turning their attention to the pickup in dwelling construction, Victoria has an oversupply which is compounded by a fall in total building. BIS Shrapnel noted:[205]

> In fact, Victoria finds itself with an excess of dwellings. As a result, we expect dwelling building to decline over the next two years at least, compounding the weakness in the broader building industry which is already under pressure from falling total non–dwelling building. Because of its significant spill–overs into other industries, the wider economy is also suffering as industries that support building activity go into reverse.

198 DEEWR, *Trends in Federal enterprise bargaining June Quarter 2013*, Table 13.
199 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
200 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).
201 AER, *Draft decision, SP AusNet transmission determination*, August 2013, pp. 63–65; SP AusNet, *Revised revenue proposal*, pp. 19–20.
202 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 14.
203 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 14.
204 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 14.
205 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 14.

Overall, Victoria's modest economic growth forecast will in turn deliver modest wage growth over the 2014–17 regulatory control period. However, both experts predict that some pickup in growth will eventuate in 2016–17.[206]

At a more specific level, both BIS Shrapnel and DAE consider the Victorian EGWWS industry will reflect the trend in the overall Victorian wage effects.[207] Table 1. shows BIS Shrapnel's and DAE's revised EGWWS WPI forecasts and the average of these forecasts.

Table 1. BIS Shrapnel's and DAE's revised EGWWS WPI forecasts and an average of the experts forecasts (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
BIS Shrapnel revised forecast	2.3	1.9	1.2	1.4	1.8
DAE revised forecast	2.3	1.3	1.2	0.4	1.1
Average of BIS Shrapnel and DAE revised forecasts	2.3	1.6	1.2	0.9	1.5

Source: SP AusNet, *Revised revenue proposal*, p. 21, BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria,* September 2013, p. iv; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 89.

We consider the experts' forecasts have reliably captured the environment that a Victorian TNSP will incur labour costs over the 2014–17 regulatory control period. As noted, both SP AusNet and ourselves consider that a forecast based on the EGWWS WPI is a reliable forecast. We also agree with SP AusNet and other stakeholders that, in this instance, an average of the two forecasts is more reliable than a single forecast.[208] As such, we do not accept SP AusNet's proposal to use BIS Shrapnel's forecasts, but we accept its alternative proposal to use an average of the BIS Shrapnel and DAE forecasts.

External labour

We do not accept SP AusNet's forecast external labour cost escalators for the 2014–17 regulatory control period. SP AusNet proposed external labour cost escalators based on BIS Shrapnel's Victorian construction WPI forecast.[209] We consider the average of BIS Shrapnel and DAE's Victorian construction forecasts is a more reliable forecast of the cost inputs required to meet the opex and capex objectives.[210] Thus we have substituted this forecast for our final decision which is presented in Table 1..

206 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 14; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 89.
207 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, pp. 28–33; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 89.
208 SP AusNet, Revised revenue proposal, p. 20.
209 SP AusNet, *Revised revenue proposal*, pp. 21–2.
210 NER, clauses 6A.6.6(c)(3) and 6A.6.7(c)(3).

Table 1. AER final decision external labour cost escalators (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
AER final decision	1.2	2.25	0.75	1.0	1.75

Source: AER analysis; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 89. Note – figures include superannuation guarantee.

SP AusNet's revised proposal applied BIS Shrapnel's Victorian construction WPI forecast to form its external labour cost escalation forecast.[211] It considered BIS Shrapnel's forecast be applied because:

- our draft decision had incorrectly considered that the BIS Shrapnel's November 2012 report had incorrectly applied 2011–12 ABS data
- our draft decision consideration regarding the inconsistencies between text and forecast in BIS Shrapnel's November 2012 report were incorrect[212]
- BIS Shrapnel's report appeared to more accurately reflect the movements in the ABS construction WPI over 2013–14 than DAE's June report.[213]

We acknowledge our draft decision misunderstanding that BIS Shrapnel had incorrectly applied 2011–12 ABS data in its November 2012 report for SP AusNet. Rather it was the DAE report that incorrectly presented this data. We note this error has been corrected in DAE's December report.[214]

In response to SP AusNet's other considerations for not accepting our draft decision, we have reviewed the revised BIS Shrapnel forecast along with DAE's revised forecast for the Victorian construction WPI. Based on our review, we consider the text and forecast in BIS Shrapnel's revised report is consistent. We note overall that BIS Shrapnel has revised down its forecast for the Victorian construction WPI over the 2014–17 regulatory control period. Given the modest Victorian economic outlook and wage pressures over the forecast, BIS Shrapnel noted that construction activity in the short term should decline:[215]

> Looking ahead, we expect Victorian dwelling building to decline over the next two years at least, as Victoria now finds itself with an excess of dwellings. Engineering construction activity activity in (sic) is forecast to decline in aggregate over the next two years…

However, it considered that a recovery in overall construction should be seen from 2015–16.[216] Overall it considered that construction wages over the three years to 2016–17 would be similar to the national average.[217]

DAE noted that it expected Victoria to experience a sustained period of relative easing in the rate of growth in construction wages. However, after falling in 2014–15 and 2015–16, its forecasts indicated that construction wages would grow in line with general trends in subsequent years.[218]

Consistent with our discussion above, we consider that an average of the two forecasts is more reliable than a single forecast. SP AusNet supports this consideration.[219]

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211 SP AusNet, Response to request AER RRP 05 - Labour forecast [confidential], 7 November 2013.
212 SP AusNet, *Revised revenue proposal*, p. 21.
213 SP AusNet, *Revised revenue proposal*, p. 21.
214 DAE, *Forecast growth in labour costs in Victoria,* 3 December 2013, Appendix D, p. 108.
215 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 37.
216 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 37.
217 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 37–8.
218 DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, pp. 84 and 89.

Table 1. BIS Shrapnel's and DAE's revised construction WPI forecasts and an average of the experts forecasts (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
BIS Shrapnel revised forecast	1.2	2.0	0.9	1.3	1.8
DAE revised forecast	1.2	2.0	0.0	–0.3	0.7
Average of BIS Shrapnel and DAE revised forecasts	1.2	2.0	0.5	0.5	1.25

Source: SP AusNet, *Revised revenue proposal*, p. 22; BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. iv; DAE, *Forecast growth in labour costs in Victoria*, 3 December 2013, p. 89.

Superannuation guarantee rate increases

We also note the experts' forecasts do not account for non–wage labour costs such as superannuation.[220] Thus we have added the incremental superannuation guarantee rate increases over the 2014–17 regulatory control period to our final decision labour cost escalators.

We investigated whether SP AusNet's EBAs included the superannuation guarantee. SP AusNet explicitly confirmed that the superannuation guarantee was not included within its EBS rates.[221] We therefore accept that the superannuation guarantee increases are input costs that SP AusNet will incur during the 2014–17 regulatory control period. The superannuation guarantee rate increases are presented in Table 1..

Table 1. Superannuation guarantee rate increases (real, per cent)

	2012–13	2013–14	2014–15	2015–16	2016–17
Superannuation guarantee rate increase	0.0	0.25	0.25	0.5	0.5

Source: Federal Government fact sheet.[222]

1.4.2 Material escalators

Our final decision applies SP AusNet's proposed material escalator method with updated inputs to reflect the latest available data and conversion rates. Our draft decision accepted this method as being reasonable. We accept that SP AusNet's revised proposal material escalators do not include labour as an input. However, we do not accept the proposed carbon pricing impacts as inputs. We consider our final decision material escalators reflect a realistic expectation of the cost inputs required to achieve the capex objectives.[223]

We accept SP AusNet's revised proposal that its material escalators do not include labour as an input. Our draft decision considered that the SKM material escalators—prepared for SP AusNet's initial

219 SP AusNet, *Revised revenue proposal*, p. 22.
220 BIS Shrapnel, *Real labour cost escalation to 2017—Australia and Victoria*, September 2013, p. 23; DAE, *Forecast growth in labour costs in Victoria,* 3 December 2013, Appendix C, p. 105.
221 SP AusNet, *Response to request AER RRP 05 - Labour forecast [confidential]*, 7 November 2013.
222 See http://www.futuretax.gov.au/content/Content.aspx?doc=FactSheets/super_guarantee_rate_to_12_percent.htm
223 NER, clauses 6A.6.7(c)(3) and 6A.6.7(a).

proposal—had included forecast labour costs as an input.[224] We considered the inclusion of labour in the material escalators would be double counting as SP AusNet's proposal also applied separate labour cost escalators prepared by BIS Shrapnel. Subsequently our draft decision material escalators did not include forecast labour costs as an input.

SP AusNet's revised proposal acknowledged the appearance of double counting forecast labour costs.[225] However, SP AusNet confirms that this was due to a presentational issue in the SKM report and that the material escalators did not include forecast labour costs. SP AusNet stated:[226]

> The misunderstanding is due to an oversight in the November 2012 SKM Report which included labour in the table of inputs used to derive SP AusNet's materials escalators. This led the AER to believe that the calculation for materials inputs included labour cost inputs. SKM has confirmed that its calculations did not include such costs in SP AusNet's materials escalators...

We note the updated SKM report confirms this position.[227]

We do not accept the carbon pricing impacts as inputs to the material escalators for our final decision. As stated in the Australian Government's *Repeal of the Carbon Tax: Exposure Draft Legislation and Consultation Paper*, the carbon tax will be abolished as of 1 July 2014.[228] The Australian Government note that it:[229]

> …will not extend the carbon tax beyond 2013–14, even if the Parliament does not pass the carbon tax repeal bills until after 1 July 2014.

SP AusNet's initial proposal and our draft decision material escalators included the impacts of the carbon price.[230] The inclusion of these impacts reflected the legislation and likely forecast impact on the material escalators at the time of publishing the respective documents. SP AusNet's revised proposal also applied the impact of carbon pricing to its material escalators. However, SP AusNet acknowledged that the final decision should reflect the most up-to-date outlook on carbon pricing impacts.[231] Thus our final decision material escalators do not include carbon pricing impacts.

Consistent with our draft decision, we have also updated the materials and the $US forecast to reflect the most recent data. This latest data is reflected in our final decision material escalators set out in Table 1..

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224 AER, *Draft decision, SP AusNet transmission determination*, August 2013, pp. 67-68.
225 SP AusNet, *Revised revenue proposal*, p. 23.
226 SP AusNet, *Revised revenue proposal*, p. 23.
227 SKM, *Annual real material cost escalation forecast 2014/15–2016/17*, 1 October 2013, pp. 28–29.
228 Australian Government, *Repeal of the carbon tax: Exposure draft legislation and consultation paper*, October 2013.
229 Australian Government, *Repeal of the carbon tax: Exposure draft legislation and consultation paper*, October 2013, p. 1.
230 AER, *Draft decision, SP AusNet transmission determination*, August 2013, pp. 67-68.
231 SP AusNet, *Revised revenue proposal*, p. 23.

2 Capital expenditure

The National Electricity Rules (NER) require SP AusNet to include its total forecast capital expenditure (capex) in its revenue proposal to the Australian Energy Regulator (AER) for the 2014–17 regulatory control period.[232] The return on capex and the return of capex (depreciation) are components of the building block revenue requirement.[233] We must either accept SP AusNet's proposed forecast capex or substitute our own forecast.[234] Forecast capex must reasonably reflect the capex criteria set out in the NER.[235] If it is overstated, then the tariffs consumers pay will be higher than they should be.

Capex is generally broken down into network and non-network related categories:

- network load driven (augmentation, connection and land/easements)
- network non-load driven (replacement, refurbishment, security/compliance and inventory spares)
- non-network (business information technology (IT) and buildings/facilities).

SP AusNet has not included any forecast network load driven capex. This exclusion is consistent with the transmission arrangements in Victoria, which differ from those in other regions in the National Electricity Market (NEM). The Australian Energy Market Operator (AEMO) has the role of transmission planner in Victoria and is responsible for augmenting the transmission network. When augmentation is contestable, AEMO procures the augmentation assets by competitive tender, and the assets remain outside of SP AusNet's regulatory asset base (RAB). When augmentation is not contestable and AEMO requires SP AusNet to fund the augmentation, the assets are rolled into SP AusNet's RAB at the end of the relevant regulatory control period.

2.1 Final decision

We do not accept SP AusNet's revised proposed total forecast capex of $541.7 million ($2013–14)[236] for the 2014–17 regulatory control period.[237] We are not satisfied the revised forecast reasonably reflects the capex criteria because we consider SP AusNet has overstated elements of the forecast.[238] We have thus reduced SP AusNet's forecast capex by $28.6 million ($2013–14) to arrive at a substitute total forecast capex of $513.1 million ($2013–14) that reasonably reflects the NER requirements.[239] The following two findings led us to determine that SP AusNet's revised forecast capex is more than necessary:

- In its total forecast capex for its projects and programs of work, SP AusNet did not adequately account for prudent changes we expect it will make during the 2014–17 regulatory control period ($19.6 million ($2013–14) reduction).
- SP AusNet's proposed real cost escalators do not reasonably reflect a realistic expectation of cost inputs required to achieve the capex objectives ($9.0 million ($2013–14) reduction).

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232 NER, clause 6A.6.7(a).
233 NER, clause 6A.5.4.
234 NER, clauses 6A.6.7(d), 6A.6.7(f) and 6A.14.1(2).
235 NER, clause 6A.6.7(c).
236 This figure of $541.7 million ($2013–14) differs from the revised revenue proposal of $546.7 million ($2013–14) (SP AusNet, *Revised revenue proposal*, p. 54) because SP AusNet subsequently revised its forecast capex to rebuild the Richmond terminal station (SP AusNet, *Capex update*, 5 December 2013).
237 NER, clause 6A.14.1(2)(ii).
238 NER, clause 6A.6.7(c).
239 NER, clause 6A.14.1(2)(ii).

In developing our substitute forecast we also considered the following aspects of SP AusNet's forecast capex:

- the rebuild of the West Melbourne Terminal Station (WMTS)
- the relocation of assets owned by distributors at the Richmond terminal station (RTS) and WMTS, which SP AusNet did not include in its initial revenue proposal
- the extension of the life of four transformers at the RTS and WMTS
- information technology (IT) capex.

We were satisfied that forecast capex relating to the above specified works reasonably reflects the capex criteria. Table 2. shows our final decision forecast capex compared with SP AusNet's revised forecast capex. Our substitute forecast capex of $513.1 million ($2013–14) is 5.3 per cent less than SP AusNet's revised forecast capex of $541.7 million ($2013–14).

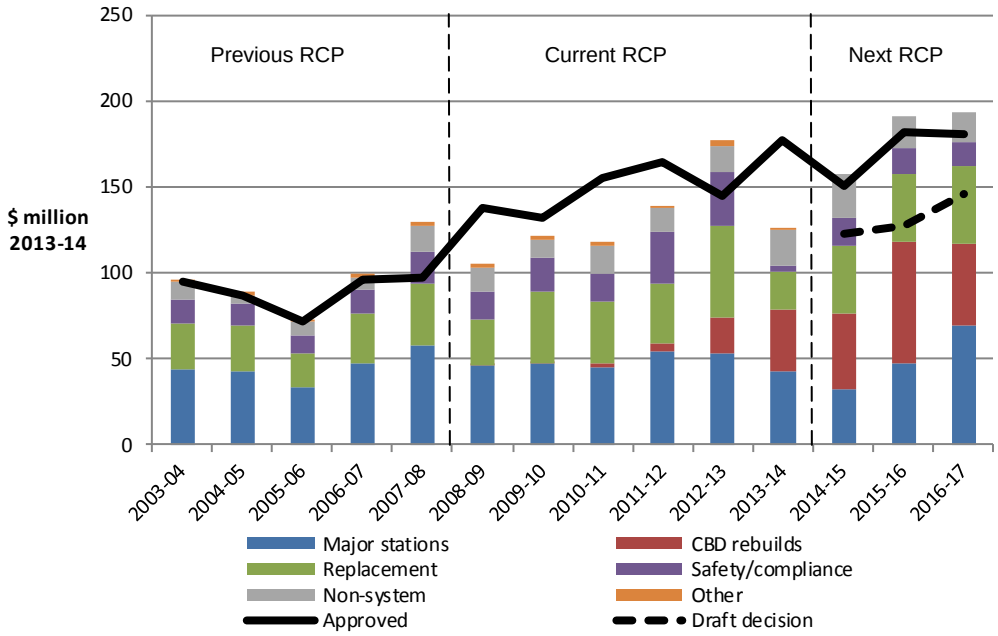
Table 2. AER's final decision capex and SP AusNet's revised forecast capex ($ million, 2013–14)

Category	2014–15	2015–16	2016–17	Total	SP AusNet	Difference
Major stations:						
Richmond	31.4	22.1	18.9	72.4	73.3	-0.9
West Melbourne	11.3	32.9	23.8	68.0	68.8	-0.8
Relocate distributors' assets	1.5	12.9	3.7	18.1	20.7	-2.6
Other stations	31.3	46.3	64.5	142.2	148.5	-6.4
Total major stations	75.5	114.2	110.9	300.7	311.4	-10.7
Asset replacement	35.5	35.6	40.9	112.0	124.2	-12.3
Safety and compliance	14.9	13.4	12.2	40.5	44.9	-4.3
Non-system	24.6	18.5	16.8	59.9	61.2	-1.3
Total	**150.6**	**181.8**	**180.8**	**513.1**	**541.7**	**-28.6**

Source: SP AusNet, *Revised revenue proposal*, p. 54; AER analysis. Numbers may not add up due to rounding.

Figure 2. compares our approved capex with SP AusNet's revised forecast capex for the 2014–17 regulatory control period and actual capex for the previous two periods. It also shows our draft decision capex for the 2014–17 regulatory control period.

Figure 2. Comparison of AER's approved capex and SP AusNet's actual and forecast capex ($ million, 2013–14)



Source: SP AusNet, *Revised revenue proposal*, p. 54; AER analysis.
Note: RCP— regulatory control period.

2.2 SP AusNet's revised proposal

SP AusNet's revised forecast capex of $541.7 million ($2013–14) is $22.5 million ($2013–14) (or 4.0 per cent) less than its initial forecast. It is also $145.5 million ($2013–14) (or 37 per cent) higher than our draft decision forecast of $396.2 million ($2013–14).

Table 2. compares SP AusNet's revised forecast capex by category with its initial forecast and our draft decision. Key features of its revised revenue proposal are:

- Forecast capex of $68.8 million ($2013–14) for the West Melbourne Terminal Station (WMTS) rebuild compared with $106.4 million ($2013–14) in its initial revenue proposal. SP AusNet has deferred the project by one year and the total costs of the project have increased as a result of the Linking Melbourne Authority's (LMA) intention of acquiring part of the land on which the WMTS is situated.[240]
- Additional capex of $20.7 million ($2013–14) to relocate distributors' assets at the WMTS and Richmond Terminal Station (RTS), which SP AusNet did not include in its initial revenue proposal.[241]
- rejection of our draft decision prudency and cost estimation bias adjustment of $30.4 million ($2013–14). SP AusNet submitted we could not rely on past outcomes to reduce forecast capex because circumstances have changed since the 2008–14 regulatory control period. Moreover, forecasts are more certain for a three year regulatory control period than a six year period. It also submitted we did not account for adjustments it had already made a portfolio level in deriving its forecast capex. They include the deferral of four projects and a 1.44 per cent efficiency factor.

240 SP AusNet, *Revised revenue proposal*, pp. 42–46.
241 SP AusNet, *Revised revenue proposal*, pp. 41–42 and pp. 46–47.

Moreover, it submitted we should take account of 'roll-ins' and 'roll-outs' ('roll-ins' are projects SP AusNet undertook in the 2008-14 regulatory control period but which it did not propose in its revenue proposal for that period, while 'roll-outs' are projects it proposed but did not undertake). Finally, it submitted more projects now have approved business cases since it submitted its initial revenue proposal. If the prudency adjustment was valid, which it doesn't think it is, SP AusNet submitted the correct adjustment would be $19.5 million ($2013–14), after taking account of the above factors.[242]

Table 2. SP AusNet's revised and forecast capex and the AER's draft decision forecast capex ($ million 2013–14)

Category	2014–15	2015–16	2016–17	Revised total	Initial total	Draft decision
Major stations						
Richmond	31.6	22.3	19.3	73.3	79.5	77.6
West Melbourne	11.4	33.3	24.2	68.8	106.4	nil
Relocate distributors' assets	1.7	14.7	4.2	20.7	nil	nil
Other stations	31.6	47.7	69.3	148.5	149.8	132.9
Total major stations	76.3	118.0	117.1	311.4	335.7	210.6
Asset replacement	39.1	39.6	45.5	124.2	121.1	103.3
Safety/compliance	16.3	15.0	13.6	44.9	44.7	38.0
Non-system	25.1	18.9	17.3	61.2	62.7	44.3
Total	156.9	191.4	193.5	541.7	564.2	396.2

Source: AER, *Draft decision: SP AusNet transmission determination 2104–15 to 2016–17*, p. 71; SP AusNet, *Revised revenue proposal*, p. 54. Numbers may not add up due to rounding.

2.3 Assessment approach

We adopted the same approach as our draft decision to assess SP AusNet's revised capex forecast. The following is a summary of our approach. For more details please see section 2.3 of our draft decision.

We must accept SP AusNet's forecast capex if we are satisfied it reasonably reflects the capex criteria.[243] Otherwise, we must not accept SP AusNet's forecast capex and we must substitute our own.[244] Forecast capex must reasonably reflect the efficient costs that a prudent operator in SP AusNet's circumstances would incur, based on a realistic expectation of the demand forecast and cost inputs to achieve the capex objectives (the capex criteria).[245] We must perform our function in a manner that will or is likely to contribute to the achievement of the national electricity objective (NEO). We must also have regard to the capex factors and the revenue and pricing principles in the National Electricity Law (NEL).[246]

242 SP AusNet, *Revised revenue proposal*, pp. 29–39.
243 NER, clause 6A.6.7(c).
244 NER, clauses 6A.6.7(d), 6A.6.7(f) and 6A.14.1(2).
245 NER, clause 6A.6.7(c). The capex objectives are set out in NER, clause 6A.6.7(a).
246 NER, clause 6A.6.7(e); NEL, ss. 7 and 7A.

Although we review individual projects and programs we must form a view on the forecast capex in total, rather than for individual projects or programs.[247] It is the responsibility of SP AusNet's management to operate its network to meet its service standards obligations. It is important for the regulatory framework to provide SP AusNet with incentives to manage its network efficiently and effectively. This means the capex we allow in this final decision is not a firm budget. It is neither a floor nor a cap on capex. SP AusNet may spend more or less than the amount set out in this final decision depending on the circumstances. It may also direct capex to projects not identified in this decision. Similarly, it might decide not to undertake some projects considered in this decision. The purpose of this decision is to set a total capex allowance under the NER that SP AusNet reasonably expects to require in the 2014–17 regulatory control period. Nevertheless, because the total forecast is separated into components, we may assess these components to make our decision on the total amount. As discussed below, we have taken account of forecast capex for individual projects in deriving our total substitute forecast capex. However, ultimately we have considered SP AusNet's forecast capex as a portfolio in determining its total capex requirements for the 2014–17 regulatory control period.

We considered SP AusNet's response to the draft decision in its revised revenue proposal and supporting documents. We also took account of matters interested parties raised in their submissions in response to the draft decision. As with the draft decision, we again engaged Energy Market Consulting associates and Strata Energy Consulting (EMCa)[248] to assist us review SP AusNet's revised forecast capex.

2.4 Reasons for final decision

Overall we do not accept SP AusNet's revised forecast capex satisfies the requirements of the NER and NEO for the reasons outlined in this section. We consider SP AusNet's revised forecast capex does not meet the capex criteria with respect to two matters. First, we expect SP AusNet will make prudent changes to its capex program during the 2014–17 regulatory control period and consequently it will find that at a portfolio level its capex requirements will be less than its revised forecast capex. Second, we do not consider SP AusNet's revised real cost escalators reasonably reflect a realistic expectation of the cost inputs required to achieve the capex objectives. After taking account of these two matters, we reduced SP AusNet's total revised forecast capex by $28.6 million to $513.1 million ($2013–14).

2.4.1 West Melbourne terminal station

SP AusNet's revised forecast capex for the 2014–17 regulatory control period includes $68.8 million ($2013–14) to rebuild the WMTS.[249] We have included an amount of $68.0 million ($2013–14) in our total substitute forecast capex (SP AusNet's forecast capex of $68.8 million ($2013–14) adjusted for differences between SP AusNet's proposed real costs escalators and ours). As discussed in our draft decision, we agree with SP AusNet the WMTS needs to be rebuilt given its age and condition. We also agree with SP AusNet that electricity consumers should not have to pay for any additional project costs caused by the LMA's intention to acquire part of the land on which the WMTS is situated as part of the East West Link road project.[250] Instead road users should meet those additional costs.

SP AusNet intends to seek compensation from the LMA for the additional project costs resulting from the LMA's action, should SP AusNet undertake the project. SP AusNet proposed a cost pass through

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247 NER, clause 6A.14.1(2).
248 This attachment refers to Energy Market Consulting Associates and Strata Energy Consultants collectively as EMCa.
249 SP AusNet, *Revised revenue proposal*, p. 46.
250 SP AusNet, *Revised revenue proposal*, p. 47.

event to return to consumers any compensation it receives from the LMA (less 10 per cent which SP AusNet would retain as an incentive to seek compensation from the LMA).[251] We do not approve SP AusNet's proposed pass through event. While we acknowledge SP AusNet's intention to pass the compensation on to users, we consider the pass through amount would not meet the materiality threshold for cost pass through events (see chapter 14 of our final decision for more details). In that case SP AusNet would be compensated twice for the costs it incurs—first through revenue it receives from electricity users and second through the compensation it receives from the LMA. This would not be consistent with the NEO concerning the long term interests of users with respect to price. Instead, to protect the interests of users the capex we will roll into the opening regulatory asset base (RAB) at the start of the 2017–22 regulatory control period will be net of any compensation (post tax) SP AusNet receives from the LMA. This approach would also ensure that users over the life of the asset will benefit from the compensation.[252]

We consider it is important SP AusNet has an incentive to seek compensation from the LMA and electricity users should not have to pay the additional project costs caused by the LMA's actions. We expect SP AusNet to take all necessary action to obtain compensation from LMA. We consider our approach provides SP AusNet with a strong incentive to seek compensation because the early receipt of compensation would provide benefits to it similar to capex underspends under the current capex incentive framework. We expect SP AusNet to report to us any compensation it receives by including it in its annual regulatory accounts. Our approach also overcomes the limitation of the materiality threshold and 10 per cent fee associated with the cost pass through event mentioned above.

For the purposes of the NER, we consider the prudent and efficient costs of the WMTS rebuild project is the capex SP AusNet is expected to incur less any compensation it receives from the LMA. However, the timing and amount of compensation is unknown. It is possible SP AusNet might not receive any compensation in the 2014–17 regulatory control period. Therefore, although it is clear costs have increased due to the actions of the LMA, we are not reasonably satisfied that compensation will be received in time to fund the capex requirement. For this reason we have not reduced SP AusNet's revised forecast capex by an estimate of the amount of compensation.

In its initial revenue proposal SP AusNet forecast capex of $106.4 million ($2013-14) in the 2014-17 regulatory control period to rebuild the WMTS. The total estimated cost of the project was $145 million ($2013-14), with the project to be completed during the 2017–22 regulatory control period.[253]

Before we released our draft decision SP AusNet informed us on 22 July 2013 the LMA might compulsorily acquire part of the land on which the WMTS is situated for road works for the East West Link road project.[254] In a letter to SP AusNet dated 15 July 2013 the LMA indicated it would not be in a position to formally advise SP AusNet until early to mid 2014 whether or not it would acquire the land. With respect to the proposed route of the East West Link, in that letter the Chief Executive Officer of the LMA informed SP AusNet:[255]

> I would like to emphasise that this design is not yet finalised. It may be amended following consultation over the next few months with the community, relevant regulatory authorities and ultimately potential builders of the project.

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251 SP AusNet, *Revised revenue proposal*, pp. 122–124.

252 It is unclear whether SP AusNet's proposed cost pass through approach is based on adjusting its forecast capex and accounting for the associated building block costs via a pass through or just a direct lump sum pass through by way of a revenue adjustment in the year that compensation is received.

253 SP AusNet, *Revised revenue proposal*, p. 46.

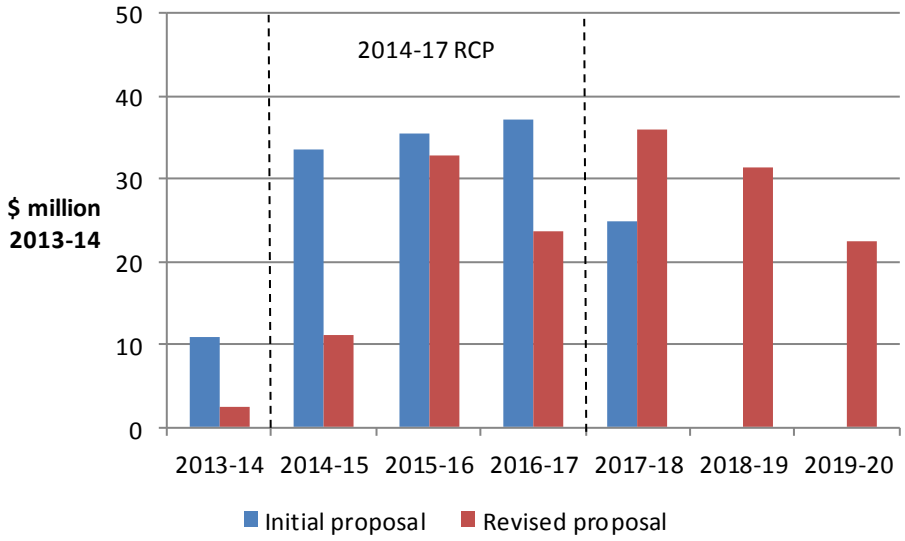
254 SP AusNet, *Material developments at West Melbourne terminal station*, 22 July 2013.

255 LMA, *The east west link road project, 297–307 Arden Street, Kensington*, 15 July 2013.

At that time SP AusNet informed us these developments would materially alter the scope of the WMTS project, but it was not in a position to submit a revised project proposal to us in time for our draft decision. Given those developments and the uncertainty over the timing and costs of the WMTS project, for our draft decision we could not make a reasonable forecast of the capex requirements for the project for the 2014-17 regulatory period that complied with the NEL and NER. We indicated for our final decision we would consider any revised proposal for the WMTS which SP AusNet submitted as part of its revised revenue proposal.[256]

The revised forecast capex is predicated on the LMA acquiring part of the land on which the WMTS is situated. This development has resulted in some key changes to the project in terms of cost and timing. First, the estimated total capex of the project is $163 million ($2013–14), which is $18 million higher than the total capex estimated in SP AusNet's initial revenue proposal. Second, the project has been deferred by one year and is expected to take longer to complete. It is now expected to be completed in 2019-20 instead of 2017-18. As well as the delay caused by the LMA's actions, lower forecast demand is a driver of the one year deferral. Figure 2. illustrates these timing and cost differences by graphing forecast annual capex of SP AusNet's initial and revised proposals.

Figure 2. Comparison of SP AusNet's initial and forecast capex for the WMTS ($ million, 2013–14)



Source: SP AusNet, *Revised revenue proposal*, p. 46; SP AusNet, *Information update–capex for RTS and WMTS*, 5 December 2013.
Note: RCP—regulatory control period.

In light of the advice from the LMA that it might acquire some of the land on the WMTS site, SP AusNet investigated and assessed new options for rebuilding the WTMS. To assist with the review, SP AusNet engaged the services of three engineering consultants, BECA, SKM and Aurecon. Each consultant independently developed six options to rebuild the WTMS. These were:

- Four separate designs to rebuild at the existing site using the remaining space and with gas insulated switchgear (GIS).

[256] AER, *Draft decision: SP AusNet transmission determination 2014–15 to 2016–17*, p. 85.

- A full GIS rebuild at the existing site with load temporarily shifted to the Fisherman's Bend and Brunswick terminal stations.
- A full GIS greenfield rebuild at another site.[257]

SP AusNet rejected the second and third of these options as they were not economic, with estimated total costs in excess of $300 million ($2013–14). It reviewed the remaining options to identify the most economic and feasible option. It developed its preferred option based on BECA's best overall option and incorporated the best elements of the other consultants' options. To support its revised revenue proposal SP AusNet submitted the consultants' reports and a breakdown of the estimated costs of its preferred option.[258] We examined this material and consider the process SP AusNet has undertaken to develop the most cost efficient and feasible option to be thorough and sound. EMCa also considers the process SP AusNet undertook to establish and assess the various options was appropriate, and the cost estimates were reasonable.[259]

As part of the WMTS rebuild SP AusNet proposes to replace air insulated switchgear (AIS) with the more expensive GIS. We considered this issue in our assessment of SP AusNet's initial revenue proposal. We and EMCa were not entirely convinced AIS was unviable at the WMTS, or that the benefits of GIS outweighed the additional costs. However, the actions of the LMA and SP AusNet's advice it would have to review the project meant we did not have to reach a conclusion on this aspect for our draft decision. One advantage GIS has over AIS is that it is more compact. Given SP AusNet is proceeding with the project on the assumption the LMA will acquire part of the land at the WMTS site, we and EMCa now agree with SP AusNet that GIS is the only option, because AIS would not be viable given SP AusNet will have less land on which to rebuild the WMTS.[260]

Since submitting its revised revenue proposal, SP AusNet has informed us the LMA will make its land acquisition decisions in two stages and the WMTS is in the second stage. SP AusNet provided us with a report from Urbis Valuations and Advisory confirming the LMA's intentions.[261] It is now unlikely the LMA will make its decision whether to acquire part of the land at the WMTS site before June 2014, as it had previously indicated to SP AusNet. We consider it is prudent for SP AusNet to proceed with this project on the assumption the LMA will acquire part of the land, rather than wait until the LMA makes its decision before commencing the project. SP AusNet has already deferred this project by one year. In its initial report EMCa recommended the project be deferred by one year and, although the reasons might be different from SP AusNet's reasons for deferring the project, the outcome is the same.[262] We agree with EMCa the project should not be further deferred given health and safety risk and security of supply risk, and have taken account of this in determining our total substitute forecast capex.[263]

The EUAA supports SP AusNet's revised project and its proposed cost pass through event. However, it submitted this is not to be taken as support for the amount of the forecast capex and the timing of the project.[264]

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257 SP AusNet, *Revised revenue proposal*, pp. 42–44.
258 SP AusNet, *Revised revenue proposal*, Appendix N [confidential].
259 EMCa, *SP AusNet technical review*, January 2014, p. 16, paragraph 56.
260 EMCa, *SP AusNet technical review*, January 2014, p. 16, paragraph 53.
261 Urbis Valuations and Advisory, *West Melbourne Terminal – Proposed compulsory acquisition*, 21 November 2013.
262 EMCa was concerned about the risk to CBD supply from SP AusNet undertaking the WMTS and RTS rebuilds simultaneously (EMCa, *SP AusNet technical review*, August 2013, p. 54, paragraph 163).
263 EMCa, *SP AusNet technical review*, January 2014, p. 17, paragraphs 63–64.
264 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 11.

EMCa considers the reasonable costs are the actual costs of the rebuild less the compensation SP AusNet receives from the LMA. It noted the effect of the compensation is to reduce the cost of the project to SP AusNet. EMCa stated:[265]

> EMCa disagrees with SP AusNet that the pass through event provision is reasonable to use in this case. We take this view because a reasonable basis for establishing the level of compensation is already available based on information already provided by SP AusNet, and from SP AusNet's information that it is likely to obtain such compensation. In EMCa's opinion it is straight forward and reasonable to utilise an assessed net cost to SP AusNet as the allowance for capex for revenue determination purposes, and a pass-through mechanism is not required.

EMCa recommended we approve forecast capex of $61.5 million ($2013–14) for the 2014–17 regulatory control period.[266] This is a pro rata adjustment to SP AusNet's forecast capex based on the ratio of $145 million—the total forecast costs SP AusNet would have incurred if not for the actions of the LMA—to $163 million. While we consider this approach has some merit we have not adopted it. If SP AusNet does not receive any compensation from the LMA in the 2014–17 regulatory control period, forecast capex of $61.5 million may not be sufficient to cover SP AusNet's efficient costs.

Potential contingent project

Given the uncertainty over the timing of the LMA's decision and the effect this might have on the scope, timing and costs of the WMTS, we considered whether all or part of the forecast capex should be included as a contingent project. However, given the LMA is now unlikely to make its decision before June 2014, we agree with EMCa it would not be prudent for SP AusNet to wait until the LMA makes its decision before commencing the project. The project has already been deferred by one year and any further delay has the potential to increase health and safety risk and security of supply risk. Thus we have not included any of the forecast capex as a contingent project.

2.4.2 Prudency adjustment

We reduced SP AusNet's forecast capex by $19.6 million ($2013–14) to account for prudent changes we expect SP AusNet will make to its capex program during the 2014–17 regulatory control period. EMCa also recommended we make this prudency adjustment.[267] We consider SP AusNet's forecast capex does not adequately account for its commitment to continuous improvement in delivering its capex program. We consider SP AusNet's asset management framework will lead SP AusNet to find economies and make prudent changes to certain projects during 2014–2017. That is, SP AusNet should be able to identify projects that it could prudently defer, or for which it would be prudent to change the scope, optimise the design and specification, and/or integrate with other projects. We consider that in developing a portfolio of capex projects that make up the total capex forecast, SP AusNet should consider these prudent adjustments.

SP AusNet's forecast capex is built up from cost estimates of its individual projects and programs of work. However, taking account of the continuous improvement to its capex delivery program, we consider it reasonable to conclude that the total efficient and prudent capex requirements will be less than SPA has forecast at a portfolio level. To account for this portfolio level outcome we have applied a prudency adjustment.

We have considered new information SP AusNet provided in its revised revenue proposal, submissions from interested parties and EMCa's recommendations. We conclude that a prudency

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265 EMCa, *SP AusNet technical review*, January 2014, p. 17, paragraph 61.
266 EMCa, *SP AusNet technical review*, January 2014, p. 19, paragraph 71.
267 EMCa, *SP AusNet technical review*, January 2014, pp. 29–34, paragraphs 119–146.

adjustment to forecast capex is justified. We do not agree with SP AusNet that no prudency adjustment to its forecast capex is warranted.

How we calculated our prudency adjustment

As projects transition from the initial concept stage through to being fully scoped and approved, a transmission network service provider (TNSP) will make decisions on alternative options, project scope and delivery approaches. In our assessment of a TNSP's forecast capex we consider how these decisions are likely to affect the overall level of required capex. We consider that capex savings will be possible through prudent decision making at various points of a project's life cycle. For example, a TNSP might change the scope of a project, optimise a project's design and specification, defer certain projects, and find economies of scope by integrating projects. Such continuous improvement will lead to a prudent TNSP revising its cost estimates as projects develop.

We consider SP AusNet's asset management framework (including SP AusNet's commitment to continuous improvement) will lead to SP AusNet finding economies and making prudent changes to certain projects during the 2014-17 regulatory control period. Throughout this period SP AusNet should be able identify projects for which it would be prudent to make the types of changes identified above. As noted by EMCa, SP AusNet made such changes during the 2008-14 regulatory control period, so actual capex was less than SP AusNet estimated. Regarding SP AusNet's capex program for the 2014–17 regulatory control period, EMCa stated:[268]

> At a portfolio level, we consider that there will be considerable opportunities to rationalise this program, to de-scope certain projects through prudent engineering, to prudently defer projects as more information is gathered and to refine cost estimates. We consider that the evidence from the current RCP outcomes leads to the conclusion that SP AusNet will find that it needs to spend less at a portfolio level than it has currently proposed.

We adopted EMCa's recommended methodology to determine the level of prudency adjustments that should be made to SP AusNet's forecast capex. EMCa compared SP AusNet's forecast capex with its historical capex in the 2008-14 regulatory control period. It reviewed 57 projects, of which it classified 14 as site-specific projects and the remaining 43 as programs of work. For those projects that had business cases, EMCa found that SP AusNet's cost estimates were relatively accurate, with only a 1.4 per cent over-estimation bias. For those projects and programs without business cases, EMCa found SP AusNet spent on average 9.9 per cent less than it proposed on site-specific projects and 9.2 per cent less on programs of works.[269] EMCa recommended we reduce SP AusNet's forecast capex for the 2014–17 regulatory control period by these percentages. With respect to the underspend in the 2008–14 regulatory control period EMCa stated:[270]

> From a range of information provided by SP AusNet, we consider that the under-spend most likely resulted from a combination of:
>
> - Prudent deferrals of projects or programs of work which are found not to be required within the period (or for which there is a reduced requirement within the period) based on changed consumer requirements and/or better [asset] condition information. In other words, SP AusNet is dynamically adjusting its program for changing circumstances, and/or
>
> - De-scoping of projects and/or optimisation across a portfolio of projects that reveals a reduced overall requirement. That is, the project scope can be reduced and is simply deferred, and/or

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268 EMCa, *SP AusNet technical review*, August 2013, p. 49, paragraph 134

269 In EMCa's August 2013 report (p. 49, paragraph 135) and our draft decision (p. 80) the equivalent percentages were 11.7 per cent for site-specific projects and 12.6 per cent for programs of work. We have updated these percentages in our final decision to account for roll-ins and roll-outs.

270 EMCa, *SP AusNet technical review*, August 2013, p. 41, paragraph 101.

- Engineering design optimisation which delivers the identified required outcome in a more cost-effective manner than was assumed at the early proposal stage, and/or
- Cost efficiencies in delivery of the project (e.g. post design implementation).

As in the 2008-14 regulatory control period, SP AusNet's revised forecast capex for the 2014-17 regulatory control period is built up from SP AusNet's cost estimates for 38 individual projects and programs of work. We expect SP AusNet will identify prudent changes to its capex program over the course of the 2014-17 regulatory control period similar to the prudent changes it made during the 2008-14 regulatory control period. So at the portfolio level we expect SP AusNet's actual total capex in the 2014-17 regulatory control period will be less than the aggregate of the forecast capex for each of its individual projects and programs of work. We consider these expected changes should be reflected in lower forecast capex than SP AusNet forecast by applying the adjustments EMCa recommended. Put simply, we expect the total forecast capex to be less than the sum of the individual components because of the portfolio effects described above.

In deriving our final decision prudency adjustment of $19.6 million ($2013–14) we made the following reductions to SP AusNet's forecast capex, in accordance with EMCa's analysis and recommendation:

- 10 per cent for uncommitted[271] site-specific projects
- 9 per cent for uncommitted programs of work.

These percentages are based on the observed differences between proposed and actual capex in the 2008–14 regulatory control period as a result of changes SP AusNet made to its capex program throughout that period. The percentages are less than our draft decision and consequently our final decision prudency adjustment of $19.6 million is less than our draft decision adjustment of $30.4 million ($2013–14). In arriving at our final decision prudency adjustment we have taken account of additional information SP AusNet submitted in its revised revenue proposal. This includes the fact that more projects now have approved business cases since SP AusNet submitted its initial revenue proposal. It also takes account of roll-ins and roll-outs.

As noted above the observed difference between proposed and actual capex in the 2008–14 regulatory control period for projects with business cases was 1.4 per cent. However, we have made no prudency adjustment for the 2014–17 regulatory control period to projects that are underway or have business cases approved by SP AusNet's board. SP AusNet has applied a 1.44 per cent efficiency factor to its forecast capex and we consider no further prudency adjustment is warranted. EMCa also recommended this approach.[272]

Our prudency adjustment of $19.6 million ($2013–14) is 3.6 per cent of SP AusNet's revised total forecast capex of $541.7 million ($2013–14). For the 2008–14 regulatory control period the expected underspend—the difference between our approved forecast capex and actual/estimated capex—is about $120 million ($2013–14), which is 13 per cent of our total approved forecast capex for that period. We recognise the portfolio effect is likely to be less in the 2014–17 regulatory control period because:

- the period is shorter (three years compared with six years)
- a greater proportion of the forecast capex applies to projects that have approved business cases (59 per cent compared with 7 per cent at the start of the 2008–14 regulatory control period).

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[271] Projects that are not substantially underway or do not have business cases.
[272] EMCa, *SP AusNet technical review*, January 2014, p. 32, paragraphs 134–137.

Accordingly, our prudency adjustment for the 2014–17 regulatory control is less in dollar and percentage terms than the underspend we expect to observe in the 2008–14 regulatory control period.

With regard to the overall prudency adjustment, EMCa stated it had recently undertaken five reviews of transmission capex budgets as part of a similar regulatory process to the one we are undertaking for SP AusNet's electricity transmission network. It found from its analysis of capex outcomes at a portfolio level that an underspend was the norm. It stated the underspend was attributed to prudent changes to capex programs similar to the ones EMCa found SP AusNet made in the 2008–14 regulatory control period (as discussed above).[273] It also observed:[274]

> The under-spend that we have found in SP AusNet is not the highest of the prudency variances that we have found from other analysis.

Other matters raised in SP AusNet's revised proposal and submissions

We do not agree with certain issues SP AusNet raised to support its revised revenue proposal that we should make no prudency adjustment. First, we do not consider our approach is dependent on the same circumstances applying now as they did in 2008.[275] Our approach takes account of continuous improvements in SP AusNet's capex governance and delivery processes. We would expect this to be dynamic and adaptive to changing circumstances that would lead to SP AusNet making prudent changes to its capex delivery program throughout the 2014–17 regulatory control period. A typical example is the deferral of the WMTS by one year since SP AusNet submitted its initial revenue proposal and associated reduction in SP AusNet's forecast capex for this project from $106.4 million to $68.8 million ($2013–14). Likewise, we would expect SP AusNet to have similar opportunities to make prudent changes during the course of 2014–17 regulatory control period. The prudent changes would not be limited to further deferral of projects, but could also include the other types of prudent changes mentioned earlier in this section.

Second, SP AusNet submitted we did not take account of four projects for which SP AusNet deferred capex of $88 million to the 2017–22 regulatory control period.[276] We have considered those four projects, but do not consider the deferral of these projects is justification for not applying the prudency adjustment. With respect to these projects, SP AusNet stated:[277]

> In light of affordability and deliverability issues, SP AusNet examined opportunities to prioritise critical works and balance risk against delivery challenges, to ensure the overall expenditure was realistic.

We acknowledge a TNSP will face 'delivery challenges' when preparing its capex delivery program for a regulatory control period, which will be reflected in its forecast capex. A consequence of these challenges is that a TNSP might find it needs to reconsider the timing of some projects, which SP AusNet has done. However, the prudency adjustment is designed to reflect the dynamic process of continuous improvements we would expect a TNSP to make throughout the course of a regulatory control period. EMCa agreed with this assessment. In analysing the underspend in the 2008–14 regulatory control period, EMCa stated:[278]

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273 EMCa, *SP AusNet technical review*, January 2014, p. 33, paragraph 144.
274 EMCa, *SP AusNet technical review*, January 2014, p. 33, paragraph 144.
275 SP AusNet, *Revised revenue proposal*, p. 31.
276 SP AusNet, *Revised revenue proposa*l, p. 32–34.
277 SP AusNet, *Revised revenue proposal*, p. 33.
278 EMCa, *SP AusNet technical review*, January 2014, p. 31, paragraph 128.

> The conclusion that we have drawn from this is that it has resulted from the continuing application of prudent management, which is an ongoing process of any well-functioning business and is not applied only at the time of forecasting expenditure for a regulatory reset.

EMCa further stated:[279]

> … the [prudency] adjustment is intended to reflect the continued application of prudent management processes that already exist in the business and, by doing so, the RCP allowance will better reflect the capex that a business will actually incur.

Third, we have taken account of the greater certainty the three year regulatory control period provides by not applying our prudency adjustment to projects and programs of work which are substantially underway and/or have business cases.[280]

Finally, we consider it appropriate for us to use historical outcomes as the basis for our prudency adjustment. The NER requires us to have regard to the actual and expected capital expenditure of the TNSP during any preceding regulatory control periods.[281] Moreover, SP AusNet itself compared actual capex with business case estimates in the 2008–14 regulatory control period to derive its 1.44 per cent efficiency factor.[282] It then applied this percentage to its total forecast capex, including those projects and programs for which it did not have business cases. While this approach might be appropriate for adjusting that part of forecast capex for which business cases have been prepared, it does not follow that it should be applied to total forecast capex. For those projects and programs which do not have business cases a more appropriate methodology is to calculate the percentage difference between actual and proposed capex for similar projects and programs in the 2008–14 regulatory control period. That percentage difference is then applied to forecast capex in the 2014–17 regulatory control period for projects and programs that do not yet have business cases. This is the approach EMCa recommended and which we adopted for our draft and final decisions.

In response to our draft decision Transgrid, ElectraNet and Transend did not support our prudency and cost estimation bias adjustments.[283] EUAA supported SP AusNet's revised proposal that we should account for roll-ins and roll-outs in our calculation of the prudency adjustment. However, it was not convinced by other arguments SP AusNet put forward for rejecting our prudency adjustment. It accepted SP AusNet's forecasting should be more accurate over a three year period than a six year period, but errors are still possible. As evidence, it pointed to a $7 million ($2013–14) increase in capex for the RTS in 2012–13 between SP AusNet's initial revenue proposal and its revised revenue proposal.[284] Of SP AusNet's 1.44 per cent efficiency factor, the EUAA stated:[285]

> … we are not convinced that SP AusNet's "portfolio" reduction in expenditure of 1.4% is meaningful. Network service providers are hardly going to argue that they have overstated their claims, and being able to point to an adjustment that has been made is an unconvincing response to the hard evidence that claims have been overstated in the past.

For reasons discussed above we do not agree with Transgrid's, ElectraNet's and Transend's submissions, and SP AusNet's revised revenue proposal, that no prudency adjustment is warranted. We agree with EUAA's submission that we should account for roll-ins and roll-outs. After considering the matters SP AusNet raised in its revised revenue proposal, EMCa's advice and these submissions we have reduced the amount of our draft decision prudency adjustment.

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279 EMCa, *SP AusNet technical review*, January 2014, p. 31, paragraph 130.
280 SP AusNet, *Revised revenue proposal*, p. 31.
281 NER, clause 6A.6.7(e)(5).
282 SP AusNet, *Revised revenue proposal*, p. 34.
283 Transgrid, *Submission*, pp. 1–2; ElectraNet, *Submission*, pp. 1–2; Transend, *Submission*, pp. 2–3.
284 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, pp. 10–11.
285 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 11.

2.4.3 Real cost escalators

We do not accept that SP AusNet's revised proposed real cost escalators reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives over the 2014–17 regulatory control period. However, there are parts we do accept. We have determined substitute escalators, which reflect our considerations that:

- where applicable, labour cost forecasts based on SP AusNet's enterprise agreements (EA) reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- in all other instances, labour cost forecasts derived from the average of the forecasts of BIS Sharpnel and Deloitte Access Economics (DAE) reasonably reflect a realistic expectation of the cost inputs required to achieve the opex and capex objectives
- forecast inputs and exchange rates for material escalation should be updated to reflect most recent data.

Attachment 1 contains our assessment of SP AusNet's proposed real cost escalators. Table 2. shows the impact of our real cost escalators on SP AusNet's forecast capex.

Table 2. Impact of the AER's real cost escalators on forecast capex ($ million, 2013–14)

	2014–15	2015–16	2016–17	Total
SP AusNet's revised revenue proposal	3.0	5.4	7.4	15.8
AER's final decision	1.2	2.2	3.4	6.8
Difference	1.7	3.2	4.1	9.0

Source: AER analysis. Numbers may not add up due to rounding.

2.4.4 Richmond terminal station

Since submitting its revised revenue proposal, SP AusNet has reduced it forecast capex for the Richmond terminal station (RTS) from $78.2 million to $73.3 million ($2013–14) for the 2014–17 regulatory control period. SP AusNet stated the reduction is a result of accelerated progress in the delivery of the project.[286] In our total substitute forecast capex, we have included capex of $72.4 million ($2013–14) (SP AusNet's forecast capex after taking account of differences between SP AusNet's proposed real cost escalators and ours). We note the EUAA queried the higher actual capex in 2012–13 compared with the estimated capex in SP AusNet's initial revenue proposal. It understood this to be a change in the timing of the capex, rather than an increase in total capex for the project.[287]

2.4.5 Relocation of distributors' assets

We include in our total substitute forecast capex $8.1 million and $10.0 million ($2013–14) for SP AusNet to relocate assets owned by distributors at the RTS and WMTS sites respectively (SP AusNet's revised forecast capex (total $20.7 million ($2013–14)) after taking account of our prudency adjustment and differences between SP AusNet's proposed real cost escalators and ours.)

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286 SP AusNet, *information update–capex for RTS and WMTS,* 5 December 2013.
287 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 11.

Prior to release of our draft decision, on 16 July 2013 SP AusNet informed us it will incur additional capex to relocate assets owned by distributors at the RTS and WMTS sites (about $7.6 million and $15.2 million ($2013–14) respectively). At that time SP AusNet stated it would provide more accurate forecasts in its revised revenue proposal.[288]

These costs are part of the overall project costs and outside the control of the distributors. We agree with SP AusNet they should be included in SP AusNet's forecast capex. EMCa also supported this approach. It considered the work is necessary for SP AusNet to complete the RTS and WMTS rebuilds. It also reviewed the costs estimates and considered them reasonable.[289]

With respect to the RTS, Citipower's 2010–15 revenue determination included $3 million ($2013–14) to relocate Citipower's 22kV cables. The forecast capex SP AusNet has now proposed is the additional costs of relocating Citipower's 66kV cables, which was not foreseen at the time.[290]

2.4.6 Transformer refurbishments

In its revised revenue proposal, SP AusNet proposed to include in its asset replacement capex category $3.7 million ($2013–14) to extend the life of four transformers at the RTS and WMTS. SP AusNet included these costs in its initial revenue proposal as opex in its asset works category. However, in response to EMCa's recommendation, SP AusNet has now reclassified the costs as capex. Given the work will extend the lives of the assets, we agree with SP AusNet that the costs should be included as capex.

2.4.7 Fisherman's Bend Terminal Station

SP AusNet's revised revenue proposal accepted our draft decision to remove $3.9 million ($2013–14) from SP AusNet's forecast capex for the replacement of a transformer at the Fisherman's Bend Terminal Station (FBTS). We considered replacement of the transformer could be deferred to the 2017–22 regulatory control period. SP AusNet submitted the distributor at the FBTS has signalled potential augmentation plans for the site, in which case it would be prudent to defer replacing the transformer pending consideration of those plans.[291]

2.4.8 Information technology capex

We include in our total substitute forecast capex information technology (IT) capex of $46.0 million ($2013–14) (SP AusNet's revised forecast capex of $47.1 million ($2013–14) adjusted for differences between its proposed real cost escalators and ours).[292] In our draft decision we reduced SP AusNet's forecast capex by $16.8 million ($2013–14).[293] We considered this represented strategic IT capex for which SP AusNet had not justified or quantified the benefits. One of our concerns was SP AusNet's forecast IT capex was not supported by business cases. We accepted the component we considered to be replacement capex, because it was consistent with the expected IT asset replacement cycle. In its revised revenue proposal, SP AusNet has now submitted the capex we identified as strategic IT capex is replacement capex, which is needed to maintain the resilience of its IT systems, otherwise customers would be exposed to substantial risk and potential costs.[294]

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288 SP AusNet, *Identified additional costs – SP AusNet electricity transmission revenue proposal 2014–15 to 2016–17*, 16 July 2013.
289 EMCa, *SP AusNet technical review*, January 2014, p. 19, paragraphs 73–74.
290 SP AusNet, *Revised revenue proposal*, p. 42.
291 SP AusNet, *Revised revenue proposal*, p. 47.
292 SP AusNet, *Revised revenue proposal*, pp. 49–50.
293 AER, *Draft decision: SP AusNet transmission determination*, pp. 87–89.
294 SP AusNet, *Revised revenue proposal*, Appendix O.

Subsequently, SP AusNet submitted additional material about its IT program which it did not submit with its revised revenue proposal. This included a business case for an IT program designed to integrate and standardise SP AusNet's IT systems across all its businesses. SP AusNet also informed us it had not included in its forecast IT capex, in its initial or revised revenue proposals, all of its electricity transmission business's share of the total costs. Instead, it included only the replacement capex component and not the strategic component.[295] In this way SP AusNet will fund the strategic component and will not seek to recover the costs from users. It will also retain any benefits, such as opex savings, associated with the strategic component it achieves in the 2014–17 regulatory control period.

This new project is an integrated project and the total costs are not split into specific replacement and strategic components. Instead SP AusNet has used a proxy value to estimate the replacement capex component of the project. Another option SP AusNet considered, but rejected, was to replace its current systems with the latest versions. It is the cost of this option which SP AusNet used as the proxy for the replacement component of this new, integrated project. In other words, it derives the replacement capex component as the costs it would have incurred to replace its current systems had it not proceeded with the new project. Based on the additional information provided we now accept that SP AusNet's forecast IT capex represents replacement capex only, and not strategic IT capex. EMCa has drawn the same conclusion.[296]

We made our draft decision on the basis of the information SP AusNet submitted to us in its initial revenue proposal. We assessed its forecast capex on the understanding that it represented the full costs of its IT program. This was EMCa's understanding also.[297] Had SP AusNet put to us the case it has now put forward our draft decision considerations would have been different, as they would have been based on additional information.

EMCa also reviewed the additional material SP AusNet submitted. While it was concerned with SP AusNet's use of a proxy value to derive the replacement component of its total forecast capex, nevertheless on balance it recommended we approve the revised forecast capex of $47.1 million ($2013–14). While it noted the forecast replacement capex was higher than historical levels, it considered this reasonable as a straight replacement would not be available and so more expensive applications would be necessary.[298]

2.5 AER decision

Decision 2.1: Table 2. shows our final decision on total forecast capital expenditure for the 2014–17 regulatory control period.

295 SP AusNet, *ICT TRR briefing slide handout*, 12 November 2013 [confidential].
296 EMCa, *SP AusNet technical review*, January 2014, p. 24, paragraph 92.
297 EMCa, *SP AusNet technical review*, January 2014, p. 23, paragraph 88.
298 EMCa, *SP AusNet technical review*, January 2014, p 24, paragraphs 96–97 and pp. 27–28, paragraphs 110–112.

3 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital costs, including labour costs, incurred in the provision of network services. Opex is one of the building blocks used to determine SP AusNet's total revenue requirement.

The structure of this attachment is set out below:

3.1 Final decision

On 14 October 2013, SP AusNet submitted its revised total opex forecast of $594.6 million ($2013–14).[299] However, on 29 November 2013 it resubmitted its controllable opex model, which

[299] Unless otherwise stated, all controllable opex in this attachment is in $2013–14 mid-year dollars. SP AusNet's revised proposal total opex forecast was $598.0 million (SP AusNet, *Revised revenue proposal*, p. 94). This figue includes $274.1 million of controllable opex ($2013–14 end–year dollars). The revised proposal total opex forecast of $594.6 million includes $270.7 million of controllable opex ($2013–14 mid–year dollars).

effectively revised its total opex to $599.6 million.[300] From herein, all references to SP AusNet's 'revised proposed opex' refer to the 29 November 2013 revision.

We are not satisfied that the total of the forecast opex for the regulatory control period reasonably reflects each of the opex criteria and we therefore do not accept the forecast.[301] We estimate the total required opex for the regulatory control period that we are satisfied does reasonably reflects opex criteria, taking into account the opex factors, is $560.0 million.[302] Our final decision is therefore to approve a substitute total opex forecast of $560.0 million and forecast opex for each regulatory year as set out in Table 3. which we are satisfied reasonably reflects the opex criteria.[303] Our final decision is $39.6 million less than SP AusNet's revised proposal (Table 3.).

Table 3. AER's final decision and SP AusNet's revised proposal, total opex ($ million 2013–14)

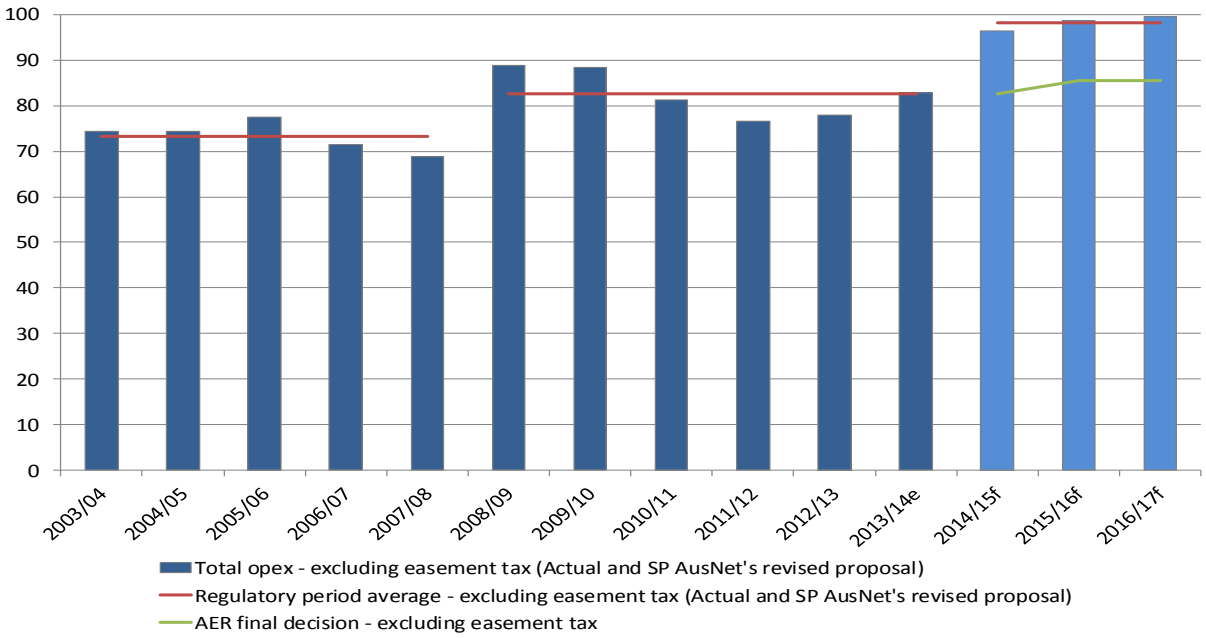
	2014–15	2015–16	2016–17	Total
SP AusNet revised proposal	197.3	202.0	200.3	599.6
AER final decision	184.2	188.8	187.0	560.0
Difference	–13.1	–13.2	–13.3	–39.6

Source: AER Analysis.
Note: excludes equity raising costs (ERC).

Our final decision is a 2.2 per cent real increase on SP AusNet's total average expenditure in the 2008–14 regulatory period. Figure 8. shows the actual and average expenditure over the last two regulatory control periods, compared with the forecast period. We use annual averages because the regulatory periods are different lengths.

300 SP AusNet, *Amended revised proposal opex model*, 29 November 2013 [confidential]; Controllable opex increased from $270.7 million to $275.6 million.
301 NER cl.6A.6.6(c) and (d).
302 NER cl.6A.14.1(3)(ii).
303 NER cl.6A.13.2(b).

Figure 3. AER's final decision, total opex (less easement land tax)* ($ million, 2013–14)



Source: AER analysis.
Note: Easement land tax is excluded from non-controllable opex in this chart because, positive or negative variations (>1% MAR) between the actual tax paid and the forecast approved by us will be recovered/reimbursed via an annual recovery mechanism. It comprises 51% of the proposal. (e) 2013-14 data is a budget estimate (f) refers to forecast.

Table 3. AER final decision, 2014–15 to 2016–17 ($ million, 2013–14)

	2014-15	2015-16	2016-17	Total
Controllable opex				
Base opex	70.9	70.9	70.9	212.6
Step changes	1.9	2.4	2.1	6.4
Trend	5.0	6.5	7.6	19.2
Subtotal: controllable	77.7	79.8	80.6	238.2
Non-controllable opex				
Self-insurance	1.7	1.7	1.6	5.0
Availability incentive scheme	2.3	2.3	2.3	6.8
Debt raising costs	1.5	1.6	1.6	4.7
Easement land tax	100.9	103.4	100.9	305.3
Subtotal: non-controllable	106.4	109.0	106.4	321.8
TOTAL	184.2	188.8	187.0	560.0

Source: AER analysis.

3.2 Summary of reasons for final decision

This summary provides an overview of the key factors in reaching our conclusions and final decision. The summary follows the structure of the attachment, with cross references to the sections within the attachment that provide a more detailed discussion of our reasoning.

What are we required to decide?

SP AusNet proposed a total forecast opex for the regulatory control period of $599.6 million in order to achieve the opex objectives set out in the NER.[304] We must accept SP AusNet's total forecast opex if we are satisfied that it reasonably reflects the opex criteria: that is, the efficient costs that a prudent operator in SP AusNet's circumstances would require, given a realistic expectation of the demand forecast and cost inputs, to achieve the opex objectives.[305] We must have regard to the opex factors when making that decision.[306]

If we are not satisfied that SP AusNet's proposed total forecast opex reasonably reflects the opex criteria, we must not accept the forecast.[307] We must estimate the total required opex that, in our view, does reasonably reflect the opex criteria taking into account the opex factors.[308]

What are the main components of SP AusNet's opex forecast?

In its revised revenue proposal, SP AusNet classified opex under two main categories – controllable opex and non-controllable opex.

In general terms, controllable opex is opex over which SP AusNet's management has a degree of discretion or control. Controllable opex includes costs for maintenance, support, asset works, network operations, insurance, corporate costs and human resources. Controllable opex, at a total level, tends to be relatively stable from one period to the next. SP AusNet proposed a total controllable opex of $275.6 million for the 2014–17 period.[309]

In contrast, non-controllable opex is opex that is not necessarily subject to the same level of management discretion[310]. Non-controllable opex includes easement land tax, debt raising costs, self-insurance and costs incurred under AEMO's availability incentive scheme (AIS). SP AusNet proposed a total forecast of non-controllable opex of $324.0 million for the 2014–17 period.

We discuss SP AusNet's revised proposal in detail in section 3.3 of this attachment.

Are we satisfied that the total opex forecast reasonably reflects the opex criteria?

We consider that much of the total opex proposed by SP AusNet in its revised proposal is consistent with the requirements of the NER.

In particular, we largely agree with SP AusNet's revised proposal for non-controllable opex. Our main concern with SP AusNet's opex proposal centres on the controllable opex forecast. SP AusNet's revised proposal amounts to an 18 per cent (real) increase on its average controllable opex over the

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304 NER, clause 6A.6.6(a).
305 NER, clause 6A.6.6(c).
306 NER, clause 6A.6.6(e).
307 NER clause 6A.6.6(d).
308 NER clauses 6A.13.2(b) and 6A.14.1(3).
309 SP AusNet, *Amended revised proposal opex model*, 29 November 2013 [confidential].
310 With the exception of self-insurance.

current regulatory control period (2008–14). Consumer submissions raised concerns with the proposed level of controllable opex that SP AusNet had forecast, and our analysis of SP AusNet's initial proposal in our draft decision had found that the controllable opex forecast was more than would reasonably reflect the opex criteria.

We therefore gave considerable attention to understanding and testing the reasons and justification SP AusNet put forward for its revised proposal forecast, engaging closely with SP AusNet to investigate the drivers of this proposed increase. We also engaged appropriate consultants to provide expert reports about relevant elements of the proposal.

Our overall assessment process and the methods we used to make our assessments are set out in more detail in section 3.4 of this attachment.

The results of our assessment of controllable opex

We assessed controllable opex using two primary methods – a top-down revealed costs method and a bottom-up technical engineering review.

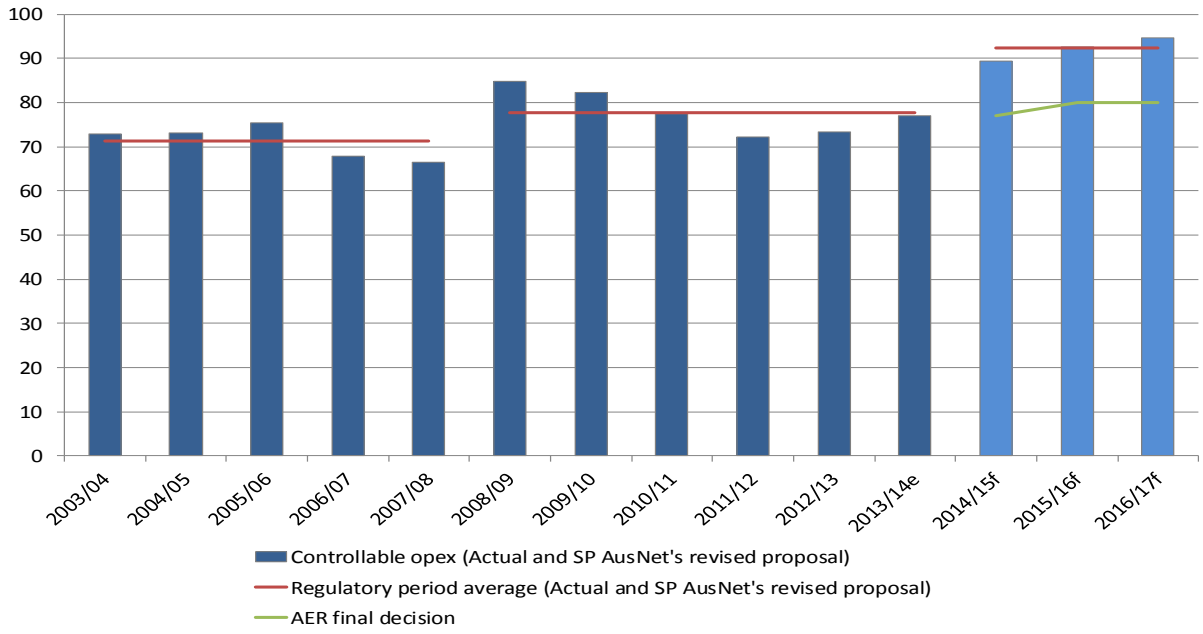
Our top-down analysis is discussed in detail in section 3.5 of this attachment. The bottom-up review of costs is set out in detail in section 3.5.6 of this attachment.

Both the top-down and bottom-up assessments of controllable opex are aimed at arriving at a total opex forecast that reasonably reflects the opex criteria. They employ different methodologies and may arrive at different amounts for individual categories of expenditure in arriving at that total but they have the same goal of reaching a total that reasonably reflects the opex criteria.

In our top-down analysis we examine revealed controllable costs in a recent year for which we have audited accounts (2011–12). Using those revealed costs, we then extrapolate SP AusNet's likely expenditure over the 2014–17 regulatory period. We make any necessary adjustments to be satisfied that the base year reasonably reflects the opex criteria. We consider any new drivers of expenditure and apply real cost escalators to project likely costs. We refer to this method as the base-step-trend method and we discuss it in detail in section 3.4 of this attachment.

Our top-down analysis indicates that SP AusNet's proposed forecast controllable opex is $37.4 million too high and we determined a substitute controllable opex allowance of $238.2 million (Figure 3.).

Figure 3. AER's final decision, controllable opex ($ million, 2013–14)



Source: AER analysis.
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

While our full conclusions are set out in section 3.5, there were two major areas in which our analysis indicated that SP AusNet's proposed forecast was overstated. One major area is the step changes SP AusNet proposed. We found that some of the step changes were not new drivers of expenditure that reasonably reflected the opex criteria and we therefore did not approve them. Our reasons are set out in detail in section 3.5.3 of this attachment and Appendix A.

The second main area of difference concerns a sub-category of opex which SP AusNet refers to as asset works opex. A key concern noted by SP AusNet in its revised proposal was that our top-down approach, being based on a single year of expenditure, does not take account of the variability of asset works opex from year to year.[311] SP AusNet was concerned that a failure to take into account the variability of spending in this category of costs from year to year would leave it with insufficient funds to carry out necessary works during the 2014–17 period. SP AusNet proposed a modification to the base-step-trend method on the basis that the asset works opex forecast developed on the 2011–12 base year was insufficient. In short, its proposal was for this one sub-category of opex to be averaged over a period of six years and for this average to be substituted for the equivalent asset works component of the base year.[312]

We engaged Frontier Economics to provide a report on SP AusNet's proposed modified base-step-trend approach.[313] Frontier Economics recommended, and we accept, that the proposed modification was not justified or appropriate. Making a special adjustment for one subcategory of opex, without making similar adjustments for other subcategories of opex which also vary from year to year (sometimes more significantly than asset works opex), is not appropriate as it is not internally consistent. Frontier Economics advised that our single year base-step-trend method was appropriate in the particular circumstances of SP AusNet to give effect to the NER requirements. We discuss this in more detail in section 3.5.2 of this attachment at pages 107 to 122.

311 SP AusNet, *Revised revenue proposal*, pp. 63-72.
312 SP AusNet, *Revised revenue proposal*, pp. 68-9.
313 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013.

Nevertheless, we understand that our role is to provide a total opex allowance that reasonably reflects the opex criteria over the next regulatory control period (2014–17). Hence, it is necessary for us to consider whether the proposed total opex forecast, and any amount we might substitute, is sufficient for SP AusNet to meet the opex objectives set out in the NER and that it does sufficiently take into consideration SP AusNet's specific circumstances.

We engaged engineering consultants, EMCa,[314] to examine SP AusNet's revised opex proposal from a technical engineering, governance and asset management perspective. EMCa used a bottom-up method to analyse and test SP AusNet's proposed opex forecast against the requirements of the NER. We discuss this analysis, and EMCa's findings, in detail at section 3.5.5 of this attachment.

Significantly, EMCa concluded that SP AusNet's forecast was about $39 million above an amount that would reasonably reflect the opex criteria.[315] EMCa therefore concluded that an allowance of $236 million for controllable opex would be sufficient to reasonably reflect the opex criteria.[316]

We also observe that:

- Over the past 10 years, SP AusNet's controllable opex has been relatively stable from year to year and from regulatory period to regulatory period in real terms. This is what we would expect from an efficient service provider that has undertaken substantial capital expenditure on replacement of aging assets, and proposes to continue to replace aging assets at significant levels.[317]
- We observe that the proposed controllable opex would represent a substantial departure from this trend (Figure 3.), given the level of past and future capex investment aimed at managing the risk of aging assets through replacement and refurbishment.
- SP AusNet has substantially overestimated the controllable opex it requires to achieve the opex objectives in each of the past two determination processes (the orange line in Figure 8.).
- SP AusNet has proposed step changes to fund works in the 2014–17 regulatory control period on a very similar basis to which it sought funding for essentially similar works in the 2008–14 regulatory control period. SP AusNet did not undertake the spending it had forecast during the 2008–14 regulatory control period. By deferring these works, SP AusNet will be rewarded through the application of the efficiency benefit sharing scheme in the 2014–17 period. The total opex allowance approved by us for the 2008–14 period was sufficient to undertake the works in the 2008–14 regulatory control period, but deferred, and that it is proposing to now undertake in the 2014–17 regulatory control period. We discuss this issue, in the context of the step changes SP AusNet has proposed in detail in section 3.5.3 and Appendix A.

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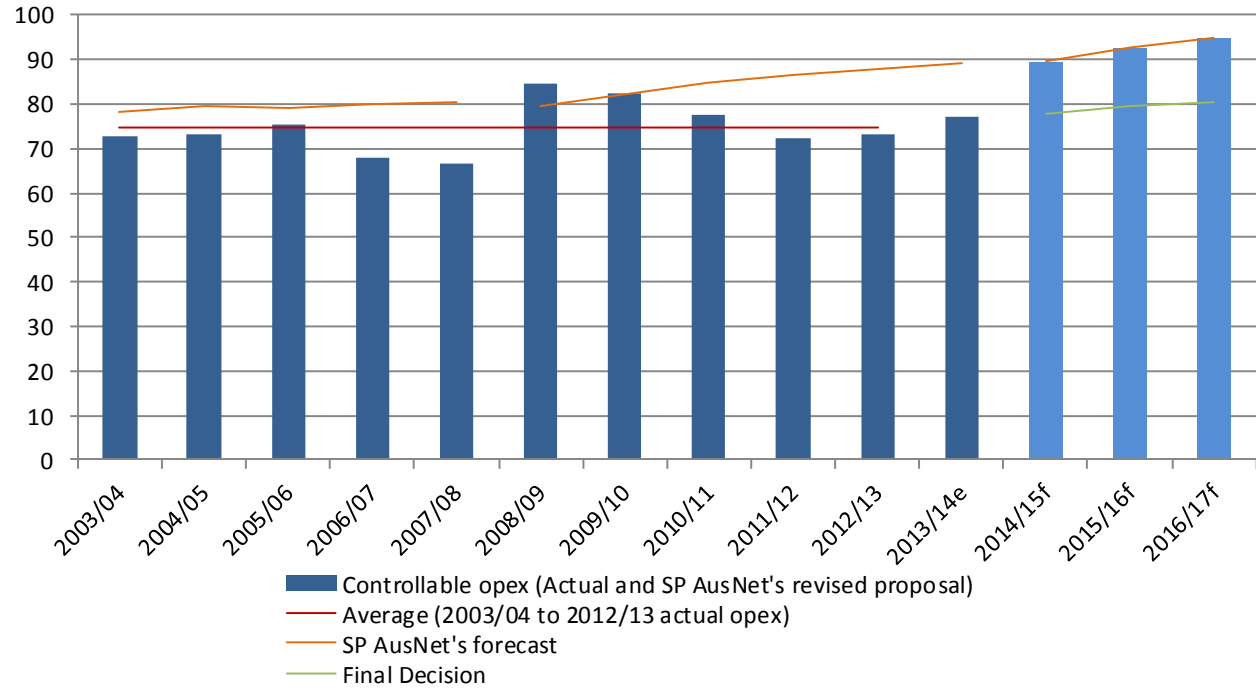
314 EMCa refers to Energy Market Consulting associates/Strata Energy Consulting.

315 EMCa concluded that a total controllable opex allowance of $236 million is a reasonable total, which is a reduction of $35 million on the proposed opex of $270.7 million in SP AusNet's revised revenue proposal opex model of 11 October 2013. However, SP AusNet subsequently revised its opex model on 29 November 2013 which increased its proposed controllable opex to $275.6 million. EMCa did not consider the change SP AusNet made to its model warranted it changing its own (a) assessment of the proposed asset works allowance, or (b) the proposed increase in the step change for SF6 (the remaining changes were for items not within EMCa's technical review scope). Therefore, EMCa's assessment implies that SP AusNet's total controllable opex is $39 million too high (relative to SP AusNet's 29 November 2013 revised forecast).

316 EMCa, *SP AusNet technical review*, January 2014, para 39.

317 SP AusNet, *Revenue proposal*, pp. 20–2.

Figure 3. SP AusNet's past controllable opex forecasts ($ million, 2013–14)



Source: AER analysis.
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

The results of both our top-down analysis and an independent consultant's bottom-up analysis produced very similar conclusions. While each methodology is quite different in its application, the results of both corroborate the findings in the other. That is, the total controllable opex forecast proposed by SP AusNet does not reasonably reflect the opex criteria and is overstated by $37.4 million (AER) to $39.5 million (EMCa). When added to our assessment of non-controllable opex, the total opex forecast is $39.6 million to $41.7 million too high.

Our review of non-controllable opex

While we largely accept SP AusNet's proposal for non-controllable opex, we are of the view that SP AusNet's proposal for non-controllable opex should be reduced by $2.2 million in order to reasonably reflect the opex criteria. Our assessment of non-controllable costs is set out in detail in section 1.6 of this attachment.

Specific concerns with our draft decision raised by SP AusNet

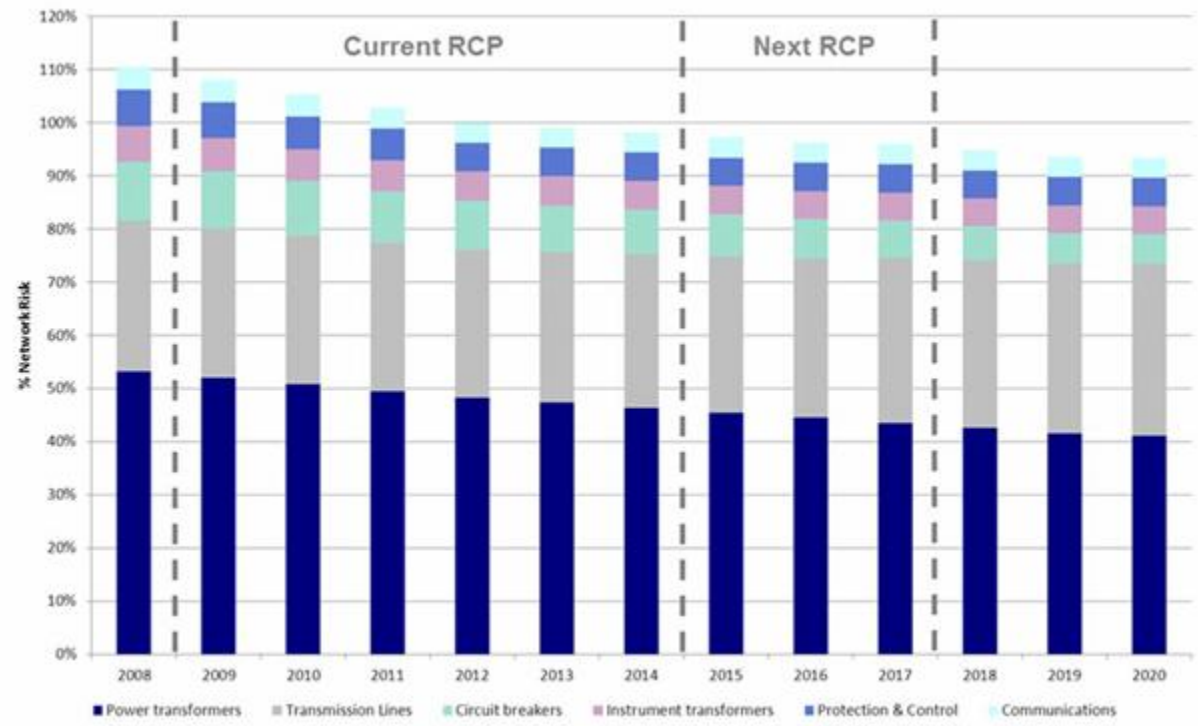
In our draft decision, we proposed not to accept SP AusNet's initial forecast. We proposed a substitute total opex forecast based on similar considerations to those set out in this final decision.

SP AusNet criticised our draft decision on the basis that it would be exposed to an unacceptable level of risk if we maintained the approach set out in our draft decision. We have carefully reviewed the claims SP AusNet made in support of this contention.

We have concluded that these concerns are essentially misplaced. In particular, we engaged EMCa to review SP AusNet's network risk profile. EMCa found that SP AusNet should be able to manage its identified and emerging network risks within the total opex forecast that we have decided in this final decision. A chart illustrating historical and projected risk levels for SP AusNet is produced at Figure 3. below. It shows SP AusNet's time-profile for transmission network asset risk, from 2008–20. The

scale of this graph is an index, and shows a declining risk level, including over the period from 2011–14 when asset works expenditure was significantly reduced. This risk profile can also be set against the overall controllable opex profile, which shows a similar (though less prominent) expenditure reduction over the same period. The forecast risk profile shown in this diagram is on the basis of SP AusNet's proposal, but EMCa found that our forecast will not materially alter the result.

Figure 3. SP AusNet network risk profile



Source: SP AusNet, *Revenue proposal – Appendix 2A, Transmission asset management strategy 10-01*, Figure 9, 28 February 2013, p. 23.

Note: For clarity, starting from the bottom, the bars represent: power transformers, transmission lines, circuit breakers instrument transformers, protection & control and communications.

What is our decision?

We are not satisfied that SP AusNet's total forecast opex reasonably reflects the opex criteria. We consider that a prudent operator in SP AusNet's circumstances (given a realistic expectation of the demand forecast and the cost inputs) could achieve the opex objectives with less opex than proposed.

We have estimated a substitute total opex that we consider reasonably reflects the opex criteria, having regard to the opex factors. We have estimated the substitute based on our top-down analysis of SP AusNet's proposed controllable opex and our assessment of SP AusNet's proposed non-controllable opex. This provides a total forecast opex of $560.0 million over the forthcoming regulatory control period. It reduces SP AusNet's proposed total forecast opex only to the extent necessary to comply with the NER.

We are satisfied this amount reasonably reflects the opex criteria for the reasons we discuss in support of our decision not to accept the total opex forecast proposed by SP AusNet.

3.3 SP AusNet's revised proposal

SP AusNet's opex forecast in its revised proposal was $599.6 million, $9.5 million less than it had initially proposed (Table 3.).[318]

Table 3. SP AusNet initial and revised proposal 2014–17 ($million, 2013–14)

		SP AusNet initial	SP AusNet revised	Difference
Controllable opex				
	Base opex	189.2	190.9	1.7
	Insurance	19.1	14.9	–4.2
	Asset works	24.6	26.1	1.5
	IT efficiency	-0.8		0.8
	Subtotal base year items	**235.9**	**231.9**	**–4.0**
	Network growth	5.2	4.4	–0.8
	Step changes	31.5	27.6	–3.9
	Real escalation	8.8	11.7	2.9
	Total controllable^	**281.4**	**275.6**	**–5.8**
Non-controllable opex				
	Availability Incentive Scheme	9.9	8.6	–1.3
	Self-insurance	6.4	5.5	–0.9
	Debt raising costs	4.7	4.6	–0.1
	Equity raising costs (ERC)	3.4	0.0	–3.4
	Easement land tax	305.2	305.3	0.1
	Total non-controllable	**329.6**	**324.0**	**–5.6**
Total opex		611.0	599.6	–11.4
	Total opex excl ERC	607.6	598.1	–9.5

Source: SP AusNet, *Amended revised proposal opex model* [confidential], 29 November 2013; AER analysis.
Note: ^Does not include the PTRM adjustment, which is a half year escalation to December; Equity raising costs were capitalised per the draft decision.

3.3.1 SP AusNet's controllable opex forecast

SP AusNet's revised controllable opex forecast had the following main characteristics:

- Forecast step changes of $27.6 million.[319] In arriving at this total SP AusNet adopted $2.8 million for step changes that we had accepted in its draft decision, but it reproposed the step changes

[318] On 14 October 2013 SP AusNet submitted its revised total opex forecast of $594.6 million ($2013–14). However, on 29 November 2013 it resubmitted its controllable opex model, which effectively revised its total opex to $599.6 million ($2013–14); SP AusNet, *Amended revised proposal opex model [confidential]*, 29 November 2013; Excludes equity raising costs.

that were not accepted and added an additional two new step changes which had not been included in its original proposal (these comprised of the fire services levy (FSL) which we removed from insurance forecast in its draft decision ($2.8 million), and a new AEMO agreement $0.09 million).[320]

- SP AusNet maintained its position that overhead line (OHL) condition assessment ($3.9 million) and OHL corrosion risk mitigation (that is, tower painting) ($8.8 million, reduced from $9.9 million initially proposed)[321] should be considered as step increases in maintenance expenditure, rather than as part of its asset works opex category.[322]
- SP AusNet's forecast asset works of $26.1 million. It used the 2008–13 average annual expenditure for 2008–14 as the basis for asset works.[323] Given its use of an averaging approach, SP AusNet did not re-propose an asset works program of specific work items. Initially it had proposed a program of specific work to develop its asset works category forecast which was referred to as a bottom-up (non-base year) forecast. The revised amount is higher than the initial proposal which was $24.6 million, even though transformer replacement works were capitalised.
- Insurance forecasts decreased by $4.2 million, from $19.1 million in the initial proposal to $14.9 million.[324]
- SP AusNet adopted our method of estimating asset growth and the scale factors as set out in our draft decision, but proposed an additional 100 per cent scale factor for taxes and leases.
- SP AusNet adopted our draft decision on material escalation but did not adopt our labour cost escalators (see attachment 1).

3.3.2 SP AusNet's non-controllable opex forecast

SP AusNet's revised non-controllable opex forecast had the following main characteristics:

- SP AusNet revised its availability incentive scheme (AIS) rebate forecast to $8.6 million based on the average rebate rates from 2008–13[325]
- Self-insurance forecast was reduced from $6.4 million to $5.5 million, primarily because it reduced its proposed risk margin from 18.8 per cent to 10 per cent[326]
- The method for calculating debt raising costs was accepted, per the draft decision
- Equity raising costs were capitalised, per the draft decision
- Easement land tax was consistent with draft decision.

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319 The escalated total is $29.0 million when labour cost escalation is considered.
320 SP AusNet, *Revised revenue proposal*, p. 77.
321 $9.3 million including labour cost escalation.
322 SP AusNet, *Revised revenue proposal*, pp. 81-3.
323 EMCa reported this as $24.3 million before escalation and before adding support costs. EMCa, *SP AusNet, Technical review*, January 2014, para 153. We confirm the $26.1 million proposed is exclusive of support costs, per 29 November 2013 opex model.
324 SP AusNet, *Revised revenue proposal*, pp. 72-5. SP AusNet amended its revised proposal forecast of $14.0 million to $14.9 million.
325 SP AusNet, *Revised revenue proposal*, *Appendix R: Availability Incentive Scheme opex forecast*, 11 October 2013.
326 SP AusNet, *Revised revenue proposal*, pp. 75-7.

3.3.3 SP AusNet's reasons for not accepting the draft decision substitute forecast

In our draft decision, we did not accept SP AusNet's forecast opex. Consequently, we determined a substitute by employing a base-step-trend approach. We chose a base year of 2011–12 for this purpose.

SP AusNet's revised proposal adopted the approach to forecasting controllable opex we set out in our draft decision[327] except for step changes and asset works. SP AusNet did not agree with our substitute total controllable opex forecast for the following two key reasons:

- we did not allow all of its proposed step changes
- at the asset works category level, SP AusNet considered our substitute forecast was insufficient.[328]

With respect to step changes, SP AusNet considered that we had applied the opex criteria inconsistently, had disregarded EMCa's recommendations and had not considered some step changes on their own merits.[329] It also disagreed with our classification of three of the proposed step changes as asset works.[330]

With respect to asset works, SP AusNet considered we had used a base year that did not reflect an efficient revealed cost for asset works, failed to analyse and consider SP AusNet's forecast and supporting information and did not take into account EMCa's findings.[331] SP AusNet accepted the base-step-trend approach (compared with the bottom-up build approach of its initial proposal) but disagreed with our calculated forecast using that approach.[332] It proposed the forecast should be determined using average expenditure over a six year period rather than using the single base year of 2011–12.[333]

Additionally, SP AusNet considered our approach to forecasting insurance using a base-step-trend to be inconsistent with our past decisions.[334]

3.4 AER's assessment approach

Under the NER, the AER must accept SP AusNet's proposed forecast opex for the 2014–17 regulatory control period, if satisfied the forecast reasonably reflects the opex criteria set out in the NER.[335] If not satisfied, we must give reasons for not accepting the proposal and estimate the total required opex that reasonably reflects the opex criteria.[336] In doing so, we must have regard to the opex factors.[337]

We use the base-step-trend forecasting approach to test the proposal because it is a robust means of testing an opex forecast against the opex criteria. Under CPI-X incentive regulation, this is a common approach used by regulators in Australia as a basis for forecasting opex.[338] And in the context of the

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327 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp.95-98 and 111.
328 SP AusNet, *Revised revenue proposal*, p. 12.
329 SP AusNet, *Revised revenue proposal*, pp. 80–1.
330 SP AusNet, *Revised revenue proposal*, p. 81.
331 SP AusNet, *Revised revenue proposal*, pp. 63–72.
332 SP AusNet, *Revised revenue proposal*, p. 68.
333 SP AusNet, *Revised revenue proposal*, p. 69.
334 SP AusNet, *Revised revenue proposal*, p. 73.
335 NER, clause 6A.6.6 (c).
336 NER, clauses 6A.6.6 (d), 6A.12.1(c) and 6A.14.1(3)(ii).
337 NER, clause 6A.6.6 (e).
338 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013.

NER framework, there are complementarities between this approach and the efficiency benefit sharing scheme (EBSS). If a TNSP has operated under an effective incentive framework, and sought to maximise its profits, the actual opex incurred in a base year should be a good indicator of the efficient opex required. However, we must test this, and if we determine that a TNSP's revealed costs do not reasonably reflect the opex criteria, we will adjust them appropriately. Our approach also provides mechanisms for increasing base year expenditure where efficient opex in the forecast regulatory control period would be different from actual expenditure in an efficient base year. These are generally recognised as step changes to base year efficient opex.

3.4.1 Assessment framework

We use a holistic approach to reviewing the proposal: we review governance, methodology and technical assessments.[339] Our technical consultant, EMCa, conducted a review each of these areas and provided its technical assessment. A favourable governance review will not of itself satisfy us that a TNSP's proposed expenditure reasonably reflects the expenditure criteria. A governance review may, however, indicate a TNSP's likely overall efficiency, prudency and areas for further analysis.

We also assess the methodology the TNSP utilises to derive its total opex expenditure forecasts, including assumptions, inputs and models. Similar to the governance framework review, we will assess whether the TNSP's methodology is a reasonable basis for developing expenditure forecasts that reasonably reflect the opex criteria.[340] We expect a TNSP to justify and explain how its forecasting method results in a prudent and efficient forecast, so if a method (or aspects of it) does not appear reasonable, we will require further justification from the TNSP. If we are not satisfied with further justification, we will adjust the method such that it is a reasonable basis for developing expenditure forecasts that reasonably reflect the opex criteria.[341]

As well as the governance and methodology reviews, we conduct a top-down and bottom-up review of the forecast. Our top-down review is our base-step-trend method, which is described in the next sections, and the bottom-up review is informed by the technical review of our consultants. If we are not satisfied that the total forecast reasonably reflects the opex criteria we estimate and substitute our own forecast. An important component of both our assessment of the forecast and, if necessary, our substitute opex allowance is our use of the revealed costs approach to assessing controllable opex.

Given the importance of the revealed costs approach in our assessment, we explain the following points in more detail in the following section:

- the revealed costs approach for assessing controllable opex (3.4.2)
- why we consider the revealed costs approach provides the most reliable tool for assessment of controllable opex (3.4.3)
- how this approach fits with the broader incentive arrangements established by the regulatory scheme (3.4.4)
- why cost categorisation and disaggregation can be problematic (3.4.5)
- how expert engineering reviews also assist us when making our assessments (3.4.6)
- our review process for SP AusNet (3.4.7).

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339 NER, clauses 6A.6.6(e)(4) and (12).
340 NER, clauses 6A.6.6(c) and (e)(3).
341 NER, clause 6A.6.6(c).

3.4.2 The revealed costs approach for assessing controllable opex

We use the revealed costs approach to assess and determine forecast controllable opex. This is a top-down forecasting method which we also refer to as a base-step-trend approach.

Under this approach, we first select an historical base year of expenditure as the basis for the forecast. When choosing a base year, a key consideration is the selection of a year which is likely to reflect future costs. Typically, we use the revealed costs of the second or third last year in a regulatory control period as the base year. The second last year is the most recent available data at the time of the determination, so likely to best reflect the forecast period. Sometimes, we use the third last year, being the most recent year of available data when the TNSP submitted its regulatory proposal. An important consideration in assessing whether the base year controllable opex is efficient is whether an efficiency sharing mechanism applied during the base year, as this acts as an incentive on the TNSP to incur only efficient costs.

In some instances, the revealed cost is not appropriate because historical expenditure in the base year is inefficient and therefore, cannot form a basis for efficient forecasts. For this reason we will scrutinise the base year expenditures and may adjust that base year expenditure to the extent necessary to derive a forecast consistent with the opex criteria.

In general, there are two types of drivers of step changes: exogenous (where a cost increase is driven by a factor external to the business) and endogenous (where management decision drives the cost increase). An important part of our assessment of proposed step changes is whether management had discretion in 'controlling' its base year costs.[342] Where existing programs, or activities are proposed as incremental cost increases, we would assess whether such costs are consistent with the concepts of efficient and prudent expenditure.[343]

We trend forward base opex by accounting for forecast changes to input costs, output growth and productivity improvements (such as economies of scale) in the forecast period.

If a TNSP's total opex forecast (or components of the forecast) is greater than the estimates we develop using our assessment techniques and there is no satisfactory explanation for this difference, we may form the view that the TNSP's estimate does not reasonably reflect the opex criteria. In this case, we may amend the TNSP's forecast or substitute our own estimate that reasonably reflects the opex criteria.[344]

3.4.3 Why we use the revealed costs approach as an assessment tool

We prefer the revealed costs approach to other forecasting methods for controllable opex for many reasons. We discuss these in full in our '*Better regulation: Expenditure forecast assessment guideline for electricity transmission*' (December 2013).[345] In summary:

- Controllable opex has a recurrent nature and historical costs therefore usually provide a good indicator of future costs.[346] If the actual costs in a base year are efficient, then revealed costs will

342 EMCa, *SP AusNet technical review*, January 2014, para 177.
343 *Re Application by EnergyAustralia* [2009] ACompT 8 (12 November 2009) [190] (Middleton J, R Davey and R Shogren); para. 190.
344 We assessed non-controllable opex items using a bottom up review.
345 See also: AER, *Better regulation- expenditure forecast assessment guideline for electricity transmission- issues paper*, December 2012.
346 This was confirmed by Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013.

generally provide a good indicator of future efficient costs. Using revealed costs, we can thus perform a non-intrusive assessment of and determination on opex allowances.

- The revealed cost approach works in tandem with the incentive framework to provide a forecast of efficient ongoing operating expenditure.[347] Where a TNSP has operated under an effective incentive framework, actual past expenditure should be a good indicator of the efficient expenditure the TNSP requires in the future. The ex-ante incentive regime provides an incentive to reduce expenditure because TNSPs can retain a portion of cost savings (i.e. by spending less than the regulatory allowance) made during the regulatory control period.
- Bottom-up builds of costs, by contrast, are disconnected from the incentive framework. Bottom-up builds are difficult to assess as efficient because it is disconnected from actual past expenditure. Further, efficiencies that may be achieved at portfolio-level may not be reflected in the bottom-up aggregation of constituent projects.
- The revealed costs approach mitigates the problem of information asymmetry faced by regulators of natural monopolies. Using revealed costs approach can help balance the natural tendency for TNSP's to act strategically in relation to information in its control.
- There can typically be considerable management discretion available to re-prioritise and time-shift some controllable opex programs, particularly in asset works.[348] The movement in the level and timing of such works tends to have a relatively slow and incremental effect on the risks of the business and on the lifecycle economics of asset management. Using revealed costs can help consumers fairly experience the benefits of such management decisions.

3.4.4 How the revealed costs approach interacts with opex incentive schemes

Under the NER's chapter 6A incentive framework, TNSPs are subject to an efficiency benefit sharing scheme (EBSS) and a revenue cap control mechanism. The revenue cap control mechanism means revenue is fixed during the regulatory control period, so the TNSP retains any cost savings. The application of the EBSS provides a continuous incentive for TNSP's to make savings because the TNSP is allowed to retain the benefits of an efficiency gain for five years, irrespective of the year of the regulatory control period in which it made the efficiency gain.[349] The TNSP thus faces a constant incentive to pursue efficiency gains over a regulatory control period. The EBSS allows efficiency benefits to be shared between customers and the TNSP; the TNSP is rewarded approximately 30 per cent of the net present value of the 'saving' and the remaining 70 per cent of the benefits flow through to consumers.[350]

3.4.5 Why cost categorisation and disaggregation can be problematic

Two fundamental points are relevant to how we perform our assessment of controllable opex. First, the NER requires us to form a view on forecast total opex, rather than subcomponents such as individual projects and programs (even though examining subcomponents is important in forming a view on total opex).[351] Second, we may have regard to a range of information to determine the reasonableness of a proposal and (if necessary) the appropriate substitute.[352]

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347 See also: AER, *Better regulation- expenditure forecast assessment guideline for electricity transmission- issues paper*, December 2012.
348 EMCa, *SP AusNet technical review*, January 2014, para 178.
349 This assumes adjacent regulatory control periods of equal length.
350 The interaction of the EBSS with forecast opex was set out in our draft decision at page 99 and in section 3.4.3.
351 NER, clause 6A.6.6(c).
352 NER, clause 6A.6.6(e).

One of the key regulatory issues we face concerns information asymmetry, and this is a particular problem at cost category level. TNSPs have discretion over their classification of expenditure. At cost category level, revealed costs for a given program or activity can be opaque to the regulator if the TNSP has reclassified costs (from one cost category to another) or relabelled programs (for example, "corrosion risk mitigation" may have previously been called "tower painting"). Reclassification of expenditure from one opex cost category to another, or relabelling projects from one regulatory period to the next can potentially lead to double counting of costs. It can distort comparisons and make trend analysis difficult. This can make it more difficult to assess whether expenditure is really necessary from one period to the next, whether the TNSP is acting efficiently and prudently over regulatory control periods and whether expenditure is truly recurrent or non-recurrent.[353] This is one reason why our assessment focus is on the efficiency and prudency of the total controllable opex allowance; it is a more transparent measure.

The fact that we may nominally compare and also review the proposed forecast in the context of the categories that are presented, should not be construed as us having specified an allowance for any particular opex cost category. Moreover, this cost category level information and comparison does not restrain SP AusNet in how it applies its management expertise in in the context of the total controllable opex allowance and the incentive based regulatory framework.

In our draft decision we found reclassification of expenditure to be a specific problem in our assessment, and this was also the case in our final decision. For example, we assessed the total amount of the revised asset works proposal to be $38.8 million, which consists of:

- base opex $26.1 million
- aging asset profile step changes $12.7 million, comprising:
  - overhead line condition assessments $3.9 million
  - corrosion risk mitigation $8.8 million

    plus
  - communications infrastructure $2.7 million–SP AusNet proposed this conditionally upon the base asset works opex.

SP AusNet's asset works forecast is complicated because it encompasses a number of opex categories. It has discretion over how it spends its opex allowance and how it classifies its expenditure at a category level. We found some asset works expenditure had been classified as routine maintenance, as asset works, proposed as step changes to base opex, as well as self-insurance costs (non-controllable).

In our draft decision we assessed asset works on a like-for-like basis with activities that SP AusNet had considered as asset works in the past, so we assessed these step changes in the same category. We observed that SP AusNet reclassified and relabelled some expenditure from 2008–14 in 2014–17, including the:

- overhead line condition assessment – SP AusNet included this work in its 'condition monitoring' asset works project in the 2008–14 regulatory control period

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[353] AER, *Draft decision: SP AusNet transmission determination*, August 2013, p.104.

- corrosion risk mitigation – SP AusNet called this work 'Tower corrosion—tower painting' in the 2008–14 regulatory control period
- communications infrastructure – SP AusNet included this work in 'Miscellaneous asset works' in the 2008–14 regulatory control period.

SP AusNet agreed with our draft decision that its proposed communications infrastructure step change was in fact double counted in the base opex ($2.7 million), providing that base opex is the average of 2008–13 but not if a single base year was used. It did not agree with our draft decision that the other two step changes should be considered alongside asset works, and reproposed both.

We maintain that these elements should be considered on a like-for-like basis in trend analysis. We observe that since 2001, SP AusNet has undertaken condition assessment and corrosion mitigation programs within asset works and it is inconsistent to remove these from trend analysis. However, it has variously called the program aimed at reducing the risk of corrosion as: 'corrosion abatement program' (2002), 'tower painting' (2007), 'corrosion risk mitigation' (2013).[354] We present the evidence of these programs in section 3.5.3. Furthermore, SP AusNet submitted actual expenditure in asset works line condition assessments was ***minus*** $3.26 million in 2010–11.[355] This is a timing/accounting issue but it does highlight why the total opex is a more transparent measure of actual expenditure, compared with category level analysis.

While SP AusNet's reclassification does make comparisons over time and over disaggregated categories difficult, our total opex approach overcomes these difficulties because our assessment focuses on increments to the total. Similarly, when we compare EMCa's findings with our own, we are looking at the totals and not the category analysis.

Another concern we have with assessment of disaggregated expenditure is that TNSP's may be able to achieve benefits through reclassification of expenditure, rather than by pursuing efficient practices and realising tangible efficient expenditure gains through management effort. We found examples of this issue in SP AusNet's proposed and revised forecast (see 3.5.3). SP AusNet reclassified some base year expenditure to asset works and vice versa and also used self-insurance (non-controllable opex) to manage some asset works expenditure.[356] Our revealed costs method takes a top-down focus on total controllable opex, so our method mitigates this problem of disaggregated controllable opex.

3.4.6 How expert technical reviews assist our assessment

We engaged expert technical advisors to review the proposed opex from a bottom-up technical perspective. This assessment helps us to determine whether the proposed expenditure is reasonably required in the timeframe proposed and of a reasonable magnitude. If the consultant advises the forecast is overstated and requires adjustment then we may not be satisfied the proposed expenditure reasonably reflects the opex criteria.

In addition to the technical advice relating to our draft decision, for this final decision we received further advice:

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354 SP AusNet, *Revenue proposal* 2003-08, p. 28; SP AusNet, *Revenue proposal* 2008-14, p. 84; *Appendix E, Asset Management Scheme 10-01*, p. 68.SP AusNet, *Revenue proposal* 2003-08, p. 128.

355 SP AusNet, *Response to information request AER 11*, 27 May 2013.

356 Machinery breakdown (below insurance deductible expenses), property damage for urgent maintenance.

- EMCa reviewed the proposed controllable opex forecast (excluding insurance)[357]
- AM Actuaries reviewed SP AusNet's insurance and self-insurance forecasts[358]
- Deloitte Access Economics assessed labour cost escalation.[359]

Frontier Economics provided us with an expert economic opinion on SP AusNet's revised asset works proposal in the context of efficiency outcomes of forecasting approaches.[360]

While we sought the consultants' advice and expertise to help us understand the proposal from an independent perspective, we are not bound to automatically adopt their findings/conclusions. We note that consultants' advice can be subject to the problems we noted above (section 3.4.4 and 3.4.5) and we therefore need to be careful that the advice is considered in an appropriate framework. Those findings are part of the overall information and analysis we consider in accordance with the opex factors. We take into account all the available relevant information, including public submissions, submissions from SP AusNet and our own internal analyses, and then use judgement and a broader array of interconnecting information to arrive at a balanced decision. In this, we consider the historical expenditure, incentives, risk transfers and economic principles. Importantly, our assessment is on whether the total opex reasonably reflects the opex criteria and we considered the wider economic context and the regulatory framework.

3.4.7 Our review process for SP AusNet

For our draft decision, we examined SP AusNet's controllable opex proposal using two approaches: a top-down assessment and a detailed bottom-up technical review. Both controllable opex reviews showed SP AusNet's forecast opex was more than would reasonably reflect the opex criteria. We also examined non-controllable opex and found elements of the proposal to be more than what is required to reasonably reflect the opex criteria.

We used this approach in our draft decision to develop a base-step-trend model which we were satisfied reasonably reflects the opex criteria and objectives. However, our base-step-trend model at the draft decision stage of our assessment was significantly below SP AusNet's proposal. So, we looked for whether there might be any exceptions in the specific circumstances of SP AusNet that might mean the base-step-trend method requires an adjustment or some other consideration. To help us with this part of the assessment we engaged technical consultants, EMCa to look at the proposal from its technical engineering and managerial perspective, and AM actuaries to assess the insurance forecast. We asked EMCa to assess the specific circumstances of the business and part of EMCa's assessment was also a governance review. EMCa's review and our review both found that SP AusNet's initial proposal was more than reasonably required, so on the basis of both reviews we did not accept the proposal. AM actuaries reviewed the insurance forecast and method SP AusNet had used. It found the proposal had been significantly over stated and on that basis we did not accept the insurance part of the proposal. We made relevant adjustments to the base-step-trend model through a (net) step change reduction for insurance.

In our final decision, we again used the base-step-trend method to develop and test SP AusNet's proposal and, subsequently, to estimate a substitute forecast. We reviewed each of the elements in the context of SP AusNet's revised proposal. We considered all relevant information SP AusNet had

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357 NER, clause 6A.6.6 (e) and in particular, (e)(3).
358 AM Actuaries, *Review of SP AusNet (Transmission) insurance premiums and self-insurance - 2014–17*, [confidential], July 2013.
359 NER, clause 6A.6.6 (e) and in particular, (e)(3) and (6)-(8).
360 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013.

submitted at all stages of the review including its initial proposal, revised proposal and its criticisms of our approach. Along with our consultants we had further direct engagement with SP AusNet including a two day on-site meeting and a number of information requests.[361] This resulted in, where relevant, a re-consideration of material obtained in the course of this review. Once we were satisfied that we had developed a base-step-and trend model for the final decision that reasonably reflected efficient and prudent costs, we then compared our model with SP AusNet's forecast.

EMCa reviewed the revised proposal from their technical, governance and asset management perspectives. EMCa's findings assisted us in assessing whether any circumstances specific to SP AusNet needed to be given weight in deriving a total controllable opex allowance that reasonably reflects the opex criteria. EMCa's focus was a bottom-up technical review of specific elements of the proposal and it combined this with some top-down techniques to form its view on a total that reasonably reflects the opex criteria. We further asked EMCa to test whether the total controllable opex allowed in our draft decision would result in a material change in risk profile and to assess SP AusNet's statements about risk.

We also considered whether it was appropriate to combine two different approaches to forecast total controllable opex as proposed by SP AusNet in its revised proposal. We asked Frontier Economics to review the issues SP AusNet had raised in its revised proposal about our base-step-trend method and approach, from an economic efficiency perspective. Specifically, we asked Frontier to respond to SP AusNet's submission that our single base-year approach for all controllable opex, including asset works, without adjustment, does not reasonably reflect an efficient opex forecast. This advice helped us assess the opex criteria taking into account the revenue and pricing principles and the requirement to perform our functions in a manner that is likely to contribute to the achievement of the national electricity objective (the NEO).[362]

In deriving its forecast opex total, EMCa looks at bottom-up factors, risks and specific circumstances and components. Having considered all of the relevant information EMCa also derived a controllable opex total that reasonably reflects efficient and prudent expenditure. Importantly, EMCa also considered whether its forecast total is sufficient for SP AusNet to discharge its obligations in the next three years without material changes to network risks or asset health.

Thus, once again we reviewed SP AusNet's revised proposal using two approaches to assess the forecast total opex in the revised proposal: our preferred base-step-trend model and through EMCa's technical review.

3.5 Controllable opex review

Both our top-down and bottom-up reviews found that SP AusNet's controllable opex forecast was more than reasonably required to achieve the opex criteria. Both reviews found SP AusNet's revised proposal of $275.6 million was too high. In particular:

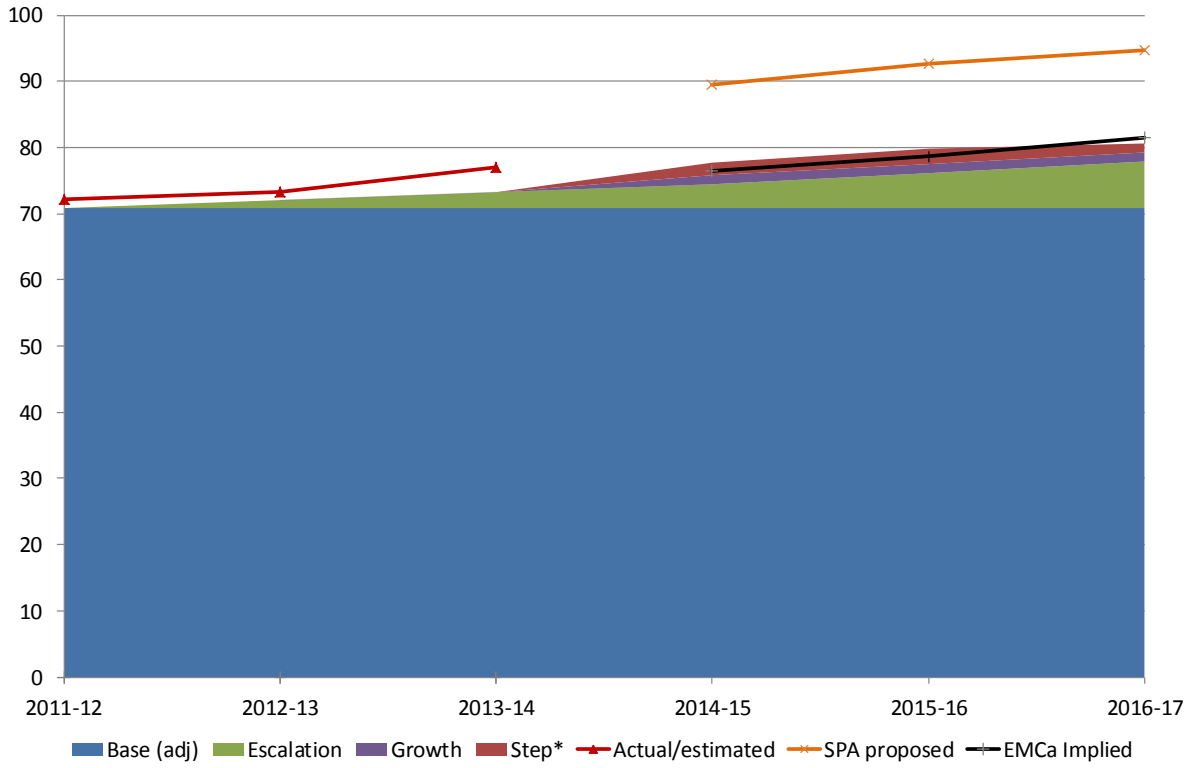
- Our base-step-trend approach indicated that a total controllable opex allowance of $238.2 million reasonably reflects the opex criteria.

361 See section 1.5.2 regarding stakeholder engagement.
362 NEL, s 16.

- EMCa advised that a total forecast of $236 million would reasonably reflect the opex criteria, being sufficient for SP AusNet not to materially increase network risk or impact asset health over the next 3 years.[363]

Our substitute forecast is $238.2 million. We are satisfied that this allowance reasonably reflects the opex criteria. It also provides SP AusNet sufficient revenue that allows it a reasonable opportunity to recover at least its efficient costs in delivering safe and secure network services. Figure 3. compares the total controllable opex proposed by SP AusNet, recommended by EMCa and derived from our base-step-trend analysis.

Figure 3. Comparison of total controllable opex: SP AusNet, EMCa and AER's base-step-trend ($ million, 2013–14)



Source: AER analysis.
Note: Escalation includes insurance growth; base (adj) refers to base opex less the movements in provisions.

3.5.1 AER's top-down assessment

Our preferred method for assessing controllable opex is a base-step-trend method.

In its revised proposal, SP AusNet proposed applying a base-step-trend approach to its opex forecast but there were two main points of distinction between our base-step-trend model and SP AusNet's:

[363] EMCa, *SP AusNet technical review*, January 2014, para. 233-4. Basis for comparison: The scope of EMCa's review did not include cost escalation, taxes and leases, insurance or network growth. The difference between our forecast and EMCa's in the non-technical opex (but still controllable) is the result of differing base years. In that context, when comparing totals the final decision real escalation should be applied to the output from the base year (the NER requires us to also ensure that the input costs are efficient). Other than applying our labour escalator and insurance market escalator (because we accepted SP insurance forecast) EMCa's non-technical opex need not be adjusted any further to compare totals.

1. Efficiency of the base opex, with respect to asset works – SP AusNet proposed that we should modify the single year base-step-trend approach when it came to assessing asset works opex.[364]

   We do not accept this proposed modification because it systematically biased to produce an inefficient forecast, given the incentive regime. The asset works is a controllable opex expenditure item which does not display properties requiring an adjustment. SP AusNet has a history of over forecasting its requirements and its actual expenditure would have been more accurately forecast using a revealed costs approach over the last 10 years, rather than SP AusNet's previously proposed forecast method.

2. Step changes ($27.6 million), including $15.5 million (un-escalated) for aging asset profile.[365]

   We do not accept the proposed aging asset step changes are properly described as step changes because of the nature of the proposed works. We find that the proposed works are a continuation of existing programs/activities, for which costs have been revealed in the total base opex.

   SP AusNet received an allowance of $90.2 million in 2008–14 for asset works, of which it decided not to spend $49.4 million and deferred the program of works into 2014–17.[366] However, it received an efficiency benefit for the underspend and consumers have submitted that it would not be fair for consumers to fund these works more than once.[367]

The next sections set out our reasons in more detail and the discussion includes our method and basis of our substitute base-step-trend forecast as well as responding to some of the issues raised by SP AusNet, comprising the following elements (Table 3.):

- Base opex (section 3.5.2)
- Step changes (section 3.5.3)
- Trend (section 3.5.4).

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364 SP AusNet, *Revised revenue proposal*, pp. 68–9.

365 Including the $2.7 million for communications infrastructure in the $15.5 million. Note the $2.7 million is in addition to SP AusNet's $27.6 million proposed. SP AusNet, *Revised revenue proposal*, pp. 79-92.

366 EMCa, *Technical review*, August 2013, Table 22. Based on SP AusNet response to information request SP EMCa 021A. From this table, $6.3 million was spent on tower corrosion of the proposed $24.3 million for this program.

367 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp.23-6; EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 1.

Table 3. Total controllable opex: base-step-trend decomposition ($ million, 2013–14)

	SP AusNet	AER final decision
Base opex		
all cost categories except asset works	204.7	204.7
asset works	12.0	12.0
asset works adjustment	13.0	0.0
insurance (FSL)		-2.1
Subtotal: base opex	**229.6**	**214.5**
Less: reversal of movements in provisions	-1.9	-2.0
Total: base opex	**227.7**	**212.6**
Step changes (no escalation)	**27.6**	**6.4**
Trend		
Real cost escalation	11.5	11.3
Escalation on step changes	1.4	0.3
Total escalation	12.9	11.6
Network growth	4.4	4.1
Insurance escalation (increase over base)	3.0	4.3
Total trend	**20.3**	**20.0**
capex-opex trade-off	**0.0**	**-0.8**
Total controllable opex	**275.6**	**238.2**

Source: AER analysis.

3.5.2 Base opex

SP AusNet's controllable opex can be decomposed into base opex of $227.7 million, step changes of $27.6 million and trend elements of $20.3 million, as shown in Table 3.. In comparison, we found an efficient base opex for controllable opex to be $212.6 million.[368]

We are satisfied that the single year base-step-trend approach should not be modified to provide an additional allowance for asset works opex, as proposed. Instead, to the extent that additional spending may be justified to reasonably reflect the opex criteria, it should be assessed as a step change within the base-step-trend approach.

We set base opex by choosing a base year and testing whether the base year is likely to be efficient and reflective of ongoing expenditure requirements. Our conclusions were founded on assessment of the following:

1. Is the proposed base year (2011–12) likely to be efficient and reflect actual base year costs?

[368] Adjusted for provisions.

2. What happens if we change the proposed base year to an alternative base year?
3. How do year-on-year movements in the major opex categories affect the total base opex?
4. Is the proposed base year adjustment for asset works required and necessary to produce an economically efficient controllable opex forecast?
5. What did consumers say?
6. Have SP AusNet's past forecasts been reliable compared with actual outcomes?

Is the proposed base year likely to be efficient and reflect actual base year costs?

In its initial and revised proposal, SP AusNet proposed 2011–12 as a base year for most categories of controllable opex, but not for insurance or asset works.[369] We used the 2011–12 base opex for **all** controllable opex categories, including asset works and insurance, because we find this likely to be efficient and reflect actual costs for the following reasons:[370]

- Total controllable opex in 2011–12 was a reasonable starting point for the base-step-trend approach because the Efficiency Benefit Sharing Scheme (EBSS) applied to all controllable opex.[371] As we set out in section 3.4, the revealed cost approach works in tandem with the incentive framework to provide a forecast of efficient ongoing operating expenditure. Where a TNSP has operated under an effective incentive framework, actual past expenditure should be a good indicator of the efficient expenditure the TNSP requires in the future and the TNSP has an incentive for continuous improvement.
- The base year controllable opex was not an outlier as total controllable opex in 2011–12 was in line with the long run average. The actual controllable opex annual average from 2003–13 was $74.6 million, the actual controllable opex annual average from 2008–13 was $78.0 million and actual expenditure in 2011–12 was $72.2 million. The 2011–12 expenditure is not a year with greatest variance from the average of 2008–13 (Figure 3.).
- The 2011–12 expenditure is less than in 2003–04 to 2005–06, and more than in 2006–07 and 2007-08. It is about the same as in 2012-13.[372] This demonstrates that total controllable opex is not undergoing long term cyclical variations (Figure 3.).[373]
- SP AusNet proposed the base year 2011–12 as a reasonable basis for most opex categories and we have found no reason to reject this as a reference year.

In our draft decision we removed the accrued provisional liabilities ($0.62 million) because it does not represent actual costs incurred in the year. SP AusNet accepted this adjustment in its revised proposal. Therefore the adjusted base opex is $214.6 million.

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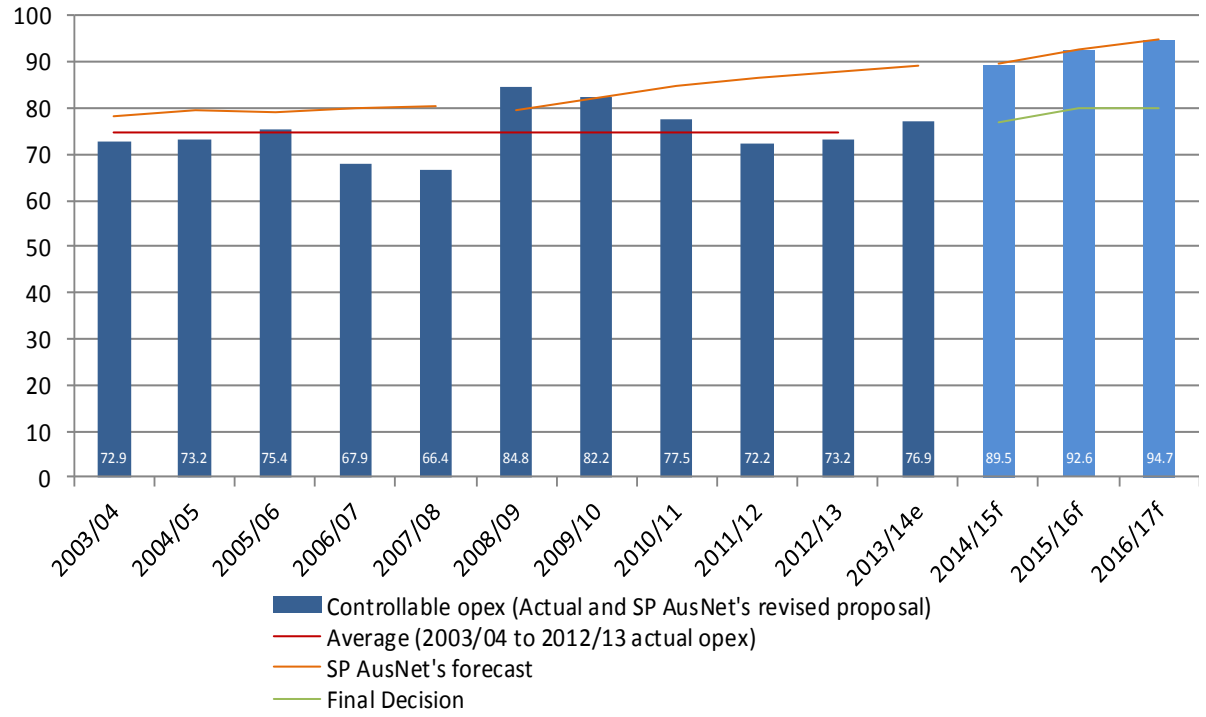
369 SP AusNet, *Revised revenue proposal*, p. 55.
370 We made some adjustments for insurance and our insurance review is discussed in section 5.4.
371 EBSS items that were excluded were the adjustment for movements in provisions (controllable opex) and non-controllable opex items.
372 The $1.0 million difference between the two years can largely be accounted for by the increased regulatory costs (step change) commencing 2012–13. See SP AusNet, *Response to EMCa 032*, 17 June 2013: $1.38 million ($2012-13) regulatory cost increase in 2012–13.
373 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013. pp. iii, 15.

Figure 3. Controllable opex, forecast and actual ($ million, 2013–14)



Source: AER analysis.
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

What happens if we change the proposed base year to an alternative base year?

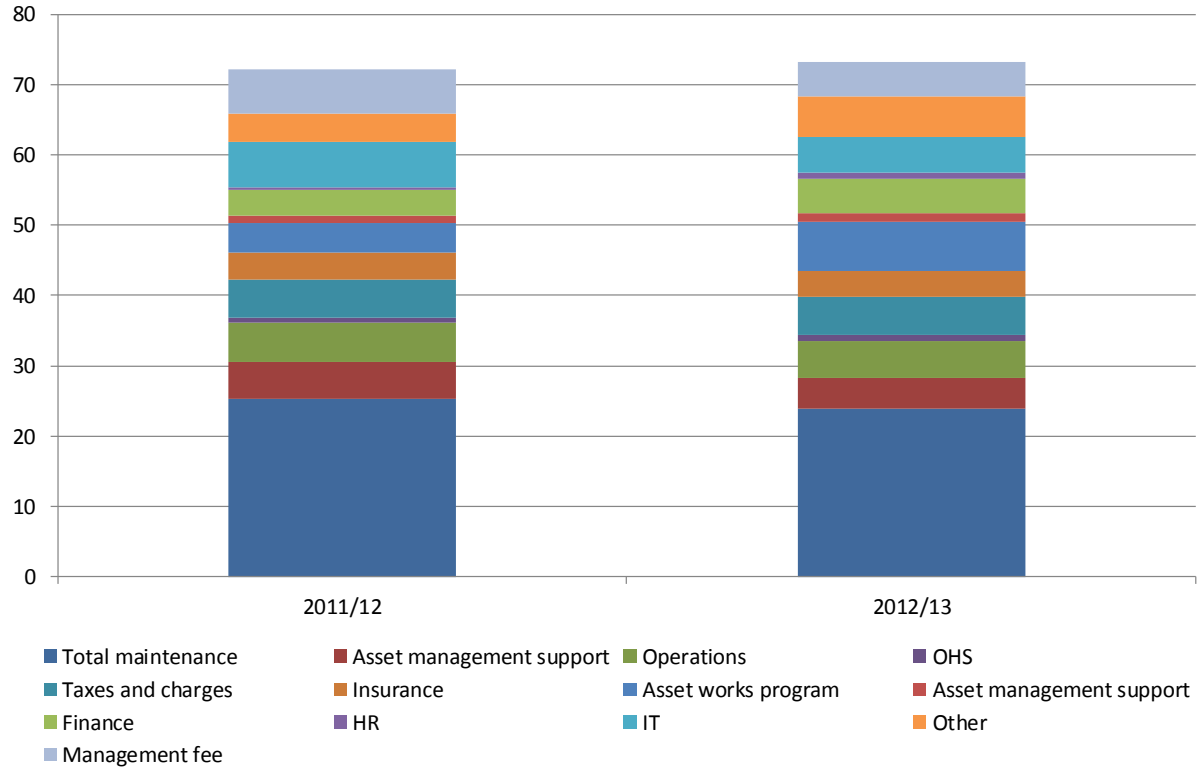
Another way of asking this question is, if the composition of cost categories differs from year to year, what happens if we change the base year? We could equally have chosen an alternative base year, with a very similar total controllable opex forecast outcome, but with different category outcomes.[374] For example, because more updated data has recently become available, we could have used 2012–13 to estimate base opex.

Figure 3. and Table 3. shows the results of using 2011–12 and 2012–13 as base years. If we used 2012–13 as a base year instead, the impact on the total controllable opex forecast from using the different opex bases is the same, but varies at category level. For example:

- Asset works would be $8.5 million more but this would be offset by routine maintenance and support which would be $6.8 million less.
- IT would be $3.6 million less and the management fee would be $3.9 million less.

[374] As set out in our draft decision, a change of base year would also have EBSS carry-over consequences.

Figure 3. Comparison of different base years ($ million, 2013–14)



Source: AER analysis.

Table 3. Comparison of different base years ($ million, 2013–14)

	2011/12	2012/13	Difference	Forecast impact
Total maintenance	25.4	23.9	–1.5	–4.5
Management support	5.1	4.3	–0.8	–2.3
Operations	5.7	5.4	–0.3	–0.8
OHS	0.7	0.8	0.1	+0.3
Taxes and charges	5.4	5.3	–0.1	–0.2
Insurance	4.0	3.8	–0.2	–0.5
Asset works program	4.2	7.0	+2.8	+8.5
Asset management support	1.0	1.2	+0.1	–+0.4
Finance	3.6	4.9	+1.3	+4.0
HR	0.5	0.8	+0.4	+1.1
IT	6.4	5.2	–1.2	–3.6
Other*	4.1	5.6	+1.5	+4.5
Management fee	6.3	5.0	–1.3	–3.9
TOTAL	72.2	73.2	+1.0	+3.0
*Remove regulatory step change		–1.0	–1.0	–3.0

Source: AER analysis.
Note: The forecast impact is 3 times the difference. *In 2012–13 the regulatory step change costs occurred, which would be removed from the base year. This almost entirely accounts for the difference at total level, see SP AusNet, *Response to EMCa 032*, 17 June 2013.

How do year-on-year movements in major opex categories affect the total base opex?

A key proposition underpinning SP AusNet's submission is that past outcomes in a single year for most aspects of controllable opex can be relied on to forecast future requirements, but not for asset works. These submissions necessarily draw our attention to the asset works category of opex but it is instructive to also review the other major opex categories.

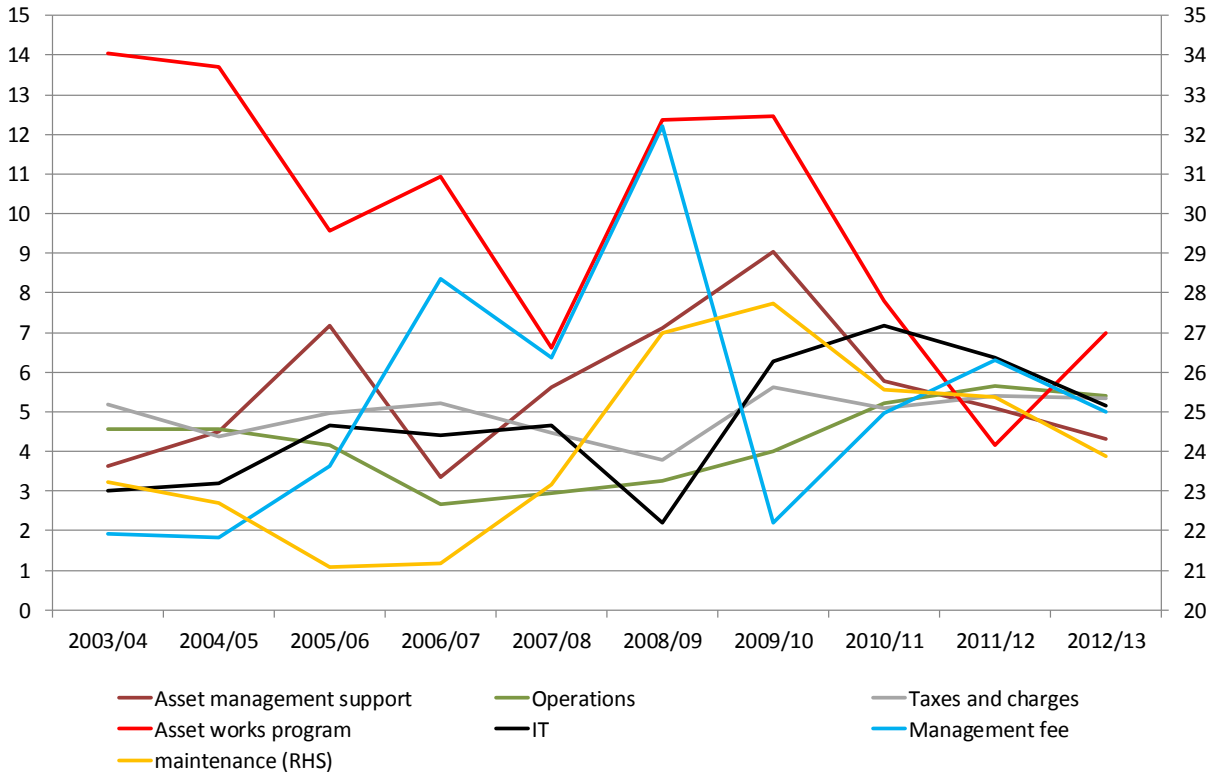
Any opex category examined in isolation is likely to show higher and lower amounts in any particular year. SP AusNet identified one particular category for which expenditure was lower in the base year than in other years. However, we note that in 2011–12 there were some categories that were higher than in other years (Figure 3.). For example, the management fee category of expenditure (blue) has a greater year-on-year range than asset works expenditure (red).

When we overlay Figure 3. and Figure 3., as demonstrated in the preceding section, SP AusNet's total controllable opex was relatively stable through-out the last decade even though at category level there is some volatility.

That the variation in total controllable opex is less than the variation of particular categories is consistent with our conclusions in respect of SP AusNet's management and governance practices. In our draft decision we observed that SP AusNet is a well-managed network business with good reporting and planning tools. It is able to direct its efforts and expenditure to priority areas to address

emerging needs while managing within an overall budget.[375] Therefore, a focus on any one opex category has the potential to be significantly misleading.

Figure 3. Year-on-year actual volatility of major opex categories: 2003–04 to 2012–13 ($ million, 2013–14)



Source: AER analysis.

SP AusNet says that our reasoning suggests that it will be able to "borrow from its allowance in relation to other opex categories to undertake the required asset works during 2014–17, and thereby correct for the lower asset works allowance".[376] It sets out that, while our role is to set a total opex, in practice we discharged our obligation by assessing the forecast at a disaggregated level. [377]

In this regard EMCa observed that:[378]

> At the on-site meetings that we attended as part of the revised revenue proposal assessment process, SP AusNet advised that it has internal budget controls which appear to limit management expenditure discretion based on AER allowances at an expenditure category and even a line item level. Evidence from the current regulatory control period shows that relative to the AER allowance, SP AusNet has considerably underspent in a number of categories and line items proposed by it and, used in determining its required revenues for the current regulatory control period. It would appear therefore that these strictures do not apply to underspend, but appear to limit the ability to respond to 'churn'-based variances at a category and line-item level. We were advised, for example, that SP AusNet would not undertake certain work or certain business management initiatives, unless the AER allowed for them explicitly in its revenue determination process.
>
> While the ways in which SP AusNet chooses to maintain its internal budget discipline is not a matter for us to consider as technical advisers, equally we stress that technical advice that we provide to the AER in this

375 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp.100–107.
376 SP AusNet, *Revised revenue proposal*, p. 71.
377 SP AusNet, *Revised revenue proposal*, p. 71.
378 EMCa, *SP AusNet technical review*, January 2014, para. 225-6.

> and other reports to assist it in setting the revenue allowance should not be construed as usurping the proper role of management in regards to budget prioritisation and approvals of specific items of work.

From the following evidence, we observe that SP AusNet does, in fact, prioritise its internal budgets within given regulatory control periods, to manage its allowance.

As explained by EMCa:[379]

> SP AusNet spent considerably less on asset works than it proposed as being necessary at the outset of 2008–14. It provided three main reasons for this, two of which refer explicitly to its prioritisation of expenditure on a risk basis:
>
> - Freeing-up funding to allow capex works to be undertaken: '…demand for capital across the networks also required tough decisions to be made. Therefore SP AusNet prioritised expenditure in the following way:
> - Safety related expenditure was and is non-discretionary and fully funded
> - Expenditure in the distributors to meet customer growth and customer connections was also non-discretionary (clear obligations to connect and meet planning standards)
> - Replacement capex and operating costs were reviewed and reassessed for risk trade-offs, with the networks accepting more risk given the adverse financial conditions.'
> - Re-prioritisation due to better asset information and external drivers such as new legislation
> - Operational constraints – such as dealing with unexpected asbestos.

We agree with SP AusNet that disaggregated expenditure levels are part of the overall information that we must consider, but we reiterate that this does not equate to us approving a particular amount of opex for a particular category. By its very nature, controllable opex and its individual components/categories are not isolated when the TNSP has discretion as to how it controls - and classifies - its expenditure within these categories. Controllable opex is subject to the EBSS and therefore the business has an incentive to reveal efficient expenditure. Asset works tends to be driven by the revealed condition of assets and tends to be more variable in nature than scheduled maintenance activities.[380] These expenditures are also more amenable to being brought forward or deferred based on priorities as typically determined by ongoing risk assessments and of the lifecycle economic implications of doing so.[381] A well-managed business makes discretionary decisions to meet its legal, technical, regulatory, safety, reliability and other obligations, and to balance its competing incentives. We agree with EMCa that these decisions are properly the businesses' and disagree with SP AusNet's characterisation of its role in managing its total allowance.

Is the proposed base year adjustment for asset works required and necessary to produce an economically efficient controllable opex forecast?

SP AusNet isolated and focused on asset works and sought a special adjustment to uplift its base opex by $13.0 million for the forecast period to $26.1 million.[382] A special adjustment for one category of opex, without making similar adjustments for other categories of opex, is not appropriate as it is not internally consistent.

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379 EMCa, *Technical review*, January 2014, para 209 based on: SP AusNet, *Response to information request EMCa021A*, *Response to information request AER 20* and *Transmission asset management plan 2013-14 to 2017/18*, p.12.
380 SP AusNet, *Revised revenue proposal*, p.65.
381 EMCa, *SP AusNet technical review*, January 2014, para 175.
382 SP AusNet, *Revised revenue proposal*, p. 68; SP AusNet, *Amended revised revenue proposal opex model* [confidential].

We sought Frontier's advice on the economic efficiency of SP AusNet's revised proposal approach to controllable opex compared with our single year base-step-trend method. In the context of the given circumstances, whether it is appropriate to disaggregate total controllable opex to produce an economically efficient forecast. Frontier advised us that:

- SP AusNet's method is systematically biased towards producing an economically inefficient total controllable opex forecast. That is, it produces a total controllable opex forecast that is more than reasonably required. This may lead to a systematic over rewarding of SP AusNet and network charges higher than efficient costs at the total opex level and at the total revenue level.[383]
- The pattern of SP AusNet's historical controllable opex supports the view that our use of a single base year forecasting approach for controllable opex in its draft decision is appropriate to achieve an economically efficient forecast.[384]
- There appears to be no reasonable basis for us to move away from a single base year forecasting approach for SP AusNet's controllable opex in general and for asset works opex in particular.[385]
- In the circumstances of SP AusNet, it would be inappropriate for us to review each component of controllable opex individually to see whether it conformed to the same pattern as overall controllable opex. Such 'cherry-picking' would likely result in aggregate controllable opex being systematically and inefficiently over-forecast. Frontier found no reason to distinguish asset works expenditure differently to other controllable opex.[386]

We also asked Frontier Economics to review SP AusNet's response to our draft decision, and in particular that the total forecast does not meet the opex criteria because one category of expenditure is lower than the average of that category.

According to Frontier, from an economic efficiency perspective, the appropriateness of a single base year forecasting approach depends on the following three conditions being met:

1. The regulated business must have incentives to minimise the relevant class of expenditures.
2. The business must not have incentives to 'game' the regulatory process, such as by shifting expenditure within a regulatory control period to benefit from a higher expenditure forecast or efficiency benefit.
3. The relevant class of expenditure needs to be broadly stable, in that past actual expenditure can provide (with the aid of transparent adjustments) a reasonable reflection of future efficient expenditure.

Where an opex efficiency benefit sharing scheme applies, our single base year forecast approach meets the first two of these conditions. On the third condition, controllable opex tends be fairly stable both on a year-by-year basis and even more so when comparing total spending across successive regulatory control periods. Frontier sets out that, in this context, the important feature is whether SP AusNet's expenditure is significantly *different between* regulatory periods, as opposed to within a period.[387]

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383 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013, p. 17.
384 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013. p. 19.
385 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013. p. 18.
386 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013. p. 17.
387 Frontier Economics, *Opex forecasting advice for SP AusNet final decision*, December 2013. p. 15. In this context, Frontier is referring to the total controllable operating expenditure level.

EMCa observed that it is more difficult to interpret asset works in a given year as revealing an ongoing prudent and efficient level of costs because of the considerable management discretion typically available to re-prioritise and time-shift such programs. This movement in the level and timing of such works tends to have a relatively slow and incremental effect on the risks of the business and on the lifecycle economics of asset management.[388] We accept that the first part of this statement may be the case in the absence of an EBSS. However, given there is an incentive framework applicable to asset works in the base year, we agree with Frontier that, from an economic efficiency point of view, there does not appear to be any specific reason to consider that asset works exhibits a profile that would necessitate a different treatment from the rest of controllable opex.

What did consumers say?

EUAA and EUCV submissions also expressed concerns that SP AusNet's approach led to an inefficient total forecast outcome. Their views were supported by the advice from Frontier Economics discussed previously, and are consistent with our own views. We consider that the opex objectives and criteria are most likely to be satisfied where a consistent approach has been used to forecasting controllable opex, including asset works.[389]

The EUAA stated:

> SP AusNet points out that the asset works spend in the base year used to set the allowance (2011–12) was the lowest since 2003/4. While this may be the case, SP AusNet's argument against the use of this year as the base year is internally inconsistent. Specifically, SP AusNet accepts the use of 2011–12 for the base level of opex for base opex, but suggests that a different methodology be used for asset works opex.
>
> This is “cherry picking” – accepting a base level that is advantageous for one part of the opex budget, but then rejecting it for the other when it is not advantageous.
>
> The integrity of the use of revealed cost approach (and of the resulting EBSS incentive payments) demands a consistent application of the base year to all controllable opex elements. Accordingly we disagree with SP AusNet's rejection of the 2011–12 base year for the determination of asset works opex.[390]

The EUCV stated:

> In its revised application SP AusNet devotes considerable effort to explain why it considers that there needs to be an upwards adjustment for its asset works. SP AusNet makes no reference to the massive increase in routine maintenance (which increased by some 30% (by $7.5 million pa) but then stating separately the cost of the asset works is not included in the recurrent maintenance cost allocation.
>
> This implies that SP AusNet has not carried out any asset works within its allowances yet it considerably under-ran its regulatory allowance which did include for an appropriate level of asset protection. SP AusNet can't have it both ways! Either the work is included in the actual revealed opex or SP AusNet is attempting to "game the regulator" by claiming a benefit by not doing work allowed for and is then seeking it again as a future cost.
>
> Throughout the revised application SP AusNet concentrates just on the aspects where the AER has reduced the amounts claimed by SP AusNet. Effectively SP AusNet has used the revealed cost approach for the bulk of its opex and then used a bottom-up approach for other elements to "prove" the legitimacy of costs which have risen considerably; this applies particularly its asset works.
>
> The AER approach looks at the SP AusNet opex on a holistic basis, driven by an EBSS which provides support that the opex in the base year is efficient. SP AusNet has the ability to shift costs from one cost element to another and would appear to have done so in the case of asset works.[391]

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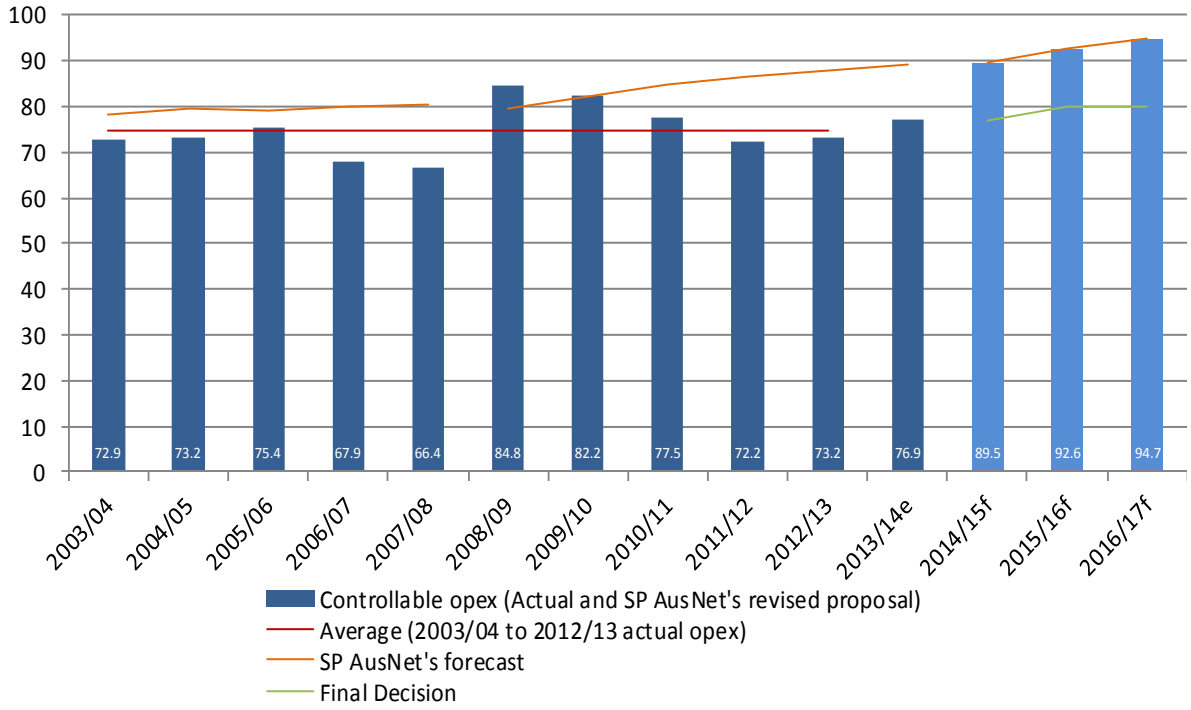
388 EMCa, *SP AusNet technical review*, January 2014, para 177.
389 NER clauses 6A.6.6(e)(2) and (5).
390 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 15.
391 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 25.

We consider that the opex objectives and criteria are most likely to be satisfied where a consistent approach has been used to forecasting controllable opex, including asset works.[392]

Have SP AusNet's past forecasts been reliable compared with actual outcomes?

In the past two regulatory periods, SP AusNet forecast opex that was subsequently revealed to be well above its actual expenditure. This occurred at both the total controllable opex level (Figure 3.) and, even more significantly, at the asset works level (Figure 3.).

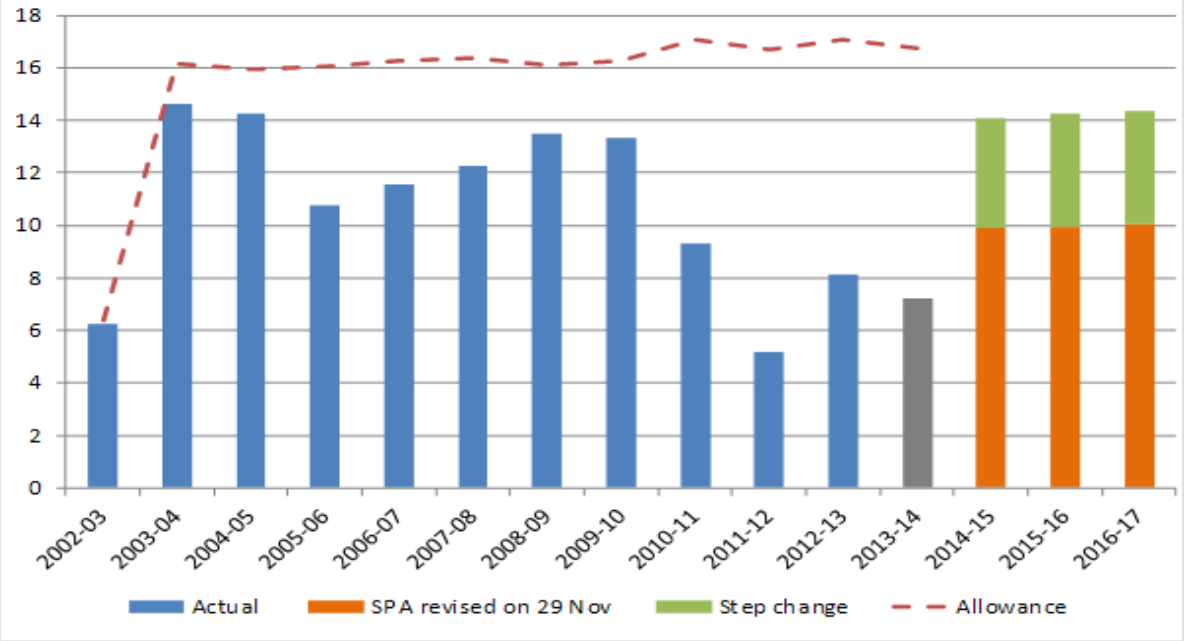
Figure 3. Controllable opex, forecast and actual ($ million, 2013–14)



Source: AER analysis
Note: (e) 2013–14 is a budget estimate; (f) denotes forecast.

[392] NER clauses 6A.6.6(e)(2) and (5).

Figure 3. Asset works forecast and actual, 2003–14 ($ million, 2013–14)



Source: Reproduced from AER, *Draft decision: SP AusNet transmission determination*, p.102.
Note: Includes asset works support costs.

We consider this reveals an inherent weakness in SP AusNet's past forecast method:

- In its initial revenue proposal, SP AusNet used a bottom-up forecast method in its initial proposal and proposed a total forecast of $40.6 million, comprising of $24.6 million plus $16.0 million related step changes (May 2013).[393]
- In its revised revenue proposal, it used the base-step-trend method with a base year adjustment to uplift the asset works component of opex to the average of 2008–14 (base opex is therefore $26.1 million) plus $12.7 million for related step changes (plus $2.7 million for a step change contingent upon the base) (November 2013).
- Although it changed its forecast method from its initially proposed forecast, the revised forecast for the base opex ($26.1 million) was in fact higher than its initial forecast ($24.6 million).[394]

In our draft decision we considered that the robustness and forecasting credibility of SP AusNet's current forecasts is diminished in light of an examination of its historical forecasting and actual expenditure.[395] Our concerns expressed in the draft decision apply to SP AusNet's revised forecast: we found the method of its initial forecast to be likely to produce an over-inflated estimate and its revised forecast is slightly higher than its initial forecast. This also illustrates that SP AusNet's revised proposal for the asset works adjustment is likely to be too high.

In the current determination, SP AusNet put forward reasons justifying an increase in asset works that are similar to the reasons it put forward in its previous two determinations, even though historically the additional funds have not proved necessary. Consequently, we have gone to considerable effort to

393 Does not include asset works support costs, which SP AusNet accepted as base-opex in its revised proposal.
394 It also capitalised some transformer refurbishment costs. All up, its revised forecast was $42.6 million (including the capitalised refurbishment of $3.8 million) which compares with the $40.6 million initially proposed.
395 NER clause, 6A.6.6(e)(5).

test these claims. The following extracts are from SP AusNet's proposals from previous determinations.

In 2007 SP AusNet stated:

> The asset works expenditure is not recurrent and therefore it is not appropriate to derive forecasts of future requirements from previous expenditure. The future asset works program is designed to respond to new priorities and problems, which vary from the previous regulatory period. The increasing number and complexity of asset works has resulted in the need to hire technical specialists from time to time to support the core of SP AusNet's engineers and technical staff.[396]
>
> Asset works costs have averaged 18 per cent below the AER benchmark during the current regulatory period. This variation reflects the new priorities and problems that have arisen during the current period. The key drivers for the increase in asset works costs over the forthcoming regulatory control period include the assessed levels of asset failure risk and increased resource requirements for compliance with legislation, rules and regulations. The asset works program addresses health, safety and environmental obligations, which includes asbestos removal and switchyard resurfacing. As noted earlier, the asset works program is non-recurrent and therefore it is not appropriate to base forecasts of future requirements on previous expenditure levels.[397] The key areas of focus for the asset works program between 2008–09 and 2013–14 are: Repair and prevention of tower corrosion; Significant repair or refurbishment projects to mitigate asset failure risk; Reduction in OH&S and environmental risk; and Condition monitoring.[398]

In its initial revenue proposal for 2014–17 SP AusNet stated:[399]

> Actual and forecast asset works expenditure over the current regulatory control period is 43% below the regulatory allowance for the period. The reasons for the underspend are specific to individual asset works programs, but generally reflect realised cost efficiencies in project delivery and changing priorities due to unexpected capital works needs which emerged during the period.
>
> The proposed asset works program is driven by emerging priorities and challenges, and reflects one-off projects that are required to address a specific network or asset requirement. The program focuses on the following areas: Major asset repairs and refurbishments – stations and lines; Reduction in health and safety and environmental risk through enhancing line ground clearance assessments; Facilities maintenance; and Miscellaneous works.

SP AusNet underspent its asset works allowance for 2008–14 by $49.8 million and we asked EMCa to explore the reasons. EMCa analysed the underlying metrics associated with the proposed and actual asset works expenditures in the 2008–14 and 2014–17 regulatory control period.[400] In summary it found that SP AusNet tended to overestimate unit costs but the majority of the variance is explained by less work having been done.[401]

EMCa said:[402]

> In broad terms the $49.8 million ($2013–14) underspend was attributed to:
>
> - significant over-forecast of cost, but volume of work largely achieved: $15.4 million
> - significant over-forecast of cost / less work achieved–not re-proposed: $11.2 million
> - significant over-forecast of cost / less work achieved–re-proposed: $11.2 million
> - significant over-forecast / volume variance unknown–re-proposed: $2.7 million

396 SP AusNet, *Revenue proposal for 2008–14*, March 2007, p. 89.
397 SP AusNet, *Revenue proposal for 2008–14*, March 2007, p. 90.
398 SP AusNet, *Revenue proposal for 2008–14*, March 2007, p. 90.
399 SP AusNet, *Revenue proposal*, p. 137.
400 EMCa, *Technical review*, 16 August 2013, para. 316.
401 EMCa, *Technical review*, 16 August 2013, para. 317, 319.
402 EMCa, *Technical review*, 16 August 2013, para. 323.

- cancelled: $1.6 million
- capitalised: $7.3 million.

Given the above information, EMCa found it difficult to have a high degree of confidence in SP AusNet's asset works program budget for 2014–17. EMCa's view was that the significant variance to budget could be ascribed to one, or a combination of factors and EMCa found no evidence to suggest that these factors have materially changed. These include:

- that the need was conservatively over-estimated
- that the unit costs for the program were conservatively over-estimated
- that needs that were reasonably estimated based on information available at the time of the proposal were later found not to exist, or to be less than estimated

EMCa noted that recurrent expenditure was considerably higher than proposed expenditure, starting 2008–09 and EMCa suggested it was possible that work that was proposed as asset works had in fact been undertaken under recurrent maintenance, or had been capitalised. In either case, EMCa raised this as a concern as, unless adjusted for, would lead to "double dipping". From this, EMCa then observed that SP AusNet may have held over work that reasonably should have been done, in order to obtain the three-pronged benefits of (a) increased profit and increased cash flow within the regulatory period (since revenue was not reduced for the work not done), (b) an EBSS efficiency benefit and (c) obtaining an allowance for the same work to be undertaken in its proposal for 2014–17.[403]

Consumer submissions expressed concerns that consumers have already paid for the proposed works, and which SP AusNet have then reproposed.[404]

We set this evidence out in our draft decision, but SP AusNet did not explicitly respond to these observations. Rather, it changed its asset works forecast method as discussed above.

3.5.3 Step changes

SP AusNet put forward 13 step changes in its revised revenue proposal, totalling $27.7 million excluding escalation and $29.0 million inclusive of escalation.[405] We accept a step change total of $6.4 million.[406] Our final decision on all proposed step changes is shown in Table 3..

403 EMCa, *Technical review*, 16 August 2013, para. 325-7.
404 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 25
405 SP AusNet, *Opex Model, 29 November 2013.* The escalation refers to internal labour costs.
406 Includes AER escalation.

Table 3. AER's final decision on SP AusNet's step changes ($ million, 2013–14)

		SPA	EMCa	AER
Ageing asset profile	Overhead line condition assessment	3.9	3.2*	0.0
	Corrosion risk mitigation	8.8	0.0*	0.0
	Communications infrastructure^	2.7	0.0*	0.0
Changes in compliance obligations	AEMO outage planning requirements	0.6	0.0	0.0
	Security of critical infrastructure (terminal stations)	3.3	[CIC]#	[CIC]#
	AEMO operating agreement	0.1	0.1	0.1
Regulatory changes and government policy initiatives	SF6 top ups	1.7	0.0	0.0
	Transitional arrangements for the Economic Regulation of NSPs rule change	3.6	2.5	2.5
	Fire services levy	2.8	2.8	2.8
Opex to support IT capital works	Controller simulator training	0.9	0.9	0.9
	SCADA security – software environment	0.6	0.0	0.0
	IT network security	0.8	0.0	0.0
	Service standard reporting tools	0.5	0.0	0.0
Total step change opex (un-escalated)		**27.6**	**9.6**	**6.4**

Note: ^SP AusNet proposed this as contingent upon acceptance of its asset-works base opex.
*EMCa recommended these step changes could be performed within a total controllable opex forecast of about $236 million. It also concluded that 'corrosion risk mitigation' and 'communications infrastructure' could be performed within SP AusNet's proposed asset works level and did not require a step change.
Our assessment of this step change is in confidential appendix D (not published).
Source: AER analysis.

Step changes allow for additional funding when a new requirement or change in circumstance requires the TNSP AusNet to incur incremental costs in the future. To determine whether the application of a step change will lead to a forecast opex that reasonably reflects the opex criteria, we first identified the driver of the proposed step change. The driver could be a decision to operate differently (a management decision), or a new legislative requirement or regulatory obligation. This is reflected in our submission guidelines:[407]

> the operating expenditure forecast must include any necessary adjustments for changes in responsibilities that result from compliance with a new or amended law or licence, or other statutory or regulatory requirements, including a requirement that can be demonstrated to arise directly from a recognised policy, practice or policy generally applicable to similar firms participating in the National Electricity Market.

We then applied the following principles to determine whether a step change was required:[408]

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407 AER, *Final – Electricity transmission network service providers, Submission Guidelines*, September 2007, clause 4.3.4(c)(3).

408 The basis of these principles has been endorsed by the Australian Competition Tribunal. See *Re Application by EnergyAustralia* [2009] ACompT 8 (12 November 2009) [190] (Middleton J, R Davey and R Shogren); Energy Users Coalition of Victoria, *AER draft decision and SP AusNet revised application: A response*, October 2013, p. 27; Energy

- A rational business will only voluntarily change its practices if it results in benefits to the firm. As such, if a management decision step change is to reasonably reflect the opex criteria, cost savings arising from any efficiencies associated with the relevant step change should be reflected in the forecast opex.
- If cost savings are not expected from the management decision (i.e. benefits to the firm are not expected), then the step change should result in benefits to consumers that warrant the increased opex. There should also be evidence that consumers are willing to pay more for that benefit.
- Identifying and quantifying the expected benefit to the firm or consumers is relevant to evaluating whether the expenditure is "efficient" and "prudent".
- If neither cost savings nor other consumer benefits are expected, then a step change that reasonably reflects the opex criteria must be driven by an unavoidable change in operations due to a new externally imposed obligation. We would expect a prudent business to have met existing obligations from its revealed opex. Providing step changes for existing obligations is likely to overestimate opex requirements, and would not result in an opex forecast that reasonably reflects the opex criteria.[409]

The basis of these principles has been endorsed by the Australian Competition Tribunal[410] and was supported by consumer groups.[411] We use these principles to guide our assessment in the context of the incentive regime. Importantly, if an increment amount is proposed because a TNSP wishes to operate differently, or because the step change reflects the practices of other TNSPs, this is a starting point for our assessment process, but is not sufficient reason to accept the step change. Our focus is on whether incremental opex is required to derive an opex forecast that is consistent with the opex criteria.[412] We will not accept a step change if we are not satisfied that incremental opex is required to carry out the proposed activity.

EMCa also reviewed the proposed step changes and provided technical information and this information is particularly helpful in assessing whether the step change:

- is technically required
- results in an incremental opex increase
- accounts for cost savings and/or benefits to consumers that warrant the expenditure
- includes proposed costs that are reasonably estimated and reflect the opex criteria.

Our reasoning on the asset works step changes is presented below. The other elements of our decision on step changes are in Appendix A.

Aging asset step changes (asset works)

In this section we discuss our reasons for rejecting each of the proposed step changes:

Users Association of Australia, *Submission on SP AusNet draft decision and revised revenue proposal*, 6 November 2013, p. 4.

409 NER, clause 6A.6.6(c).

410 See *Re Application by EnergyAustralia* [2009] ACompT 8 (12 November 2009) [190] (Middleton J, R Davey and R Shogren).

411 EUCV, *AER draft decision and SP AusNet revised application: A response*, October 2013, p. 27; EUAA, *Submission on SP AusNet draft decision and revised revenue proposal*, 6 November 2013, p. 4.

412 NER, clause 6A.6.6(c).

- overhead lines (OHL) condition assessment, $3.9 million
- corrosion risk mitigation, $8.8 million
- communications infrastructure, $2.7 million.

Overall, we are satisfied that our base year opex need not be stepped up for these proposed step changes and that our substitute total opex forecast is consistent with the NER and NEL requirements.

In its revised proposal, SP AusNet stated:[413]

> The AER considered the following three step changes as part of SP AusNet's asset works forecast:
>
> - Overhead Line (OHL) condition assessment
> - Corrosion risk mitigation
> - Communications infrastructure
>
> This assessment appears limited as it did not extend to considering the individual merits of the proposed step changes but concluded without good reason that the step changes could be met through the AER's allowance for asset works. Again, this is contrary to the recommendations of the AER's technical consultant, EMCa, who considered that all three of these step changes should be approved.

Firstly, we clarify that we did not conclude, as SP AusNet has construed, that '***all*** *the works could be met through the* ***asset works*** *allowance'*. In our draft decision we concluded the works could be reasonably prioritised through the total controllable opex allowance, which includes both maintenance and asset works.[414]

Overhead lines condition assessments

SP AusNet proposed $3.9 million for overhead line condition assessments.[415] It characterised this program as:[416]

> SP AusNet's 2007 TRR proposal forecast asset works expenditure for condition monitoring activities. The extract below describes the basis of that proposed expenditure. *"SP AusNet is embarking on a major program to develop a knowledge-based asset management system that utilises both on-line and off-line condition monitoring data. This expenditure is required to investigate, adopt and implement new condition monitoring technologies."*
>
> During the current regulatory control period SP AusNet has trialled and tested new condition monitoring techniques in line with the 2007 TRR proposal. These trials have been carried out as part of asset works due to the non-recurrent nature of the expenditure. SP AusNet's step change proposal involves embedding the use of successfully trialled condition monitoring techniques such as SAIP and CORMON into routine maintenance activities.

and

> Asset works condition monitoring also involved trialling advanced condition assessment techniques not currently embedded in routine maintenance. Emerging or new condition assessment techniques are usually piloted as asset works projects in order to validate the technique….

We do not accept this as a step change because we find that the base opex is efficient and prudent for SP AusNet to continue its overhead line program, which was funded through its asset works

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413 SP AusNet, *Revised revenue proposal*, p. 70.
414 AER, *Draft decision: SP AusNet transmission determination*, pp.39, 106, 242 and 245.
415 SP AusNet, *Revised revenue proposal*, p. 83.
416 SP AusNet, *Response to Information request EMCa/003*, 5 April 2013.

allowance and its routine maintenance allowance during 2008–14. SP AusNet confirmed that there are 6 components of the program, and the majority of the programs are 'underway'.[417] That the program is currently underway suggests that the base-step-trend forecast should accommodate these activities without a need for a step change.

We also compared the base year opex on this program with the expenditure in the years before and after. The base year expenditure on overhead line condition assessments was $3.48 million (2011–12).[418] Therefore the relevant opex in our base-step-trend forecast is $10.7 million and the average is $3.6 million per annum.[419] The total condition monitoring for lines in opex identified by SP AusNet was $3.8 million per annum during 2008–14.[420]

However, in the early years of the program, it is likely that costs were higher, to account for the 'error' component of the 'trial and error' method, which suggests that the average annual expenditure for the period might be higher than likely future costs. This is consistent with the observation that overall costs have declined since the early part of the period, but that the base opex is in-line with actual expenditure since 2010–11. Therefore we expect the period average for 2008–13 in asset works would be somewhat higher because the cost of running trials includes the costs of trial and error. This is consistent with SP AusNet's submission that it is only more recently that the technology has become cost effective for it to roll the program out into maintenance and that the asset works expenditure was a trial-then-do approach.

Thus, our forecast average of $3.6 million per annum compares favourably with the average of the last four years of the period ($3.6 million). Again, the fact that the majority of the OHL line condition assessment program(s) is currently underway, suggests that the latter expenditure in the 2008–14 regulatory control period is more likely to reflect ongoing future costs than the earlier expenditure in the period. This is shown in Figure 3. which shows that actual expenditure on transmission line condition monitoring from 2010–11 through to 2013–14 is quite stable and in line with the base amount.

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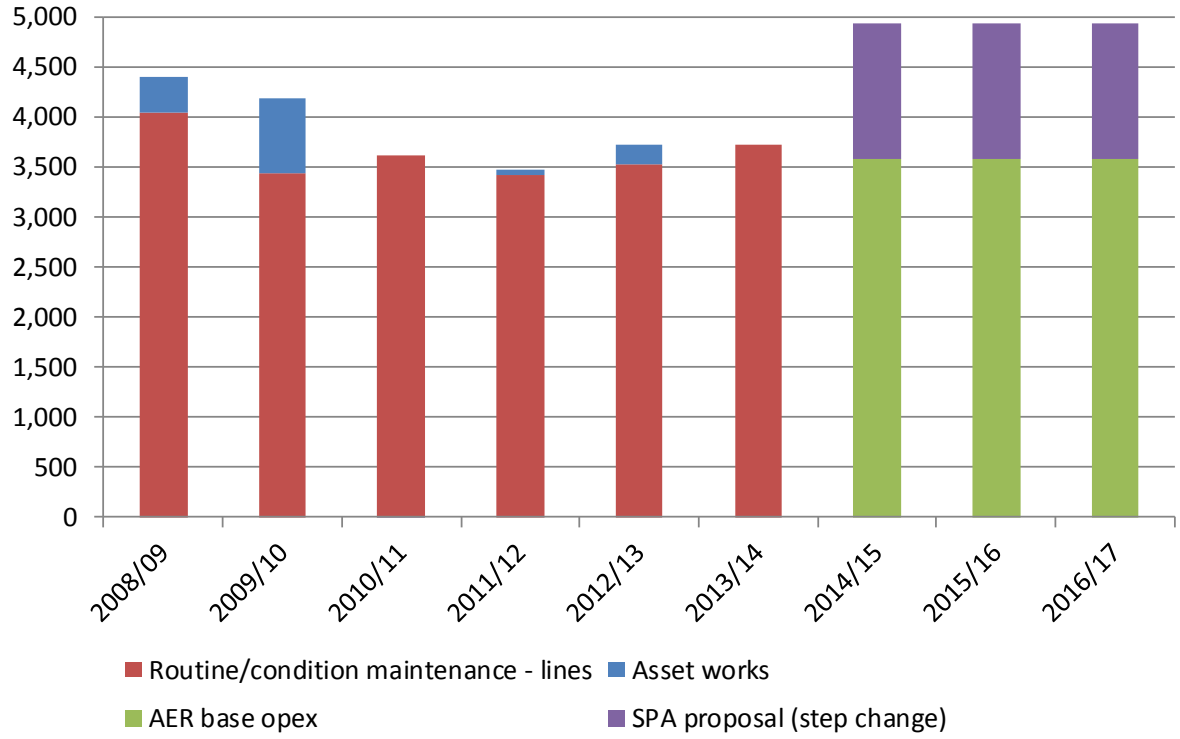
417 SP AusNet presentation, Step changes, 8 November 2013, slide 4; EMCa p.237

418 SP AusNet, *Response to Information request AER/011*, 27 May 2013.

419 We also increase base opex for network growth: asset works increased by 2.76 per cent. [network growth was 2.92 per cent multiplied by a scale factor of 95 per cent]. However, the network growth by asset class revealed that only $4 million of the $144 million RAB "growth" was from new transmission lines assets. We do not estimate the network growth by asset class, but we do note that the network growth may well be an overestimation at this disaggregated level because most of this asset growth was from new switch gear, transforms and secondary equipment.

420 SP AusNet, *Response to info request AER/011*, 27 May 2013.

Figure 3. Actual and forecast OHL condition monitoring ($ thousand, 2013–14).



Source: AER analysis based on SP AusNet, *Response to information request AER/011*, 27 May 2013.

Figure 3. sets out the 'overhead line condition assessment program' which covers both the routine maintenance and asset works cost categories. Condition monitoring, as a program, has been a continuous activity in asset works since 2001.[421] In 2007 SP AusNet set out its comprehensive risk management strategy and approach to optimise (minimise) total asset life cycle costs through a comprehensive condition assessment program[422] (see also section 3.4.5). The priority and focus of these assessments has changed over time as new priorities have emerged and the network profile has changed. Thus, we find that it is a continuation of existing programs/activities, albeit with a different approach and technologies, for which costs have been revealed in the base opex (asset works and routine maintenance).

We also note that the overhead line condition monitoring component is but one element of business-as-usual program (condition monitoring). SP AusNet describes the asset work component of the program as subset of condition monitoring on lines. But it also commented that isolating and focusing on one element is 'not practical or meaningful':[423]

> ...all scheduled maintenance activities contain condition monitoring elements and it is not practical or meaningful to separate out expenditure associated with these condition monitoring elements

We consider that this comment reinforces our approach to view the program 'holistically' across all cost categories.

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421 SP AusNet, *SPI PowerNet's Revenue Cap Application – For the period 1 January 2003 to 31 March 2008 (2002)*, p.28.
422 SP AusNet, *Revenue proposal for 2008–14*, February 2007, pp.25-26.
423 SP AusNet, *Response to information request AER11*, 27 May 2013.

EMCa recommended that the works can be performed within a total of $236 million, but EMCa's method was different and it combines the 'bottom-up' view of asset works with a base-step-trend view on maintenance. In this sense, it accepts that the asset works condition monitoring costs be 'transferred' to maintenance.[424] Our assessment focus of this step change, on the other-hand, consistently compares the program expenditure across all cost categories as base year expenditure. In this frame a step change is not required for a 'reclassification' (from asset works to maintenance), because the total across the two should not be any different.

EMCa found that there has been sufficient experience through the trial period of new techniques to determine an efficient net cost for the program of work, but it did not accept the full amount proposed.[425] It accepted $3.2 million of this as a step change, reflecting information that the relevant practices are being embedded in maintenance procedures, and this being a currently emerging standard practice. It considered that the component relating to use of the CORMON technique was not sufficiently mature to be considered part of maintenance routines.[426] The amount is net of benefits that SP AusNet identified ($254,000).

None-the-less, we agree with EMCa that the works can be performed within a similar total allowance, although we came to this position using a different method. We found that total base opex, given the incentive framework, reasonably reflects the ongoing program costs and we reiterate that we do not make allowances for specific components but the total, as a whole.

According to SP AusNet's own network risk profile, it foresees an increase in overhead line risks (see risk discussion is section 3.5.5 and 3.5.5), and it has stated that the overhead line condition assessment program is integral to its management of network risk.[427]

We asked EMCa to assess SP AusNet's statements about risk. EMCa agreed that there is evidence of increasing network risk relating to transmission lines. However, we observe from the network risk profile chart (Figure 3.) that SP AusNet expects network risk to decline in other areas such that overall, ***total*** network risk has declined and is expected to decline further over the forecast period. From 2011 to 2014, network risk declined by around 10 per cent.[428] Opex in the same period was sufficient for SP AusNet to realise this decrease, thus base opex plus 2.92 per cent growth, should reasonably be sufficient for SP AusNet to maintain the network, and to continue to conduct its condition monitoring program. On balance, we consider this will be sufficient because network risk is declining in other asset types. Network risk is an important consideration and we discuss this in section 3.5.5.

We encountered a further problem that SP AusNet had allocated its condition monitoring costs for overhead lines, across several different categories of opex, as well as capex, during 2008–14.[429] We discuss the regulatory issues associated with this problem in section 3.4.5. SP AusNet submitted transmission lines condition monitoring costs in maintenance opex ($21.7 million), asset works opex ($1.35 million) and capex (development of SAIP ($0.95 million) and purchase of UAV ($0.46 million)).[430] Furthermore, SP AusNet submitted actual expenditure in asset works line condition assessments was ***minus*** $3.26 million in 2010–11. This is a timing/accounting issue but it does highlight why the total opex is a more transparent measure of actual expenditure, compared with

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424 This is akin to a 'hybrid' method.
425 EMCa, *Technical review*, January 2014, para. 239.
426 EMCa, *Technical review*, January 2014, para. 327.
427 SP AusNet, *Response to information request EMCa/050*, 26 November 2013.
428 This has been observed in the network risk aforementioned chart.
429 SP AusNet, *Response to information request AER 11*, 27 May 2013.
430 SP AusNet, *Response to information request AER 11*, 27 May 2013.

category level analysis. These examples illustrate why our preferred focus is on total controllable opex: at a granular level the information has asymmetry and programs can straddle multiple categories.

Consequently, we do not find SP AusNet's estimates of benefits and costs at this disaggregated level reliable enough to demonstrate the case for a step change. It commented that 'the majority of the proposed program elements have not yet progressed to the business case stage'.[431] Business cases have been prepared for some of the expenditure in the current regulatory period: a business case for the SAIP survey which was carried out as asset works was included.[432] The very high level benefits were identified.[433] In response to our questions, it disclosed that there were some off-setting benefits for which it had not originally accounted for.[434] It clarified that there are offsetting savings of $254,000 over the three years of 2013–17.[435] This illustrates why our assessment focus is on the efficiency and prudency of the total controllable opex allowance.

Communications infrastructure step change

SP AusNet agreed with our draft decision that its proposed communications infrastructure step change was in fact double counted in the base opex ($2.7 million), providing that base opex is the average of the 2008–14, but not if base opex is based on a single base year.

SP AusNet submitted:[436]

> *If the AER accepts SP AusNet's proposed base year expenditure determining using the annual average expenditure methodology, the step change for communications infrastructure will not be required. This step change reallocated expenditure from asset works into base opex and, as SP AusNet now proposes a base-step-trend asset works forecast, this step change is no longer required.*

We disagree and do not accept a step change contingent upon our acceptance of SP AusNet's asset works base adjustment because we found the base opex to be economically efficient (section 3.5.2), without recourse to the proposed adjustment.

We do not accept this step change because:

- The communications infrastructure program was underway in the base year in asset works as "miscellaneous asset works". In 2008–14 SP AusNet spent $2.6 million on this program.[437]
- EMCa identified the drivers for this expenditure as 'on-going compliance requirements that have existed for many years'.[438]
- transferring projects from 'asset works' to 'maintenance' is not an expenditure step change. It is a reclassification of expenditure that has no net impact within the context of total controllable opex.[439]

The program expenditure is therefore in the total base opex (across multiple opex categories), so a step change to total controllable opex is not required. EMCa did not accept this step change.

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431 SP AusNet, *Response to information request EMCa 050, 26 November 2013.*
432 SP AusNet, *Response to information request AER 11*, 27 May 2013.
433 SP AusNet, *Response SP EMCa 050*, 26 November 2013.
434 SP AusNet, *Response to EMCa 003* and SP AusNet, *Response to information request AER 11,* 27 May 2013.
435 EMCa, *Technical review*, January 2014, para 237.
436 SP AusNet, *Revised revenue proposal*, p. 71.
437 SP AusNet, *Response to EMCa 035*, 27 May 2013.
438 EMCa, *Technical review*, January 2014, para. 299.
439 This is slightly different from the FSL transfer, in which we concluded that the escalation for insurance forecast is at a different rate.

Corrosion risk mitigation (tower painting)

We do not accept the proposed corrosion risk mitigation costs of $8.8 million as a step change because the allowance is efficient for SP AusNet to continue its program of corrosion risk mitigation and the proposed costs do not constitute a 'step change'.

SP AusNet has already revealed its efficient level of costs because these programs have been ongoing for the last two regulatory periods. In 2001 SP AusNet identified corrosion risk mitigation on its towers as a problem.[440] In 2007 SP AusNet proposed $20.7 million ($2013–14) for tower painting to 'minimize corrosion' and condition assessments as part of its asset works program and 'remedial tower works for corrosion' $1.5 million ($2013–14).[441] It set out its risk management strategy and approach to optimise (minimise) total asset life cycle costs through a condition assessment program. It demonstrated that its allowance was optimal timing, prudent and efficient.[442] Consumers funded these works through the opex allowance in that SP AusNet decided to defer the works and obtain the EBSS rewards for doing so. To apply a step change for an existing program would require an additional EBSS adjustment so that consumers receive a fair share of the underspend.

The proposed costs for 2014–17 are to continue this program of corrosion risk mitigation, for which SP AusNet has received an allowance in the last two regulatory resets and the revealed base year expenditure levels were driven by asset management initiatives. The revealed costs approach, within an efficiency incentive framework, accommodates ongoing practices without need to recourse to step change.

EMCa found that SP AusNet proposed an ongoing expenditure level for tower painting for 2008–14 ($7.1 million), but then largely failed to undertake the program, painting only 2 of the 20 steel towers proposed for that period, plus some steel poles, with total expenditure of $1.4 million.[443] However, consumers have already paid for the works through the 2008–14 allowance.

The painting of the proposed 17 towers in 2014–17 will be the first whole-of-tower painting program at scale, and EMCa advised that those three years are best considered a proof of concept for delivery of ongoing programs beyond 2014–17. EMCa considered that this work should not be included as a step change until the ongoing annual level is established and stable and with evidence of the work program actually being carried out as proposed.

Given that our total opex allowance is consistent with EMCa's total controllable opex allowance, we are satisfied that we have provided SP AusNet a reasonable opportunity to recover at least efficient costs.

EMCa was not convinced that the level of effort will continue on an ongoing basis nor that the unit costs were well established (the true costs of complete tower painting at this scale will emerge from the program). Further, it was unconvinced that SP AusNet has an established program including a committed delivery mechanism for this longer term. As with its initial advice, EMCa recommended that this expenditure remain under Asset Works, as it has been to date rather than a step change to the base opex. That is, EMCa considered this should be included in the asset works total without a step change adjustment:[444]

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440 SP AusNet, *Revenue proposal for 2003-08*, 2001, p.19.
441 $1.4 million 2007–08 dollars converted into 2013–14 dollars.
442 SP AusNet, *Revenue proposal for 2008–14*, February 2007, pp.25-26.
443 EMCa, *Technical review*, January 2014, para 167.
444 EMCa, *Technical review*, January 2014, para 227.

> In our technical review report on the initial RP, we drew attention to SP AusNet having spent $45.8m, or 46%, less than it had proposed to spend in the current regulatory control period (in $2013/14 terms)69. We also reported evidence of outcome metrics provided by SP AusNet that showed that significant volumes of work that underpinned the previous allowance, were simply not undertaken. This was part of a strategic deferral that SP AusNet has ascribed to "financing constraints as a result of the GFC which led to a sacrifice of asset works opex to enable continued delivery of the capex program" 70 The implications of this deferral are evidenced in its 2010 Transmission Asset Management Plan that has recently been provided to us: "The expenditure profile for asset works was reduced in 2010/11 significantly from previous years and to allow this level to be sustained during 2011/12 and 2012/13, it is planned to defer works into future years. The major works to be deferred are tower corrosion mitigation works, station gantry structure repairs, transformer contingency CBD works, painting of towers, asbestos removal, removal of redundant plant to increase ratings and miscellaneous station repairs."
>
> This is broadly as we had deduced. In our Technical Review report, we identified $13.9m of 'under-spend' relative to the allowance in the current regulatory control period, for works that appeared to have been 're-proposed" for inclusion in the revenue allowance for the next regulatory control period. In its on-site presentation72, SP AusNet has acknowledged that the major components that we had identified, and which we calculate as comprising $11.2m of the $13.9m above, have been "possibly partially re-proposed". SP AusNet has disagreed that GIS is 're-proposed" as "different equipment is covered" and it considers that there is "no evidence of overlap' in regards to transformer and CT failure risk expenditure. It is difficult to accept these contentions, given that SP AusNet was unable to provide us with metrics for these programs of work, specifying measurable targets and outcomes, nor do such metrics appear either in its 2007 proposal or in its proposal for the next regulatory control period. 73 228. Given further information, we would now also tend to categorise tower painting as 'reproposed' work. The 2010 Asset Management Plan (as quoted above) specifically refers to deferring this work and the metrics that emerged in the course of our technical review of the initial RP showed that, whereas 19 repainted 'structures' were reported against a target of 20, only 2 of these were steel towers and the remainder were simpler steel poles74. As a result of this deferral of the major work, SP AusNet spent $5.4m less than it had proposed for the current regulatory control period, and the 17 towers proposed for the next regulatory control period essentially align with the number of unpainted towers that were deferred. In its revised revenue proposal, SP AusNet has proposed $8.8m for the repainting of these towers.

We agree with EMCa that this program should not be recognised as a step change. The base expenditure is sufficient to carry out appropriate work over the period.

We also note that it advised that it is prudent to undertake the operating expenditure sooner so as to defer future capital replacement costs. In this regard, whilst noting that we do not determine the levels of operational risk that SP AusNet decides to take on at any given time, we are however cognisant of the need for an opex allowance that is sufficient to meet prudent expenditure requirements. Hence, we also considered EMCa's analysis on network risk level and asset health (section 3.5.5).

We observe that the overall risk profile appears to be changing relatively gradually from year to year (section 3.5.5, Figure 3.). SP AusNet does not appear to be forecasting any substantial sudden increases in risk. In fact, it made a conscious decision, with full knowledge that it was shifting risks to the next regulatory period, to defer expenditure in the current period although it was funded to address these gradual changes in risks.

The following extract is from SP AusNet's asset management plan for 2011–12. This extract clearly shows SPA deliberately traded-off tower condition, for which it had previously proposed in 2007 that the prudent optimal timing for these works was in 2008–14:[445]

> Asset works are singular large or specialised activities focussed on specific issues. They include emergency works following major failures, corrosion mitigation, repair of equipment fleets, condition assessments, civil infrastructure maintenance, power cable repairs and high voltage bushing replacements. Major self-funded insurance events are also funded from the Asset works allowance, The expenditure profile for asset works was reduced in 2010–11 significantly from previous years and to allow this level to

[445] SP AusNet, *Asset Management Plan 2011–12*, pp.10–11.

> be sustained during 2011–12 and 2012–13, it is planned to defer works into future years. The major works to be deferred are tower corrosion mitigation works, station gantry structure repairs, increase ratings and miscellaneous station repairs. The immediate increase in technical risk in 2011 from these deferrals is minimal, however without higher provisions for asset works in future years increases in risk in these areas will be material. In particular, tower corrosion will be more progressed, more extensive repairs and mitigation works are likely to be required in the future years….
>
> Provision to carry out emergency works following major failures (eg tower collapse transformer failures) and other unplanned works such as implementing CBD transformer contingency plans is minimal. Other parts of the current planned asset works program, mainly station works as outlined above, will be deferred on a priority basis to accommodate these emergency works should the unplanned works occur. This increases the risk of longer restoration times, increases unplanned costs, ultimately decreasing network performance.

In contrast, SP AusNet made the following statement in its revised proposal:[446]

> …the AER's substitute forecast was without regard to consequential risks to the reliability, safety and security of supply of transmission services. In particular, that the asset works allowance below a level which will allow it to satisfy the opex objectives and which therefore encourages asset works projects to be inefficiently deferred beyond 2014–17. It says that in the worst cases this may result in the deterioration of asset condition to the extent that asset works projects are no longer an effective treatment to improve the assets' condition, and the assets instead need to be replaced. Such an outcome constitutes a sub-optimal opex-capex trade-off, increases expenditure over the lifetime of the assets' and would therefore be inconsistent with the NEO.

Having considered the above information, we agree with EMCa that there is insufficient evidence that risks would increase unacceptably in the next three years if SP AusNet continues its current actual total expenditure profile. In this regard we also note that our final decision on total controllable opex is an increase of 1.6 per cent over SP AusNet's actual expenditure during 2008–13.

Even so, the EUAA submitted that our draft decision forecast still leaves significant room for SP AusNet to achieve further efficiency savings in the coming regulatory period, given opportunities for on-going productivity improvement as a result of younger network and on-going technology.

The following table is reproduced from EMCa's Technical Review. It shows the metrics for the asset works step changes that were proposed in 2007, not spent and reproposed in 2013.[447]

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446 SP AusNet, *Revised revenue proposal*, p 67.
447 EMCa, *Technical review*, 16 August 2013, p. 92.

Table 3. Current and next regulatory period asset works program opex and associated metrics–reproduced from EMCa.

Table 21: Current and next RCP asset works program opex and associated metrics[55]

	Current RCP (6 years): EXPENDITURE ($m)				Current RCP (6 years): METRICS			Next RCP (3 years)	
					Metric			Proposed	
	RP 2007	RRP 2007	Actual/ Est	Var (%)	Forecast	Actual	Var (%)	Cost ($)	Metrics
Tower Corrosion – Foundations	6.1	5.9	0.7	-87%	32	4	-88%	-	-
Tower Corrosion – Ground Level	11 9	11.6	4.2	-64%	2,700	1,330	-51%	5.2	1,129
Tower Corrosion – Tower Painting	7 0	6.8	1.4	-80%	20	19	-5%	-	17
Transmission Line Hardware	2.6	2.5	0.4	-85%	2,000	1,220	-39%	0.4	563
Replacement of Tower Steelwork	1.7	1.7	0.1	-96%	1,250	316	-75%	1.4	1,604
Paint Bolte Towers	0.7	0.7	0.0	-99%	3	-	-100%	-	-
SF6 CB Refurbishments	14.7	14.7	7.6	-48%	58	59	2%	2.2	60
Power Cable Repairs	10 9	10.0	7.0	-30%	36	36	0%	-	-
Oil CBs *	-	-	0.8	0%	-	28	0%	1.6	78
Line Clearance Management *	-	-	1.0	0%	-	15,070	0%	1.0	20
Metrics explained subtotal	55.6	53.9	23.3	-57%				11.8	
Others - No Metric subtotal		36.3	26.2	-28%				12.8	
Total		**90.2**	**49.4**	-45%				**24.6**	

Source: EMCa analysis based on SP AusNet Opex Model and Response SP EMCa 021A

Consumer submissions

Consumer submissions also raised concerns about the unfairness of paying for works in the 2008–14 regulatory control period that SP AusNet chose to defer to the next period, and, in effect, paying for works twice.

EUAA said:[448]

> During the regulatory period ending 31 December 2013, SP AusNet has been managed by a subsidiary of its largest security holder Singapore Power. Under this management contract Singapore Power retains 40 per cent of any network incentive payments received by SPN, with deficits capped at $2 million but carried forward. This provides very strong managerial incentives to reduce opex below the AER allowances in order to maximise fees under the EBSS which count as part of the network incentive payments in the management control.
>
> Evidently SP AusNet has been very successful in reducing opex over the last regulatory period, delivering EBSS payments of $34 million in the coming regulatory control period on total savings during the current regulatory control period of $22 million. This is a very substantial reward for SP AusNet's opex reduction efforts and energy users expect that in setting future opex allowances, that the AER has regard to this actual outcome.
>
> For this reason we share the AER's rejection of much of SP AusNet's selective use of revealed costs for part of its opex allowance, but zero base budgeting for other parts of their proposed allowance.
>
> The AER's Draft Decision sets an opex allowances that is, after adjusting for the capitalisation of equity raising costs, approximately the same as SP AusNet's actual average opex in the current regulatory control period. Considering on-going productivity improvement as a result of a younger network and on-going technology change, our assessment is that this still leaves significant room for SP AusNet to achieve further efficiency savings in the coming regulatory period.
>
> The AER included SP AusNet's proposed step change increases in Overhead Line Inspections, Corrosion prevention work and communications infrastructure as part of its allowance for asset works, which is determined based on the revealed level of expenditure in 2011/12. As such it rejected SP AusNet's claim for separate remuneration of this expenditure as "step changes".

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448 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, pp. 3 and 7.

Like the AER, we are not convinced by SP AusNet's claim to strip this expenditure from the rest of the asset works expenditure and claim it separately as a step change. Expenditure on overhead line inspections, corrosion prevention work and communications infrastructure has historically always been included within the "asset works" bucket. As such, using information on the revealed cost to set future asset works allowance, as the AER has, will compensate this expenditure.

SP AusNet says that its over-head line inspection is a step change since it is the roll-out methods that have been developed recently but not yet widely deployed. Likewise SP AusNet's full tower painting program on the 220 kV Rowville circuits are significantly different to its historic tower paining program. But this of itself is not sufficient to justify separate additional provisions. The asset works budget is sufficiently large for SP AusNet to prioritise expenditure as it sees fit, and we suggest that it is reasonable for the AER to weigh heavily the historic outcomes compared to historic projections, in assessing SP AusNet's current claims.

EUCV said:[449]

Overall, the single largest impact proposed by SPA is in regard to recurrent asset works - specifically overhead line condition monitoring, corrosion risk mitigation and communications infrastructure. Like the AER and its consultant EMCa, the EUCV also has great difficulty in seeing these as step changes.

In its revised application SPA devotes considerable effort to explain why it considers that there needs to be an upwards adjustment for its asset works. SPA makes no reference to the massive increase in routine maintenance (which increased by some 30% (ie by $7.5m pa) but then stating separately the cost of the asset works is not included in the recurrent maintenance cost allocation. This implies that SPA has not carried out any asset works within its allowances yet it considerably under-ran its regulatory allowance which did include for an appropriate level of asset protection. SPA can't have it both ways! Either the work is included in the actual revealed opex or SPA is attempting to "game the regulator" by claiming a benefit by not doing work allowed for and is then seeking it again as a future cost. Throughout the revised application SPA concentrates just on the aspects where the AER has reduced the amounts claimed by SPA. Effectively SPA has used the revealed cost approach for the bulk of its opex and then used a bottom-up approach for other elements to "prove" the legitimacy of costs which have risen considerably; this applies particularly its asset works.

The AER approach looks at the SPA opex on a holistic basis, driven by an EBSS which provides support that the opex in the base year is efficient. SPA has the ability to shift costs from one cost element to another and would appear to have done so in the case of asset works.

SPA points out that the AER approach is at odds with the EMCa assessment of the asset works proposed. What EMCa did was to assess the cost of the asset works on the same basis as did SPA (ie from a bottom-up basis) assuming that the costs had not be included elsewhere. The AER assessment considers that SPA has carried out all of the necessary "asset works" tasks within its total actual opex.

If this was not the case, then SPA had elected to regard this work as unnecessary and able to claim the saving as a benefit.

Specifically, the AER approach recognises that consumers have already paid for works within the allowance and which SPA has elected not to do by deferring the works, recognising they are not needed or carrying them out for less. The EBSS allows SPA to retain the cost reductions within AA3 [2008–14] and to be paid a bonus in AA4 [2004–17] for achieving a lower cost. The AER points this out succinctly when commenting that the SPA approach effectively double counts the costs. For example, for the last three years of AA3 [2008–14], SPA received a benefit for not carrying out works that it now considers are necessary. It would be inappropriate for the AER to give SPA funds for doing work in AA4 [2004–17] that SPA was already paid to do in AA3 [2008–14] but did not do and, by not doing so, was entitled to a bonus. For SPA to claim a step change to include in AA4 [2004–17] for work they were paid to do in AA3 [2008–14] is bizarre in the extreme.

The EUCV considers that the AER has carried out a comprehensive assessment of the opex needed by SPA, properly utilising SPA's own incentivised performance to set the efficient level of opex for AA4 [2004–17]. In contrast, SPA has accepted that its historic performance sets the efficient opex level for some of the costs, and considers that it is entitled to assess other costs on a bottom-up basis without accepting that:

- Much of the costs for "new" tasks claimed were already included in the base year efficient level, and

[449] EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp. 22, 25-6.

- Some of the costs that SPA might have been able to justify as "new" tasks were actually legitimately being added to the base year costs were included in the allowance but as SPA elected not to perform the tasks, it claims the absence of the work as a step increase

- there was considerable capex during AA3 [2008–14] yet, despite this, there has been an increase in opex where there is an expectation that replacement capex (the bulk of the capex program during AA3 [2008–14]) should have led to a considerable reduction in opex.

Capex-opex trade-off

In its initial proposal SP AusNet proposed an adjustment to its opex forecast of $0.85 million because it had identified an opex saving as a result of its proposed IT capex in the same period:[450]

> A significant project within the Asset and Works Management and Back Office Management program areas which commenced in the current period and will be completed in the forecast period is the [IT capex] project. This project will deliver a new consolidated and integrated enterprise asset and works management platform…, as well as implement an integrated enterprise resource planning platform… which ensures back office systems meet and can competently service an increased volume of business transactions. The project is expected to drive efficiencies across asset and works management processes and back office functions and is forecast to deliver $850,000 of operating efficiencies in the forecast regulatory period. These savings have been factored into the opex forecast presented….

This is a capex-opex trade-off adjustment, where an increase in capital expenditure in the same period will result in a decrease in opex in the same period (2013–17). In our draft decision we did not accept the opex decrease because we did not accept the capex IT program.[451]

Upon EMCa's review, we found that the strategic component of the capex proposal—driving the opex savings—was not acceptable and therefore, our draft decision rejected SP AusNet's IT capex proposal. We did not accept the proposed IT capex ($47.9 million) because we did not accept that strategic costs included in the proposal met the capex criteria. Consistent with our capex draft decision we did not accept SP AusNet's proposed efficiency adjustment of $0.85 million. EMCa also did not accept the $0.85 million reduction.[452]

Although, SP AusNet re-proposed the IT capex in its revised revenue proposal, it did not repropose the opex savings nor provide reasons for non-inclusion. EMCa again reviewed the IT capex proposal and considered that it now included a positive business case.

Our final decision accepts SP AusNet's IT capex proposal (see section 2.4.8).

SP AusNet submitted that it did not require transmission customers to fund the strategic component of the IT capex because only the replacement was included in the revised revenue proposal. Therefore, it stated that any opex benefits that arise will be shared via the EBSS.[453]

EMCa's approach to forecasting opex is a bottom-up calculation method and it developed its own method of calculating opex cost reductions in the 2013–17 forecast. It based its calculation on expected opex benefits as per SP AusNet's IT capex project business case. EMCa found that SP AusNet's efficient total opex should account for an opex cost reduction of $3.6 million arising from its IT capex investments in the next regulatory control period (2013–17).

EMCa stated:[454]

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450 SP AusNet, *Revenue proposal*, p.104 and p.125.
451 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p.108.
452 EMCa, *Technical Review*, 16 August 2013, para 341 and 267.
453 EMCa, *Technical Review*, January 2014, para 99; SP AusNet, CDBS0182 Business Case [confidential].

> We consider that AER's adjusted opex should take account of such expected opex cost reductions, whether explicitly or in comparing its total opex allowance (however derived) to the aggregate opex allowance that would be consistent with our technical review findings.

Our approach is to make the comparison at the total opex allowance. We have noted EMCa's reduction of $3.6 million in deriving its total, nevertheless, we note that initially SP AusNet proposed an opex saving of $0.85 million due to its own analysis of the capex/opex trade off. SP AusNet proposed this cost saving as a capex/opex trade off as set out in its revenue proposal.[455]

In our approach (for this final decision) efficiency gains will be captured via the EBSS. However, this does not preclude NSPs or us from calculating explicit capex/opex trade off savings as these are consequent to customers funding capex. Such identified cost reductions must be passed on to consumers. The EBSS is targeted at rewarding efficient management and should not be construed as preventing proper recognition of opex reductions due to customers funding capex.

We have therefore reinstated the $0.85 million opex saving due to the capex/opex trade off initially proposed by SP AusNet. Any efficiencies driven by management and captured by SP AusNet going forward should be reflected in the EBSS carryover.

3.5.4 Trend

Real cost escalation

SP AusNet adopted the material escalation and clarified that labour was not included in the material escalators. It did not accept the draft decision on labour cost escalation. It noted carbon price impacts remain as inputs until the timing of the repeal is announced by the Government.[456]

We applied individual real cost escalators for each year of the 2014–17 regulatory control period. Our application differs from SP AusNet's proposal because we applied an average of the BIS Shrapnel and Deloitte Access Economics (DAE) forecast real cost escalators in each year. We consider our approach more reliably reflects the year on year movements in real cost escalation over the forecast. Our approach is consistent with SP AusNet's approach for its proposed capex forecast. This adjustment reduced SP AusNet's total opex requirements by $1.6 million (Table 3.).

Table 3. Impact of AER's real cost escalation on opex ($ million, 2013–14)

	2014–15	2015–16	2016–17	Total
Reduction from applying AER escalators	0.2	0.6	0.8	1.6

Source: AER analysis.

Network growth and scale factors

SP AusNet adopted our method of estimating network growth and the scale factors set out in draft decision, but proposed an additional 100 per cent scale factor for taxes and leases.[457] We accept this. We applied network growth factors to SP AusNet's asset works and asset works support cost categories as these cost categories are also part of our base-step-trend forecasts. We have applied a scale factor of 95 per cent and 25 per cent respectively to these cost categories.

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454 EMCa, *Technical review*, January 2014, para. 199.
455 SP AusNet, *Revenue proposal*, p.126.
456 SP AusNet, *Revised revenue proposal*, p. 86.
457 SP AusNet, *Revised revenue proposal*, p. 60.

We updated the network growth factors to reflect our final decision on the SP AusNet's opening RAB value as at 1 April 2014 (an input). Consistent with our draft decision, we have used the opening RAB values as at 1 April 2014 excluding the capitalised equity raising costs for estimating asset growth factors.[458] Therefore the network growth factor is revised from 2.81 per cent to 2.92 per cent. SP AusNet proposed a network growth forecast of $4.43 million.[459] The network growth component of our final decision is $4.479 million because we updated the inputs and applied network growth to asset works ($0.384 million).

Insurance growth factors

We approve SP AusNet's revised proposed total insurance forecast of $14.9 million, as amended on 14 November 2013.[460] However, in its opex model SP AusNet also applied a growth factor to this forecast. We do not approve the application of the growth factor as SP AusNet's forecast of $14.9 million already accounts for network growth. We have amended the forecast opex model to remove the growth factor applied to insurance.

SP AusNet's main comment on our draft decision was that our revealed cost approach for insurance did not allow it to recover at least its efficient costs.[461] They considered future premiums are best forecast using information on the specific circumstances of the individual business including forecast insurance rates based on expert views. Further, they said our zero per cent premium growth factor was inconsistent with AM Actuaries' advice who recommended minimum real increases of 1per cent per annum for liability and property insurance.

In response, SP AusNet engaged Aon Risk Solutions to provide an independent forecast of their insurance premiums for its revised revenue proposal.[462] Based on Aon's forecast, SP AusNet reduced its revised total insurance forecast from $19 million to $14 million[463], later amended to $14.9 million.

Insurance premiums depend on two elements:

- exposure to risk
- premium rates per unit of exposure.

Aon first determined the base premium costs for all risk classes and then estimated future changes to exposure and premium rates. They applied lower growth rates to forecast liability and property insurance than SP AusNet did in its original proposal. Based on advice from AM Actuaries, we found Aon's assumptions regarding exposure and premium rates for each category of insurance were reasonable.[464] Therefore we approve the revised total insurance forecast for 2014–17.

Top-down and bottom-up reconciliation

Both the top-down and bottom-up assessments of controllable opex are aimed at arriving at a total opex forecast that reasonably reflects the opex criteria. They employ different methodologies and may

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458 SP AusNet, *Email response to AER information request AER RRP 22*.
459 SP AusNet, *Revised revenue proposal, opex model,* 29 November 2013.
460 On the 14 November, SP AusNet amended its revised forecast from $14.0 million to $14.9 million because they had allocated too great a share of the premium to their non-regulated business.
461 SP AusNet, *Revised revenue proposal*, p. 74.
462 Aon, *Revised revenue proposal Appendix Q, Insurance premium forecast 2014–15 to 2016–17*, p. 17 [confidential].
463 SP AusNet, *Revised revenue proposal*, p. 73.
464 AM Actuaries, *Review of SP AusNet (transmission) revised insurance premium forecast 2014–17* [confidential].

arrive at different amounts for individual categories of expenditure in arriving at that total but they have the same goal of reaching a total forecast that reasonably reflects the opex criteria.

Our top-down approach begins from the point that SP AusNet would have managed its network efficiently and prudently in the base year in a manner reflecting the opex criteria. If, for example, SP AusNet elected to regard particular work as unnecessary in the base year, it would do so by exercising its management discretion driven by prudent and/or efficient decision making. Savings in that one category of opex might be balanced by extra costs in other categories of expenditure in reflecting efficient and prudent spending for that year. Although one or more categories of controllable opex might vary from year to year, overall controllable spending remains relatively stable. To the extent that new or additional spending might be required in order to achieve the opex objectives, that spending can be assessed as a necessary step change in overall opex.

SP AusNet says:[465]

> *In contrast to the AER's regulatory practice, the excerpt set out above presents a different picture of the AER's approach. It implies that it is acceptable to determine an asset works allowance that is insufficient to achieve the opex objectives, as the AER is only responsible for determining a total opex forecast allowance. The AER's reasoning appears to suggest that SP AusNet will be able to borrow from its allowance in relation to other operating expenditure categories to undertake the required asset works during –12014–17, and thereby correct for the lower asset works allowance.*
>
> *This approach is wholly unsound. The AER is required to assess a TNSP's total forecast operating expenditure in accordance with the provisions of the NER within the framework provided by the NEL. It must evaluate the proposed forecast in light of the operating expenditure objectives, and satisfy itself that the forecast reasonably reflects the opex criteria. It does not permit the AER to assume that a TNSP will overspend on some categories, and underspend in others, and that it will even out over time. Such an approach has no place in the current regulatory framework.*
>
> *Overall, good regulatory outcomes are more likely to be served by setting appropriate allowances for each category of operating expenditure. This observation does not preclude a "top-down" analysis in addition to a "bottom-up" assessment. However, it does imply that the regulator should not consciously set inadequate allowances in one category of expenditure on the basis that it has set overly generous allowances in relation to other categories.*

We clarify that our assessment method differs from EMCa's. Our base-step-trend method looks holistically at the total controllable opex base year expenditure and we assess whether the expenditure in that year was efficient and prudent expenditure, as a starting point. We then make adjustments where new costs are demonstrated to be certain in the forecast period (such as the legislative imposition of a new tax), or if the base year was demonstrated to be 'inefficient'. In the case of SP AusNet, we found the base to be efficient, and no adjustment was required to this extent. Our key focus is the efficiency of the actual expenditure in the (historic) base year as a starting point for extrapolating future costs.

Nevertheless, we are cognisant that our role is to provide an opex allowance that reasonably reflects the opex criteria over the 2014–17 regulatory control period. Hence, it is necessary for us to consider whether the opex forecast sufficiently takes into consideration SP AusNet's specific circumstances and is sufficient to discharge its obligations over the 2014–17 regulatory control period, as reflected in the opex objectives, particularly from a technical engineering, governance and asset management perspective.[466] This is a benefit of examining the revised proposal from both a top-down and a bottom-up perspective.

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[465] SP AusNet, *Revised revenue proposal*, pp. 71.
[466] SP AusNet, *Revised revenue proposal*, p. 71.

In its revised proposal, SP AusNet contended that opex levels allowed for in our draft decision were not consistent with the NEL and NER requirements, and did not take into account consequent network outcomes or risk implications.[467]

In preparing a report for our final decision, EMCa sought evidence for these statements by considering: SP AusNet's historic opex level compared with the draft decision; information provided by SP AusNet on the risk implications for step changes and asset works; and, SP AusNet's own assessment of its risk profile. It also considered SP AusNet's stated asset condition, and the role of SP AusNet's expenditure prioritisation processes in managing risk.[468]

3.5.5 EMCa's technical review

EMCa recommended an aggregate controllable opex forecast of $236 million.[469] It considered this is an amount that is a reasonable, prudent and efficient allowance that reflects the circumstances of the business and takes account of information provided by SP AusNet (to the extent that the components of the controllable opex allowance were within the scope of its review).

EMCa recommended that:

- SP AusNet had not demonstrated that its proposed step changes of $27 million were reasonably required. EMCa advised that they should be reduced by $17.4 million to $9.6 million.[470]
- The tower painting program (proposed corrosion risk mitigation step change) is not a step change. This program should be included in the asset works allowance (not in addition to), of $24.3 million.[471]
- The most recent actual opex amount (2012–13) provided a better indication of likely costs for the 2014–17 regulatory control period than the 2011/12 amount and result in a $5.2 million lower opex allowance.[472]
- Consistent with the benefits disclosed since the revised proposal for its investment in the capex IT program, the controllable opex allowance should be reduced by $3.6 million in 2016–17. This figure updates and replaces the opex benefit ($0.8 million) that SP AusNet proposed in its initial revenue proposal.
- Consistent with its findings in its Technical Review of the initial proposal, EMCa considered that the proposed opex needs to be reduced by $7.2 million for benefits that should arise from strategic investments in IT to date.[473]

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467 SP AusNet, *Revised revenue proposal*, p. 67.

468 Such as the examples set out in Appendix C of EMCa's report. EMCa, *Technical review*, January 2014, p200.

469 Basis for comparison: The scope of EMCa's review did not include cost escalation, taxes and leases, insurance or network growth. The difference between our forecast and EMCa's in the non-technical opex (but still controllable) is the result of differing base years. In that context, when comparing totals the final decision real escalation should be applied to the output from the base year (the NER requires us to also ensure that the input costs are efficient). Other than applying our labour escalator and insurance market escalator (because we accepted SP insurance forecast) EMCa's non-technical opex need not be adjusted any further to compare totals.

470 This reduction includes the $8.8 million proposed tower painting costs, moved to Asset Works. For comparability reasons the step change is presented relative to a 2011/12 base year and must be adjusted if a different base year is used.

471 AER notes that SP AusNet subsequently increased its asset works forecast to $28.4 million on 29 November 2013.

472 Excluding taxes, leases and insurance (which were not within EMCa's review scope) and excluding Asset Works (for which EMCa accepted the proposed amount); EMCa, *Technical review*, January 2014, para. 229.

473 EMCa, *Technical review*, January 2014, para.36.

Risk implications

Assessment of the risk implications of the revenue allowance should be made on the basis of the reasonableness of that aggregate allowance and not on the risk implications of specific works being done, or not done.[474] EMCa sought to establish a level of opex that is reasonable in aggregate. It considered the specific circumstances of SP AusNet's transmission business.

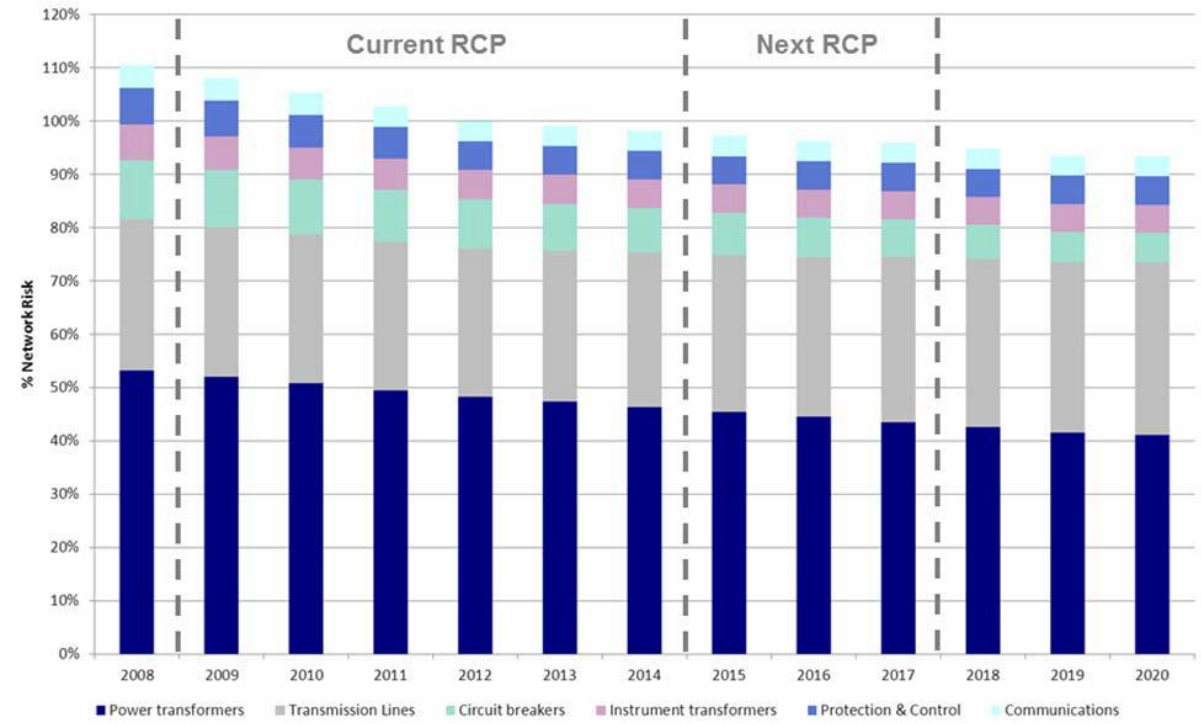
EMCa recommended a level of controllable opex of $236 million for the 2014–17 regulatory control period which includes the level of asset works opex that SP AusNet had proposed and its proposed tower painting program that it deferred from the 2008–14 regulatory control period. EMCa recommended the amount is sufficient for SP AusNet, through the exercise of sound governance and sound management practices, to be able to discharge its obligations over the 2014–17 regulatory control period, without material change to its risk position or to asset health.[475] EMCa recommended the allowance is:[476]

- sufficient to allow specific areas of risk to be addressed, assuming that safety, reliability and security of infrastructure will continue to be prioritised by SP AusNet
- sufficient to allow SP AusNet to progressively realise economic opex/capex trade-off benefits
- unlikely to lead to increased risk relative to current levels for the duration of the 2014–17 regulatory control period.

We accept this as evidence that our base-step-trend substitute forecast of $238.2 million reasonably reflects the opex criteria. Figure 3. shows SP AusNet's time-profile for transmission network asset risk, from 2008–20. The scale of this graph is an index, and shows a declining risk level, including over the period from 2011–14 when asset works expenditure was significantly reduced. This risk profile can also be set against the overall controllable opex profile, which shows a similar (though less prominent) expenditure reduction over the same period.

474 EMCa, *Technical review*, January 2014, para 210.
475 EMCa, *Technical review*, January 2014, para 234.
476 EMCa, Technical review, January 2014, para 221.

Figure 3. Transmission network asset risk



Source: SP AusNet, Revenue proposal – Appendix 2A, Transmission asset management strategy 10-01, Figure 9, 28 February 2013, p. 23.

Note: For clarity, starting from the bottom, the bars represent: power transformers, transmission lines, circuit breakers instrument transformers, protection & control and communications.

Our conclusions are based on the following:

- Our final decision allowance is 1.8 per cent more than the 2008–14 actual average annual controllable opex. This is more than SP AusNet actually spent during a period in which its actual network risk declined, by around 10 per cent from 2009 to 2014.[477] This suggests that our allowance is sufficient for SP AusNet to manage its current network risk levels.
- SP AusNet deferred a substantial portion of its Asset Works program during the most recent four years of 2008–14. SP AusNet also reduced its ongoing opex and further deferred some significant capital works in this time. At the time, in its 2011 Asset Management Plan, SP AusNet explained the works program deferral and its risk implications as follows:[478]

  > The expenditure profile for asset works was reduced in 2010/11 significantly from previous years and to allow this level to be sustained during 2011/12 and 2012/13, it is planned to defer works into future years. The major works to be deferred are tower corrosion mitigation works, station gantry structure repairs, transformer contingency CBD works, painting of towers, asbestos removal, removal of redundant plant to increase ratings and miscellaneous station repairs. The immediate increase in technical risk in 2011 from these deferrals in minimal, however without higher provisions for Asset Works in future years increases in risk in these areas will be material. In particular tower corrosion will be more progressed, more extensive repairs and mitigation works are likely to be required in the future years.

- SP AusNet has described the risk profile and its drivers as follows:[479]

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477 Inferred from the chart above.

478 SP AusNet, *Asset management plan 2011–12 to 2015–16*, 10 March 2011, p. 10.

479 SP AusNet, *Revenue proposal – Appendix 2A, Transmission asset management strategy 10-01*, 28 February 2013, pp. 22-23.

> A reduction in transmission network risk is evident over the period shown in Figure 4. This reduction is primarily the result of the large number of transformer replacements related to the CBD station rebuild projects. Asset classes other than transformers display a relatively flat risk profile with the exception of transmission lines, where risk is increasing due to deterioration of assets and a relatively small asset replacement program.

- The asset works expenditure and the overall controllable opex in EMCa's forecast are both higher than they were in the recent past, when the risk level has been falling. That is, EMCa found that $236 million is sufficient for SP AusNet to conduct its tower painting program and condition assessments without material change to the network risk position or asset health.[480]

- Moreover, a significant proportion of SP AusNet's Step Change and Asset Works opex forecasts was directed at long term issues, with an emphasis on economic opex/capex trade-off benefits (to accrue outside the 2014–17 regulatory control period). While EMCa found that its forecast is enough for SP AusNet to undertake its condition monitoring and tower painting programs, it observed that a lower level of opex is unlikely to result in a significant or rapid increase in network reliability, safety and security risk over the 2014–17 regulatory control period.[481]

- We note also that SP AusNet has already deferred this work, which was proposed and allowed for in successive revenue determinations, and then deferred, since 2002.

- SP AusNet has documented the condition of transmission line assets as follows:

> Although [transmission line] structure assets are ageing primary inspection techniques indicate that they are generally in good condition.[482]
>
> At the present time structure foundations are generally in good condition[483]
>
> Although conductor and ground-wire assets are ageing primary inspection techniques indicate that they are generally in good condition…...[484]

- These statements are consistent with SP AusNet's assessment in the 2011 Asset Management Plan that the failure risk of transmission lines is increasing slowly (and linearly).[485] This document also states the extent to which works are required on these assets, and EMCa's assessment accounted for the need for a greater proportion of transmission line works in its asset works expenditure.

3.5.6 SP AusNet's asset works benchmarking

SP AusNet presented its asset works expenditure per million dollar of RAB to demonstrate relatively low opex in comparison with what it has identified as similar opex categories for ElectraNet and Powerlink. It claims the draft decision is less than half of the industry benchmark which SP AusNet takes as an indication that it is likely to be inefficiently low. It also presents the actual and forecast opex per gigawatt hour (GWh) of energy transmitted as a reason to validate its forecast.

We did not apply much weight to this factor in our decision because this information is not particularly informative about the appropriateness of SP AusNet's forecast. The single category of asset works is not relevant, given that a single base year is appropriate, variability within categories is within SP AusNet's control and can vary from year to year when the total does not, and our base-step-trend forecast opex is very similar to EMCa's technical advice on forecast opex.

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480 EMCa, *Technical review*, January 2014, para. 216.
481 EMCa, *Technical review*, January 2014, para. 217.
482 SP AusNet, *Asset management strategy 10-77, Transmission line structures*, 1 March 2013.
483 SP AusNet, *Asset management strategy 10-78, Transmission line structures*, 1 March 2013.
484 SP AusNet, *Asset management strategy 10-79, Transmission line structures*, 1 March 2013.
485 SP AusNet, *Asset management plan 2011–12 to 2015–16*, 10 March 2011, p.4.

Moreover, the information does not:

- compare all TNSPs in the NEM
- compare historical levels of asset works opex
- demonstrate the significance of the asset work expenditure. It may be that different network configurations inherently require more, or less, asset works
- necessarily provide a like-for-like comparison between the definition of works between TNSPs
- include the proposed corrosion risk mitigation or condition assessment costs.

SP AusNet's actual and forecast opex per GWh of energy transmitted is also not particularly informative about the appropriateness of its forecast for similar reasons:

- the information does not account for the different density, configuration and topography of SP AusNet's transmission network as compared with other TNSPs
- other TNSPs are likely to have networks that are less dense and require more opex per GWh of energy transmitted.

3.6 Non-controllable opex review

This non-controllable opex review addresses self-insurance, availability incentive scheme (AIS), debt raising costs (DRC) and easement land tax.

3.6.1 Self-insurance

We do not approve SP AusNet's revised proposed self-insurance allowance of $5.5 million because:

- it includes insurer default risk which we do not approve (–$0.02 million)
- it includes a 10 per cent risk margin which we do not approve (–$0.5 million).[486]

Instead we substitute a self-insurance allowance of $5.0 million. We discuss the reasons for our decision in more detail in Appendix B which is a confidential appendix due to the commercial sensitivity of the material.

3.6.2 Availability incentive scheme

We do not accept SP AusNet's availability incentive scheme (AIS) opex forecast of $8.6 million because it is well above the 10 year average (Figure 3.) and does not reflect a reasonable expectation of likely cost inputs.[487] Instead, we have substituted a total AIS opex forecast of $6.8 million on the basis of the average actual AIS payments, from December 2003 to November 2013. SP AusNet agreed to this method, providing the most recent 6 months of data are included.[488]

The network service agreement between SP AusNet and AEMO includes the AIS. Under the AIS, SP AusNet must pay rebates to AEMO for outages on its network. These rebates depend on the asset on which the outage occurs and the time when the outage occurs. SP AusNet receives an opex allowance to fund its AIS rebate payments to AEMO. Depending on its AIS performance, SP AusNet

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486 SP AusNet, *Revised revenue proposal*, pp. 76–7.
487 SP AusNet, *Revised revenue proposal*, p. 93.
488 SP AusNet, *Response to AER RRP 018*, 4 December 2013.

receives a benefit/penalty by either keeping/paying out the difference between its AIS forecast and actual AIS payments

In our draft decision, we did not accept SP AusNet availability incentive scheme (AIS) opex forecast of $9.9 million ($2013–14). When SP AusNet submitted its revenue proposal, the AIS was under review by AEMO. SP AusNet informed us that, should AEMO decide to maintain the scheme, it would submit a revised AIS forecast. We therefore did not accept the forecast and noted that we would assess SP AusNet's updated forecast in the final decision.

To derive its AIS forecast, SP AusNet calculated AIS rebate ratios per dollar of maintenance opex and dollar of capex and then applied these two ratios to its maintenance opex and capex forecasts.[489] It also used the average AIS rebates attributable to plant failure, and included a $0.1 million uplift to account for overlapping incentives between the AIS and the market impact component of the STPIS. The outcome was significantly higher than the 2004–13 average AIS rebate payments, as shown in Figure 3.. SP AusNet has only paid out higher AIS rebates than its forecast in one year out of nine, while it has paid out less than the forecast in the other eight years. This suggests that SP AusNet's AIS forecast is not a reasonable expectation of its future AIS payments. We therefore do not accept SP AusNet's AIS forecast.

We have substituted the long term (2004–13) average actual AIS rebate payments as the AIS forecast. We consider this to be more likely to reflect future costs than SP AusNet's method. In fact, if this method had been used to set the forecast for the 2008–14 regulatory control period,[490] SP AusNet would have paid out more than the forecast in two years and less than the forecast in two years.[491]

We asked SP AusNet for its views on our approach. SP AusNet responded that, providing that 2013–14 data be incorporated in the calculation of the average, it found our approach reasonable.[492] We confirm that the average we have used is based on the monthly average actual rebate paid from December 2004 to November 2013.

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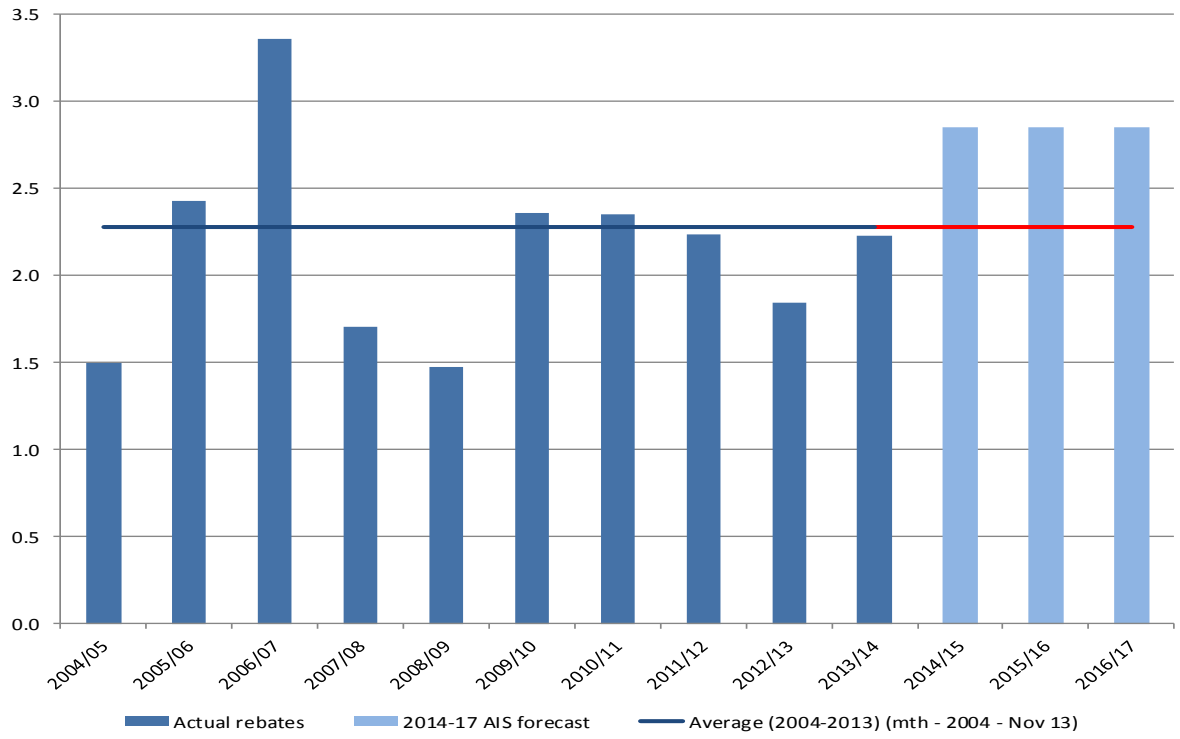
489 SP AusNet, *Revised revenue proposal*, *Appendix R: Availability Incentive Scheme opex forecast*, 11 October 2013, p. 4.
490 That is, using the 2004–08 average actual.
491 Complete AIS rebate data for the 2013–14 year was not available at the time of writing.
492 SP AusNet, *Response to AER RRP 018*, 4 December 2013.

Figure 3. SP AusNet's historical AIS rebates and AIS opex forecast ($ million, 2013–14)



Source: SP AusNet, *Response to AER revised revenue proposal 02*, 11 November 2013; AER analysis. Actual data in 2013–14 to November 2013.
Note: The red line indicates our final decision.

3.6.3 Debt raising costs

Our draft decision accepted SP AusNet's proposed method for determining its benchmark debt raising costs allowance associated with its forecast opex.[493] We consider this method provides estimates of the debt raising costs that a prudent service provider acting efficiently would incur, because it:

- identifies the types of transaction cost that a prudent service provider acting efficiently would incur in raising debt
- quantifies the level of these costs (using benchmark assumptions that also account for the circumstances of the service provider) with reference to market rates for the relevant services.

We updated SP AusNet's proposed debt raising cost allowance to reflect our final decisions on the opening RAB (debt component) and weighted average cost of capital (WACC). Our final decision, therefore, is to provide SP AusNet with an allowance for debt raising costs of $ 4.7 million ($2013–14), as shown in Table 3..

Table 3. AER's final decision on debt raising costs ($ million, 2013–14)

Unit rate	2014–15	2015–16	2016–17	Total
9.2 basis points per year	1.5	1.6	1.6	4.7

Source: AER analysis.

[493] AER *Draft decision: SP AusNet transmission determination*, August 2013, pp. 116–7.

3.6.4 Easement land tax

Victoria's land tax regime extends to easements held by SP AusNet. SP AusNet is required to forecast its easement land tax liability as part of the forecast opex. Where the forecast we accept in this determination differs (higher or lower) from the actual tax paid, SP AusNet is entitled to apply for a cost pass through.[494]

SP AusNet proposed an easement land tax forecast of $305.3 million for the 2014–17 regulatory control period. We are satisfied that this forecast reflects a realistic expectation of the easement land tax likely to be incurred in the 2014–17 regulatory control period because:

- the forecast average annual tax liability of $101.7 million is relatively close the actual tax SP AusNet incurred in 2012–13 ($101.6 million)
- SP AusNet's forecast easement land tax assumes it will increase at the same rate as CPI.[495]

The EUCV was concerned that SP AusNet does not include easement land tax in its forecast opex after the government ceases to require it.[496] The EUCV considered that as the easement land tax is linked to providing Alcoa with discounted electricity costs and that commitment ceases in the near future, the easement land tax should not continue to apply to SP AusNet. We are satisfied that SP AusNet's forecast easement land tax meets the opex criteria because we have not received any evidence that the tax will change in the 2014–17 regulatory control period. Further, if it does change, any difference between the forecast and the actual tax paid will be addressed through the cost pass through mechanism.

We note that a TNSP must submit a negative cost pass through within 60 business days of becoming aware of the event (this moves to 90 business days under the new rules) (see NER 6A.7.3(f)). However, if, during the next regulatory period, we become aware that an event has occurred that will trigger a negative cost pass through, (such as a change to the easement land tax assessment or valuation base resulting in an actual easement land tax obligation that is less than our allowance), then we can take action to instigate the negative cost pass through under NER 6A.7.3(g).[497]

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494 NER, clauses 6A.7.3 and 11.6.21.

495 *Valuation of Land Tax Act 1960* (Vic), s 5B: valuations of transmission easements by the Valuer–General occur every two years in even numbered years.

496 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 29.

497 Under the new rules there is an additional requirement for the AER to notify the TNSP that the issue has come to its attention before making a pass through decision under NER 6A.7.3(g).

4 Maximum allowed revenue

This attachment sets out the AER's final decision on SP AusNet's maximum allowed revenue (MAR) for the provision of prescribed transmission services during the 2014–17 regulatory control period. Specifically, the attachment addresses:[498]

- the annual building block revenue requirement
- the X factor
- the annual expected MAR
- the estimated total revenue cap, which is the sum of the annual expected MAR.

We determine SP AusNet's annual building block revenue requirement using a building block approach in the post-tax revenue model (PTRM). We determine the X factors by smoothing the annual building block revenue requirement over the 2014–17 regulatory control period. The X factor is used in the CPI–X methodology to determine the annual expected MAR (smoothed) for each regulatory year of the 2014–17 regulatory control period.

4.1 Final decision

Our determinations on SP AusNet's proposed building block components have a consequential impact on the annual building block revenue requirement. We have recalculated the X factor and the annual expected MAR to reflect our final decision on SP AusNet's annual building block revenue requirement.

For this final decision, we approve an estimated total revenue cap of $1600 million ($ nominal) for SP AusNet for the 2014–17 regulatory control period.[499] Our approved X factor is 3.24 per cent per annum for 2015–16 and 2016–17.[500]

Table 4. sets out our final decision on SP AusNet's annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2014–17 regulatory control period.

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498 NER, clauses 6A.4.2(a)(1)–(3) and 6A.6.8.

499 The estimated total revenue cap is equal to the total of the annual expected MAR over the 2014–17 regulatory control period.

500 Consistent with SP AusNet's revised proposal, we have determined a constant X factor to apply over the 2014–17 regulatory control period.

Table 4. AER's final decision on SP AusNet's annual building block revenue requirement, annual expected MAR, estimated total revenue cap and X factor ($ million, nominal)

	2014–15	2015–16	2016–17	Total
Return on capital	226.5	233.0	242.0	701.4
Regulatory depreciation[a]	75.1	81.0	86.6	242.7
Operating expenditure	189.7	199.2	202.2	591.1
Efficiency benefit sharing scheme (carryover amounts)	18.4	16.1	4.9	39.4
Net tax allowance	9.5	9.3	9.8	28.6
Annual building block revenue requirement (unsmoothed)	519.0	538.7	545.4	1603.1
Annual expected MAR (smoothed)	538.1	533.4	528.8	1600.3[b]
X factor (%)	n/a[c]	3.24	3.24	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) SP AusNet is not required to apply an X factor for 2014–15 because the MAR is set in this final decision. The MAR for 2014–15 is around 3.8 per cent lower than the MAR in the final year of the 2008–14 regulatory control period (2013–14) in real terms, or 1.5 per cent lower in nominal terms. The MAR for 2013–14 is $546.2 million ($ nominal).

4.2 SP AusNet's revised proposal

Based on its revised building block components, SP AusNet's revised proposal included a total (smoothed) revenue cap of $1594 million ($ nominal) for the 2014–17 regulatory control period.[501]

Table 4. sets out SP AusNet's revised proposed annual building block revenue requirement, the X factor, the annual expected MAR and the estimated total revenue cap for the 2014–17 regulatory control period.

[501] SP AusNet, *Revised revenue proposal*, p. 129.

Table 4. SP AusNet's revised proposed annual building block requirement, annual expected MAR, estimated total revenue cap and X factor ($ million, nominal)

	2014–15	2015–16	2016–17	Total
Return on capital	213.1	219.8	229.1	661.9
Regulatory depreciation[a]	74.0	80.0	85.7	239.7
Operating expenditure	201.9	211.6	214.9	628.5
Efficiency benefit sharing scheme (carryover amounts)	18.4	16.2	4.9	39.4
Net tax allowance	8.3	8.1	8.5	24.9
Annual building block revenue requirement (unsmoothed)	515.6	535.7	543.1	1594.4
Annual expected MAR (smoothed)	519.0	531.3	543.9	1594.2[b]
X factor (%)	n/a	0.13	0.13	n/a

Source: SP AusNet, *Post-tax revenue model*, October 2013.
(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.

4.3 Assessment approach

We did not change our assessment approach for the MAR from our draft decision. Section 8.3 of our draft decision details that approach.

4.4 Reasons for final decision

For this final decision, we determine a total annual building block revenue requirement of $1603 million ($ nominal) for SP AusNet for the 2014–17 regulatory control period. This compares to SP AusNet's proposed total annual building block revenue requirement of $1594 million ($ nominal) for this period in its revised proposal.[502]

Figure 4. shows the building block components from our determination that make up the annual building block revenue requirement for the 2014–17 regulatory control period and the corresponding components from SP AusNet's revised proposal.

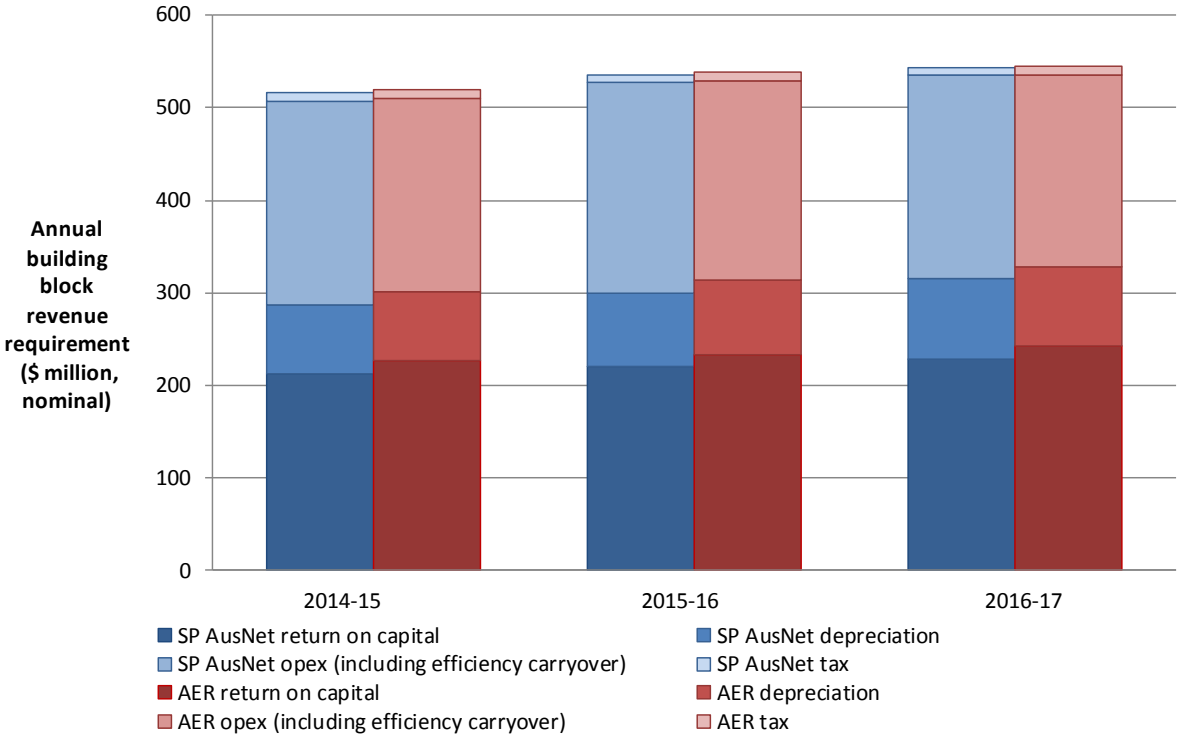
We have calculated the annual building block revenue requirement for SP AusNet based on our final decision on these building block components. The revenues were affected by our changes to SP AusNet's revised building block components. These changes include:

- forecast operating expenditure (attachment 3)
- the cost of capital (chapter 5)
- the opening RABs over the 2014–17 regulatory control period (chapter 4) and forecast capital expenditure (attachment 2)
- forecast regulatory depreciation (chapter 6)

502 SP AusNet, *Revised revenue proposal*, p. 129.

- the estimated cost of corporate income tax (chapter 10).

Figure 4. AER's final decision on SP AusNet's revised proposed annual building block requirement ($ million, nominal)



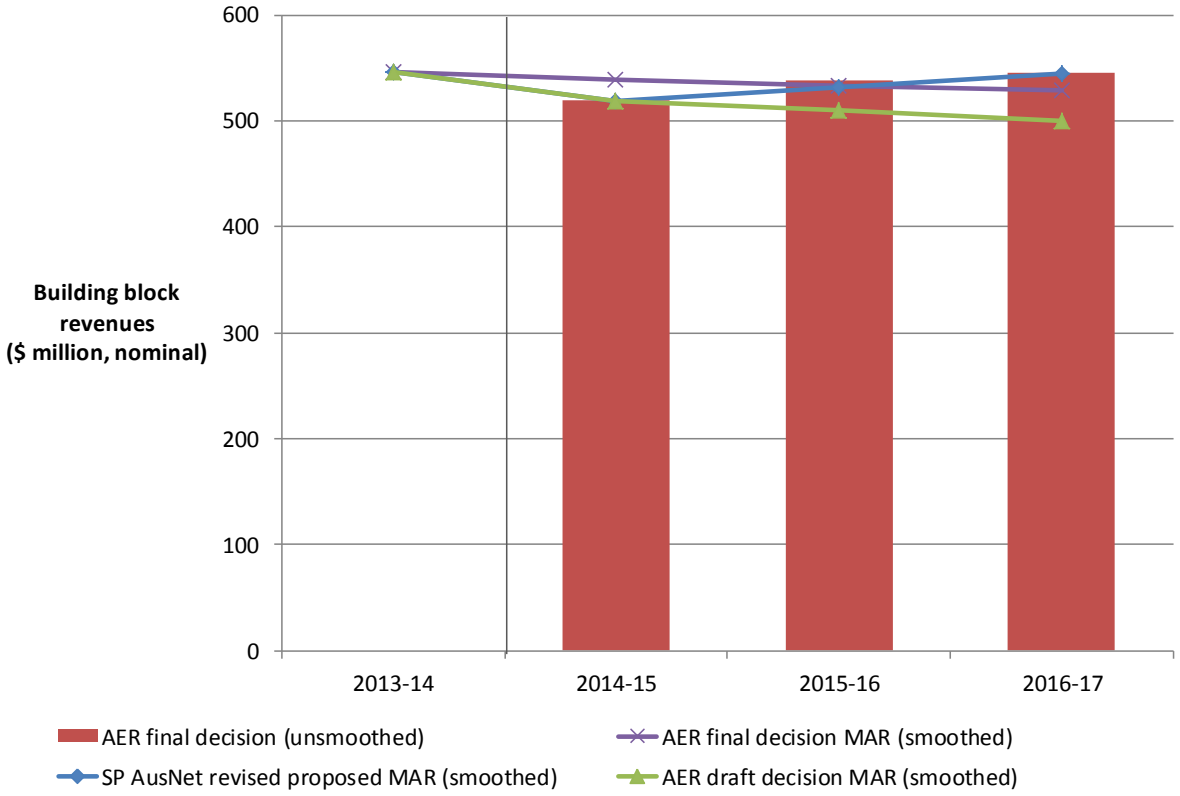
Source: AER analysis.

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

For this final decision, we determine an X factor of 3.24 per cent per annum for 2015–16 and 2016–17. The net present value of the annual building block revenue requirement for the 2014–17 regulatory control period is $1378 million ($ nominal) as at 1 April 2014. Based on this net present value and applying the CPI–X method, we determine that the annual expected MAR (smoothed) for SP AusNet decreases from $538.1 million in 2014–15 to $528.8 million in 2016–17 ($ nominal). The resulting estimated total revenue cap for SP AusNet is $1600 million ($ nominal) for the 2014–17 regulatory control period.

Figure 4. shows our final decision on SP AusNet's annual expected MAR (smoothed revenue) and the annual building block revenue requirement (unsmoothed revenue) for the 2014–17 regulatory control period.

Figure 4. AER's final decision on SP AusNet's annual expected MAR and annual building block revenue requirement ($ million, nominal)



Source: AER analysis.

To determine the expected MAR over the 2014–17 regulatory control period, we have set the MAR for the first regulatory year (2014–15) at $538.1 million ($ nominal).[503] This is higher than the annual building block revenue requirement for 2014–15, which is $519.0 million ($ nominal).[504] We then applied an X factor of 3.24 per cent per annum to determine the expected MAR in subsequent years.[505] We consider this profile of X factors results in an expected MAR in the last year of the 2014–17 regulatory control period that is as close as reasonably possible to the annual building block revenue requirement for that year as required under the NER.[506] 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 2014–17 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 factor we have determined, this divergence is 3 per cent.

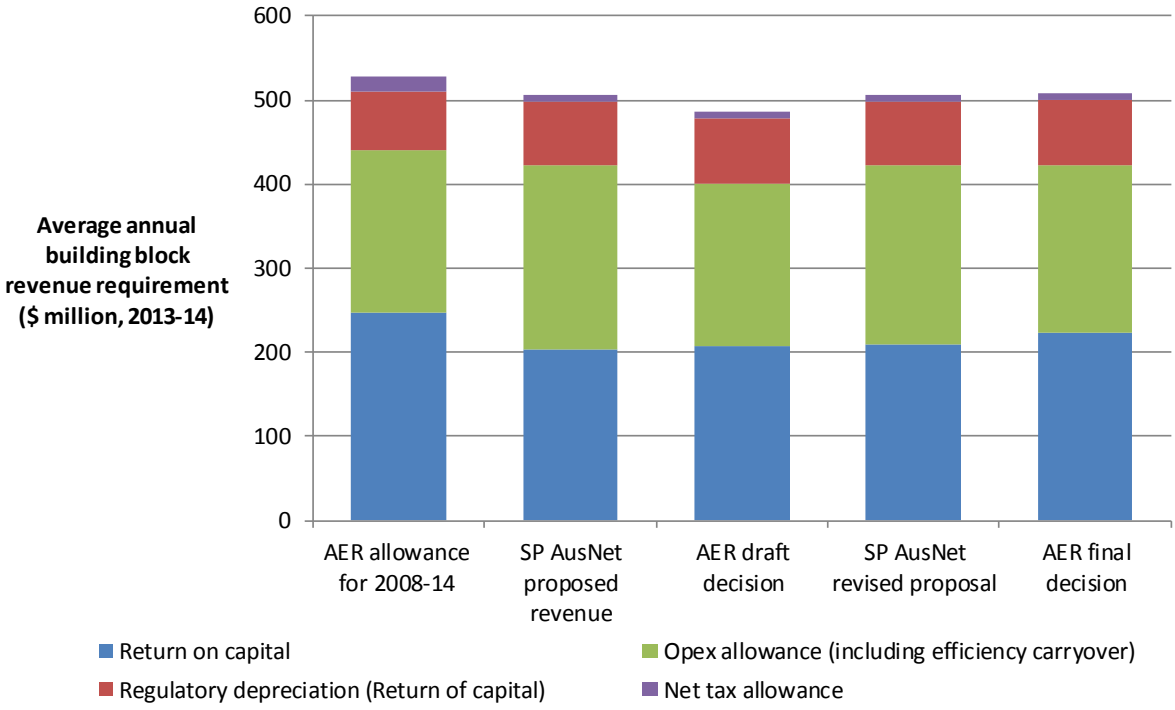
We have considered stakeholder submissions, which raised concerns with the impact of SP AusNet's revenue determination on the expected electricity price.[507] We have smoothed the estimated total revenue cap as much as possible, consistent with the requirements of the NER and NEL.

503 NER, clause 6A.5.3(c)(2).
504 The MAR for the last year of the 2008–14 regulatory control period (2013–14) is approximately $546.2 million.
505 NER, clause 6A.5.3(c)(3).
506 NER, clause 6A.6.8(c)(2).
507 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp. 3–4; EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal,* November 2013, p. 1.

The average decrease in our approved expected MAR for SP AusNet is 1.1 per cent per annum ($ nominal) over the 2014–17 regulatory control period. This consists of an initial decrease of 1.5 per cent from 2013–14 to 2014–15 and a subsequent average annual decrease of 0.9 per cent during the remainder of the 2014–17 regulatory control period.[508] Our final decision results in a decrease of 3.7 per cent in real terms ($2013–14) to SP AusNet's average annual revenue relative to that in the 2008–14 regulatory control period.[509] This decrease in revenue is primarily because of a lower WACC applied to this final decision for the 2014–17 regulatory control period than was approved in the 2008–14 revenue cap decision.[510]

Figure 4. compares our draft and final decision building blocks for SP AusNet's 2014–17 regulatory control period with SP AusNet's proposed and revised revenue requirement for that same period, and the approved revenue for the 2008–14 regulatory control period.

Figure 4. Annual average of AER's draft and final decision building blocks compared to SP AusNet's proposed and revised revenue requirement and approved revenue for 2008–14 ($ million, 2013–14)



Source: AER analysis.

4.4.2 Indicative impact on transmission charges and electricity bills in Victoria

The NER does not require us to estimate transmission price changes for a revenue determination of a TNSP. Nonetheless, we typically provide some indicative transmission price impacts flowing from the revenue determination. Although we assess SP AusNet's and AEMO's proposed pricing methodologies, actual transmission charges established at particular connection points are not

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508 In real dollar terms, the average decrease in our approved expected MAR for SP AusNet is 3.4 per cent per annum over the 2014–17 regulatory control period. This consists of an initial decrease of 3.8 per cent from 2013–14 to 2014–15 and a subsequent average annual decrease of 3.2 per cent during the remainder of the 2014–17 regulatory control period.

509 Because the regulatory control periods compared are of different lengths, we calculated the annual average revenues for the relevant regulatory control periods for comparison.

510 Our final decision WACC is 7.87 per cent and the approved WACC for 2008–14 was 9.76 per cent.

determined by us. SP AusNet and AEMO establish the transmission charges in accordance with their approved pricing methodologies and the NER.[511]

We estimate the effect of our final decision for SP AusNet's transmission determination on forecast average transmission charges in Victoria by:

- taking the sum of SP AusNet's annual expected MAR determined in this final decision and the proportion of Murraylink's annual expected MAR for 2014–17 that is allocated to Victorian customers (55 per cent),[512] and
- dividing it by the forecast annual energy delivered in Victoria.[513]

Based on this approach, we estimate this final decision will result in a decrease to average transmission charges of 4.8 per cent per annum ($2013–14) from 2013–14 to 2016–17.[514] Figure 4. shows the indicative average transmission charges resulting from this final decision for SP AusNet's transmission determination compared with the average transmission charges from 2008–14 in real dollar terms. The average transmission charges are forecast to decrease from around $11.8 per MWh in 2013–14 to $10.1 per MWh in 2016–17.

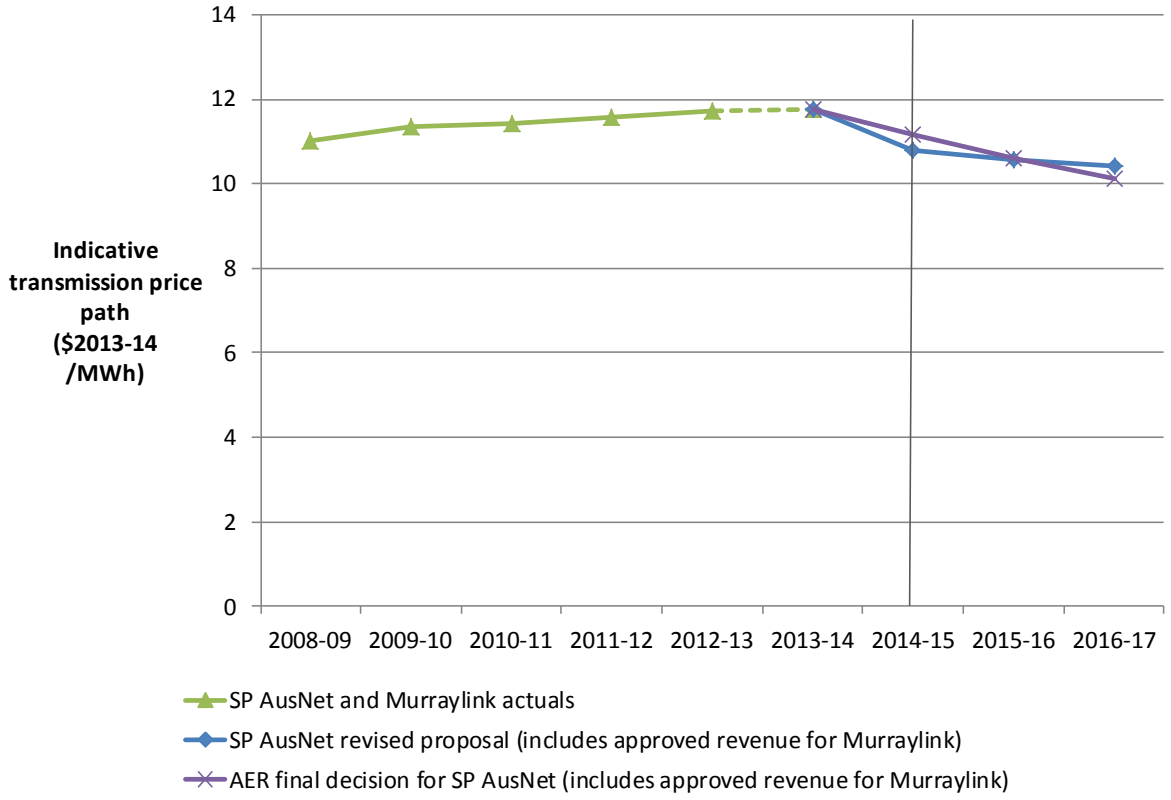
511 NER, clause 6A.24.1(d).

512 Murraylink, *Pricing methodology*, May 2012, p. 3. AER, *Murraylink transmission determination 2013–18*, April 2013, p. 9. Murraylink is an interconnector that provides a path for the flow of electricity to the limit of its 220MW capacity, in both directions, between the South Australian and Victorian transmission networks. About 55 per cent of Murraylink's revenue is from its Victorian customers.

513 AEMO, *National electricity forecasting report*, June 2013, table 6-1, Medium.

514 The average decrease in our final decision MAR ($2013–14) is 3.4 per cent per annum, whereas the average increase in the forecast energy delivered in Victoria is about 1.5 per cent per annum from 2013–14 to 2016–17. The reason for the transmission charge decrease being larger than the revenue decrease is because our final decision annual MAR ($2013–14) is decreasing on average from 2013–14 to 2016–17 and the annual forecast energy delivered in Victoria is increasing over this period. In nominal terms, we estimate this final decision will result in a decrease to average transmission charges of 2.5 per cent per annum from 2013–14 to 2016–17.

Figure 4. Indicative transmission price path from 2008–09 to 2016–17 ($/MWh, 2013–14)



Source: AER analysis.
Note: The indicative transmission price path for 2008–13 (green line) reflects actual energy from 2008–09 to 2010–11 and estimated actual energy from 2011–12 to 2012–13 as reported by AEMO (AEMO, *National electricity forecasting report 2012 and National electricity forecasting report 2013*, June 2012 and June 2013, table 8-1 and table 6-1). From 2013–14 to 2016–17 (purple and blue lines), the indicative price paths reflect forecast energy and forecast revenue.

In Victoria, transmission charges represent approximately 5 per cent on average of a typical customer's electricity bill.[515] We note that there are other factors that may affect electricity bills.[516] Our final decision for SP AusNet is not expected to contribute towards any price increase on average for Victorian residential electricity customer bills. We estimate that this final decision will result in lower transmission charges on average over the 2014–17 regulatory control period compared to SP AusNet's revised proposal. If these lower transmission charges were passed through to end customers, the average residential electricity bills could be expected to reduce by about $12 in total ($2013–14) or 0.2 per cent per annum during the 2014–17 regulatory control period. In comparison, SP AusNet's revised proposal would result in an average bill reduction of approximately $10 in total or 0.2 per cent per annum.

Table 4. shows the estimated impact of our final decision and SP AusNet's revised proposal on the average Victorian residential electricity bills by tariff type.[517]

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515 This is based on the average proportion of the transmission charges on a typical residential bill from 2001 to 2012. Oakley Greenwood, *Causes of residential electricity bill increases in Victoria, 2001 to 2012*, March 2013, p. 11.

516 For example, usage, retail costs, wholesale costs, distribution network costs and green and carbon costs.

517 Our final decision on SP AusNet's revenue requirements resulted in a slightly larger reduction to a typical electricity bill than SP AusNet's revised proposed revenue. This is because our final decision revenue path (smoothed) is different to that of SP AusNet's revised proposal (figure 4.2). Figure 4.4 shows our final decision revenue path results in a more

Table 4. AER estimated impact of the final decision for SP AusNet on the average residential electricity bills in Victoria over 2014–17 ($2013–14)

Tariff type[a]	Average annual bill[b]	Total reduction over 2014–17 — SP AusNet's revised proposal	Total reduction over 2014–17 — AER's final decision	Impact on annual bill—SP AusNet's revised proposal (per cent, per annum)	Impact on annual bill—AER's final decision (per cent, per annum)
Single rate	$1347	–$8	–$9	–0.2	–0.2
Two-rate	$1743	–$10	–$12	–0.2	–0.2
Time-of-use	$2231	–$12	–$15	–0.2	–0.2

Source: Essential Services Commission of Victoria, *Energy retailers comparative performance report—pricing*, October 2013, p.17; AER analysis.

(a) The single rate tariff is based on 4000 kilowatt hours (kWh) peak consumption per year. This use is typical of a customer who has gas hot water and heating.
The two-rate tariff is based on 4000 kWh peak and 2500 kWh off-peak consumption per year (off-peak is between 11 pm and 7 am). This use is typical of a customer with no gas supply who has off peak electric hot water.
The time-of-use tariff is based on 3000 kWh peak and 6000 kWh off-peak consumption per year. Off-peak includes the whole weekend and between 11 pm and 7 am Monday to Friday. This use is typical of a customer who uses the off-peak time for any purpose over the weekend in addition to hot water and heating overnight.

(b) The average annual bills reflect a weighted average of the market offers and standing offers as shown on the Victorian government's electricity and gas comparator website as at 3 July 2013 (http://yourchoice.vic.gov.au/). They also reflect the average offers across all the distribution zones in Victoria. Retailers who have less than 1000 customers in Victoria are not included in this analysis.

Similarly, for an average electricity bill for businesses in Victoria, our final decision is expected to on average lead to lower prices. We estimate that if the lower transmission charges arising from this final decision were passed through to end customers, the average business electricity customer bills could be expected to reduce by about $48 in total ($2013–14) or 0.2 per cent per annum during the 2014–17 regulatory control period. In comparison, SP AusNet's revised proposal would result in an average bill reduction of approximately $40 in total or 0.2 per cent per annum.

Table 4. shows our estimated impact of this final decision and SP AusNet's revised proposal on the average Victorian business customer's electricity bills by tariff type.

steady decrease in prices over the 2014–17 regulatory control period when compared to that of SP AusNet's revised proposal.

Table 4. AER estimated impact of the final decision for SP AusNet on the average electricity bills of businesses in Victoria over 2014–17 ($2013–14)

Tariff type[a]	Average annual bill[b]	Total reduction over 2014–17 — SP AusNet's revised proposal	Total reduction over 2014–17 — AER's final decision	Impact on annual bill— SP AusNet's revised proposal (per cent, per annum)	Impact on annual bill— AER's final decision (per cent, per annum)
Single rate	$3777	–$21	–$25	–0.2	–0.2
Time-of-use	$10661	–$60	–$72	–0.2	–0.2

Source: Essential Services Commission of Victoria, *Energy retailers comparative performance report—pricing*, October 2013,
p. 17; AER analysis.

(a) The single rate business tariff is based on 12000 kWh peak consumption per year. This use is typical of a business that is closed on weekends.
The time-of-use business tariff is based on 25000 kWh peak and 15000 kWh off-peak consumption per year. Off-peak includes the whole weekend. This use is typical of a larger business that is open more than five days a week.

(b) The average annual bills reflect a weighted average of the market offers and standing offers as shown on the Victorian government's electricity and gas comparator website as at 3 July 2013 (http://yourchoice.vic.gov.au/). They also reflect the average offers across all the distribution zones in Victoria. Retailers who have less than 1000 customers in Victoria are not included in this analysis.

5 Service target performance incentive scheme

This attachment sets out the AER's final decision on the service target performance incentive scheme (STPIS) that will apply to SP AusNet during the 2014–17 regulatory control period. Version 4 of the STPIS will apply to SP AusNet during the 2014–17 regulatory control period.[518] The STPIS comprises three components: the service component, the network capability component and the market impact component. This attachment deals with each component separately.

5.1 Final decision

5.1.1 Service component

We accept SP AusNet's revised proposal service component parameter values. Table 5. shows our final decision on SP AusNet's proposed values for the service component.

Table 5. AER's final decision on SP AusNet's parameter values for the service component of the STPIS

	Collar	Target	Cap	Weighting (% of MAR)
Average circuit outage rate (%)				
Line outage – fault	42.0	25.9	14.8	0.2
Transformer outage – fault	31.7	16.1	7.4	0.2
Reactive plant – fault	46.4	35.1	2.5	0.1
Line outage – forced	17.7	14.9	12.3	0.0
Transformer outage – forced	17.6	12.0	6.2	0.0
Reactive plant – forced	32.7	15.4	6.2	0.0
Loss of supply event frequency				
>0.05 system minutes	6	2	0	0.15
>0.3 system minutes	2	1	0	0.15
Average outage duration				
Average outage duration (mins)	293.5	98.0	5	0.2
Proper operation of equipment				
Failure of protection system	n/a	n/a	n/a	0.0
Material failure of SCADA	2	1	0	0.0
Incorrect operational isolation of primary or secondary equipment	n/a	n/a	n/a	0.0

Source: AER analysis.

[518] AER, *Final – Service target performance incentive scheme,* December 2012.

5.1.2 Market impact component

The market impact component performance target is an average of three years of performance data. Performance will be measured as a rolling average of the most recent two years of performance data.[519] The target for the 2014 calendar year, for example, will be an average of SP AusNet's 2011, 2012 and 2013 market impact performance, while actual performance in 2014 will be measured as an average of the TNSP's 2013 and 2014 performance. We will publish these targets annually after we conduct the annual review of SP AusNet's STPIS performance.

We have not made a decision on SP AusNet's performance target for 2014, as SP AusNet's 2013 data is not yet available for this calculation.[520] However, we have audited SP AusNet's 2011 and 2012 performance, which we will use to calculate the 2014 target in the future.

We have audited this data and made minor adjustments to the performance values that were submitted. We adjusted SP AusNet 2011 performance from 3329 to 3322 dispatch intervals and its 2012 performance from 2560 to 2608 dispatch intervals.

5.1.3 Network capability component

We do not accept SP AusNet's proposed priority projects and improvement targets set out in its revised network capability incentive parameter action plan (NCIPAP). We removed one project from the NCIPAP (the Dederang–Wodonga No. 1 330kV project) because it is unlikely that the benefits would outweigh the cost of the project. We considered AEMO's review of the NCIPAP when making our decision.[521] Table 5. sets out our final decision on SP AusNet's priority projects, improvement targets and project rankings.

519 AER, *Final – Service target performance incentive scheme,* December 2012, clause 4.2(d) and Appendix F.
520 The 2013 data will be submitted on 1 February 2014.
521 AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013; AEMO, *Email: Update to SP AusNet NCIPAP project list*, 13 January 2014.

Table 5. AER's final decision on SP AusNet's network capability priority projects ($ 000s, 2013–14)

Rank	Project circuit / injection point	Description	Improvement target	Opex	Capex	Total cost
1	220kV switchyards at HTS, KTS, MLTS, ROTS, RTS, RWTS, SVTS, TTS and WMTS	Assess fault level at nominated terminal stations	Provision of report detailing the fault level capability of the equipment, structures and earth grid at the nine specified terminal stations.	5 300	0	5 300
2	Altona TS	Protection setting change	ATS B4 220/66 kV transformer capability 174MVA.	14	0	14
3	Templestowe TS	Replace 66kV interplant connections, review and uprate equipment ratings in RADAR	TSTS 220/66 kV B1 transformer rating 187 MVA and limited by 66 kV busbar rating of 181 MVA TSTS 220/66 kV B3 transformer rating 192 MVA and limited by 66 kV busbar rating of 181 MVA TSTS 220/66 kV B2 transformer capability of 175 MVA.	0	377	377
4	Both Dederang –Murray 330kV lines	Installation of an emergency control scheme	Fully functioning emergency control scheme provided for the loss of both Dederang–Murray 330kV lines.	0	3 261	3 261
5	Both Dederang–South Morang 330kV lines	Installation of an emergency control scheme	Fully functioning emergency control scheme provided for the loss of both DDTS–SMTS 330 kV lines, or both the DDTS–SMTS 330 kV lines together with 220 kV EPS–MBTS 1 & 2 lines, or both DDTS–SMTS 330 kV lines together with 220 kV EPS–TTS line.	0	4 241	4 241
6	Rowville–East Rowville No 1 & 2 and Rowville–Springvale No 2 220kV circuits	Replacement of two 220kV isolators, protection setting changes	ROTS–ERTS No 1 & 2 220 kV circuits capability limited by circuit rating of 800 MVA. Rating of isolators between ROTS No 1 220 kV bus and ROTS–SVTS No 2 line increased to 800 MVA or higher.	0	999	999
7	Eleven 220 kV and 330 kV circuits	Increase instrumentation range on 11 circuits	Increase instrumentation range of the 11 circuits as set out on p. 13 of NCIPAP.	0	400	400
8	Rowville–Malvern No 1 & 2 220kV circuits	Install a wind monitoring scheme	Implement dynamic rating for both ROTS–MTS 220 kV circuits. The scheme will be designed to achieve ratings of ROTS–MTS circuits under favourable ambient conditions as 234 MVA for system normal operation and 267 MVA under contingent conditions provided pre–	0	400	400

			contingency loading is less than 60% of 234 MVA.			
9	Moorabool–Mortlake–Heywood–Portland Aluminium customer substation No 2 500 kV circuit	Implement inter–trip control schemes	Fully functional APD inter–trip control scheme provided for this circuit to prevent potential overvoltage at APD 500 kV bus during a prior outage of plant connected at APD.	0	920	920
10	Hazelwood–Loy Yang No 1, 2 and 3 500 kV circuits	Dynamic line model development and implementation	Hazelwood–Loy Yang No 1, 2 and 3 500 kV circuit capability implemented in the thermal line model based on ambient temperatures.	2	0	2
11	Moorabool–Mortlake No 2 and Moorabool–Tarrone 500 kV circuits	Review and uprate protection settings in TRESIS	Moorabool–Mortlake No 2 500 kV circuit capability at 2858 MVA Moorabool–Tarrone No 1 500 kV circuit capability at 2858 MVA.	0	0	0
12	Keilor–Sydenham No 1 and Keilor–South Morang No 1 500 kV circuits	Review and uprate equipment ratings in RADAR	Keilor–Sydenham No 1 500 kV circuit secondary plant limit 2078 MVA Keilor–South Morang No 1 500 kV circuit secondary plant limit 2078 MVA.	0	0	0
13	Geelong TS	Review and uprate equipment ratings in RADAR	GTS 220/66 kV B2 transformer rating 169 MVA GTS 220/66 kV B4 transformer rating 177 MVA.	0	0	0
14	Ringwood TS	Review and uprate equipment ratings in RADAR	RWTS 220/66 kV B2 transformer rating 185 MVA and limited by 66 kV busbar rating of 181 MVA RWTS 220/66 kV B3 transformer rating 190 MVA and limited by 66 kV busbar rating of 181 MVA	0	0	0
	Total project cost			**5 316**	**10 598**	**15 914**
	Total net present value of projects as estimated by AEMO					**79 800**

Source: SP AusNet, *Revised Appendix 6B: Network Capability Incentive Parameter Action Plan (NCIPAP) 2014–17*, 20 December 2013. AEMO, *AEMO endorsement of SP AusNet Network Capability Incentive Parameter Action Plan (NCIPAP) 2014–17 (with additional projects and quantified net benefits),* 20 December 2013. Note – we have removed the Dederang–Wodonga project from the NCIPAP.

5.2 SP AusNet's revised proposal

5.2.1 Service component

SP AusNet adopted our draft decision for all sub–parameters except for:

- Average circuit outage rate – reactive plant – forced
- Average circuit outage rate – reactive plant – fault.

SP AusNet stated that the data in its revenue proposal for the reactive plant sub–parameters did not correctly apply the 'capacitor banks and reactors operating at less than 66 kV' exclusion. SP AusNet provided updated data for the two reactive plant sub–parameters, shown in Table 5..

Table 5. SP AusNet's revised data for reactive plant sub–parameters

	Collar	Target	Cap	Weighting (% of MAR)
Reactive plant – fault (%)	46.4	35.1	2.5	0.1
Reactive plant – forced (%)	32.7	15.4	6.2	0.0

Source: SP AusNet, *Revised revenue proposal*, p. 99.

SP AusNet applied the methodology set out in our draft decision to calculate caps and collars for the two reactive plant sub–parameters. SP AusNet considered that the log–logistic distribution to be the distribution of best fit, and the caps and collars were set at the 5th and 95th percentiles.[522]

5.2.2 Market impact component

SP AusNet noted that we will not make a decision on the market impact component target that will apply during 2014 until a later stage in accordance with the applicable STPIS. It stated that it would work with us during our audit of the market impact component data.[523]

5.2.3 Network capability component

SP AusNet adopted our draft decision on the network capability component.

5.3 Assessment approach

We applied the same assessment approach as set out in section 9.3 of our draft decision.[524]

5.4 Reasons for final decision

5.4.1 Service component

We accept SP AusNet's revised data for the two reactive plant sub–parameters. We assessed how SP AusNet applied the new exclusion and we are satisfied that SP AusNet applied the exclusion correctly.[525]

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522 SP AusNet, *Revised revenue proposal*, p. 99.
523 SP AusNet, *Revised revenue proposal*, p. 100.
524 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 176–8.

The EUCV expressed concern that the AER applied asymmetric caps and collars for SP AusNet's STPIS parameters. By asymmetric, the EUCV meant caps and collars that were not numerically equidistant from the performance target. The EUCV considered this would allow SP AusNet to obtain bonuses easier than suffer penalties, and saw no good reason for asymmetric incentives to apply.[526]

One contributing factor to the asymmetric caps and collars was that we accepted the statistical distributions SP AusNet used to derive its caps and collars as being conceptually sound.[527] We considered that they generally reflected the inherent skewness in the five years of performance data available. This meant that the distributions used to calculate caps and collars were asymmetric distributions (non–normal). However, we accepted EMCa's advice that caps and collars should be set at the 5th and 95th percentile when asymmetric distributions are used.[528] We did this to make the probability of attaining the cap or collar value equally probable.

Another contributing factor to the asymmetric caps and collars was the fact that we set performance targets equal to the average of the last five years data, in accordance with the scheme.[529] EMCa noted that using the mean of the distribution as the performance target would mean that the caps and collars would be calculated with direct reference to the target. We consider there is merit in EMCa's approach. However, we set the performance target equal to the average of the last five years data, rather than the mean of the distribution. This was because we considered the ordinary meaning of the term 'average' in the STPIS means the arithmetic average.[530] This is consistent with our interpretation of the term in previous transmission determinations.

Our approach may result in cap and collar values that are not numerically equidistant from the performance target. However, it results in values that are statistically symmetric about the mean. This means that, based on the five years of performance data available, the probability of SP AusNet's service performance hitting the cap or collar (and therefore earning the maximum bonus or penalty) is the same. Setting caps and collars numerically equidistant from the performance target may result in caps and collars that have different probabilities of being reached. It also assumes that performance data is distributed normally (symmetrically), when this is often not the case. We consider that our approach results in a more balanced outcome.

5.4.2 Market impact component

We have audited SP AusNet's 2011 and 2012 performance data. Using the following approach:

- independently calculating (using AEMO data) the number of dispatch intervals related to binding outage constraints and validating that the outages were attributable to the TNSP
- searching AEMO Market Notices to confirm the validity of TNSP's classification of constraints as outage related
- cross-checking network outage request information provided by AEMO to confirm the classification of constraints as outage related.

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525 SP AusNet, *Response to AER RRP 03*, 6 November 2013.
526 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp. 37–8.
527 We accepted SP AusNet's proposed distributions for all sub–parameters except for the 'loss of supply > 0.05 system minutes' and 'material failure of SCADA' sub–parameters. AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 183–7.
528 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 184–5; EMCa, *SP AusNet technical review*, August 2013, p. 107, paragraphs 396–8.
529 AER, *Final – Service target performance incentive scheme*, December 2012, clause 3.2(g).
530 AER, *Final – Service target performance incentive scheme*, December 2012, clause 3.2(g).

The audit resulted in the adjustments shown in Table 5..

Table 5. AER adjustments to SP AusNet's market impact component performance data

Constraint	Adjustment	Reason
V_MACARTHUR_210 (2012)	-6	Six counts identified by SPA are not in the AEMO MCC Constraint solution table.
V_HYML1_3 (2012)	-1	One count referenced by SPA is not in the AEMO MCC Constraint solution table.
N>>V-DDMS_A (2011)	-3	Three counts referenced by SPA are not in the AEMO MCC Constraint solution table.
V:V_DDSM (2011)	51	Outage incorrectly classified as used to manage non-prescribed outage and excluded from SPA count.
V::N_SMCSQE_R (2011)	7 (excluded)	To be added to the data set, but excluded under exclusion clause 4, as the constraint was used to manage non-prescribed assets.
V::N_SMCSVE_R (2011)	12 (excluded)	To be added to the data set, but excluded under exclusion clause 4, as the constraint was used to manage non-prescribed assets.

Source: SP AusNet, *Response to AER RRP 10*, 20 November 2013.

Given the above adjustments, we revised SP AusNet's 2011 performance from 3329 to 3322 dispatch intervals and its 2012 performance from 2560 to 2608 dispatch intervals. In arriving at this revision, we continuously engaged with SP AusNet.[531]

We have not made a decision on SP AusNet's performance target for 2014, as SP AusNet's 2013 data is not yet available for this calculation.[532] However, we have audited SP AusNet's 2011 and 2012 performance, which will be used to calculate the 2014 target in the future.

5.4.3 Network capability component

SP AusNet adopted our draft decision on the network capability component (NCC).

However, the EUCV and EUAA raised several concerns with the NCC in their submissions. The EUCV considered that we should totally revise our approach to the NCC,[533] while the EUAA considered the application of the NCC should be suspended.[534]

Steps taken to address concerns raised in submissions

In consultation with AEMO and SP AusNet, we have taken additional steps subsequent to our draft decision to help address concerns raised in submissions:

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531 AER, *Information request AER RRP 06*, 12 November 2013; SP AusNet, *Response to AER RRP 06*, 15 November 2013; AER, *Information request AER RRP 10*, 19 November 2013; SP AusNet, *Response to AER RRP 10*, 20 November 2013.

532 The 2013 data will be submitted on 1 February 2014.

533 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 40.

534 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, p. 14.

1. we added another project to SP AusNet's NCIPAP which will help maximise benefits for consumers from the network capability component[535]

2. AEMO conducted further work assessing the benefits of the NCC projects

3. we have addressed the specific concerns raised in submissions in this final decision.

We consider these additional steps will help to maximise the benefit to consumers from the implementation of the NCC, and better define the benefits arising from NCC projects. While we consider that several issues raised in submissions will require further investigation in the future, we consider that the application of the NCC for SP AusNet's 2014–17 regulatory control period will benefit consumers. This is supported by AEMO's assessment, which estimated that net market benefits of almost $80 million could be delivered from SP AusNet's revised NCIPAP.[536]

Questions regarding the fundamental design of a component of the STPIS are usually considered in consultations outside a TNSP's revenue determination process. However, given the concerns raised by the EUAA and EUCV, and the fact that the NCC was only introduced in December 2012, we consider it appropriate to respond to concerns on the design of the scheme in this final decision.

Summary of submission concerns on the design and necessity of the network capability incentive

The EUAA considered that the NCC incentive payments provided to SP AusNet were generous and unwarranted, as SP AusNet was not incurring any risk to undertake these projects because they have already been identified and costed. The EUAA noted that SP AusNet still receives a bonus even if it does not complete any NCIPAP projects. Further, it considered it inappropriate to link SP AusNet's reward to the MAR rather than actual expenditure on projects.[537]

The EUCV considered there was no reason to apply the NCC, as it saw little difference between NCC projects and "normal" capex projects. The EUCV saw the incentive payment for NCC projects as the only difference between the two, and queried the benefit to consumers from this approach. It had similar concerns to the EUAA that TNSPs would receive a benefit even if they did not implement the projects. It also considered that there was insufficient justification of the benefits of NCC projects.[538]

We engaged in further discussions with the EUAA and EUCV regarding their submissions on the NCC. Both the EUAA and EUCV stated their support for the objectives which the NCC sought to achieve. However, both the EUAA and EUCV reiterated their concerns about the network capability component.

The development and design of the network capability component

The following sections outline the rationale, development and design of the network capability component of the STPIS.

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535 While an additional project was added (Emergency control scheme for Dederang–Murray 330 kV lines), the total project list reviewed by AEMO exceeded 1 per cent of SP AusNet's MAR. To meet the requirements of the scheme (clause 5.2(b)), the lowest value projects were removed so that the total project cost was just below 1 per cent of MAR. AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

536 AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

537 EUAA, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, November 2013, pp. 13–4.

538 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, pp. 38–40.

Development of the network capability component

The NCC applicable to SP AusNet during the 2014–17 regulatory control period was introduced following our recent review of the STPIS conducted during 2011 and 2012. At the time of the review there was support for the NCC from the Major Energy Users Association (an affiliate of the EUCV):[539]

> The draft STPIS does impose some requirement (especially the network capability component) to encourage the TNSPs to invest some of the expected bonus from improving service to provide the improved service. The MEU considers that his new parameter is a welcome step forward.

The EUAA did not make a submission during our review of the STPIS.

During the recent STPIS review we considered it appropriate to introduce a new incentive to deliver more efficient levels of network capability at times when it is needed most.[540] We explained that there are a range of factors that may limit the capability of assets and therefore the ability of those assets to deliver peak load and facilitate the efficient dispatch of generation in the market. TNSPs are best placed to identify limitations in their network and implement low cost solutions to ameliorate those limitations for the benefit of all network users. However, we recognised that the existing regulatory framework did not incentivise this type of behaviour, stating that:[541]

> TNSPs are not incentivised or allocated expenditure to identify limitations that could be addressed or improved through increasing the network capability of existing transmission assets as part of their business as usual practices. The current framework also provides limited incentives for interaction between the operating and asset management units of a TNSP's business. As highlighted above, prior to the introduction of the MIC there was little focus by TNSPs on the impact their asset management decisions had on wholesale market pricing outcomes. Thus, the absence of an adequate incentive has meant that attempts to increase network capability by TNSPs other than through major capital expenditure have been sporadic.

Further, there are incentives under the regulatory framework to reduce expenditure, even when there may be benefits to consumers from targeted expenditure that addresses network capability.

We sought to address these deficiencies through the introduction of the NCC. The NCC is designed to incentivise increased capability of existing assets in the network when needed most. It does this by requiring TNSPs to reveal the existing capability of their networks and to identify low cost projects to increase network capability that would provide greater value to generators and consumers.

Generators benefit from improved capability because there is a lower risk of their generation dispatch being constrained. These benefits are ultimately passed onto customers through a reduction in wholesale electricity prices. Customers further benefit from the improved ability of the network to meet peak demand without additional major augmentation capex (and accompanying higher prices).

Design of the network capability component

Under the NCC, TNSPs must submit a network capability incentive parameter action plan (NCIPAP). The NCIPAP outlines the key network capability limitations on each transmission circuit or load injection point in the TNSP's network. It also includes a list of projects (with a total cost of up to 1 per cent of the TNSP's proposed MAR) aimed at improving network limits. The projects are ranked in priority order based on the value to consumers. AEMO assists in the preparation of the NCIPAP by

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539 Major Energy Users Association, *Service Target Performance Incentive Scheme review*, 18 October 2012, p. 5.

540 AER, *Explanatory statement – Electricity transmission network service providers, Draft service target performance incentive scheme*, September 2012, p. 35.

541 AER, *Explanatory statement – Electricity transmission network service providers, Draft service target performance incentive scheme*, September 2012, p. 35.

independently assessing the projects, including their cost, benefit and ranking. Project costs cannot be included in the TNSP's capex and opex forecasts.

As part of a revenue determination, we make a decision on the NCIPAP proposed by the TNSP. If the NCIPAP is approved, the NCC provides an annual incentive payment to the TNSP to fund the approved projects. This payment is equal to 1.5 per cent of the TNSP's MAR for that year. If TNSPs do not complete and deliver the benefits identified in projects, the incentive payment may be reduced by up to –2 per cent of MAR in the final year of the regulatory control period. This approach, as applied to SP AusNet, is shown in Table 5..

Table 5. Network capability component incentive payment schedule

	2014–15	2015–16	2016–17	Average per year (approx.)
If all projects completed	1.5%	1.5%	1.5%	1.5%
If no projects completed	1.5%	1.5%	–2.0%	0.3%

Source: AER analysis; AER, *Final – Service target performance incentive scheme*, December 2012, clauses 5.3(a)–(c).

The purpose of the annual NCC incentive payment is to fund the implementation of NCIPAP projects. If the NCIPAP, developed in consultation with AEMO, is comprised of projects totalling approximately 1 per cent of MAR, the TNSP receives an incentive of around 0.5% of its MAR.

We considered that the design of the incentive payments was appropriate to fund and provide TNSPs with an incentive to work with AEMO to identify and undertake network capability projects. This was because there is presently no incentive under the regulatory framework to encourage TNSPs to undertake such projects. The regulatory framework does not encourage TNSPs to undertake small scale projects to improve network capability and there is no evidence that such projects are business–as–usual practice. However, such low cost projects may have substantial value for customers by removing limitations on the network which result in inefficient wholesale market outcomes or inefficient major capital expenditure. Taking this into account, we considered that the design of the NCC incentive payment was necessary to adequately incentivise TNSPs to respond meaningfully to the new component to benefit customers.

Specific concerns raised in submissions

The following section deals with the more specific concerns raised in the EUAA and EUCV submissions.

Quantification of project benefits

The EUCV considered the quantification of the benefits of the NCC projects was insufficient, and therefore could not be considered to meet the NEO. It considered that the intent behind the NCC was to cap the project list at a small number of projects which would have clear and definable benefits to consumers. The EUCV considered this was the intent behind SP AusNet's application.

The ability to quantify the benefits in dollar terms for SP AusNet was constrained by the tight timeframes surrounding the implementation of the scheme and SP AusNet's draft decision. This is the first time that AEMO and the AER have undertaken an assessment of a TNSPs NCIPAP, and as such we are continually refining and identifying areas where the NCIPAP assessment process can be

improved. As part of this process, we recognise that the justification for the priority projects should be improved. Since the publication of the draft determination, we worked with AEMO and SP AusNet to provide a more detailed assessment of the NCIPAP projects, including a cost benefit assessment where appropriate. AEMO reassessed each project, and estimated the net benefits of projects where possible. These benefits will be realised via improved reliability, reduced network congestion and deferred capex.[542] AEMO estimated that SP AusNet's NCIPAP could result in net benefits of approximately $80 million.[543] This shows that the expected benefits of the scheme are likely to outweigh the costs. The revised NCIPAP, which sets out a more detailed assessment of the net benefits of each priority project, is published on our website.

We are working with AEMO to ensure a more robust assessment of project benefits going forward in future NCIPAP assessments. However, the quantification of project benefits must be balanced with the cost of assessing them. Undertaking a full market benefit assessment is time consuming and costly. The intention of the NCC is not to force TNSPs to undertake a regulatory investment test (RIT–T) style assessment to justify small scale projects. The value of undertaking such detailed assessments for small projects that are likely to result in net benefits is questionable. We consider that the level of analysis which TNSPs must provide to estimate the benefits of their proposed projects will depend on the project ranking, the cost of the project and the class of benefits associated with the project. We considered this balance when designing the scheme.

Maximum penalty under the scheme

The EUAA and EUCV both raised concern that TNSPs may receive a reward even if they do not complete any projects.[544] While this is true, we consider this to be an unlikely outcome. This would result in the TNSP losing 1.5 per cent of MAR incentive payment in the final year of its regulatory period in addition to a –2 per cent of MAR penalty. Further, each TNSP's progress against their NCIPAP will be monitored and publically reported via an annual STPIS reporting process, providing a transparent monitoring of TNSP efforts to implement projects. Collectively, these factors provide a strong incentive for TNSPs to complete NCC projects.

Network capability projects vs capex projects

The EUCV considered that NCIPAP projects are no different to capex projects, and that there is no reason to incentivise NCC projects.

However, given the information asymmetry between the TNSP and the regulator, these projects would not be identified in the absence of the NCC. They have only been identified as a result of examination of network limits required by the NCC, and have been endorsed as having substantial benefits for network users by AEMO. Further to this, unlike other capex projects identified in a revenue proposal, identified NCIPAP projects must be completed (and benefits realised) or penalties will apply. For these reasons, we consider it appropriate that NCIPAP projects are separate from forecast capex.

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542 AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

543 AEMO, *AEMO endorsement of SP AusNet network capability incentive parameter action plan (NCIPAP) for 2014–17 (with additional projects and quantified net benefits)*, 20 December 2013.

544 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 38–9; EUAA, *Submission on SP AusNet draft decision and revised revenue proposal*, 6 November 2013, p. 14.

Inclusion of additional projects in SP AusNet's NCIPAP

The EUCV expressed concern that it appears the AER expanded the list of NCIPAP projects, based on the advice of AEMO. The EUCV also noted that SP AusNet's application contained a relatively low number of projects, for a modest cost. However, the AER expanded the project list with an accompanying four fold cost increase.[545]

Generally speaking, the inclusion of additional projects in the NCIPAP (up to a maximum of 1 per cent of proposed MAR) will benefit consumers, provided those additional projects result in a net benefit. This is because the level of funding under the NCC is set at 1.5 per cent of MAR each year irrespective of the total cost of NCIPAP projects. As such, the addition of beneficial projects means that consumers are getting better value for money from the scheme. All additional projects were assessed by AEMO and endorsed as being appropriate for inclusion in SP AusNet's NCIPAP.

Approval of efficient expenditure

The EUCV considered we can only approve capex which is efficient. As such, unless SP AusNet can prove that the proposed NCC capex is efficient, we should not provide an allowance for the expenditure.[546]

The forecast costs for NCC projects are not included in the opex and capex forecasts and are not assessed against the criteria for those forecasts.[547] This is because they are funded via the annual incentive payments, not via revenue provided under the building block approach. NCC projects are therefore assessed in accordance with the requirements that are set out in the STPIS itself.[548]

We consider that the requirements for NCC projects in the STPIS are sufficiently robust to ensure projects provide value for consumers. We do not consider it worthwhile to conduct a detailed bottom up assessment of each project's cost. However, AEMO does conduct a high level assessment of the reasonableness of each project's cost, and all projects proposed in a TNSP's NCIPAP are scrutinised by AEMO to ensure they deliver material benefits. Further, if there is a disagreement between the TNSP and AEMO about the material benefits of a project, then the TNSP must detail this disagreement in the NCIPAP. These disagreements will be considered by us when reviewing the proposed project. Lastly, we can reject a TNSP's proposed project if it is inconsistent with the objectives of the scheme, which includes the contribution towards achieving the National Electricity Objective (NEO). Thus, if we consider that a proposed project does not further the NEO, then it would be excluded from the NCIPAP.

As the NCC aims to incentivise and fund small scale projects (where a comprehensive market benefit analysis may not be cost effective), we consider the NCC project assessment criteria in the STPIS is appropriate for the nature of the projects and the goals of the scheme.

Removal of Dederang–Wodonga project

In the NCIPAP endorsed by AEMO, the cost of the Dederang–Wodonga project was given as $0. However, SP AusNet subsequently revised its cost estimate for this project to $190 000. Upon advice from AEMO, we have removed this project from the NCIPAP. The expected benefits from this project were relatively small, however the project was still considered worthwhile at zero cost. However,

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545 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 38.
546 EUCV, *Submission to the AER: AER draft decision and SP AusNet revised proposal*, October 2013, p. 40.
547 AER, *Final – Service target performance incentive scheme*, December 2012, clause 5.2(q).
548 AER, *Final – Service target performance incentive scheme*, December 2012, clauses 1.4 and 5.2.

AEMO advised that the expected benefit was less than the revised cost of $190 000.[549] We have taken AEMO's advice into account, and we have removed this project from the NCIPAP on the basis that the benefits are not expected to outweigh the costs.

[549] AEMO, *Email: Update to SP AusNet NCIPAP project list*, 14 January 2014.

Part 3 – Appendices

A Opex step changes

A.1 Step changes the AER accepts

We accept the 'AEMO operating agreement' and 'fire service levy' step changes as they are both new, externally imposed obligations, and contribute to a total opex forecast that reasonably reflects the opex criteria. We also accept the 'controller simulator' step change as it is likely to result in overall benefits and requires an incremental opex increase.

A.1.1 AEMO operating agreement

SP AusNet proposed a new step change in its revised revenue proposal of $0.09 million relating to a change to the 'deed of delegation' held with AEMO in relation to certain power system services:[550] These services were previously classified by SP AusNet as unregulated services. However, the new deed of delegation with AEMO, commencing on August 2013, means they will now be classified as prescribed transmission services. We assessed the new deed of delegation and confirmed these services are prescribed transmission services.[551] We therefore accept the proposed step change.

SP AusNet proposed a new step change in its revised revenue proposal of $0.09 million relating to a change to the 'deed of delegation' held with AEMO in relation to certain power system services, including:[552]

- load shedding and load restoration
- system restart services and
- liaising with distributors.

SP AusNet's opex forecast for this step change is shown in Table A..

Table A. SP AusNet revised proposal step change AEMO operating agreement ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
AEMO operating agreement	0.03	0.03	0.03	0.1
AER final decision	0.03	0.03	0.03	0.1

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 89.

EMCa was also supportive of this step change, and noted that it will not result in an increase to final electricity bills, as AEMO's opex will decrease by the same amount.[553]

A.1.2 Fire service levy

SP AusNet proposed a $2.8 million step change in relation to the fire service levy (FSL). This is not technically a step change because it is a re-categorisation of opex: it moves the FSL from the bottom-

550 SP AusNet, *Revised revenue proposal*, p.86.
551 NER, chapter 10, definition of prescribed transmission services.
552 SP AusNet, *Revised revenue proposal*, p. 86.
553 EMCa, *SP AusNet technical review*, January 2014, p. 41 paragraph 167 and pp. 70–1 paragraphs 285–6. .

up insurance forecast to recurrent opex. We accept the base year opex requires an adjustment from insurance to taxes/leases, but this has no net impact on the total controllable opex base. Our final decision on this step change is shown in Table A..

Table A. SP AusNet revised proposal step change for the fire service levy ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Fire service levy	0.9	0.9	0.9	2.8
AER final decision	0.9	0.9	0.9	2.8

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 89.

The FSL was previously included within insurance premiums. However, from 1 July 2013, the FSL has been collected through council rates due to a legislative change.[554] SP AusNet's revenue proposal included the FSL within its insurance forecast. We removed the FSL from the insurance forecast in our draft decision.[555] SP AusNet's revised revenue proposal therefore proposed an increase to its base year opex to account for the addition of a recurrent FSL payment via council rates, by adding it back to the taxes/leases opex category.[556] We note that SP AusNet's FSL forecast of $2.8 million is very similar to the amount contained within its draft decision insurance forecast ($2.7 million). We also note that the FSL costs have been excluded from the insurance forecast. On this basis, we accept SP AusNet's FSL opex costs for 2014–17 to be included in our base opex forecast.

A.1.3 Controller simulator training

In our draft decision, we accepted this step change on the basis that it represented good industry practice and would result in a reduction in risk.[557] SP AusNet considered this was inconsistent because we accepted this step change on the basis that it was 'good industry practice', yet we rejected other step changes even though they also reflected good industry practice.[558]

We have considered SP's statement about inconsistency, and re-examined this step change. We note that our reasoning for accepting this step change in the draft decision may have created a perception of inconsistency; while good industry practice and risk reductions are valid considerations when assessing a step change, in isolation they do not justify an opex step change.

EMCa accepted this step change. EMCa accepted the overall IT capex proposal, which includes SCADA enhancements, one of which is the purchase of the training simulator. The proposed purchase is described in SP AusNet's ICT strategy document, which includes a table of benefits and a risk assessment for the overall SCADA enhancement program. While the benefits are not quantified in that document, the experience of EMCa's team is that such investments are NPV-positive based on mitigating the consequences of low-probability but high consequence events. EMCa also accepted that an additional operating expense will be required to establish and maintain the simulator and SP AusNet's estimate for this appears reasonable. EMCa consider that there will not be any net change in the "training" resource itself.

554 Victorian Government, *Fire services property levy*, http://www.firelevy.vic.gov.au/about-the-levy.html.
555 AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 39.
556 SP AusNet, *Revised revenue proposal*, p.89.
557 AER, *Draft decision: SP AusNet transmission determination*, August 2013, pp. 232–3.
558 SP AusNet, *Revised revenue proposal*, p. 80.

We are satisfied with EMCa's finding on its review of the whole of the capex ICT strategy and opex implications to accept this as a step change.

Table A. SP AusNet revised proposal controller simulator training step change ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Controller simulator training	0.9	0.9	0.9	2.8
AER final decision	0.9	0.9	0.9	2.8

Source: AER analysis; SP AusNet, *Revenue proposal*, Appendix 5E, p. 21.

A.2 Step changes the AER does not accept–other

We do not accept the following proposed step changes.

A.2.1 AEMO outage planning requirements

SP AusNet reproposed a $0.6 million step change for AEMO outage planning requirements. We do not accept that moving to Network Outage Schedule (NOS) reporting will result in an incremental increase in opex. SP AusNet is already required to plan outages 13 months in advance. SP AusNet's proposed opex for this step change and our final decision on this step change is shown in Table A..

Table A. SP AusNet's proposed step change for AEMO outage planning requirements ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
AEMO outage planning requirements	0.2	0.2	0.2	0.6
AER's final decision	0.0	0.0	0.0	0.0

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 86.

SP AusNet's existing practice is to enter outage data into NOS three weeks before an outage.[559] SP AusNet currently uses spread sheets to report outages. NOS may require more detailed information to be reported than is currently required in the spread sheet reporting. However, as SP AusNet already uses NOS, this information is already provided by SP AusNet but at a later stage.[560] Improvements in outage planning processes should result in operating efficiencies, such as through more efficient use of work crews or other network staff. NOS will also streamline the process by automatically taking information from the asset management systems. Therefore, staff may not be required to manually populate outage spread sheets. As such, we do not consider this process change will result in an incremental increase in expenditure, and we therefore do not accept this step change.

559 SP AusNet, *Response to RRP AER12*, 27 November 2013, p. 2.
560 SP AusNet, *Response to RRP AER12*, 27 November 2013.

We considered EMCa's advice when making our decision. EMCa rejected this step change on the basis that, while changes are being made to the tools used for managing and communicating outages, the head requirement to maintain and communicate a rolling 13 month outage plan is not new. EMCa was also not convinced that SP AusNet had, on balance, accurately assessed the incremental expenditure or accounted for savings that should result from better planning and communications tools. EMCa also noted that it is reasonable to expect that SP AusNet's outage plan optimisation will release works program efficiencies through improved workforce coordination.[561] On this basis, EMCa concluded that significant recurrent net opex for NOS reporting would not be incurred and that this step change should therefore be rejected.[562]

A.2.2 Security of critical infrastructure – terminal stations

C–I–C. Our assessment of this step change is contained in confidential appendix D.

A.2.3 Impact of the 'Clean Energy Future' legislation on SP AusNet's SF6 top ups

SP AusNet reproposed a step change associated with the former Government's 'Clean Energy Future' legislation package. We do not accept that this step change meets the opex criteria because:

- it is unlikely that the carbon tax will apply during the 2014–17 regulatory control period, as the Australian Government has expressed clear intent to repeal the carbon tax from 1 July 2014.[563] As such, SP AusNet's SF_6 leak opex forecast is not a realistic expectation of the costs inputs required to achieve the opex objectives during the 2014–17 regulatory control period.[564]
- significant opex has been invested in a program to reduce SF6 during the 2008–14 regulatory control period which is in the base year. This program is expected to continue in the 2014–17 regulatory control period. However, despite the expenditure to date, SP AusNet contends that its leaks will increase in the future. EMCa found that this program has not been successful in reducing gas leaks.[565]A prudent TNSP would revisit its SF_6 reduction program during the 2014–17 regulatory control period, and it is therefore reasonable to expect SF_6 leakage levels to fall. SP AusNet is therefore unlikely to face incremental opex requirements for this proposed step change.

SP AusNet's revised forecast and our final decision for this step change is shown in Table A..

Table A. SP AusNet revised proposal step change for SF_6 top ups ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Impact of the 'Clean Energy Future' legislation on SF_6 top ups	0.3	0.6	0.8	1.7
AER final decision	0.0	0.0	0.0	0.0

Source: AER analysis; SP AusNet, *Response to EMCa045*, 19 November 2013.

This proposed step change is driven by a legislative requirement. However, the Australian Government has expressed clear intent to repeal the carbon tax from 1 July 2014, and the legislation

561 EMCa, *SP AusNet technical review*, January 2014, p. 64 paragraphs 248–49 and p. 40 paragraph 164.
562 EMCa, *SP AusNet technical review*, January 2014, p. 64 paragraphs 248–50.
563 Australian Government, *Repeal of the carbon tax: Exposure draft legislation and consultation paper*, October 2013.
564 NER, clause 6A.6.6(c)(3).
565 EMCa, *SP AusNet technical review*, January 2014, p. 67 paragraph 263.

to repeal it has been introduced to Federal Parliament.[566] Given the government's clear policy intent, it is not a realistic expectation that the carbon tax will apply for any significant period of time during the 2014–17 regulatory control period.

Further, we note the extensive (but ineffective)[567] program of works aimed at reducing SF_6 leaks during the 2008–14 regulatory control period, which SP AusNet proposes to continue during the 2014–17 regulatory control period.[568] We expect a prudent TNSP would revisit this program to improve its efficacy on SF_6 gas leakage reductions. As such, it is reasonable to expect that SF_6 leaks will trend downwards during the 2014–17 regulatory control period.

For these reasons, we are not satisfied that SP AusNet will incur any incremental opex for this proposed step change. We therefore do not accept this step change.

We considered EMCa's advice when making our decision. EMCa considered that this step change should not be accepted. EMCa noted the clear government policy objective to repeal the carbon tax, and considered that SP AusNet was likely to only be exposed to SF_6 leakage costs until 1 July 2014. EMCa also considered that the volatility in SP AusNet's actual and forecast SF_6 emissions casts doubt on the overall accuracy of its SF_6 leakage forecast. EMCa also considered that SP AusNet should revisit its SF_6 reduction strategy given the apparent inadequacies of the existing strategy in an attempt to reduce, or at least stabilise, SF_6 emissions. EMCa concluded that, on the balance of probabilities, SP AusNet will not be subject to a recurrent cost impost, and therefore recommended that this step change be rejected.[569]

A.2.4 Transitional arrangements for the economic regulation of NSPs rule change

This is not a strictly a 'step change' but rather cyclical expenditure associated with the transmission determination that is occurring according to a different cycle in the three year 2014–17 regulatory control period. This kind of opex tends to be incurred in the last two years of a TNSP's regulatory control period.[570]

SP AusNet proposed a step change of $3.6 million for transitional arrangements relating to its next revenue reset, representing a $1.7 million increase above the $1.9 million we approved in the draft decision. SP AusNet's forecast for this step change is shown in Table A..

Table A. SP AusNet revised proposal step change for transitional arrangements ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Transitional arrangements	0.8	1.6	1.2	3.6
AER final decision	0.6	1.1	0.8	2.5

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 89.

The components of this step change are shown in Table A..

566 Australian Government, *Repeal of the carbon tax: Exposure draft legislation and consultation paper*, October 2013, p. 1.
567 EMCa, *SP AusNet technical review*, January 2014, p. 67 paragraph 261–5.
568 SP AusNet, *Response to EMca 045*, 19 November 2013. There is opex for these programs in the 2011–12 base year.
569 EMCa, *SP AusNet technical review*, January 2014, p. 67 paragraphs 261–5.
570 The base opex forecast includes ongoing regulatory costs of $0.3 million per annum. AER, *Draft decision: SP AusNet transmission determination*, August 2013, p. 239.

Table A. Components of the transitional arrangements step change ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Apply historical reset costs		1.1	0.8	1.9
Impact of 4 month extension to reset period	0.4			0.4
Additional FTE for consumer engagement		0.1		0.1
Additional 2 FTEs for benchmarking	0.4	0.4	0.4	1.3
Total	0.8	1.6	1.2	3.6

Source: SP AusNet, *Response to AER RRP 015,* 29 November 2013.

We do not accept that this step change meets the opex criteria because the proposed costs do not reasonably reflect the efficient and prudent costs of conducting the next revenue reset.

We note that SP AusNet completed a robust consumer engagement process for this reset. Consumer groups informed us of SP AusNet's effective consumer engagement processes. As such, we consider that SP AusNet can already undertake a robust consumer engagement process, and will not incur additional costs in complying with our Consumer Engagement Guideline. Further, the costs of engaging with the AER and stakeholder's during our Better Regulation process is included within the 2012–13 and 2013–14 reset costs, and as such are included within our draft decision opex forecast.[571] This was an extensive and detailed process, yet SP AusNet noted that it did not result in a step increase to opex.[572] Therefore, we consider that the costs incurred during the Better Regulation process, which are included within our draft decision opex forecast, are sufficient to cover any new costs imposed by the Consumer Engagement Guideline. We therefore do not accept the consumer engagement element of this step change.

However, we note the increased revenue reset duration under the NER, and we accept that additional opex is required to account for this increase. We also note the additional benchmarking requirements imposed by our Expenditure Forecast Assessment Guideline. However, we consider SP AusNet's estimate of two FTEs for three years is excessive. We consider that one FTE, working for one year, should be sufficient to satisfy the Expenditure Forecast Assessment Guideline requirements. Once SP AusNet's benchmarking processes are established, it is likely that there will be a reduction in other reset costs, such as those associated with bottom up forecasting methods. As such, while there may be ongoing costs associated with benchmarking, we would expect these to be offset by reductions in other reset costs once the necessary processes are established. We therefore accept a total step change of $2.5 million. Our assessment of each element of this step change is shown in Table A..

[571] SP AusNet, *Response to AER RRP 20*, 12 January 2014.
[572] SP AusNet, *Response to AER RRP 20*, 12 January 2014.

Table A. AER assessment of the components of the transitional arrangements step change ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Apply historical reset costs		1.1	0.8	1.9
Impact of 4 month extension to reset period	0.4			0.4
Additional FTE for benchmarking	0.2			0.2
Total	0.6	1.1	0.8	2.5

Source: AER analysis.

We considered EMCa's advice when making our decision. EMCa noted that there would be an increase in costs resulting from the concurrent distribution and transmission resets, but not to the extent proposed by SP AusNet. EMCa accepted that additional community engagement would be required, but considered that the costs associated with the extension of the reset process would cover these costs. EMCa also considered that SP AusNet will be able to leverage off its existing consumer engagement resources to ensure it meets the Consumer Engagement Guidelines. EMCa concluded that SP AusNet's request for two FTEs for three years overstated the benchmarking requirements. EMCa considered that one FTE for one year would be sufficient to build a solid platform for ongoing benchmarking. EMCa concluded that a total step change of $3.5 million was appropriate, which, relative to a 2011/12 base year, is equivalent to allowing a step change of $2.5 million.[573]

A.2.5 SCADA security 'software QA/QC environment' and IT network security

SP AusNet reproposed two step changes related to IT security. These step changes relate to:

- the establishment of an ongoing patching regime and review process to reduce the security threat to SCADA and
- addressing corporate and IT network security by implementing identity access management.

SP AusNet's forecast opex for these two step changes is shown in Table A..

[573] EMCa, *SP AusNet technical review*, January 2014, p. 68 paragraphs 268–70.

Table A. SP AusNet revised proposal step changes for SCADA security and IT network security ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
SCADA security	0.2	0.2	0.2	0.6
IT network security	0.3	0.3	0.3	0.8
AER final decision	0.0	0.0	0.0	0.0

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 90.

We do not accept that this step change meets the opex criteria because:

- they are not driven by new obligations, and a prudent TNSP would already be addressing these issues
- these proposed drivers are likely to be addressed by the large IT capex program
- the program is likely to result in cost savings that will be greater than the proposed cost of the program. As such, incremental opex is not required.

Both step changes are related to the implementation of SP AusNet's capex program. SP AusNet stated that recent technological changes had increased the threat to SP AusNet's SCADA security. SP AusNet noted that these increased threats had led to an increased policy focus by the Australian government on cyber security. SP AusNet also noted that it had only just become possible for SP AusNet to implement the SCADA security patching component of the step change safely, as the vendor has recently certified that it was safe to carry out the patching regime.[574]

We note the increase in global cyber threats. However, we do not consider that an increase in opex from one period to the next is required to allow SP AusNet to undertake these programs. The threat is not new: businesses have been grappling with cyber threats for several years, and SP AusNet recognised the threat in 2009.[575] We would expect a prudent TNSP would have put in place processes to address these threats in the current period (that is, it is a revealed cost through base opex), and we consider that the large IT program would address these risks. Given this threat is not new, we do not accept these step changes.

We considered EMCa's advice when making our decision. EMCa considered that it was likely that there is an increased security threat to SP AusNet's network operations. However, EMCa noted that this threat has been recognised by SP AusNet since 2009, and has is recognised in SP AusNet's IT strategy. EMCa also considered that, once recognised, SP AusNet should have been taking steps to mitigate these risks.[576]

EMCa considered that SP AusNet's new IT infrastructure and systems will allow SP AusNet to change the way it works with in–built additional security features, rather than requiring a recurrent step change. EMCa was not satisfied by the evidence provided by SP AusNet to demonstrate the interaction between the threats this step change is aimed at addressing, the large and complex IT

574 SP AusNet, *Revised revenue proposal*, pp. 89–90.
575 EMCa, *SP AusNet technical review*, January 2014, p. 70 paragraph 278.
576 EMCa, *SP AusNet technical review*, January 2014, p. 70 paragraph 278.

program, and the extent to which the additional resources are required in the short and longer term. The relatively small opex amounts are indistinguishable from the much larger capex program. On this basis, EMCa recommended rejecting these two step changes.[577]

A.2.6 Service standard reporting tools

SP AusNet reproposed a step change of $0.5 million for service standard tools to enable market reporting. It covers an additional 0.75 FTE to manage the interface between SP AusNet's asset management system and AEMO's NOS and market management system (MMS). This integration forms part of the IT program. SP AusNet's forecast for this step change is shown in Table A..

Table A. SP AusNet revised proposal step change service standard reporting tools ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
Service standard reporting tools	0.2	0.2	0.2	0.5
AER final decision	0.0	0.0	0.0	0.0

Source: AER analysis; SP AusNet, *Revised revenue proposal*, p. 91.

SP AusNet stated that there is no overlap with the AEMO outage planning step change. While the outage planning step change related to the planning of outages, this step change related to the establishment of the interface with AEMO's systems and the management of the B2B link.[578]

We do not accept that this step change meets the opex criteria because:

- the proposed cost does not reflect the efficient and prudent cost, nor does it reflect a realistic expectation of the relevant cost inputs
- the program is likely to result in cost savings that will be greater than the proposed cost of the program. As such, incremental opex is not required.

Once the link is established under the IT capex program, we would not expect there to be a requirement for an ongoing FTE to maintain the interface with NOS and MSS. SP AusNet did not provide any further evidence as to what 'managing the interface' actually entails. We would expect that, once established, any issues with the interface could be handled on an ad hoc basis by SP AusNet's existing IT resources. Further, we note that SP AusNet currently reports against the market impact component of the STPIS using data provided by consultants.[579] SP AusNet stated that it is currently unable to verify this data at the source.[580] The B2B link will allow SP AusNet to obtain market data from AEMO's MSS. This will lead to cost savings, as SP AusNet will not require consultants and the process will be automated and more efficient. For these reasons, we do not accept this step change.

We considered EMCa's advice when making our decision. EMCa considered that SP AusNet had not provided compelling information to support its proposition that the interface with NOS and MMS required an ongoing additional IT resource. EMCa noted that it is plausible there is a short term

577 EMCa, *SP AusNet technical review*, January 2014, p. 41 paragraph 167 and p. 70 paragraphs 279–80.
578 SP AusNet, *Revised revenue proposal*, p. 90.
579 SP AusNet, *Revenue proposal*, Appendix 5E, p. 23.
580 SP AusNet, *Revenue proposal*, Appendix 5E, p. 23.

impost, but that it was also reasonable to expect the medium term impact of the change would not have a net cost impost. EMCA was not satisfied that cost savings had been accounted for. EMCa therefore recommended not accepting this step change.[581]

[581] EMCa, *SP AusNet technical review*, January 2014, p. 40 paragraph 167 and p. 69 paragraphs 275–6.

B Insurance and self-insurance (sensitive information)

Commercial in confidence. Assessment contained in unpublished confidential appendix B.

C Contingent projects (sensitive information)

Commercial in confidence. Assessment contained in unpublished confidential appendix C.

D Opex step changes (sensitive information)

Commercial in confidence. Assessment contained in unpublished confidential appendix D.