

FINAL DECISION AusNet Services distribution determination 2016 to 2020

Attachment 7 – Operating expenditure

May 2016



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Note

This attachment forms part of the AER's final decision on AusNet Services' distribution determination for 2016–20. It should be read with all other parts of the final decision.

The final decision includes the following documents:

Overview

- Attachment 1 Annual revenue requirement
- Attachment 2 Regulatory asset base

Attachment 3 - Rate of return

- Attachment 4 Value of imputation credits
- Attachment 5 Regulatory depreciation
- Attachment 6 Capital expenditure
- Attachment 7 Operating expenditure
- Attachment 8 Corporate income tax
- Attachment 9 Efficiency benefit sharing scheme
- Attachment 10 Capital expenditure sharing scheme
- Attachment 11 Service target performance incentive scheme
- Attachment 12 Demand management incentive scheme
- Attachment 13 Classification of services
- Attachment 14 Control mechanisms
- Attachment 15 Pass through events
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- Attachment 17 Negotiated services framework and criteria
- Attachment 18 f-factor scheme

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Shortened forms

Shortened form	Extended form
ABS	Australian Bureau of Statistics
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	Advanced metering infrastructure
augex	augmentation expenditure
CAM	cost allocation method
capex	capital expenditure
ССР	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for Electricity Distribution
F&A	framework and approach
MFP	multifactor productivity
MPFP	multilateral partial factor productivity
MRP	market risk premium
MTFP	multilateral total factor productivity
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider

Shortened form	Extended form
opex	operating expenditure
PFP	partial factor productivity
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
VBRC	Victorian Bushfire Royal Commission
WACC	weighted average cost of capital

7 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other noncapital expenses incurred in the provision of network services. Forecast opex for standard control services is one of the building blocks we use to determine a service provider's total revenue requirement.

This attachment provides an overview of our assessment of opex. Detailed analysis of our assessment of opex is in the following appendices:

- Appendix A—base opex
- Appendix B—rate of change
- Appendix C—step changes.

7.1 Final decision

We are not satisfied that AusNet Services' forecast opex reasonably reflects the opex criteria.¹ We therefore do not accept the forecast opex AusNet Services included in its building block proposal.² We compare our substitute estimate of AusNet Services' opex for the 2016–20 regulatory control period with its initial regulatory proposal, our preliminary decision and AusNet Services' revised regulatory proposal in Table 7.1.³

Table 7.1 Our final decision on total opex (\$ million, 2015)

	2016	2017	2018	2019	2020	Total
AusNet Services' initial proposal	235.5	241.1	247.6	249.3	254.1	1227.6
AER preliminary decision	211.2	214.6	218.7	223.1	227.3	1095.0
AusNet Services' revised proposal	239.4	244.4	250.6	255.5	260.8	1250.7
AER final decision	223.3	226.8	232.1	236.4	241.3	1160.0

Source: AER analysis.

Note: Excludes debt raising costs.

Figure 7.1 shows our final and preliminary decision compared to AusNet Services' past actual opex, previous regulatory decisions and its initial and revised proposals.

¹ NER, cl. 6.5.6(c).

² NER, cl. 6.5.6(d).

³ NER, cl. 6.12.1(4)(ii).





Note: Includes debt raising costs.

We note the main reason we and AusNet Services expect standard control services opex to increase in the 2016–20 regulatory control period is because of changes in the regulation of costs associated with the Advanced Metering Infrastructure (AMI) rollout. Previously, these costs were regulated under an AMI Cost Recovery Order. From 2016 these costs are regulated under the NER.

7.2 AusNet Services' revised proposal

In its revised proposal, AusNet Services proposed forecast opex of \$1250.7 million (\$2015) for the 2016–20 regulatory control period. This is a 1.9 per cent increase from the \$1227.6 million (\$2015) it initially proposed.

In Figure 7.2 we separate AusNet Services' forecast opex into the different elements that make up its forecast.

Figure 7.2 AusNet Services' opex forecast (\$ million, 2015)



We describe each of these elements below:

- AusNet Services used the actual opex it incurred in 2014 as the base for forecasting its opex for the 2016–20 regulatory control period. It then made adjustments relating to movement in provisions and added the difference between its opex allowances for 2014 and 2015. AusNet Services also adjusted base opex to include a category specific forecast for the cost of a network support contract.
- AusNet Services also adjusted base opex to add opex that is classified as standard control services in the 2016–20 regulatory control period. This results in estimated 2015 total opex that is \$102.1 million (\$2015) higher than our preliminary decision. This reflects different approaches to the allocation of AMI costs. In our preliminary decision we allocated these costs to alternative control services metering.
- AusNet Services included a category specific forecast for self-insurance above actual self-insurance it incurred in 2014. This is \$8.4 million (\$2015) higher than our preliminary decision. In our preliminary decision we did not include a category specific forecast for self-insurance.
- AusNet Services included a category specific forecast for guaranteed service level (GSL) payments. This increased its forecast by \$46.3 million (\$2015). This is \$18.3 million (\$2015) higher than our preliminary decision. The increase in GSL payments reflects new Electricity Distribution Code (EDC) requirements.

- AusNet Services identified several new step changes in opex for new regulatory obligations. This increased AusNet Services' forecast by \$6.9 million (\$2015). AusNet Services did not propose these step changes in its initial proposal.
- AusNet Services proposed output growth forecast using our approach to accounting for forecast output growth. However, AusNet Services forecast higher customer numbers and ratcheted peak demand growth than it did in its initial proposal. Output growth increased AusNet Services' opex forecast by \$49.2 million (\$2015). This is \$12.2 million (\$2015) higher than our preliminary decision.
- AusNet Services accounted for forecast growth in prices related to labour price increases, contracted services price increases and non-labour price increases. Price growth increased AusNet Services' opex forecast by \$28.5 million (\$2015). This is \$11.8 million (\$2015) higher than our preliminary decision.

7.3 Assessment approach

This section sets out our general approach to assessment.⁴ Our approach to assessment of particular aspects of the opex forecast is set out in more detail in the relevant appendices.

Our assessment approach, outlined below, is for the most part consistent with the Guideline.

There are two tasks that the NER requires us to undertake in assessing total forecast opex. In the first task, we form a view about whether we are satisfied a service provider's proposed total opex forecast reasonably reflects the opex criteria.⁵ If we are satisfied, we accept the service provider's forecast.⁶ In the second task, we determine a substitute estimate of the required total forecast opex that we are satisfied reasonably reflects the opex criteria.⁷ We only undertake the second task if we do not accept the service provider's forecast after undertaking the first task.

In both tasks, our assessment begins with the service provider's proposal. We also develop an alternative forecast to assess the service provider's proposal at the total opex level. The alternative estimate we develop, along with our assessment of the component parts that form the total forecast opex, inform us of whether we are satisfied that the total forecast opex reasonably reflects the opex criteria.

⁴ The discussion in this section, to the extent it differs from that set out in the preliminary decision, clarifies the assessment approach that we applied in both the preliminary decision and this final decision.

⁵ NER, cll. 6.5.6(c) and 6.12.1(4).

⁶ NER, cll. 6.5.6(c) and 6.12.1(4)(i).

⁷ NER, cll. 6.5.6(d) and 6.12.1(4)(ii).

It is important to note that we make our assessment about the total forecast opex and not about particular categories or projects in the opex forecast. The Australian Energy Market Commission (AEMC) has expressed our role in these terms:⁸

The opex criteria that we must be satisfied a total forecast opex reasonably reflects are:⁹

- 1. the efficient costs of achieving the operating expenditure objectives
- 2. the costs that a prudent operator would require to achieve the operating expenditure objectives
- 3. a realistic expectation of the demand forecast and cost inputs required to achieve the operating expenditure objectives.

The AEMC noted that '[t]hese criteria broadly reflect the NEO [National Electricity Objective]'.¹⁰

The service provider's forecast is intended to cover the expenditure that will be needed to achieve the opex objectives. The opex objectives are:¹¹

- meeting or managing the expected demand for standard control services over the regulatory control period
- complying with all applicable regulatory obligations or requirements associated with providing standard control services
- where there is no regulatory obligation or requirement, maintaining the quality, reliability and security of supply of standard control services and maintaining the reliability and security of the distribution system
- maintaining the safety of the distribution system through the supply of standard control services.

Whether we are satisfied that the service provider's total forecast reasonably reflects the opex criteria is a matter for judgment. This involves us exercising discretion. However, in making this decision we treat each opex criterion objectively and as complementary. When assessing a proposed forecast, we recognise that efficient costs are not simply the lowest sustainable costs. They are the costs that an objectively prudent service provider would require to achieve the opex objectives based on realistic expectations of demand forecasts and cost inputs. It is important to keep in mind that the costs a service provider might have actually incurred or will incur due to particular arrangements or agreements that it has committed to may not be the

⁸ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. vii.

⁹ NER, cl. 6.5.6(c).

¹⁰ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. 113.

¹¹ NER, cl. 6.5.6(a).

same as those costs that an objectively prudent service provider requires to achieve the opex objectives.

Further, in undertaking these tasks we have regard to the opex factors.¹² We attach different weight to different factors. This approach has been summarised by the AEMC as follows:¹³

As mandatory considerations, the AER has an obligation to take the capex and opex factors into account, but this does not mean that every factor will be relevant to every aspect of every regulatory determination the AER makes. The AER may decide that certain factors are not relevant in certain cases once it has considered them.

The opex factors that we have regard to are:

- the most recent annual benchmarking report that has been published under clause 6.27 and the benchmark operating expenditure that would be incurred by an efficient distribution network service provider over the relevant regulatory control period
- the actual and expected operating expenditure of the distribution network service provider during any preceding regulatory control periods
- the extent to which the operating expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the distribution network service provider in the course of its engagement with electricity consumers
- the relative prices of operating and capital inputs
- the substitution possibilities between operating and capital expenditure
- whether the operating expenditure forecast is consistent with any incentive scheme or schemes that apply to the distribution network service provider under clauses 6.5.8 or 6.6.2 to 6.6.4
- the extent the operating expenditure forecast is referable to arrangements with a person other than the distribution network service provider that, in our opinion, do not reflect arm's length terms
- whether the operating expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b)
- the extent to which the distribution network service provider has considered and made provision for efficient and prudent non-network alternatives
- any relevant final project assessment conclusions report published under 5.17.4(o),(p) or (s)

¹² NER, cll. 6.5.6(c) and (d).

¹³ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. 115.

• any other factor we consider relevant and which we have notified the distribution network service provider in writing, prior to the submission of its revised regulatory proposal under clause 6.10.3, is an operating expenditure factor.

For transparency and ease of reference, we have included a summary of how we have had regard to each of the opex factors in our assessment at the end of this attachment.

As we noted above, the two tasks that the NER requires us to undertake involve us exercising our discretion. In exercising discretion, the National Electricity Law (NEL) requires us to take into account the revenue and pricing principles (RPPs).¹⁴ In the overview we discussed how we generally have taken into account the RPPs in making this final decision. Our assessment approach to forecast opex ensures that the amount of forecast opex that we are satisfied reasonably reflects the opex criteria is an amount that provides the service provider with a reasonable opportunity to recover at least its efficient costs.¹⁵ By us taking into account the relevant capex/opex trade-offs, our assessment approach also ensures that the service provider faces the appropriate incentives to promote efficient investment in, and provision and use of, the network and minimises the costs and risks associated with the potential for under and over investment and utilisation of the network.¹⁶

Expenditure Forecast Assessment Guideline

After conducting an extensive consultation process with service providers, users, consumers and other interested stakeholders, we issued the Expenditure Forecast Assessment Guideline in November 2013 together with an explanatory statement.¹⁷ The Guideline sets out our intended approach to assessing opex in accordance with the NER.¹⁸

While the Guideline provides for regulatory transparency and predictability, it is not binding. We may depart from the approach set out in the Guideline but we must give reasons for doing so.¹⁹ For the most part, we have not departed from the approach set out in the Guideline in this final decision.²⁰ In our framework and approach paper, we set out our intention to apply the Guideline approach in making this determination.²¹ There are several parts of our assessment:

¹⁴ NEL, ss. 7A and 16(2).

¹⁵ NEL, s. 7A(2).

¹⁶ That is, the trade-offs that may arise having considered the substitution possibilities between opex and capex, and the relative prices of operating and capital inputs: NER, cll. 6.5.6(e)(6) and 6.5.6(e)(7); NEL, ss. 7A(3), 7A(6) and 7A(7).

¹⁷ AER, *Expenditure forecast assessment guideline - explanatory statement*, November 2013.

¹⁸ NER, cl. 6.5.6.

¹⁹ NER, cl. 6.2.8(c).

²⁰ We did not apply the DEA benchmarking technique. We outlined the reasons why we did not apply this technique in appendix A of our all NSW distribution determinations for the 2015–20 regulatory control period.

²¹ AER, Stage 2 Framework and approach—NSW electricity distribution network service providers, January 2014, p. 50.

- We develop an alternative estimate to assess a service provider's proposal at the total opex level.²² We recognise that a service provider may be able to adequately explain any differences between its forecast and our estimate. We take into account any such explanations on a case by case basis using our judgment, analysis and stakeholder submissions.
- We assess whether the service provider's forecasting method, assumptions, inputs and models are reasonable, and assess the service provider's explanation of how its method results in a prudent and efficient forecast.
- We assess the service provider's proposed base opex, step changes and rate of change if the service provider has adopted this methodology to forecast its opex.

Each of these assessments informs our first task, namely, whether we are satisfied that the service provider's proposal reasonably reflects the opex criteria.

If we are not satisfied with the service provider's proposal, we approach our second task by using our alternative estimate as our substitute estimate. The AEMC expressly endorsed this approach in its decision on the major rule changes that were introduced in November 2012. The AEMC stated:²³

While the AER must form a view as to whether a NSP's proposal is reasonable, this is not a separate exercise from determining an appropriate substitute in the event the AER decides the proposal is not reasonable. For example, benchmarking the NSPs against others will provide an indication of both whether the proposal is reasonable and what a substitute should be. Both the consideration of 'reasonable' and the determination of the substitute must be in respect of the total for capex and opex.

We recognise that our alternative estimate may not exactly match the service provider's forecast. The service provider may have adopted a different forecasting method. However, if the service provider's inputs and assumptions are reasonable and efficient, we expect that its method should produce a forecast consistent with our estimate. We discuss below how we develop our alternative estimate.

Building an alternative estimate of total forecast opex

The method we use to develop our alternative estimate involves five key steps. We outline these steps below in Figure 7.3.

²² AER, *Expenditure forecast assessment guideline*, November 2013, p. 7.

²³ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. 112.

Figure 7.3 How we build our alternative estimate



This results in our alternative estimate. We use this in the first task to assess the service provider's proposal at the total opex level. We also use this as our substitute estimate, should we not be satisfied the service provider's proposal reasonably reflects the opex criteria.

Underlying our approach are two general assumptions:

- the efficiency criterion and the prudency criterion in the NER are complementary
- actual operating expenditure was sufficient to achieve the opex objectives in the past.

We have used this general approach in our past decisions. It is a well-regarded topdown forecasting model that a number of Australian regulators have employed over the last fifteen years. We refer to it as a 'revealed cost method' in the Guideline (and we have sometimes referred to it as the base-step-trend method in our past regulatory decisions).²⁴

While these general steps are consistent with our past determinations, we have adopted a significant change in how we give effect to this approach, following the major changes to the NER made in November 2012. Those changes placed significant new emphasis on the use of benchmarking in our opex analysis. We will now issue benchmarking reports annually and have regard to those reports. These benchmarking reports provide us with one of a number of inputs for determining forecast opex.

We have set out more detail about each of the steps we follow in developing our alternative estimate below.

Step 1—Base year choice

The starting point for our analysis is to use a recent year for which audited figures are available as the starting point for our analysis. We call this the base year. This is for a number of reasons:

- As total opex tends to be relatively recurrent, total opex in a recent year typically best reflects a service provider's current circumstances.
- During the past regulatory control period, there are incentives in place to reward the service provider for making efficiency improvements by allowing it to retain a portion of the efficiency savings it makes. Similarly, the incentive regime works to penalise the service provider when it is relatively less efficient. This provides confidence that the service provider did not spend more in the proposed base year to try to inflate its opex forecast for the next regulatory control period.
- Service providers also face many regulatory obligations in delivering services to consumers. These regulatory obligations ensure that obligations to deliver services safely and reliably balance the financial incentives a service provider faces to reduce its costs. In general, this gives us confidence that recent historical opex will be at least enough to achieve the opex objectives.

²⁴ AER, *Expenditure forecast assessment guideline*, November 2013, p. 22.

In choosing a base year, we need to make a decision whether to remove any categories of opex incurred in that year. For instance:

- If a material cost was incurred in the base year that is unrepresentative of a service provider's future opex, we may remove it from the base year in undertaking our assessment.
- Rather than use all of the opex that a service provider incurs in the base year, service providers also often forecast specific categories of opex using different methods. We must also assess these methods in deciding what the starting point should be. If we agree that we should assess these categories of opex differently, we will also remove them from the base year.

As part of this step we also need to consider any interactions with the incentive scheme for opex, the Efficiency Benefit Sharing Scheme (EBSS). We designed the EBSS to achieve a fair sharing of efficiency gains and losses between a service provider and its consumers. Under the EBSS, service providers receive a financial reward for reducing their costs in the regulatory control period and a financial penalty for increasing their costs. The benefits of a reduction in opex flow through to consumers as long as base year opex is no higher than the opex incurred in that year. Similarly, the costs of an increase in opex flow through to consumers if base opex is no lower than the opex incurred in that year. If the starting point is not consistent with the EBSS, service providers could be excessively rewarded for efficiency gains or excessively penalised for efficiency losses in the prior regulatory control period.

Step 2—Assessing base opex

The service provider's actual expenditure in the base year may not form the starting point of a total forecast opex that we are satisfied reasonably reflects the opex criteria. For example, it may not be efficient or management may not have acted prudently in its governance and decision-making processes. We must therefore test the actual expenditure in the base year.

As we set out in the Guideline, to assess the service provider's actual expenditure, we use a number of different qualitative and quantitative techniques.²⁵ This includes benchmarking and detailed reviews.

Benchmarking is particularly important in comparing the relative efficiency of different service providers. The AEMC highlighted the importance of benchmarking in its changes to the NER in November 2012:²⁶

The Commission views benchmarking as an important exercise in assessing the efficiency of a NSP and informing the determination of the appropriate capex or opex allowance.

²⁵ AER, *Expenditure forecast assessment guideline*, November 2013, p. 22.

²⁶ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. 97.

By benchmarking a service provider's expenditure we can compare its productivity over time, and to other service providers. In our preliminary decision we used multilateral total factor productivity, partial factor productivity measures and several opex cost function models.²⁷

We also have regard to trends in total opex and category specific data to construct category benchmarks to inform our assessment of the base year expenditure. In particular, we can use this category analysis data to identify sources of spending that are unlikely to reflect the opex criteria over the forecast period. It may also lend support to, or identify potential inconsistencies with, the results of our broader benchmarking.

If we find that a service provider's base year expenditure is materially inefficient, the question arises about whether we would be satisfied that a total forecast opex predicated upon that expenditure reasonably reflects the opex criteria. Should this be the case, for the purposes of forming our starting point for our alternative estimate, we will adjust the base year expenditure to remove any material inefficiency.

Step 3—Rate of change

We also assess an annual escalator that we apply to take account of the likely ongoing changes to opex over the forecast regulatory control period. Opex that reflects the opex criteria in the forecast regulatory control period could reasonably differ from the starting point due to changes in:

- price growth
- output growth
- productivity growth.

We estimate the change by adding expected changes in prices (such as the price of labour and non-labour) and outputs (such as changes in customer numbers and demand for electricity). We then incorporate reasonable estimates of changes in productivity.

Step 4—Step changes

Next we consider if any other opex is required to achieve the opex objectives in the forecast period. We refer to these as 'step changes'. Step changes may be for cost drivers such as new, changed or removed regulatory obligations, or efficient capex/opex trade-offs. As the Guideline explains, we will typically include a step change only if efficient base opex and the rate of change in opex of an efficient service provider do not already include the proposed cost.²⁸

²⁷ We discuss the benchmarking models in detail in appendix A.

²⁸ AER, *Expenditure forecast assessment guideline*, November 2013, p. 24.

Step 5—Other costs that are not included in the base year

In our final step, we assess the need to make any further adjustments to our opex forecast. For instance, our approach is to forecast debt raising costs based on a benchmarking approach rather than a service provider's actual costs. This is to be consistent with the forecast of the cost of debt in the rate of return building block.

After applying these five steps, we arrive at our alternative estimate.

7.3.1 Interrelationships

In assessing AusNet Services' total forecast opex we took into account other components of its regulatory proposal, including:

- the operation of the EBSS in the 2010–15 regulatory control period, which provided AusNet Services an incentive to reduce opex in the 2014 base year
- the impact of cost drivers that affect both forecast opex and forecast capex. For instance, forecast maximum demand affects forecast augmentation capex and forecast output growth used in estimating the rate of change in opex.
- the inter-relationship between capex and opex, for example, in considering AusNet Services' Power of Choice related expenditure
- the approach to assessing the rate of return, to ensure there is consistency between our determination of debt raising costs and the rate of return building block
- changes to the classification of services from standard control services to alternative control services
- concerns of electricity consumers identified in the course of its engagement with consumers.

7.4 Reasons for final decision

Generally, we agree with AusNet Services on the approach to forecasting total opex. However, due to some differences with forecasts of the inputs used we are not satisfied AusNet Services' proposed total forecast opex of \$1250.7 million (\$2015) reasonably reflects the opex criteria. We must not, therefore, accept AusNet Services' proposed total forecast opex.²⁹ As discussed above, we have used our alternative estimate of \$1160.0 million (\$2015) as our substitute estimate.³⁰

²⁹ NER, cl. 6.5.6(d).

³⁰ NER, cll. 6.5.6(d) and 6.12.1(4)(ii).

Figure 7.4 illustrates how we constructed our forecast. The starting point on the left is what AusNet Services' opex for each year of the 2016–20 regulatory control period would be if it was based on AusNet Services' estimated opex in 2015.³¹



Figure 7.4 AER final decision opex forecast (\$ million, 2015)

Table 7.2 outlines the quantum of difference between AusNet Services' revised proposed total opex and our final decision estimate for each year of the 2016–20 regulatory control period.

Table 7.2 Proposed vs final decision total forecast opex (\$ million, 2015)

	2016	2017	2018	2019	2020	Total
AusNet Services' revised proposal	239.4	244.4	250.6	255.5	260.8	1250.7
AER final decision	223.3	226.8	232.1	236.4	241.3	1160.0
Difference	-16.1	-17.6	-18.4	-19.1	-19.5	-90.7

Source: AER analysis.

Note: Excludes debt raising costs.

³¹ The estimated opex in 2015 is based on AusNet Services' reported opex in 2014 adjusted for movements in provisions and network support.

We outline the key elements of our alternative opex forecast and areas of difference between our estimate of opex and AusNet Services' estimate below.

7.4.1 Base opex

Starting point for base opex

Consistent with our preliminary decision, we have based our opex forecast on AusNet Services' actual opex in 2014. We consider this leads to an opex forecast that reasonably reflects the opex criteria.

Our benchmarking indicates that the Victorian network service providers, including AusNet Services, are amongst the most efficient in the NEM. This suggests that it would be reasonable to rely on its actual opex when forecasting the base opex amount.

We also note that we regulate AusNet Services under an incentive-based regulatory framework. We would expect that AusNet Services, as a profit maximising service provider, would be responding to the financial incentives in the framework and would only incur cost increases where prudent. The incentive based framework gives us further confidence that in total AusNet Services' current opex is reasonably reflective of efficient levels.

We received some submissions that raised queries about the recent decline in productivity of the Victorian services providers and what it may mean for using actual opex in 2014 as the base opex.³²

We have considered the recent productivity trend but it has not caused us to change our position on the efficiency of AusNet Services and the other Victorian service providers. We consider external drivers such as increases in bushfire mitigation obligations following the Black Saturday bushfires of 2009 and high labour price growth over the previous regulatory control period are the most significant drivers of the recent increases in opex for the Victorian service providers.

We outline our assessment of base opex in appendix A.

Adjustment for Advanced Metering Infrastructure (AMI) costs

We have included an adjustment to our base opex forecast of AMI IT and communications costs. This is a change in position from the preliminary decision.

Following the expiry of the AMI Order-in-Council, opex associated with AMI is to be regulated under the NER. In the preliminary decision we allocated all these costs to

 ³² VECUA, Submission to the AER Preliminary 2016–20 Revenue Determinations for the Victorian DNSPs,
 6 January 2016, pp. 4, 60-62; Consumer Challenge Panel Sub Panel 3, Response to Preliminary Decisions made by the AER in response to proposals from Victorian electricity distribution network service providers for a revenue reset for the 2016–20 regulatory period, 25 February 2016, pp. 11-12.

alternative control services. This was intended to be an interim position before we considered this issue in more detail through the development of the Distribution Ring Fencing Guideline.

We received a number of submissions which disagreed with our preliminary position. We reconsidered our approach in light of these submissions.

While there would be some benefit in waiting to consider this issue through the Ring Fencing Guideline process, given advanced meters have already been rolled out in Victoria, we acknowledge the cost allocation issues the Victorian service providers currently face are different to those that may potentially be faced by other service providers in other states. Therefore we agree that, on balance, there is no strong reason why we need to hold all these costs in alternative control services until the Distribution Ring Fencing Guideline is completed. We therefore have developed a revised position on how such costs should be allocated. We have allocated shared AMI costs across standard control services and alternative control services in accordance with cost allocation principles consistent with our Cost Allocation Guidelines and the cost allocation principles in the NER.

By applying these principles we have made an adjustment to AusNet Services' total opex forecast of \$45.7 million (\$2015). As discussed in Attachment 16 the revised approach leads to a commensurate reduction in metering opex from our preliminary decision.

7.4.2 Rate of change

The efficient level of expenditure required by a service provider in the 2016–20 regulatory control period may differ from that required in the final year of the 2011–15 regulatory control period. Once we have determined the opex required in the final year of the 2011–15 regulatory control period, we apply a forecast annual rate of change to forecast opex for the 2016–20 regulatory control period. This accounts for the forecast change in opex due to price, output and productivity growth.

Our forecast of the overall rate of change used to derive our alternative estimate of opex is lower than AusNet Services' over the forecast period. Table 7.3 below compares AusNet Services' and our overall rate of change in percentage terms for the 2016–20 regulatory control period.

	2016	2017	2018	2019	2020
AusNet Services	2.70	2.35	2.55	2.56	2.45
AER	1.98	1.87	2.10	2.15	2.14
Difference	-0.72	-0.48	-0.45	-0.41	-0.31

Table 7.3 Forecast annual rate of change in opex (per cent)

Source: AER analysis.

Labour price growth drives the difference between our forecast rate of change and AusNet Services. To forecast labour price growth, AusNet Services used wage increases in its existing enterprise agreements until the expiry of those agreements. AusNet Services then used the average of the wage price index (WPI) growth rates as forecast by Deloitte Access Economics, BIS Shrapnel and CIE. We based our forecasts on an average of Deloitte Access Economics and CIE's WPI growth rates. We did not include BIS Shrapnel's forecasts in our average because they were over a year old and did not reflect up to date market conditions. We also used benchmark input price weights rather than firm specific revealed weights. We consider this is the best available forecast of efficient prudent costs. Consequently, our forecast of price growth is on average 0.50 percentage points lower than AusNet Services' forecast

We have also updated our output growth forecasts to reflect the output weights in our latest benchmarking report. Consequently, we have forecast annual output growth 0.03 percentage points higher, on average, than AusNet Services.

We outline our detailed assessment of the rate of change in appendix B.

7.4.3 Step Changes

We have included step changes in our alternative opex forecast for the following proposals:

- Power of Choice metering contestability
- Power of Choice cost reflective tariffs
- Power of Choice customer access to data
- Power of Choice access to smart meter services and shared market protocol
- new connections charging framework.

In total these step changes contribute \$5.4 million (\$2015) or 0.5 per cent to our total opex forecast for AusNet Services for the 2016–20 regulatory control period. We consider these step changes represent the efficient and prudent costs of meeting new regulatory obligations.

We were not satisfied there were reasons to change our opex forecast for other step changes.

Our position on AusNet Services' proposed step changes is summarised in Table 7.4.

Table 7.4Step changes (\$ million, 2015)

	Initial proposal	Preliminary decision	Revised proposal	Final decision
New connections charging framework	-	-	2.1	1.4
Power of Choice: Customer access to data	-	-	0.6	0.6
Power of Choice: Cost reflective pricing	-	-	0.9	0.3
Power of Choice: Metering contestability	-	-	2.8	2.8
Power of Choice: Access to smart meter services and SMP/B2B integration	-	-	0.3	0.3
Power of Choice: Demand response mechanism	-	-	0.1	-
Demand management	4.8	_	_	_
Total	4.8	-	6.9	5.4

Source: AER analysis.

We discuss each of the step changes AusNet Services in more detail in appendix C.

7.4.4 Other costs not included in the base year

We have included debt raising costs and guaranteed service level payments in our final decision opex forecast. We have not included any other category specific forecast in our final decision opex forecast.

AusNet Services proposed a category specific forecast for self-insurance; however, we have applied a 'base-step-trend' approach to forecasting self-insurance consistent with our Guideline. We discuss our assessment of GSL payments and self-insurance in appendix C and debt raising costs in attachment 3.

7.4.5 Assessment of opex factors

In deciding whether we are satisfied the service provider's forecast reasonably reflects the opex criteria we have regard to the opex factors.³³

Table 7.5 summarises how we have taken the opex factors into account in making our final decision.

³³ NER, cl. 6.5.6(e).

Table 7.5 AER consideration of opex factors

Opex factor	Consideration	
	There are two elements to this factor. First, we must have regard to the most recent annual benchmarking report. Second, we must have regard to the benchmark operating expenditure that would be incurred by an efficient distribution network service provider over the period. The annual benchmarking report is intended to provide an annual snapshot of the relative efficiency of each service provider.	
The most recent annual benchmarking report that has been published under rule 6.27 and the benchmark operating expenditure that would be incurred by an efficient distribution network service provider over the relevant regulatory control period.	The second element, that is, the benchmark operating expenditure that would be incurred an efficient provider during the forecast period, necessarily provides a different focus. This is because this second element requires us to construct the benchmark opex that would be incurred by a hypothetically efficient provider for that particular network over the relevant period.	
	We have used several assessment techniques that enable us to estimate the benchmark opex that an efficient service provider would require over the forecast period. These techniques include economic benchmarking and opex cost function modelling. We have used our judgment based on the results from all of these techniques to holistically form a view on the efficiency of AusNet Services' proposed total forecast opex compared to the benchmark efficient opex that would be incurred over the relevant regulatory control period.	
The actual and expected operating expenditure of the Distribution Network Service Provider during any proceeding regulatory control periods.	Our forecasting approach uses the service provider's actual opex as the starting point. We have compared several years of AusNet Services' actual past opex with that of other service providers to form a view about whether or not its revealed expenditure is sufficiently efficient to rely on it as the basis for forecasting required opex in the forthcoming period.	
Dex factor The most recent annual benchmarking report that has been published under rule 6.27 and the benchmark operating expenditure that would be incurred by an efficient distribution network service provider over the relevant regulatory control period. The actual and expected operating expenditure of the Distribution Network Service Provider during any proceeding regulatory control periods. The extent to which the operating expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the Distribution Network Service Provider in the course of its engagement with electricity consumers. The relative prices of capital and operating inputs	We understand the intention of this particular factor is to require us to have regard to the extent to which service providers have engaged with consumers in preparing their regulatory proposals, such that they factor in the needs of consumers. ³⁴	
Service Provider in the course of its engagement with electricity consumers.	AusNet Services did not propose additional opex beyond that in its base opex to address the concerns of its electricity consumers.	
The relative prices of capital and operating inputs	We have considered the relationship between capex and opex in considering AusNet Services' proposed step changes. For instance we have provided a step change for Power of Choice reforms on the basis that there is a link between the capex and opex. We considered the relative expense of capex and opex solutions in considering this step change.	
	We have had regard to multilateral total factor productivity	

³⁴ AEMC, *Rule Determination*, 29 November 2012, pp. 101, 115.

Opex factor	Consideration
	benchmarking when deciding whether or not forecast opex reflects the opex criteria. Our multilateral total factor productivity analysis considers the overall efficiency of networks in the use of both capital and operating inputs with respect to the prices of capital and operating inputs.
	As noted above we considered capex/opex trade-offs in considering a step change for AusNet Services' Power of Choice reforms. We considered the substitution possibilities in considering this step change.
The substitution possibilities between operating and	Some of our assessment techniques examine opex in isolation—either at the total level or by category. Other techniques consider service providers' overall efficiency, including their capital efficiency. We have relied on several metrics when assessing efficiency to ensure we appropriately capture capex and opex substitutability.
capital expenditure.	In developing our benchmarking models we have had regard to the relationship between capital, opex and outputs.
	We also had regard to multilateral total factor productivity benchmarking when deciding whether or not forecast opex reflects the opex criteria. Our multilateral total factor productivity analysis considers the overall efficiency of networks with in the use of both capital and operating inputs.
Whether the operating expenditure forecast is consistent with any incentive scheme or schemes that apply to the	The incentive scheme that applied to AusNet Services opex in the 2010–15 regulatory control period, the EBSS, was intended to work in conjunction with a revealed cost forecasting approach.
or 6.6.2 to 6.6.4.	We have applied our estimate of base opex consistently in applying the EBSS and forecasting AusNet Services' opex for the 2016–20 regulatory control period.
The extent the operating expenditure forecast is referable to arrangements with a person other than the Distribution Network Service Provider that, in the opinion of the AER, do not reflect arm's length terms.	Some of our techniques assess the total expenditure efficiency of service providers and some assess the total opex efficiency. Given this, we are not necessarily concerned whether arrangements do or do not reflect arm's length terms. A service provider which uses related party providers could be efficient or it could be inefficient. Likewise, for a service provider who does not use related party providers. If a service provider is inefficient, we adjust their total forecast opex proposal, regardless of their arrangements with related providers.
Whether the operating expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b).	This factor is only relevant in the context of assessing proposed step changes (which may be explicit projects or programs). We did not identify any contingent projects in reaching our final decision.
The extent the Distribution Network Service Provider has considered, and made provision for, efficient and prudent non-network alternatives.	We have not found this factor to be significant in reaching our final decision.

Source: AER analysis.

A Base opex

As opex is relatively recurrent, we typically forecast based on a single year of opex. We call this the base opex amount. In this section, we set out our assessment of AusNet Services' base opex.

A.1 Final decision

We have used a base opex amount of \$210.2 million (\$2015) in our final decision opex forecast.

The comparison of the base opex amount in our preliminary decision, AusNet Services' revised proposal and our final decision is outlined below in Table A.1.

Table A.1Base opex (\$ million, 2015)

	Preliminary decision	Revised proposal	Final decision
Reported 2014 opex	197.7	197.1	196.2
AMI cost reallocation	-	20.4	9.1 ³⁵
Other adjustments	4.9	6.6	4.9
Base opex	201.0	224.2	210.2

Source: AER, AusNet Services preliminary decision opex model, October 2015; AusNet Services, 2016-20 Revised Regulatory Proposal Opex Model; AER, AusNet Services final decision opex model, May 2016.

A.2 AusNet Services' revised proposal and submissions

AusNet Services forecast base opex amount of \$224.2 million (\$2015)³⁶. The differences between AusNet Services' revised proposal and our preliminary decision reflected differences in:

- the allocation approach to AMI costs
- the forecasting approaches for self insurance and debt raising costs
- how base opex is inflated from nominal dollars to real \$2015.

We received several submissions in response to our preliminary decisions for the Victorian service providers which either disagreed with our conclusions on base opex

³⁵ We note we have forecast different amounts for AMI for each year of the 2016 to 2020 period. This is the average amount over the period.

³⁶ We note that AusNet Services did not categorise AMI cost allocation as a base opex issue. However for the purposes of our assessment approach we have categorised it in this way. This is consistent across all Victorian service providers.

or requested further evidence to support our decision. In particular, VECUA considered there is extensive evidence of material inefficiencies in some Victorian distributors' opex. It considered that this has been revealed by our benchmarking. As a result, it considered using a revealed cost method to be flawed and a benchmarking approach should be used. It considered CitiPower to be the benchmark provider.³⁷

More generally, VECUA considered that in setting base opex we have had insufficient regard to:

- the decline in the Victorian distributors' productivity over the previous regulatory control period
- increases in the Victorian distributors' opex over the previous regulatory control period
- the opex reductions that should be realised from the Victorian distributors' major capex programs over the previous regulatory period.³⁸

The CCP was concerned we have presumed 2014 opex is efficient and that we have relied on it to set forecast expenditure in light of the recent decline in productivity. It also urged we review this in detail. It was not convinced that increased bushfire mitigation expenditure and expansion of the network were driving the decline in productivity.³⁹

Further specific comments we received are addressed below.

A.3 Assessment approach

In the Expenditure Forecast Assessment Guideline (the Guideline), we explain that a 'revealed cost' approach is our preferred approach to assessing base opex. If actual expenditure in the base year reasonably reflects the opex criteria, we will set base opex equal to actual expenditure for those cost categories forecast using the revealed cost approach.

We will use a combination of techniques to assess whether base opex reasonably reflects the opex criteria. If our economic benchmarking indicates a service provider's base year opex is materially inefficient, our approach is to complement our benchmarking findings with other analysis such as PPIs, category-based techniques and detailed review.

³⁷ VECUA, Submission to the AER Preliminary 2016–20 Revenue Determinations for the Victorian DNSPs, 6 January 2016, p. 60.

³⁸ VECUA, Submission to the AER Preliminary 2016–20 Revenue Determinations for the Victorian DNSPs, 6 January 2016, pp. 4, 60–62.

³⁹ Consumer Challenge Panel Sub Panel 3, *Response to Preliminary Decisions made by the AER in response to proposals from Victorian electricity distribution network service providers for a revenue reset for the 2016–20 regulatory period*, 25 February 2016, pp. 11–12.

Where a service provider proposes adjustments to base opex, then we assess whether those adjustments would lead to a total opex forecast that reasonably reflects the opex criteria.

A.4 Reasons for final decision

Incentive regulation and the revealed cost forecasting approach

We have maintained our approach to setting AusNet Services' opex based on its actual opex in 2014. This approach is consistent with the approach we set out in the Guideline.

Network services are monopoly services with little scope in any given location for a competitor to duplicate the network efficiently.⁴⁰ Monopoly businesses do not have an incentive to set prices at an efficient level because there is no competitive discipline on their decisions. They do not need to consider how and whether or not rivals will respond to their prices. Monopolies' profits depend only on the behaviour of consumers, their cost functions, and their prices or the amount supplied.⁴¹

Without regulation, the resulting market power would lead to high prices and probably insufficient investment. Accordingly, we must regulate the prices and other aspects of these services to ensure reliable and affordable electricity.⁴²

Information asymmetries make it difficult for us to accurately assess the efficiency of the network businesses' proposals. We need to make judgements about 'efficient' costs.⁴³

Incentive regulation is used to partially overcome information asymmetries. We apply incentive-based regulation across all energy networks we regulate—consistent with the NER.⁴⁴ This is a fundamental aspect of the regime. As stated by the AEMC:

Set out in Chapter 6 of the NER, the incentive regulation framework is designed to encourage distribution businesses to spend efficiently and to share the benefits of efficiency gains with consumers. Specifically, it is designed to encourage distribution businesses to make efficient decisions on when and

⁴⁰ Productivity Commission, *Electricity Network Regulatory Frameworks, inquiry report no.* 62, 2013, p. 65.

⁴¹ ACCC, Submission to the Productivity Commission's inquiry into the economic regulation of airport services, March 2011, p. 8.

⁴² Productivity Commission, *Electricity Network Regulatory Frameworks, inquiry report no.* 62, 2013, p. 65.

⁴³ Productivity Commission, *Electricity Network Regulatory Frameworks, inquiry report no.* 62, 2013, p. 190.

⁴⁴ Clause 6.2.6(a) of the NER states that for standard control services, the control mechanism must be of the prospective CPI minus X form, or some incentive-based variant of the prospective CPI minus X form, in accordance with Part C (Building Block Determinations for standard control services). Further, the RPPs state a regulated network service provider should be provided with effective incentives in order to promote economic efficiency with respect to direct control network services the operator provides.

what type of expenditure to incur in order to meet their network reliability, safety, security and quality requirements.⁴⁵

Broadly speaking, incentive regulation is designed to align the commercial goals of the business to the goals of society or, in the case of energy regulation, the NEO.⁴⁶ It relies on the principle that the network businesses' objective is to maximise profits.⁴⁷ Businesses that are able to improve their efficiency are rewarded with higher profits.⁴⁸ Businesses that allow their efficiency to deteriorate earn lower-than-expected profits. The actual revenue allowance set by the regulator should not influence the basic incentive of network businesses to minimise costs and, thereby, maximise profits. The drive to maximise shareholder returns should, in theory, push the businesses to become more efficient and productive over time. This allows us to leave the minutiae of input and output decision-making to the businesses.⁴⁹

The revealed cost forecasting approach is consistent with this framework. As opex is relatively recurrent from year to year, the incentive framework gives us confidence that we can rely on a service provider's actual opex when forecasting their efficient opex for the next regulatory control period.

By using a revealed cost forecasting approach, we assume that any efficiencies which have occurred since our previous regulatory determination have already been reflected in a service provider's actual opex. For instance, to the extent there are any opex efficiencies that the businesses have realised through a recent capex program, we assume it would be reflected in its existing opex. Similarly, given the financial incentives these service providers face in avoiding unnecessary cost increases, we assume that any cost increases that have occurred since the last regulatory determination reflect a prudent and efficient response to particular changes in a service provider's operating environment.

For Victorian service providers, strong incentives have applied to opex for three regulatory control periods. We would expect *a priori* that in responding to these incentives, these service providers would already be delivering a service that is relatively efficient. As this provides a strong theoretical reason why the Victorian service providers would be operating relatively efficiently, to conclude one is in fact operating inefficiently, we would require a convincing alternative body of evidence across a number of sources. We are not aware of any such evidence.

⁴⁵ AEMC, Consultation paper: National Electricity Amendment (Demand Management Incentive Scheme) Rule 2015, February 2015, p. 3.

⁴⁶ Productivity Commission, *Electricity Network Regulatory Frameworks, inquiry report no. 6*2, 2013, p. 188.

⁴⁷ Put simply, it is assumed that shareholders want the business to maximise profits because the greater the profits, the greater their income.

⁴⁸ As stated by the AER in its Expenditure Forecast Assessment Guideline explanatory statement, 'the ex-ante incentive regime provides an incentive to improve efficiency (that is, by spending less than the AER's forecast) because network businesses can retain a portion of cost savings made during the regulatory control period.', p. 42.

⁴⁹ Productivity Commission, *Electricity Network Regulatory Frameworks, inquiry report no.* 62, 2013, pp. 27–28.

The main tool we have to assess whether incentive regulation is working is benchmarking. However, all the benchmarking we have undertaken, which was presented in our preliminary decision⁵⁰ shows that, on the whole, the Victorian service providers are operating relatively efficiently when compared to their counterparts in New South Wales and Queensland.⁵¹ We do acknowledge the gap between the Victorian service providers and the NSW and Queensland service providers has narrowed in recent years on the MTFP and Opex MPFP benchmarks. However, as discussed in our annual benchmarking report⁵² and below, changes in bushfire mitigation requirements including vegetation management are a significant driver of this outcome.

On this basis we have continued to rely on each of the Victorian service providers' actual opex to forecast and we have chosen not to undertake a forensic review of each of their opex. We consider this is a reasonable position to take in undertaking our task in assessing opex under the NER.

We also note that VECUA has inferred that because CitiPower is the best performer on one benchmarking model, the opex of all other Victorian service providers should be deemed to be inefficient.⁵³ We do not agree with this finding. Because benchmarking models are subject to limitations regarding specification of outputs and inputs, data imperfections and other uncertainties, we consider it is preferable to interpret the findings of any benchmarking conservatively. We do not consider it is reasonable to conclude that because one service provider is ranked highest in one model then all other service providers must be inefficient.⁵⁴

Reasons for productivity decline/increase in opex in Victoria

In response to the VECUA and CCP submissions, we have considered the reasons for the decline in opex productivity across the Victorian service providers in the past period. This has not caused us to change our position on base opex from the preliminary decision.

⁵⁰ AER, *Preliminary decision, Attachment 7*, pp. 31-40.

⁵¹ Our preliminary decision was based on benchmarking we had presented in our most recent distribution benchmarking report published in November 2014 (AER, 2014 Annual benchmarking report, November 2014). After releasing our preliminary decision in October 2015 we published an additional distribution benchmarking report in November 2015 (AER, 2015 Annual benchmarking report, November 2015). The 2015 version of the report still indicates that the Victorian service providers are operating relatively efficiently compared to their counterparts in New South Wales and Queensland.

⁵² AER, 2015 Annual benchmarking report, November 2015, p. 8

⁵³ VECUA, Submission to the AER Preliminary 2016–20 Revenue Determinations for the Victorian DNSPs, 6 January 2016, p. 60.

⁵⁴ We also note the model VECUA refers to measured average opex efficiency over an eight year period (2006 to 2013). For the purposes of setting base opex we are reaching a conclusion on efficient opex for 2014 As the costs facing the Victorian service providers are different in 2014 to the average costs they faced from 2006 to 2013, it is not possible to directly infer 2014 efficiency by assessing 2006 to 2013 efficiency.

In total the Victorian service providers' opex have, on average, increased by 3.8 per cent per annum in real terms since 2009. We have observed the opex partial factor productivity (PFP) of the five Victorian service providers has declined by an average of 2.5 per cent per annum in this time. The opex PFP measure takes into account changes in customer numbers, circuit length, ratcheted maximum demand, energy delivered and customer minutes off supply. This suggests that a significant proportion of the growth in opex since 2009 is due to other cost drivers.

As outlined below in Figure A.1, the trend in opex and opex PFP has been relatively flat between 2009 and 2011. There is a significant increase in opex (and decline in opex PFP) across the Victorian service providers' between 2011 and 2012 and then a relatively flat trend in both opex and opex PFP between 2012 and 2014.



Figure A.1 Victorian service providers - trend in opex and partial factor productivity in opex - 2009 to 2014 (\$ million, 2015)

Figure A.2 aggregates total opex for each of the Victorian service providers by category and demonstrates the change in categories of opex in this time. It shows that increases in vegetation management opex followed by increases in maintenance opex are the main reasons why the Victorian service providers' opex has increased since our last determination.



Figure A.2 Change in Victorian service providers opex relative to 2009 (\$ million, 2015)

Figure A.3 illustrates the growth of each category on an index based measure. Opex on vegetation management has increased proportionally by a much greater amount than other categories of opex. There has been a moderate increase in maintenance expenditure relative to 2009 levels. Network overheads allocated to opex and emergency response opex have increased only marginally relative to 2009 levels. Opex on corporate overheads has declined.

Source: AER analysis.



Figure A.3 Change in opex relative to 2009 - index measure (\$ million, 2015)

A major driver of the increase in vegetation management opex across the industry is attributable to the changes in regulatory requirements as a result of the *Electrical Safety (Electric Line Clearance) Regulations 2010* which was introduced in June 2010 following the Black Saturday bushfires. These new regulations introduced the following key changes to the Victorian service provider's regulatory requirements.

- Minimum clearance spaces surrounding aerial bundled cable or insulated cable now applied to small tree branches. Under the previous version of the regulations, the minimum clearance spaces did not apply to small tree branches under specified conditions.
- Minimum clearance spaces surrounding powerlines in hazardous bushfire risk areas now applied to tree branches above a powerline of 22kV. Under the previous version of the regulations, the minimum clearance space did not apply under specified conditions.⁵⁵

We signalled that the *Electrical Safety (Electric Line Clearance) Regulations 2010* would be a significant cost driver affecting the Victorian service providers' opex when we forecast large step changes in opex in our final decisions for the 2011 to 2015

Source: AER analysis.

⁵⁵ Victorian Competition and Efficiency Commission, *Proposed Electrical Safety (Electric Line Clearance) Regulations* 2010 Regulatory Impact Statement, p. xviii-xix.

regulatory control period.⁵⁶ At the time, we forecast increases in opex of \$206 million (\$2015) from 2011 to 2015 due to these new regulations.⁵⁷

Vegetation management expenditure across the industry was also likely affected by heavy rainfall during the period. The year 2010 was the fifth wettest year on record in Victoria following one of the wettest springs on record,⁵⁸ and 2011 was the twelfth wettest year on record.⁵⁹ While we have not collected evidence on the effects of this pattern on vegetation growth in Victoria, we did observe that above average rainfall in South Australia in 2010 and 2011 led to significant increases in vegetation growth and vegetation management expenditure.⁶⁰

The moderate increase in maintenance expenditure across the industry in part also reflects other increases in regulatory obligations following the Black Saturday bushfires. For instance, one of the Victorian Bushfire Royal Commission's (VBRC) recommendations was to mandate maximum thirty seven-month inspection cycles of single wire earth return lines (SWER) and 22KV feeders in high bushfire risk areas.⁶¹ This came into force in the *Electrical Safety Amendment (Bushfire Mitigation) Regulations 2011*⁶² and is now mandated by the *Electrical Safety (Bushfire Mitigation) Regulations 2013*.⁶³ This has contributed to the increase in pole inspection expenditure in Figure A.4.

 ⁵⁶ AER, Victorian electricity distribution network service providers distribution determination 2011–15, October 2010,
 p. 301; AER, Opex step changes - final decision model; AER analysis.

⁵⁷ Following an Australian Competition Tribunal decision, we reconsidered the amount we had forecast for Powercor and CitiPower. This led to a further increase in our forecast for Powercor and CitiPower of \$27 million (\$2015). See AER, Vegetation management forecast operating expenditure step change 2011-15, August 2012.

⁵⁸ Bureau of Meteorology, <u>http://www.bom.gov.au/climate/current/annual/vic/archive/2010.summary.shtml</u>, 4 January 2011.

⁵⁹ Bureau of Meteorology, <u>http://www.bom.gov.au/climate/current/annual/vic/archive/2011.summary.shtml</u>, 3 January 2012.

⁶⁰ AER, SA Power Networks cost pass through application for vegetation management costs arising from an unexpected increase in vegetation management.

⁶¹ Victorian Bushfires Royal Commission, *Final Report - Summary*, July 2010, p. 29.

⁶² Electrical Safety Amendment (Bushfire Mitigation) Regulations 2011, Cl. 5A(j); Electrical Safety Amendment (Bushfire Mitigation) Regulations 2011, Cl. 5A(j).

⁶³ Electrical Safety Amendment (Bushfire Mitigation) Regulations 2011, Cl. 6(i).


Figure A.4 Pole inspection and pole inspection expenditure (\$ million, 2015)

Source: AER analysis.

Another factor contributing to the increase in maintenance opex and opex more generally is the strength in wage growth across the industry. Labour costs are the most significant component of opex for utility businesses.

Since 2009, wage growth in the ABS' Electricity Gas Water and Wastewater (EGWWS) classification has been on average 3.7 per cent per annum in nominal terms. In real terms EGWWS wage growth has been on average 1.3 per cent. As indicated in Figure A.5, this has largely matched the rate of wage growth in the mining industry and has exceeded wage growth across the Australian economy. This, in part, is likely to reflect the impact of the mining boom on the EGWWS sector. The impact of the demand for mining labour has previously been recognised as a driver of utilities wages by Deloitte and BIS Shrapnel.⁶⁴

⁶⁴ Access Economics, Forecast growth in labour costs: update of March 2010 report, September 2010, p. vii; BIS Shrapnel, Labour Cost Escalation Forecasts to 2016–17 - Australia and Queensland, January 2012, p. 21.





Source: ABS, 6345.0 Wage Price Index, December 2015.

In our view, the above drivers do not suggest that the Victorian service providers' operating efficiency has materially declined over the previous regulatory period. In our view it suggests there are a number of changes in business conditions that help to explain the trend since our last revenue determination in Victoria.

Importantly, we do not expect these drivers to persist in the 2016–20 regulatory control period. For instance, the *Electrical Safety (Electric Line Clearance) Regulations 2015* led to relatively minimal changes to the Victorian service providers' regulatory requirements for vegetation management. As discussed in Appendix B, we also expect efficient wage growth in the utility sector to slow. This is in part attributable to the reduced competition for labour from the mining sector.⁶⁵

A.5 Allocation of AMI costs

Our final decision on opex incorporates an average annual adjustment to standard control services (SCS) opex of \$9.1 million (\$2015) for AMI costs. This is a change in position from our preliminary decision where we allocated all AMI costs to alternative control services (ACS). Our revised approach is based on advice on cost allocation principles for IT and communications systems from Energy Market Consulting

⁶⁵ Deloitte Access Economics, Forecast growth in labour costs in NEM regions of Australia, February 2016, p. 39.

Associates (EMCa). These principles are aligned with the cost allocation principles in our Cost Allocation Guidelines⁶⁶ and in the NER.⁶⁷

Preliminary decision approach and consideration of stakeholder views

During the 2011–15 regulatory control period, incremental costs associated with implementing and operating smart meters were regulated under the Advanced Metering Infrastructure Order in Council (AMI OIC). This included costs associated with new or upgraded IT systems.

With the expiry of the AMI OIC, all costs, including opex, associated with AMI are now to be regulated under the NER. In its initial proposal, AusNet Services' adjustment to its SCS opex for AMI opex previously regulated under the AMI OIC was reported as a confidential amount. The remainder of opex associated with AMI was allocated to ACS metering. AusNet Services' proposed annual average opex for ACS metering was \$10.7 million (\$2015).⁶⁸

AusNet Services stated that it had calculated its metering charges on an incremental cost basis which was consistent with its CAM and its historical approach to calculating metering charges. Practically, this meant that many distribution business systems that were upgraded as part of the AMI project would be subsumed into the distribution service and their costs recovered through SCS. Examples included billing and B2B (data to market) systems that AusNet Services considered are required to provide distribution services and would exist even in the absence of a metering service. This meant that IT and communications costs (other than Metering Management System costs) were included in SCS opex. Overheads that were previously allocated to AMI were also allocated to SCS opex.⁶⁹

In our preliminary decision we did not allocate any AMI costs to SCS. Each of the Victorian service providers had adopted a different approach to allocating AMI costs in their initial proposals. Presently, metering services are not subject to competition but, following NER changes, competition is scheduled to begin from December 2017.⁷⁰ We considered that a different approach to allocating costs across each of the Victorian service providers would not help in promoting effective competition. We considered a consistent approach to be preferable which could be dealt with through our Distribution Ring Fencing Guideline in accordance with a national framework.⁷¹ We are scheduled to publish a Distribution Ring Fencing Guideline by 1 December 2016.

In the interim, before this Guideline is developed, we considered it was preferable to allocate all AMI costs to ACS. As this is similar to the historical approach where AMI

⁶⁶ AER, *Electricity distribution network service providers - Cost allocation guideline*, June 2008.

⁶⁷ NER, cl. 6.15.2.

⁶⁸ AusNet Services, *Regulatory proposal*, April 2015, p. 401.

⁶⁹ AusNet Services, *Regulatory proposal*, April 2015, p. 254.

⁷⁰ AEMC, National Electricity Amendment (Expanding Competition in Metering and Related Services) Rule 2015, 26 November 2015, p. i.

⁷¹ AER, *CitiPower preliminary decision*, October 2015, Attachment 7, p. 44.

costs are recovered separately to most distribution network costs, we also considered this approach will help in promoting transparency around trends in metering and SCS opex.

In its revised proposal AusNet's average annual adjustment for AMI was \$20.4 million (\$2015). Its revised annual opex forecast for ACS metering was \$10.9 million (\$2015). AusNet Services allocated its costs using the same cost allocation method it adopted in its initial proposal.

In response to our preliminary decisions, the Victorian service providers disagreed with our decision to allocate all AMI costs to metering ACS. All of the Victorian service providers maintained that certain AMI costs should be allocated to SCS.

The Victorian service providers' arguments to support their proposals to allocate some AMI costs to SCS can be summarised as follows:

- a number of the IT systems rolled out as part of the AMI metering service are needed even if the service providers did not provide a metering service, e.g. for customer billing and providing data to the market, and should therefore be considered to contribute to the distribution network SCS⁷²
- as some of these costs should be allocated to SCS, in the event of metering competition, they would be at an unfair disadvantage if all AMI costs are allocated to ACS⁷³
- costs must be correctly allocated now in line with the regulatory framework.⁷⁴ Several service providers considered costs should be allocated in accordance with their Cost Allocation Methods (CAM);⁷⁵ For instance, AusNet Services states that its CAM specifies that it will use an incremental costing approach to allocate shared costs.
- different DNSPs adopted different approaches to the AMI roll out (e.g. purpose built IT systems compared to upgrades / lifecycle replacement of existing systems) and these differences limit the extent to which cost allocation between standard control services and alternative control services will or can be consistent across all DNSPs.⁷⁶

⁷² AusNet Services, *Revised regulatory proposal*, Attachment 11-6, January 2016; CitiPower, *Revised regulatory proposal*, p. 151; Powercor, *Revised regulatory proposal*, pp. 150–151.

⁷³ AusNet Services, Revised regulatory proposal, Attachment 11-7; CitiPower, Revised regulatory proposal, p. 151; Jemena, Revised proposal, Attachment 9-1, p. 23; Powercor, Revised proposal, p. 151; United Energy, Revised proposal, p. 106

⁷⁴ Jemena, *Revised proposal, Attachment 9-1*, p. 22; United Energy, *Revised proposal*, pp. 104–105.

⁷⁵ AusNet Services, *Revised proposal, Attachment 11-7*; CitiPower, *Revised proposal*, pp. 152-153; Powercor, *Revised proposal*, pp. 152–153

⁷⁶ CitiPower, Revised proposal, p. 152; Jemena, Revised proposal, Attachment 9-1, p. 24; Powercor, Revised proposal, p. 152; United Energy, Revised proposal, p. 105.

The Victorian Government also disagreed with our preliminary decisions on this issue. It considered we must resolve this issue to the best of our ability now.⁷⁷ It considered that if all AMI costs are allocated to ACS then metering charges will be higher than they should be. It considered that there is a risk that this may encourage inefficient entry from new competitors.⁷⁸ The CCP agreed with our preliminary decision to allocate all AMI costs to ACS metering pending development of the Distribution Ring Fencing Guideline.⁷⁹

In light of the several submissions we received from stakeholders that disagreed with our preliminary position, we reconsidered whether we should continue to hold all AMI costs in ACS metering until we considered this issue further in developing the Distribution Ring Fencing Guideline. We have determined that a change in position from our preliminary decision is appropriate. We note that the mandated AMI roll-out involved upgrades not just to metering services but also other network services, such as IT and other systems which previously were being recovered in aggregate under the AMI OIC regime, but are now regulated under the NER. This means we agree that certain systems should be seen as part of SCS.

While there would be some benefit in waiting to consider this issue through the Distribution Ring Fencing Guideline process, given advanced meters have already been rolled out in Victoria, the cost allocation issues the Victorian service providers currently face are different to those that may potentially be faced by other service providers in other states. Therefore, on balance, it is appropriate to consider the allocation of AMI costs between SCS and ACS, notwithstanding we have not yet completed the Distribution Ring Fencing Guideline. We therefore have developed a revised position on how such costs should be allocated for the 2016–20 regulatory control period.⁸⁰

EMCa advice on cost allocation

We engaged EMCa to help develop a cost allocation approach that could be applied across the Victorian service providers. We asked EMCa to focus on IT and communications costs as this was the main area where the service providers proposed to allocate costs to SCS.

EMCa carried out a desktop review of the AMI information submitted by the Victorian service providers as part of their regulatory submissions. It also reviewed relevant AMI regulatory decision and guidance documents. It compared the allocation approach for AMI-related IT and communications expenditure and collated evidence on the key

⁷⁷ Victorian Government, Submission on the Victorian electricity distribution network service providers' preliminary distribution determinations for 2016-20, 14 January 2016, p. 10.

⁷⁸ Victorian Government, Submission on the Victorian electricity distribution network service providers' preliminary distribution determinations for 2016-20, 14 January 2016, p. 10.

⁷⁹ Consumer Challenge Panel Sub Panel 3, *Report on AER Preliminary Decisions and DNSPs' Revised Proposals*, 25 February 2016, p. 23.

⁸⁰ We note that our decision to allocate these costs in this way for the 2016 to 2020 regulatory control period does not prevent us from re-considering this issue through the Ring Fencing Guideline process.

drivers and rationale provided by each business to justify the allocation approaches taken.⁸¹

EMCa also reviewed the allocations proposed by the businesses against our cost allocation framework, which include:

- 1. the cost allocation principles in the NER⁸²
- 2. our Cost Allocation Guideline,⁸³ and
- 3. approved Cost Allocation Methods for each service provider.⁸⁴

EMCa agreed that it is reasonable that some proportion of the costs relating to AMI should be allocated to SCS as some aspects of AMI were geared towards providing greater network benefits beyond metering services.

While EMCa considered it reasonable to suggest that the allocation of AMI costs should be consistent with each service provider's CAM, for the most part it did not consider their CAMs are sufficiently prescriptive or granular as to provide a clear method for allocating AMI costs between metering ACS and SCS:

While noting the AER's Decisions approving the CAMs, given the high-level nature of the documents it is not possible to assess from the CAMs alone, whether the DNSPs have adopted a cost allocation approach for metering-related IT and communications that is consistent with NER's CAG. Moreover the variety of methods used by the DNSPs in allocating costs between SCS and metering ACS directly demonstrates the latitude in interpretation that has been applied in the CAMs.⁸⁵

EMCa also considers there is a lack of clarity on AusNet Services' use of avoided costs to allocate shared costs. In AusNet Services' CAM it states it does not use an avoided cost approach to allocate shared costs.⁸⁶ An avoided cost is a cost that a DNSP would avoid incurring by virtue of taking an alternate course of action.⁸⁷ AusNet Services states it uses incremental costing to allocate shared costs which it defines as costs that are 'the additional costs that AusNet Services will incur as a result of expanding the output of a service defined as an ACS'. As the cost saved by not taking an action would be the same as the cost that would be incurred had that action been taken, there is no practical difference between using incremental costs and using

⁸¹ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. 2.

⁸² NER, cl. 6.15.2.

⁸³ AER, *Electricity distribution network service providers - Cost allocation guideline*, June 2008.

⁸⁴ AusNet Services, Cost Allocation Method, November 2014; CitiPower, Cost Allocation Method, April 2014; Jemena, Cost Allocation Method, July 2014; Powercor, Cost Allocation Method, April 2014; United Energy Cost Allocation Method, October 2014.

⁸⁵ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. 22.

⁸⁶ AusNet Services, Cost Allocation Method, November 2014, p. 11.

⁸⁷ AER, Cost allocation guideline for electricity distribution network service providers, June 2008, p. 18.

avoided costs. EMCa is therefore unclear why AusNet Services use incremental costs to allocate shared costs but not avoided costs.⁸⁸

EMCa considers it is more instructive to allocate such costs by direct reference to the NER's Cost Allocation Principles (CAP) and our Cost Allocation Guidelines (CAG). By basing the allocation of AMI costs on consistent principles with reference to the main reason the system was put in place (i.e. driver), EMCa considers this would provide a more reasonable platform for metering competition.⁸⁹

In line with our CAG and the NER's CAP, EMCa considers that costs should be directly attributed (to distribution network SCS or metering ACS) only where the relevant systems are solely used to provide that service or where use for the other services can be considered immaterial as defined by Australian accounting standards. Where costs are shared and material, EMCa recommends the costs be allocated on a causal basis.⁹⁰

On this basis EMCa would expect DNSPs to propose an attribution / allocation of IT opex and communications opex broadly as set out in Table A.2.

Allocation between ACS/SCS	
Allocated solely to ACS metering	Communications infrastructure opex including Network Management Systems (NMS), Metering Management Systems (MMS), Network Operations and Control Centre (NOCC) Metering data management systems
Allocated solely to SCS	Field force mobility systems Network billing systems Customer Information Systems Outage management systems
Shared between ACS and SCS	B2B systems for managing AMI- related transactions with other market participants GIS Asset management systems

Table A.2 Proposed allocation of AMI IT and communications costs

⁸⁸ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, pp. 21–22.

⁸⁹ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. iii.

⁹⁰ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. iii.

Allocation between ACS/SCS
Performance and reporting regulatory systems
Middleware / integration bus technology
Data analysis systems
New / upgraded IT infrastructure to support the additional
AMI functionality

Source: EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. iii.

Several service providers considered that a common allocation method would be challenging to apply given they implemented AMI at different stages of their IT lifecycles. However, EMCa did not afford this much weight given it had recommended the service providers apply a causal allocation method. This gives consideration to the reason the cost was incurred so recognises the different stage of the service providers' IT lifecycles. EMCa considered the service providers' arguments would only be relevant if it were advocating the same fixed allocation percentage be used across all service providers.⁹¹

Application of cost allocation principles to AusNet Services' AMI costs

We invited AusNet Services to comment on EMCa's draft framework for allocating AMI costs to which it responded on 24 March.⁹²

AusNet Services agreed with EMCa's recommendation that shared costs should in the first instance be allocated on a causal basis. AusNet Services also concurs with EMCa's finding that where costs are shared and material, they should be allocated on a causal basis. It considers that the assessment of materiality and causal basis legitimately leads to an incremental cost allocation approach.⁹³

AusNet Services proposed three changes from the allocations proposed by EMCa:

- It proposed its MDMS (Siemens e-Meter and related internal staffing costs) be allocated 50:50 between SCS and ACS. This is a departure from its revised proposal where it allocated these costs wholly to SCS⁹⁴
- 2. It considered communications costs be at least shared equally between SCS and ACS, another departure from its revised proposal approach where it allocated 85 per cent of these costs to SCS.

⁹¹ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. iii.

⁹² AusNet Services, AER information request – AusNet Service- #051 – Advanced Metering Infrastructure costs [email to AER], 24 March 2014

⁹³ AusNet Services, AER information request – AusNet Service- #051 – Advanced Metering Infrastructure costs [email to AER], 24 March 2014

⁹⁴ A category of costs labelled metering data management was allocated to ACS metering.

3. It disagreed with EMCa that 'new/upgraded IT infrastructure to support the additional AMI functionality' should be shared between ACS and SCS. It considers these costs should be allocated solely to SCS.

EMCa considered AusNet Services' comments but, for the reasons discussed below, did not consider any alteration to its advice was warranted. We have applied a cost allocation approach consistent with EMCa's advice. We outline our reasons below.

Allocation of MDMS

In recommending MDMS should be allocated 50:50, AusNet described the functions of its MDMS as:

- data distribution to retailers
- network billing
- data distribution to the market and
- validation, estimation and substitution of data.

AusNet considered the first two of these as SCS functions and the last two as ACS functions and, on this basis, proposed to modify its MDMS cost allocation between SCS and ACS to 50:50.

EMCa considered that there were several issues with AusNet's response. Firstly, EMCa identified that the provision of meter data to retailers is a function of a metering service provider as prescribed in the NER.⁹⁵ This implies that this function is a metering service rather than a standard control service. Secondly, there appeared to be an inconsistency in AusNet's response as elsewhere AusNet Services identified the Kinetiq system was its network billing system which was already allocated to SCS.⁹⁶ Thirdly, EMCa did not consider AusNet had sufficiently explained why it was proposing to allocate these costs on a 50:50 basis.

To identify whether a system should be solely related to the provision of metering services, EMCa considered the main reason the system was implemented (that is, driver). As a MDMS captures, processes, stores and makes available metering data, EMCa considers that this system should be solely allocated to metering. EMCa does not consider the fact that the metering data is also used within the distribution business should mean the parts of the cost of the system should be allocated to SCS. EMCa notes future metering service providers in the NEM would all require an MDMS to provide metering services. It therefore maintained its advice to allocate all these costs to ACS metering.⁹⁷

⁹⁵ NER, cl. 7.11.2.

⁹⁶ AusNet Services, AER information request – AusNet Service- #051 – Advanced Metering Infrastructure costs [email to AER], 24 March 2014.

⁹⁷ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. iii.

Based on EMCa's advice, we are satisfied that the driver of implementing an MDMS is to provide a metering service. Therefore, we agree that these costs should be solely allocated to ACS metering. As competitors for metering will all require an MDMS that cannot be recovered through network tariffs, this allocation approach will help to ensure that future competitors for metering are not unfairly disadvantaged.

We also consider EMCa's advice is consistent with our approach to service classification which classifies metering data services as an alternative control service.⁹⁸ These services are defined as the collection, processing, storage, delivery and management of metering data.

Allocation of communications costs

AusNet Services considered that the communications network is 'vital in the provision of SCS' and that, on this basis, the costs should at least be shared equally between SCS and ACS. ⁹⁹

EMCa did not consider that metering communications infrastructure is vital to the provision of SCS. It notes that DNSPs outside of Victoria and outside of Australia operate without such communications networks.¹⁰⁰

EMCa advised that, on balance, a 100 per cent allocation of communications costs to ACS metering is reasonable given that the AMI communications network was put in place to provide for remote collection of interval metering data. It advised that a high performance communications network was essential to meet this requirement.¹⁰¹

We have accepted EMCa's advice on the allocation of these costs. The cost allocation principles in the NER and our cost allocation guidelines specify that costs should be allocated in accordance with a causal allocator unless such an allocator cannot be established without undue cost and effort.¹⁰² Following EMCa's advice, we have interpreted the main reason AusNet Services incurs ongoing communications costs in operating its advanced meters is to provide for remote collection of metering data and to support daily uploads of half-hourly interval metering data. These are metering services. Therefore we consider it reasonable to allocate these costs to ACS metering. This is the same allocation proposed by CitiPower and Powercor, which demonstrates our approach is reasonable.¹⁰³

⁹⁸ AER, Final framework and approach for the Victorian electricity distributors, 24 October 2014, p. 49.

⁹⁹ AusNet Services, AER information request – AusNet Service- #051 – Advanced Metering Infrastructure costs [email to AER], 24 March 2014.

¹⁰⁰ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. 36.

¹⁰¹ EMCa, Advice on allocation of advanced metering infrastructure (AMI) IT and communications expenditure, 6 April 2016, p. 35.

¹⁰² NER, cl. 6.5.2(3)(ii); AER, *Electricity distribution network service providers, Cost allocation guideline*, June 2008, s. 2.2.4(a).

¹⁰³ CitiPower, *AER information request – CitiPower - #044 – Advanced Metering Infrastructure costs.pdf* [email to AER], 24 March 2016; Powercor, *AER information request – Powercor - #050– Advanced Metering Infrastructure costs.pdf* [email to AER], 24 March 2016.

Our approach to allocating communications opex for the final decision is consistent with our approach for allocating the RAB and capex. This approach is also consistent with AusNet Services' revised proposal.¹⁰⁴ Under this approach all existing communications assets and all forecast communications capex for the 2016–20 regulatory control period are allocated to metering ACS.

Allocation of new/upgraded IT infrastructure to support the additional AMI functionality

AusNet Services disagreed this category of systems should be shared between SCS and ACS metering. It considered instead that these systems should be wholly allocated to SCS. AusNet stated that the IT infrastructure was upgraded not with the sole purpose to support the additional AMI functionality, but rather had been established as electricity distribution IT infrastructure for the future as the existing infrastructure was due for a lifecycle replacement. By upgrading the IT infrastructure, there was an improved capability, capacity and performance to support the additional AMI functionality. Therefore, AusNet Services disagreed with EMCa's allocation because the new/upgraded IT infrastructure had to be in place regardless of whether or not AusNet Services provides ACS metering. However, AusNet proposed a 5 per cent allocation to SCS in the event we accepted EMCa's advice.

We do not agree that new/upgraded IT infrastructure costs should be wholly allocated to SCS. While the existing infrastructure is needed to support SCS opex, by AusNet Services' definition the upgrades are required to support AMI functionality. As AMI enhances the metering service consumers receive, and metering is an ACS, it seems reasonable to allocate some proportion of these costs to ACS metering. We have adopted a 5% allocation to SCS. This is consistent with the allocation that AusNet Services proposed should be applied if we accepted EMCa's advice.¹⁰⁵

Table A.3 shows how the allocations of IT and communications costs have changed from AusNet's initial proposal, its revised proposal and our final decision.

¹⁰⁴ AusNet Services, *Revised regulatory proposal, Attachment 11-3*, January 2016; AusNet Services, *Revised regulatory proposal, Attachment 11-3*, January 2016.

¹⁰⁵ AusNet Services, *AER information request – AusNet Service- #051 – Advanced Metering Infrastructure costs* [email to AER], 24 March 2014.

Table A.3 Allocation of IT and communications costs (per cent)

Initial proposal		Revised proposal		Final decision		
SCS	ACS	SCS	ACS	SCS	ACS	
81	19	84 ¹⁰⁶	16	36	64	

Source: AusNet Services, *Revised Regulatory Proposal, Metering cost model - revised proposal PUBLIC 050116,* January 2016; AER analysis.

Forecasting approach for AMI costs

In applying an adjustment to AusNet's SCS opex forecast, we have applied the revised cost allocation approach for IT and communications costs to a revised forecast of total AMI opex. We discuss the reasons for our forecast opex for AMI in Attachment 16. The revised allocation approach leads to a decrease in SCS opex relative to AusNet Services' proposal but an increase in ACS metering opex.

In applying this approach we have forecast a category specific forecast for AMI costs. This is the same approach adopted by AusNet Services. This is different to other base year costs where we have not forecast a specific amount for categories of opex.

There are two reasons why we have adopted this approach.

- 1. To ensure our cost allocation approach is applied consistently between SCS opex and ACS metering opex, we must forecast a total amount for AMI and then apply the revised cost allocation to the total amount to arrive at revised opex forecasts for SCS and ACS metering.
- 2. While we would typically forecast an amount for total opex based on the opex incurred on all categories in a single year, this would not be appropriate for AMI opex. In the base year, 2014, AusNet Services' total opex on metering was \$46.8 million (\$2015). This included significant non-recurrent expenditure so that over the 2016–20 regulatory control period, its average total forecast opex on metering was forecast to decline to an average of \$31.9 million (\$2015). If we included the AMI opex incurred in 2014 in our base opex forecast, we would over-estimate the prudent and efficient opex required to deliver standard control services in the 2016–2020 regulatory control period.

Table A.4 illustrates the annual forecasts for opex previously regulated under the AMI OIC which are now included in our SCS opex forecast.

¹⁰⁶ The higher percentage allocated between AusNet Services initial proposal and its revised proposal reflects a change in forecast costs rather than a change in allocation approach.

Table A.4 AMI costs allocated to SCS (\$ million, 2015)

	2016	2017	2018	2019	2020
Reallocation of AMI OIC costs	9.6	9.2	9.3	8.8	8.8

Source: AER, AusNet Services final decision opex model, May 2016.

A.6 Other adjustments to base opex

AusNet Services proposed adjustments to its base opex for debt raising costs and self insurance. This was different to the approach we adopted in our preliminary decision. We have not changed our position in response to AusNet Services' proposal. We set out our consideration of a separate forecast for self-insurance in appendix C and debt raising costs in attachment 3.

A.7 Inflation of base opex

The other change to our preliminary decision base opex estimate reflects an update of how we have inflated base opex from nominal dollars to real \$2015. For our preliminary decision we estimated the annual inflation rate to December 2015 would be 2.5 per cent, based on the RBA's forecast in its statement on monetary policy.¹⁰⁷ For this final decision we have used the actual inflation rate of 1.7 per cent as reported by the ABS.¹⁰⁸ This actual inflation rate was not available at the time of our preliminary decision.

Our approach is different to AusNet Services in that we have used the most recent CPI available (unlagged),¹⁰⁹ whereas AusNet Services consider we should use a 15 month lagged CPI.¹¹⁰

We consider a starting point based on the most recent or actual CPI produces a more accurate opex forecast than a starting point based on a lagged CPI. An opex forecast that is not as accurate as possible may result in windfall gains or losses for AusNet Services. Given the timing of AusNet Services' determination we consider we do not need to use lagged CPI as we already know actual CPI between June 2014 and December 2015.

AusNet Services considers we should use a lagged CPI to establish the starting point of its opex forecast to be consistent with the lagged CPI that we use to determine its prices and revenues for the same period.

¹⁰⁷ Reserve Bank of Australia, Reserve Bank of Australia statement of monetary policy, August 2015, p. 67.

¹⁰⁸ ABS catalogue 6401.0 , December 2015.

¹⁰⁹ AER, Preliminary decision, AusNet Services determination 2016-20, Opex model, October 2015.

¹¹⁰ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-8.

Like AusNet Services, we previously considered it best to use lagged CPI to establish the starting point for the opex forecast in order to match the way we inflated revenues in the roll forward model (RFM). However, we have not used lagged CPI to forecast opex since undertaking TransGrid's regulatory determination in April 2015.¹¹¹

At that time, TransGrid challenged our use of lagged CPI, stating that such an approach was inappropriate. It provided advice from Houston Kemp that stated that the rationale for using lagged CPI in the RFM did not apply when converting base opex from nominal to real terms in the opex model. This is because the conversion of base year opex to real dollars is not attempting to match revenues received by the network service provider during the current regulatory control period. Therefore, it considered it is inappropriate to use lagged CPI when converting base year opex to real dollars.¹¹²

We agreed with TransGrid's reasoning and did not use lagged inflation to forecast opex in that final decision. It is for the same reasons that we used unlagged inflation to forecast opex in our preliminary decision for AusNet Services.

We do, however, consider there should be consistency between the inflation we use for forecasting opex and applying the EBSS. We set out the reasons why in Attachment 9.

¹¹¹ AER, *TransGrid final decision, Attachment* 7, p. 27.

¹¹² TransGrid, *Revised regulatory proposal*, 13 January 2015, p. 107.

B Rate of change

Once we have determined the efficient opex required in 2015 we apply a forecast annual rate of change to forecast opex for the 2016–20 regulatory control period. We do this to account for likely changes in demand and cost inputs for each year of the forecast period. As set out in the Expenditure Forecast Assessment Guideline (the Guideline), the rate of change accounts for forecast:¹¹³

- price growth
- output growth
- productivity growth.

This appendix contains our assessment of the opex rate of change for use in developing our estimate of total opex.

B.1 Position

We are not satisfied AusNet Services' proposed rate of change for the 2016–20 regulatory control period reasonably reflects the opex criteria.¹¹⁴ We are not satisfied AusNet Services' forecast of price growth reasonably reflect the cost inputs required to achieve the opex objectives.¹¹⁵ This is because AusNet Services' labour price growth forecasting approach:

- is inconsistent with providing effective incentives in order to promote economic efficiency through the negotiation of efficient wages¹¹⁶
- does not use the same forecasting approach for all years of the forecast period. AusNet Services' forecasting approach is likely to result in an upwardly biased total forecast of labour price growth over the regulatory control period, even assuming AusNet Services acted prudently and efficiently when entering into its current EAs
- treats all services contract expenditure as labour. This assumes that the price change of contractors' non-labour inputs is the same as their labour. Consequently, AusNet Services applied a higher weighting to labour price growth in determining the mix of labour and non-labour price growth, which it based on its actual expenditure in 2014. In our view, this overstates the cost inputs required by a prudent and efficient DNSP in the forecast period.
- Relies on outdated forecasts of WPI growth for the Victorian utilities industry that overstate the expected growth in labour prices.

¹¹³ AER. Better Regulation explanatory statement expenditure forecast assessment guideline, November 2013, p. 61.

¹¹⁴ NER, cl. 6.5.6(c).

¹¹⁵ NER, cl. 6.5.6(c)(3).

¹¹⁶ NEL, s. 7A(3).

Since we are not satisfied that AusNet Services' proposed rate of change will produce a total opex forecast consistent with the opex criteria, we must not accept it and we must develop our own estimate.¹¹⁷ Our estimate of the rate of change forecasts:

- labour price growth based on the forecast growth in the WPI for the Victorian electricity, gas, water and waste services (utilities) industry. We have used the average of the Victorian utilities WPI forecasts from Deloitte Access Economics (DAE) and the Centre for International Economics (CIE). Consistent with expert advice from Economic Insights, we have applied input price weights of 62 per cent for labour and 38 per cent for non-labour, which reflect the weights of an efficient benchmark firm, to forecast total price change.
- output growth based on the weighted average growth of customer numbers (73.9 per cent), circuit line length (8.7 per cent) and ratcheted maximum demand (17.4 per cent). We updated these weights to reflect the weights derived in our latest benchmarking report.
- no growth in productivity, which is consistent with AusNet Services' proposal.

We consider that applying our method to derive an alternative estimate of opex will result in a forecast that reasonably reflects the efficient and prudent costs faced by AusNet Services given a realistic expectation of demand forecasts and cost inputs because:

- our labour price growth measure reasonably reflects current and forecast economic conditions, including the wage increases in current EAs
- our labour and non-labour price weightings reasonably reflect the benchmark efficient mix of labour services and other costs required to provide distribution services
- our output weights, derived in our latest benchmarking report, reasonably reflect the forecast increase in services that customers require.

In the sections below we discuss the reasons why we consider AusNet Services' approach to forecasting the rate of change will not produce an opex forecast that reasonably reflects the opex criteria. We also provide our reasons why our approach to forecasting the rate of change will provide an opex forecast that reasonably reflects the opex criteria.

We have applied the same rate of change method to derive our alternative estimate of opex as we used in our preliminary decision. However, we have updated our estimate of the rate of change in opex to reflect the most recent forecasts of labour price growth in the Victorian utilities industry available from expert economic forecasters. We have also updated the weights we used to forecast output growth to reflect the weights derived in our latest benchmarking report. The net impact of these changes results in

¹¹⁷ NER, cll. 6.5.6(d), 6.12.1(4)(ii).

an annual rate of change of 2.05 per cent, which is on average 0.23 per cent higher than our preliminary decision estimate.

Our forecast of the overall rate of change used to derive our alternative estimate of opex is lower than AusNet Services' over the forecast period. Table B.1 shows AusNet Services' and our overall rate of change in percentage terms for the 2016–20 regulatory control period.

The differences in the forecast rate of change components are:

- our forecast of annual price growth is on average 0.50 percentage points lower than AusNet Services'
- our forecast of annual output growth is on average 0.03 percentage points higher than AusNet Services'.

We discuss the reasons for the difference between us and AusNet Services for the rate of change components below.

Table B.1 AusNet Services and AER rate of change (per cent)

	2016	2017	2018	2019	2020	Average
AusNet Services	2.70	2.35	2.55	2.56	2.45	2.52
AER	1.98	1.87	2.10	2.15	2.14	2.05
Difference	-0.72	-0.48	-0.45	-0.41	-0.31	-0.48

Source: AER analysis.

B.2 Preliminary position

For our preliminary decision, we did not adopt AusNet Services' forecast growth in price and output in our forecast rate of change and thus our alternative estimate of opex. We have summarised our preliminary position for each rate of change component below:

- **Price growth:** for labour price growth we adopted an average of DAE's and BIS Shrapnel's wage price index (WPI) forecasts for the Victorian electricity, gas, water and waste services (utilities) industry. For non-labour we adopted the forecast change in the CPI. We applied Economic Insights' benchmark opex price weightings for labour and non-labour.
- **Output growth:** we applied the weighted average forecast change in customer numbers, circuit length and ratcheted maximum demand. We based the weights of each of these outputs on Economic Insights' opex cost function analysis. We used the forecast customer numbers and circuit length reported by AusNet Services in its reset RIN. We used ratcheted maximum demand forecasts from AEMO.
- **Productivity growth:** we applied a zero per cent productivity growth estimate. We based this estimate on our considerations of recent productivity trends and whether

this would be applicable to the forecast period. This was also consistent with Economic Insights' recommendations.

Refer to appendix B of attachment 7 in our preliminary decision for a detailed explanation of our considerations.

B.3 AusNet Services' revised proposal

AusNet Services forecast the rate of change of opex based on the forecast growth in price, output and productivity. This is consistent with our own approach. However, it adopted a different approach to forecasting price growth than ours in the preliminary determination. It forecast price growth as the weighted average growth in labour and non-labour prices. It forecast labour prices based on:

- the annualised wage growth rates in its current EAs for the period up until the expiry of those EAs
- the average of the WPI growth rates for the Victorian utilities industry as forecast by Deloitte Access Economics (DAE), BIS Shrapnel and CIE.

For non-labour prices AusNet Services forecast no real price growth. It used its actual expenditure on labour and non-labour in 2014 to derive the weighted it applied to its forecast labour and non-labour price growth rates.

For output growth, AusNet Services adopted the forecasting approach in our preliminary decision. It updated its customer number forecast and its peak demand forecasts.

For productivity growth AusNet Services forecast no growth in productivity. This is consistent with its initial proposal and our preliminary decision.

Based on this approach, AusNet Services' average annual rate of change estimate was 2.52 per cent, which was a decrease from the 3.13 per cent in its initial proposal.

B.4 Reasons for position

For the reasons we discuss below, we are not satisfied that AusNet Services' approach to forecasting the rate of change will provide an opex forecast that reasonably reflects the opex criteria. We have, therefore, not accepted AusNet Services' proposal and forecast our own estimate of the rate of change. Our estimate is lower than that proposed by AusNet Services due to AusNet Services' higher forecast price growth. AusNet Services forecast no growth in productivity for the 2016–20 regulatory control period. This is consistent with our forecast of productivity growth.

Table B.2 shows AusNet Services' and our overall rate of change and each rate of change component for each regulatory year of the 2016–20 regulatory control period.

Table B.2 AusNet Services and AER rate of change (per cent real)¹¹⁸

	2016	2017	2018	2019	2020	Average
AusNet Services revised proposal						
Price growth	1.00	0.73	0.96	1.03	0.97	0.94
Output growth	1.69	1.61	1.57	1.51	1.47	1.57
Productivity growth	_	-	-	-	-	-
Overall rate of change	2.70	2.35	2.55	2.56	2.45	2.52
AER						
Price growth	0.25	0.23	0.49	0.59	0.63	0.44
Output growth	1.73	1.64	1.60	1.54	1.50	1.60
Productivity growth	_	-	_	-	-	-
Overall rate of change	1.98	1.87	2.10	2.15	2.14	2.05
Overall difference	-0.72	-0.48	-0.45	-0.41	-0.31	-0.48

Source: AER analysis.

In estimating our rate of change, we considered AusNet Services' proposed forecast growth in prices, output and productivity and the method used to forecast these. The key areas of disagreement with AusNet Services are:

- 1. Forecast labour price growth: AusNet Services used a hybrid approach which used its own EAs and forecast WPI growth. We used a broader and more forward looking measure. We used the forecast change in the WPI for the electricity, gas, water and waste services industry (the utilities industry) as the forecast change in the labour price as forecast by DAE and CIE. We did not include BIS Shrapnel's November 2014 forecasts in our average because they are outdated.
- 2. **Input price weights:** AusNet Services applied a higher weighting to labour price growth, based on its actual expenditure in 2014, that treated all services contract expenditure as labour. We used a benchmark weighting that treated field services labour as a mix of labour and non-labour and non-field services as non-labour.

We have separated the sections below into the three rate of change components. Where relevant we compare these components to AusNet Services' proposed rate of change using information provided in its reset RIN and opex model.

¹¹⁸ The rate of change = $(1 + \text{ price growth}) \times (1 + \text{ output growth}) \times (1 + \text{ productivity growth}) - 1$.

B.4.1 Forecast price growth

We are not satisfied AusNet Services' proposed average annual price growth of 0.9 per cent for the 2016–20 regulatory control period reflects the increase in prices a prudent and efficient service provider would require to meet the opex objectives. We forecast an average annual price growth of 0.4 per cent for the 2016–20 regulatory control period.

There are two main differences between AusNet Services' approach to forecasting price growth and the approach we have adopted:

- 1. AusNet Services adopted a different approach to forecasting labour price growth.
- 2. AusNet Services applied a higher weighting to labour price growth.

We discuss our consideration of each of these issues below.

Forecast labour price growth

AusNet Services forecast labour price growth using a hybrid forecasting method comprising:¹¹⁹

- the annualised wage growth rates in its EAs for the period up until the expiry of those agreements
- the average of the WPI growth rates for the Victorian utilities industry as forecast by Deloitte Access Economics (DAE), BIS Shrapnel and CIE.

We have assessed the reasons and evidence put forward by AusNet Services in its revised proposal and supporting materials. We are not satisfied that AusNet Services' forecast of labour price growth reasonably reflects a realistic expectation of the cost inputs or the efficient costs that a prudent operator would require to achieve the opex objectives.¹²⁰ There are two key reasons why we must not accept AusNet Services' approach to forecasting labour price growth:

- 1. We are concerned that adopting the wage rate increases in an individual firm's EAs would not provide effective incentives in order to promote economic efficiency through the negotiation of efficient wages.¹²¹ This is because there is no benefit to a firm from negotiating lower wage rate increases in the next regulatory control period. There is no benefit because those lower wage increases will be reflected in a fall in its revenue allowance. This outcome is inconsistent with the ex ante incentive-based regulatory framework under the NER and with the national electricity objective (NEO).
- 2. AusNet Services did not use the same forecasting approach for all years of the forecast period (we call this a hybrid forecasting approach). We consider AusNet

¹¹⁹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 4-11 to 4-16.

¹²⁰ NER, cl. 6.5.6(c)(3).

¹²¹ NEL, s. 7A(3).

Services' hybrid forecasting method is likely to result in an upwardly biased total forecast of labour price growth over the regulatory control period, even assuming AusNet Services acted prudently and efficiently when entering into its current EAs. This is because different forecasting approaches reflect different timing assumptions. For example, if a firm has higher wages than the industry average (because it negotiated its latest EA prior to the labour market softening) then we expect, all else equal, that the wage increases in its next EA will be lower than the industry average at the time of the next EA. A compensating adjustment will be necessary to account for these timing differences.

In addition, we disagree with AusNet Services that its EAs are an appropriate basis for forecasting labour price growth because they, or section 50 of the *Fair Work Act 2009*, are a 'regulatory obligation or requirement'. We do not consider that we are obliged to come to a different result by reason of any decision of the Tribunal.

We set out our reasons why we are not satisfied that AusNet Services' forecast of labour price growth reasonably reflects a realistic expectation of the opex criteria in greater detail below.

When we are not satisfied a DNSP's total forecast opex reasonably reflects the opex criteria, the NER require that we develop our own estimate. Given we disagree with AusNet Services' proposed rate of change, we must estimate a forecast of labour price growth that reasonably reflects a realistic expectation of the cost inputs that a prudent and efficient operator would require.

In summary, to develop our estimate, we used a forecast of WPI growth for the Victorian utilities sector to forecast labour price growth. We are satisfied that this approach to forecasting labour price growth reasonably reflects a realistic expectation of the cost inputs or the efficient costs that a prudent operator would require to achieve the opex objectives. This forward looking approach draws on available current market information from multiple sources, including from EAs.

We consider our forecasts of labour price growth should be the average of growth in the utilities WPI as forecast by DAE and CIE. BIS Shrapnel's forecasts from December 2014 should not be included in our forecast of labour price growth because they are outdated.

We discuss these reasons, and other issues raised by AusNet Services, in greater detail below.

Why we cannot accept AusNet Services' labour price growth forecast

As noted above, there are two key reasons why we cannot accept AusNet Services' forecast. The first is because AusNet Services' approach is inconsistent with incentives to promote economic efficiency. The second is because AusNet Services' hybrid approach is likely to be upwardly biased. Finally, AusNet Services' approach relies on an incorrect interpretation of 'regulatory obligation or requirement'.

Key reason 1: Adopting a firm's revealed price growth reduces its incentive to minimise price growth

We consider using a firm's revealed price growth would remove the incentive to minimise wage increases in EAs and adopt a more efficient input mix. Using AusNet Services' revealed price growth would not provide it with effective incentives in order to promote economic efficiency¹²² and would not be in the long term interest of consumers.¹²³

AusNet Services, however, proposed that we use the wage increases in its EAs until the expiry of those EAs as well as input price weights derived from its own historic expenditure.¹²⁴ In effect, AusNet Services proposed that we should use its revealed labour price growth. AusNet Services, however, was not consistent in how it used its revealed price change. It did not propose that we use the price increases it had negotiated in other agreements it had entered into.

Adopting the wage increase in a firms' EA reduces its incentive to minimise wage growth

AusNet Services proposed that we use its EA outcomes to forecast labour price growth until the expiry of those EAs. As we stated in our preliminary decision, doing so will reduce the incentive to negotiate efficient wages. This is because there will be no benefit to a firm from negotiating lower wage rate increases in the next regulatory control period. If it did so, those lower wage increases would be reflected in its revenue allowance. DAE expressed similar concerns:¹²⁵

For the AER's purposes of setting a price for electricity distribution that is in the interest of electricity consumers over the long term, EBA outcomes are useful for understanding the short term constraints that a regulated firm is experiencing.

However, if regulators simply compensate a business for its commercial negotiations with employees, then they would be effectively undercut or even remove the incentive for businesses to move to the most productive workers over time, and to the long term efficient outcome for electricity consumers.

We are also concerned that using the revealed wage increases in a firm's EA will provide it an incentive to trade off higher annual wage increases for lower non-wage entitlements. This could have no impact of the cost to the DNSP of employing labour but would increase its opex allowance.

For these reasons NSPs do not have strong commercial incentives to negotiate lower wage increases in the following regulatory control period,

¹²² NEL, s. 7A(3).

¹²³ NEL, s. 7.

¹²⁴ AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 4-11 to 4-21.

¹²⁵ DAE, A response to submissions on AER's preliminary decision for a Regulatory Proposal, 11 September 2015, p. 3.

VECUA appear to agree that we should not adopt the wage rate increases in an individual firm's EA as our labour price growth forecast. It stated that the Victorian DNSPs' EAs are delivering wages well above the efficient level. It stated that our preliminary determinations would allow the Victorian DNSPs to continue to treat inefficient EA outcomes as a 'pass through'.¹²⁶ We agree that it would be inappropriate to treat the wage price increases in an EA as a pass through, because it would reduce the incentive to negotiate efficient wages. However, we note that we did not use the wage rate increases in AusNet Services ' EAs as our labour price growth forecast for the years up until the expiry of those agreements.

AusNet Services did not agree that adopting the wage rate increases in an individual firm's EA to forecast opex would reduce the incentive to negotiate efficient wages. It stated that for this would only be true if the incentives provided by the EBSS were not strong enough to drive DNSPs to negotiate wage outcomes that allowed it to meet its obligations at the most efficient cost.¹²⁷ AusNet stated that the EBSS provides DNSPs with a strong and continuous incentive to make opex efficiency savings, including by negotiating efficient wage outcomes.¹²⁸

AusNet Services' statement, however, does not recognise the way the EBSS operates together with a revealed cost forecasting approach and ex ante opex allowances to provide DNSPs a continuous incentive to reduce opex. This incentive framework provides DNSPs a strong incentive to negotiate the most efficient wage outcomes possible within the current regulatory control period. If a DNSP is able to achieve efficiency gains through wage negotiations then the incentive framework shares those gains with consumers by allowing the DNSP to retain them for an additional five years (similarly, if the DNSP makes efficiency losses, the DNSP will share these losses with consumers for an additional five years).

This is different from using wage increases negotiated for the next regulatory control period to forecast opex for that regulatory control period, which is what AusNet Services has proposed. In this case the negotiated wage increase would flow straight into the opex forecasts and AusNet Services would not retain any efficiency gains (or losses) those negotiations deliver. The wage negotiations would be effectively treated as a cost pass through. Consequently AusNet Services would not have a strong commercial incentive to negotiate efficient wage increases for the following regulatory control period.

Broader incentive effects of using a firm's revealed price growth

The incentive effects of using a firm's revealed price growth go beyond reducing the incentives to negotiate lower wage increases in the following regulatory control period.

¹²⁶ VECUA, *Submission to the AER*, 6 January 2016, p. 65.

¹²⁷ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-13.

¹²⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-13.

Analysis previously undertaken by Jeff Balchin for PWC, and submitted to the AER by Electranet, shows that:¹²⁹

...it is inappropriate and inconsistent with the incentive framework for the assumed trend or trajectory after the base year to be based upon the observed performance in the preceding regulatory period.

How we use revealed opex when we forecast total opex influences the incentive to reduce opex. If we were to use a firm's revealed price growth, then the lower a firm's actual price growth, the lower its forecast price growth for subsequent periods, all else equal. However, if we do not base our forecast price growth on the firm's revealed price growth, then its revealed price growth does not influence its opex forecast. Consequently using a firm's revealed price growth reduces its incentive to reduce price growth.

Mr Balchin demonstrated this in his report for Electranet. He shows that if factoring a firm's revealed efficiency gains when setting base opex and determining the trend, the reward from an improvement in opex is substantially diminished (and, similarly, the penalty from a decline in opex would be reduced).¹³⁰ By applying a *benchmark* rate of change to the firm's revealed level of opex and applying the EBSS, the firm is able to retain the efficiency gains it makes for an additional five years after making them. Thus using a *benchmark* rate of change allows the firm's *revealed* rate of change, when it makes efficiency gains its opex for the following period would be reduced by the lower revealed rate of change as well as the lower revealed base opex. As a result, the firm would retain less than 30 per cent of the efficiency gains. Consequently, the lower rewards for the firm would almost entirely eliminate the incentives ordinarily provided by the regulatory framework.¹³¹ This would not be in the long term interest of consumers.

Given these incentive effects, we consider forecast price growth should be a benchmark, so as to provide firms effective incentives in order to promote economic efficiency.¹³² Using a benchmark forecast of price growth ensures the firm's revealed price growth does not impact forecast opex (beyond the impact on base opex) and diminishes its incentive to reduce price growth.

Other concerns with using revealed price growth to forecast

We have a number of other concerns with using revealed labour price growth to forecast labour price growth.

 ¹²⁹ PWC, Operating expenditure efficiency assumption and the efficiency benefit sharing scheme, 16 January 2013, p. 6.

 ¹³⁰ PWC, Operating expenditure efficiency assumption and the efficiency benefit sharing scheme, 16 January 2013, p. 7.

¹³¹ PWC, Operating expenditure efficiency assumption and the efficiency benefit sharing scheme, 16 January 2013, pp. 7–8.

¹³² NEL, s. 7A(3).

Firstly, we do not consider that by accepting AusNet Services' base opex as efficient, we have accepted its EAs are efficient. When we assessed AusNet Services' base year opex, we were satisfied that at the total level, it reasonably reflected the opex criteria. However, in doing so we did not make any judgment about the various components that comprise base opex. This is unnecessary when benchmarking demonstrates that, overall, AusNet Services is operating relatively efficiently compared it is peers. Importantly, the NER do not require us to examine components of opex.¹³³

Therefore, it does not follow that the wages in AusNet Services' current EAs are necessarily efficient even though we are satisfied that, overall, AusNet Services' base opex reasonably reflects the opex criteria. Many different expenditure items within AusNet Services' base opex may be higher or lower than originally forecast, but overall, they offset each other. This is a fundamental tenet of the base-step-trend approach that we consider—and AusNet Services agrees—is an appropriate means of forecasting total opex.

Second, we do not consider that a finding that a firm's revealed base opex is reasonably efficient necessarily means that its revealed price growth will produce a total opex forecast consistent with the opex criteria. Under our opex forecasting approach we have tested whether the absolute level of opex in the base year reasonably reflects the opex criteria. The testing of the proposed price growth is a separate process.

Third, the operating conditions prevalent during the historic period may not be prevalent during the forecast period. Consequently, even though a firm's price growth during the historic period may have been efficient at that time, that does not mean the same price growth would be efficient for the forecast period. For example, assume there was strong demand for labour during the historic period that resulted in strong labour price growth. However, if the demand for labour weakens, and supply increases, then you we expect lower price growth during the forecast period. Ignoring markets conditions for the forecast period would not result in a forecast that represents a realistic expectation of the cost inputs required to achieve the opex objectives.

Finally, it is important to recognise the interaction between the three rate of change components (output growth, input price growth and productivity). An individual firm may have been able to achieve greater productivity growth than the benchmark but, in doing so, incurred price growth above the benchmark rate. Consequently using the firm's revealed price growth combined with a benchmark productivity growth, would overstate the rate of change of a prudent and efficient firm.

¹³³ NER, cl 6.5.6(c), 6.12.1(4).

Key reason 2: AusNet Services' hybrid forecasting method is conceptually flawed

Consistent with our preliminary decision, we do not consider AusNet Services' approach of using more than one method to forecast labour price growth over a single regulatory control period (a hybrid approach) is appropriate. AusNet Services forecast labour price growth on the basis of two different approaches. For the period up until the expiry of AusNet Services' current EAs, AusNet Services based its forecast on the annualised wage growth rates in those EAs. For the period after the expiry of AusNet Services' current EAs, AusNet Services to n the average of the WPI growth rates for the Victorian utilities industry as forecast by Deloitte Access Economics (DAE), BIS Shrapnel and CIE.

Even if AusNet Services acted prudently and efficiently when it entered into its current EAs, this hybrid approach is conceptually flawed. It risks producing a biased forecast of labour price growth over the entire period because of differing prevailing market conditions at the time EAs were entered into. Absent a compensating adjustment to account for these timing differences, a hybrid approach will not produce a forecast that reasonably reflects the opex criteria. It is for this reason we have used a consistent forecast labour price growth over the entire forecast period.

As we explained in our preliminary decision, wage increases in an individual EA will often deviate from the industry average as time goes on. One reason for this is that the market conditions and expectations, and the existing wage levels, prevalent at the time an agreement is made will drive the wage increase in that agreement. These conditions will be different than those that exist when other firms negotiate their agreements at different times. For example, when labour market conditions are softening the wage increases in an agreement made a year ago will likely be higher, all else equal, than an agreement made today. Thus, different firms may have negotiated different wage increases for the same year because they negotiated them at different points in time.¹³⁴

Consequently, using an individual EA to forecast labour price growth at the start of the forecast period and another forecasting approach for the remainder is likely to produce a biased forecast. This is because the two different forecasting approaches reflect different timing assumptions, and consequently different starting wage rates. For example, if a firm has higher wages than the industry average (because it negotiated its latest agreement prior to the labour market softening) then we would expect, all else equal, that the wage increases in its next EA would be lower than the industry average.

DAE reviewed the NSW DNSPs' labour operating costs and concluded that the NSW DNSPs' EAs, as a whole, were no more generous than those of their peers.¹³⁵ That is, there were no material differences between the substantive terms and conditions of the

¹³⁴ AER, *Preliminary decision*, Attachment 7, p. 52.

¹³⁵ DAE, NSW distribution network service providers labour analysis: Final addendum to 2014 report, 28 April 2015, pp. 12–14, 16.

NSW electricity distribution EAs compared to those in Victoria and the other states in the NEM. Since this wage review, the wage increases in AusNet Services' EAs have been higher than those in the Victorian utilities industry and higher than the NSW and Queensland DNSPs. Consequently it is likely that adopting AusNet Services' hybrid forecasting approach will yield an upwardly biased forecast of labour price growth over the entire forecast period.

For AusNet Services' hybrid forecast not be to upwardly biased, its wage rates would need to be lower than the industry average in 2014. None of the evidence available to us suggests this is the case.

Consequently, applying a forecast of industry average wage increases for the remainder of the period would not reasonably reflect a realistic expectation of the cost inputs or the efficient costs a prudent operator would require to achieve the opex objectives.¹³⁶ If we were to adopt a firm's own EAs for the initial years of the forecast period we would need to adjust the forecast for the remaining years to account for the different timing assumptions.

AusNet Services stated that its EA wage increases reflect its actual, efficient costs and are therefore the best estimate of the cost inputs required to achieve the opex objectives. However, these EAs do not cover the entire 2016–20 regulatory control period and an alternative labour price growth forecast is required for the remaining years. AusNet Services considered the best available WPI forecast was an appropriate forecast for these years.¹³⁷

AusNet Services stated that although EA outcomes may be based on different labour conditions than the conditions prevailing when the WPI forecast is developed, both reflect a realistic expectation of the cost inputs required to achieve the opex objectives for the time periods which they have been applied to. It stated we should not reject the use of different labour price growth forecasts for different years because each forecast was developed at a different time.¹³⁸

AusNet Services appears to have misinterpreted the reasons we set out in our preliminary decision. We did not reject the use of different labour price growth forecasts for different years because each forecast was developed at a different time. Rather, it was because the two different forecasting approaches reflect different assumptions about when wage increases were negotiated. Past wage negotiations will influence future wage negotiations. Past wage negotiations would have been influenced by when they were negotiated because different employers negotiate new wages at different times and market conditions would have varied.

Even if we were satisfied that AusNet Services' EAs were prudent and efficient, AusNet Services' labour price forecasting approach would trade off more accurate

¹³⁶ AER, *Preliminary decision*, Attachment 7, pp. 52–53.

¹³⁷ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-12.

¹³⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-12.

forecasts of labour price growth for the period of its existing EAs for an upwardly biased forecast over the entire forecast period.¹³⁹ For the reasons explained above, AusNet Services' hybrid forecast is upwardly biased because the wage increases in its EAs are higher than the wage increases forecast for the Victorian utilities industry as a whole for 2016. Consequently it will not need to offer wage increases as high as the rest of the market for electricity distribution labour for its wages to be competitive for the remainder of the forecast period.

This does not necessarily mean that AusNet Services' EAs are inefficient. Rather it is because labour market conditions have softened since AusNet Services negotiated those agreements. Industry average WPI growth forecasts are based on the assumption employees received industry average wage increases in the past, not the wage increases in AusNet Services' EA.

Consequently, we are not satisfied that AusNet Services' approach of using its existing EAs to forecast labour price growth at the start of the forecast period and a second forecasting approach for the remainder would produce an opex forecast that reasonably reflects the opex criteria over the forecast period.

Compliance with an enterprise agreement is not a regulatory obligation or requirement or otherwise required by the NER

AusNet Services, in its revised regulatory proposal, submitted that once the Fair Work Commission certifies an EA the EA constitutes a regulatory obligation or requirement which AusNet Services must comply with. Consequently, AusNet Services considered that costs it incurs in complying with its EA are costs which are required to achieve the operating expenditure objectives.¹⁴⁰ Clause 6.5.6(3)(c) requires the AER to accept a DNSP's forecast of operating expenditure if it is satisfied that the total forecast 'reasonably reflects' the three opex criteria. One of the criteria is the 'costs that a prudent operator would require to achieve the operating expenditure objectives'. One of those objectives is to 'comply with all applicable regulatory obligations or requirements associated with the provision of standard control services': clause 6.5.6(a)(2).

In our view, nothing in the NEL or NER obliges the AER to compensate DNSPs for the costs of paying wages under its negotiated EAs.

EAs and section 50 of the FW Act are not regulatory obligations or requirements

AusNet Services relies on the definition of 'regulatory obligation or requirement' in section 2D(1)(b)(v) of the NEL:

an Act of 'a participating jurisdiction', or 'any instrument made or issued under or for the purposes of that Act'...that 'materially affects the provision, by a regulated network service provider, of electricity network services' that are the

¹³⁹ AER, *Preliminary decision*, Attachment 7, pp. 55–56.

¹⁴⁰ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-13.

subject of a distribution determination or transmission determination. [quotes added]

Clause 6.5.6(a) of the NER requires a DNSP to include, in its building block proposal, the total forecast opex the DNSP considers is required in order to:

comply with all applicable regulatory obligation or requirements 'associated with the provision of standard control services'.

We have examined AusNet Services' submissions in the context of each of the quoted relevant phrases. AusNet Services' argument will not succeed unless section 50 of the FW Act satisfies, or its EAs satisfy, every element of these definitions.

A participating jurisdiction

In response to the first point, we observe that the Commonwealth is a participating jurisdiction through the application of the NEL to offshore adjacent areas.¹⁴¹ This enables uniform application of the electricity legislation but ensures the jurisdiction of the Commonwealth does not unnecessarily overlap with State or Territory jurisdictions.¹⁴² Section 2D of the NEL should be read in this context.

We accept that section 50 of the FW Act is an obligation under an 'Act of a participating jurisdiction.' However, for the reason set out below, we do not accept that section 50 of the FW Act materially affects the provision of network services.

Any instrument made or issued under or for the purposes of that Act

We note that an EA is an agreement entered into by the DNSP exercising its business discretion. That is, it is a voluntary commercial agreement. Although an EA is regulated by the FW Act, it is not an instrument 'made' for the purposes of the FW Act. An EA is 'made' when agreement is reached between an employer and a majority of employees.¹⁴³

It is more appropriate to describe the FW Act as regulating EAs (including in relation to their enforcement), in much the same way that the Family Law Act 1975 (Cth) regulates financial agreements (Part VIIIA), the Franchising Code of Conduct regulates franchise agreements and the National Consumer Credit Protection Act 2009 (Cth) regulates consumer credit (Schedule 1). All of these agreements are made by the parties, but regulated by an Act. It is wrong to conflate these two concepts; an

¹⁴¹ Australian Energy Market Act 2004, s. 6; Second reading speech, National Electricity (South Australia) (New National Electricity Law—Miscellaneous Amendments) Amendment Bill 2007, Parliament of South Australia, Hansard of the House of Assembly, 27 September 2007, p. 963; Second reading speech, National Electricity (South Australia) (New National Electricity Law) Amendment Bill 2005, Parliament of South Australia, Hansard of the House of Assembly, 9 February 2005, p. 1451.

¹⁴² The Parliament of the Commonwealth of Australia, House of Representatives, Australian Energy Market Bill 2004, Explanatory Memorandum, pp. 4–6.

¹⁴³ Fair Work Act 2009 (Cth), s. 182.

agreement made between parties is not made or issued under or for the purposes of an Act simply because it is regulated by the Act.

Materially affects the provision...of electricity network services

We do not consider that an EA or section 50 of the FW Act materially affects the provision of network services. An EA is simply a type of an employment agreement. Section 50 of the FW Act prohibits contravening an EA.

However, there is no necessary connection between the terms of an EA or section 50 of the FW Act and the provision of network services by a DNSP. The FW Act is an Act of general application. Its purpose is to govern workplace relations between enterprises and their employees, not how a DNSP must provide electricity network services. Labour costs may be higher or lower under an EA and other employment terms and conditions may differ without any impact on the provision of electricity network services.

Even if a bargain struck between a DNSP and employees did materially affect the provision of network services (which is denied), the EA or section 50 of the FW Act is not the kind of 'obligation or requirement' intended to be covered by section 2D of the NEL. A DNSP can choose to use EAs as a means of employing staff to operate its network. However, there is no externally imposed obligation on a DNSP to use a particular EA. An EA merely records the bargain struck between a DNSP and its employees. It is an agreement voluntarily entered into and negotiated by the DNSP. Section 50 ensures that the agreement is enforceable under the FW Act. If anything materially affects the provision of network services (which is denied), it is the DNSP's own decision to enter into the agreement.

Associated with the provision of standard control services

The relevant opex objective is to 'comply with all applicable regulatory obligations or requirements associated with the provision of standard control services'. Even if section 50 of the FW Act or EAs are 'regulatory obligations or requirements' (which is denied) they must also satisfy the criterion that they be associated with the provision of standard control services.

For similar reasons as stated above, an obligation under an EA or the FW Act is not a regulatory obligation or requirement 'associated with the provision of standard control services'. The obligations under an EA or the FW Act have no particular association with the provision of standard control services. With respect to the FW Act, it is of general application. With respect to EAs, the EA, as an obligation, has no association with standard control services. The association is with the enterprise, the DNSP, that entered into the agreement.

Enterprise agreements and the opex objectives and criteria

We do not consider the compliance with EAs is a part of the opex objectives. As discussed above, the obligation to comply with EAs is not a regulatory obligation or requirement associated with the provision of standard control services for the purposes of clause 6.5.6(a)(3). EAs may be a means of engaging labour in order to achieve the

opex objectives. However, the opex objectives do not mandate specific EAs or specific employee numbers. Rather, costs associated with EAs need to be assessed against the opex criteria.

The AER cannot automatically accept costs associated with EAs as a part of the expenditure allowance. For those costs to be included in the expenditure allowance, we must be satisfied that the total opex for the entire 2016–20 regulatory control period reasonably reflects a realistic expectation of cost inputs required to achieve the opex objectives, and the efficient costs that a prudent operator would require to achieve the opex objectives.

As discussed above, we consider AusNet Services' hybrid forecasting approach does not produce a realistic forecast of labour costs for the entire 2016–20 regulatory control period. Therefore, AusNet Services' forecast does not reasonably reflect a realistic expectation of cost inputs required to achieve the opex objectives. We also consider that AusNet Services' forecast would not provide it with effective incentives in order to promote economic efficiency¹⁴⁴ and would not be in the long term interest of consumers.¹⁴⁵

Determining our substitute labour price growth forecast

When we are not satisfied a DNSP's total forecast opex reasonably reflects the opex criteria, the NER require that we develop our own estimate. Given we disagree with AusNet Services' proposed rate of change, we must estimate a forecast of labour price growth that reasonably reflects a realistic expectation of the cost inputs that a prudent and efficient operator would require.

Consistent with our preliminary decision we are satisfied that forecast growth in the WPI for the Victorian utilities industry reasonably reflects a realistic expectation of the labour price growth faced by a prudent and efficient service provider in the 2016–20 regulatory control period. This is our standard approach to forecasting labour price growth.

The forward looking forecasts of WPI growth for the Victorian utilities sector that we have used draw on available current market information from multiple sources, including from EAs. This is particularly important when labour drivers have changed significantly in recent times and wage price growth, for both the economy as a whole, and the utilities industry more specifically, is at the lowest level on record.¹⁴⁶

AusNet Services also forecast labour price changed based on the forecast growth in the WPI for the Victorian utilities industry for the period after the cessation of its existing EA. For the reasons above we have not used the wage rate increases in AusNet Services' EA in our forecast of labour price growth. We are also not satisfied

¹⁴⁴ NEL, s. 7A(3).

¹⁴⁵ NEL, s. 7.

¹⁴⁶ ABS, 6345.0 Wage price index, Table 9b.

that AusNet Services' forecast of WPI growth for the Victorian utilities industry reasonably reflects a realistic expectation of the cost inputs that a prudent and efficient operator would require because it included outdated WPI growth forecast from BIS Shrapnel in its forecast. We discuss this below.

Which forecasts should we include in our average?

Where a consultant is used to forecast labour prices, we consider an averaging approach that takes into account the consultant's forecasting history, if available, to be the best method for forecasting labour price growth. We, and DAE, have previously undertaken analysis that found that DAE under-forecast utilities labour price growth at the national level. The analysis also found that BIS Shrapnel over-forecast price growth and by a greater margin.¹⁴⁷ For our preliminary decision we used an average of the WPI growth rates forecast by DAE and BIS Shrapnel.

However, none of the Victorian DNSPs provided updated WPI forecasts from BIS Shrapnel. Consequently the only forecasts we have from BIS Shrapnel were those it produced in November 2014.

As a result, we considered alternative sources of WPI forecasts. CitiPower, Powercor and AusNet Services all included WPI growth forecasts from CIE with their revised regulatory proposals, as they did with their initial proposal. In our preliminary decision for AusNet Services we raised a number of concerns with CIE's WPI growth forecasts. Specifically, we stated that CIE WPI growth forecasts looked inconsistent with the prevailing labour market conditions in that they peaked in 2016 and remained above the historic average over the entire forecast period.¹⁴⁸ However CIE has addressed these concerns in its revised forecasts. We compare the Victorian utilities WPI forecasts from all three forecasters in Table B.3.

	2016	2017	2018	2019	2020	Average
BIS Shrapnel (November 2014)	0.9	1.3	1.8	2.1	1.8	1.6
CIE (November 2015)	0.7	1.0	1.1	1.0	1.0	0.9
DAE (February 2016)	0.1	-0.2	0.5	0.9	1.1	0.5

Table B.3 Forecast annual WPI growth, Victoria, EGWWS (per cent)

Source: DAE, Forecast growth in labour costs in NEM regions of Australia, 22 February 2016, p. 8; CIE, Labour price forecasts, 23 November 2015, p.76; BIS Shrapnel, Real labour and material cost escalation forecasts to 2020, November 2014, p. ii.

The forecast Victorian utilities WPI growth rates from BIS Shrapnel are higher on average than the historic average rate at the national level of 1.2 per cent per

¹⁴⁷ AER, *Powerlink Final decision*, p. 54, April 2012.

¹⁴⁸ AER, *Preliminary decision: AusNet Services*, Attachment 7, October 2015, p. 56.

annum.¹⁴⁹ By contrast, the forecast utilities WPI growth rates from both DAE and CIE are lower, on average, than the historic average rate. We noted in our preliminary decision that WPI growth rates, both at the Australian all industries level and for the utilities industry more specifically, were at their lowest level on record.¹⁵⁰ WPI growth rates, both at the Australian all industries industry more specifically, have since fallen further.¹⁵¹

We note that CIE's revised forecasts are significantly lower than its initial forecasts from December 2014. Its revised average annual WPI growth forecasts are 0.8 per cent lower. CIE stated that the primary driver of this reduction was a downgrade to its forecast GDP growth and an upgrade to its forecast labour supply growth.¹⁵² Therefore it is clear that CIE considered changes in economic conditions between December 2014, when it released its initial forecasts, and November 2015, when it released its revised forecasts, have had a significant impact on wage growth expectations. AusNet Services itself stated that CIE's updated forecasts reflect updated economic data that suggests a more subdued economic outlook in the near term.¹⁵³ BIS Shrapnel's December 2014 forecasts do not account for this more subdued economic outlook. Therefore we consider BIS Shrapnel's outdated forecasts should not be included in our average.

AusNet Services considered that an average of DAE, BIS Shrapnel and CIE's updated forecast represents the best available forecast of Victorian utilities WPI growth because:¹⁵⁴

- statistical theory indicates that an average of multiple forecasts will produce a better forecast than an individual forecast, provided the forecasts are reasonable
- evidence suggests that actual EGWWS WPI growth has diverged from DAE and BIS Shrapnel's forecasts
- CIE has strong credentials as an economic forecaster.

We consider that AusNet Services' forecast of Victorian utilities WPI growth is inconsistent with its own reasons. AusNet Services stated that statistical theory supports using an average of individual forecasts provided the forecasts are reasonable. For the reasons above, we consider BIS Shrapnel's forecasts are not reasonable because they are out of date and AusNet Services itself has stated that updated economic data suggests a more subdued economic outlook compared to when BIS Shrapnel released its forecasts.¹⁵⁵

¹⁴⁹ ABS, *6345.0 Wage price index* Table 9b.

ABS, 6401.0 Consumer price index, Tables 3 and 4.

¹⁵⁰ AER, *Preliminary decision*, Attachment 7, p. 57.

¹⁵¹ ABS, Catalogue 6345.0, Table 9b.

¹⁵² CIE, *Labour price forecasts*, 23 November 2015, p. 25.

¹⁵³ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-14.

¹⁵⁴ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-15.

¹⁵⁵ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-14.

AusNet Services noted that CIE forecast Victorian utilities real WPI growth for 2015 of 1.25 per cent in its December 2014 forecast. In its June 2015 forecast, DAE forecast real WPI growth for 2015 of 2.0 per cent, while BIS Shrapnel forecast growth of 0.50 per cent in its November 2014 forecast. AusNet Services stated that actual year-to-date utilities WPI growth in 2015 is 0.53 per cent in real terms.¹⁵⁶

AusNet Services considered this demonstrated that:

- there will be divergence between the various WPI forecasts and actual growth in 2015, substantially so for some forecasts
- DAE is likely to have significantly over-forecast 2015 growth, despite the AER finding that DAE tend to under-forecast utilities labour price growth
- BIS Shrapnel's forecast appears most likely to best reflect actual growth, followed by CIE's.

There are two flaws with AusNet Services' analysis. Firstly, AusNet Services compared forecast Victorian utilities WPI growth forecasts against actual Australian WPI growth rates. Secondly, the actual WPI growth rate AusNet Services' used was only for the nine months through to September 2015. It was not for the full year.

We note that the ABS only publishes on its website the utilities WPI values for Australia. It does not publish state specific utilities WPI figures. However, it does provide Victorian utilities WPI figures on request, and DAE used the Victorian WPI figures to develop its forecasts. DAE informed us that the actual Victorian utilities WPI growth for the full year to December 2015 was 3.3 per cent in nominal terms, exactly equal to its nominal forecast. For Australia, utilities WPI growth was 2.5 per cent in nominal terms.

Over the same period CPI grew 1.7 per cent. Consequently, the Victorian utilities WPI grew 1.6 per cent in real terms compared to 0.8 per cent for the Australian utilities WPI. Therefore real growth in the Victorian WPI in the year to December 2015 was between the forecasts of CIE and DAE. This supports our conclusion that BIS Shrapnel's forecasts are not reasonable because they rely on outdated economic information.

Price weights

We have weighted the forecast price growth to account for the proportion of opex that is labour and the proportion that is non-labour. We have adopted a 62 per cent weighting for labour and 38 per cent for non-labour. We have forecast the labour component based on the utilities WPI and we base the non-labour component on the CPI. These weights are consistent with those used in Economic Insights' benchmarking analysis. They are also consistent with the weights we used for our preliminary decision.

¹⁵⁶ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-15.

We consider that we should base the price weights we use to forecast price growth on a prudent and efficient benchmark network service provider. Using benchmark price weights provides service providers an incentive to make efficiency gains by adopting the most efficient input mix. Weights of 62 per cent for labour and 38 per cent for non-labour represent the best available estimate for the benchmark efficient firm, as advised by Economic Insights.¹⁵⁷

AusNet Services did not use the same weights as us. It divided opex price growth into 'internal labour', 'external labour' and 'non labour' components. Specifically, it disaggregated its base year opex into the following:¹⁵⁸

- internal labour costs, which included the costs of its employees and its internal labour hire contracts
- external labour costs, which is further broken down into:
 - field services (vegetation management), which included the costs of vegetation management contracts
 - field services (other), which included the costs of other field services contracts, such as asset inspection and maintenance, patrol services and installations
 - non-field services, which included the costs of non-field services contracts, such as consulting, legal and audit services
- non-labour, which includes a range of costs such as materials, motor vehicle expenses, media and marketing costs and land and building leases.

AusNet Services proposed input price weightings based on its actual expenditure in 2014. This resulted in weights of 45.6 per cent for internal labour, 37.3 for external labour and 17.2 per cent for non-labour.¹⁵⁹

Consequently, there are two key differences between our input price weights and AusNet Services':

- in addition to internal labour costs, we only included the labour component of field services contracts in our labour component whereas AusNet Services included all services contracts costs as labour
- 2. we used benchmark weights whereas AusNet Services proposed weights based on its firm specific expenses.

We discuss both of these differences below.

¹⁵⁷ Economic Insights, *Memorandum, Opex input price index weights*, 19 February 2016.

¹⁵⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 4-17 to 4-18.

¹⁵⁹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-18.

Components of price growth

In order to forecast the rate of change under the opex forecasting method set out in our *Expenditure forecast assessment guideline*, we need to define our inputs. This is required to forecast price change and productivity change. Opex inputs are generally classified as labour, services or materials.

In our preliminary decision we included labour employed by contractors providing field services as labour, rather than services. We stated that:¹⁶⁰

We define labour this way so we only include the productivity related to providing field services in the productivity component of the opex cost function. This is true for both our measurement of historic productivity growth and the forecast productivity growth in our opex forecast. We do this because when we measure historic productivity growth we are interested in the productivity growth achieved by the service providers rather than the productivity growth achieved by contractors providing services that are not unique to electricity distribution.

The forecast rate of change is a function of the forecast growth in price, output and productivity. As further explained by Economic Insights, excluding contract labour that provides non-field services from our definition of labour does not ignore the price growth of non-field services labour. Rather, the price growth of that labour will be included in the price of non-field services, as will the productivity growth of that labour.¹⁶¹ As we discuss further below, the available evidence shows that the price of non-field services has grown at a similar rate to CPI.

The key difference between our definition of labour expenditure and AusNet Services' is that AusNet's includes all services contracts expenditure in its labour weight. We only included the labour component of field services contracts in our labour weight. We included non-field services in our non-labour component because the service provider is purchasing services rather than purchasing labour directly.

Regarding non-field services, AusNet Services stated that it did not agree that the price of these services should grow at the same rate as CPI.¹⁶² AusNet Services considered that CPI growth was not an appropriate estimate for non-field services labour price growth, and that all labour prices will increase at the same rate.¹⁶³ However, we have not stated that CPI growth is an appropriate estimate for non-field services labour price growth. At this point it is important to make the distinction between the price of a service and the price of labour. Here we are considering the appropriate price measure to apply to non-field services. It would be inappropriate to use the price of labour when we are forecasting the price of the service.

¹⁶⁰ AER, *Preliminary decision*, Attachment 7, p. 60.

¹⁶¹ Economic Insights, *Memorandum to AER, Opex input price index weights*, 19 February 2016, pp. 6–7.

¹⁶² AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 4-17 to 4-19.

¹⁶³ AusNet Services, *Revised regulatory proposal*, 6 January 2016, pp. 4-17 to 4-18.
In our preliminary decision we looked at the evidence available on the change in the price of services typically purchased by DNSPs. We stated that, having reviewed the historic change in various producer price indices, we found no evidence that the price of the non-field services purchased by an efficient service provider have grown at a rate materially different from CPI.¹⁶⁴

AusNet Services, however, stated that this analysis depended on the weights assigned to each producer price index. It stated our use of the benchmark input mix weights assumed that the composition of AusNet Services' non-field services labour reflects these weights, without presenting evidence that this is the case.¹⁶⁵

Although AusNet Services questioned the weights we applied to the five producer price indexes, it did not provide evidence to support the use of alternative weights. Rather, it proposed we use a wage price index to forecast the change in the price of services it purchases. However, the WPI proposed by AusNet Services does not reflect the price of non-field services. Using WPI growth for non-field services would ignore the growth in the price of other inputs used to deliver those services as well as productivity growth. AusNet's proposal is not, therefore, a reasonable alternative to our approach.

Similarly for field services, it is not appropriate to assume the price of field services contracts will change at the same rate as labour prices. Field services contractors have inputs other than labour. For example, field services contractors will require inputs such as:

- tools and other equipment used to provide the field services
- materials used to provide the field services
- vehicles including insurance, registration, fuel and servicing
- owning or leasing offices and other buildings and maintaining them.

AusNet Services' assumption ignores the price change of these other inputs. AusNet Services effectively assumed that field services contractors have only one input, which is labour. This is not a reasonable assumption. We note that AusNet Services stated that where its field services contracts contain substantive non-labour expenditure on materials and equipment, the costs of these contracts are typically capitalised and thus do not form part of opex.¹⁶⁶ Even if this is the case, it is unreasonable to assume that 100 per cent of the field services contracts that AusNet expenses are labour costs.

How we define our inputs, and the weights we assign to them, is intrinsically linked to productivity growth. For non-field services we capture productivity growth in the price growth component. For field services we capture the productivity growth of contractors in the productivity growth component of our rate of change. We do this both when we measure and forecast productivity growth as well as when we forecast price change.

¹⁶⁴ AER, *Preliminary decision*, Attachment 7, October 2015, p.54.

¹⁶⁵ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-20.

¹⁶⁶ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-18.

Alternatively we could allocate all service contracts, both field and non-field, to nonlabour costs since the service provider is purchasing a service rather than labour directly. This would have resulted in a lower labour weight and lower forecast price change. However, this would not be consistent with how we have defined our inputs when we measured and forecast productivity growth.

Benchmark versus firm specific weights

Having defined our inputs we need to decide how to measure them. We could either use the input price weights of a benchmark firm or the revealed input price weights of the specific service provider. We have used benchmark input price weights to derive our alternative estimate of opex. We discuss above why we should not use AusNet Services' revealed price growth to forecast the rate of change (section B.4.1). Using a firm's revealed rate of change, for example by using its firm specific input weights, diminishes its incentive to reduce opex by reducing its rate of change.

The ex ante opex allowance, our revealed cost forecasting approach and the EBSS work together to provide DNSPs a continuous incentive to minimise opex. However, if a DNSP knew we would use its revealed input mix to forecast the rate of change then it would have an incentive to increase its use in the base year of the input that will increase in price more rapidly. As noted by Economic Insights, using the best estimate available of the appropriate weights of labour and non–labour components of opex and applying these to all DNSPs, removes the incentive to skew either actual, or reported, opex composition towards components with faster growing prices.¹⁶⁷

AusNet Services stated that forecasting the price of non-field services to increase in line with CPI would create a perverse incentive to directly employ to the greatest extent possible. It stated this would undermine the incentive provided by the EBSS to drive opex efficiencies through, among other things, adopting the most efficient outsourcing model.¹⁶⁸ However, these concerns would only be valid if we were to use a DNSP's own input mix, as proposed by AusNet. This is one of the reasons we use a benchmark input mix.

In our preliminary decision we noted that Powercor's reported input mix varied from year to year, suggesting DNSPs have some capacity to alter their reported input mix.¹⁶⁹ AusNet Services stated that its internal labour proportion was 47 per cent in both 2014 and 2011.¹⁷⁰ However, this does not address whether AusNet has an ability to change its reported input mix or not. AusNet did not disclose its input mix for any other years.

AusNet Services also stated that there is a danger that using a benchmark input mix would drive businesses to adopt an outsourcing model that aligns with the benchmark

¹⁶⁷ Economic Insights, *Memorandum to AER, Opex input price index weights*, 19 February 2016, p. 8.

¹⁶⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-20.

¹⁶⁹ AER, *Preliminary decision*, Attachment 7, October 2015, p. 59.

¹⁷⁰ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-21.

weights, potentially increasing costs.¹⁷¹ However AusNet did not explain why it considered this would be the case and, in any event, we disagree. If we use a benchmark input mix to forecast price change then a DNSP's input mix will not impact its opex allowance in subsequent years. Given our incentive framework provides a continuous incentive to reduce opex, the DNSP then has an incentive to reduce opex by adopting the most efficient input mix.

AusNet Services raised concerns with our use of the input price weights derived by Pacific Economics Group (PEG). It stated that the PEG conducted its analysis more than a decade ago, based on estimated information and for a different purpose to what we and Economic Insights have used it for.¹⁷²

As discussed by Economic Insights, there are a number of challenges in identifying the input mix of a prudent and efficient DNSP.¹⁷³ However, like Economic Insights, we are satisfied that the PEG input weights remain the best available estimate of the labour and non–labour component weights of opex. As noted by Economic Insights they are consistent with the varying reported information currently available from the Victorian and South Australian DNSPs.¹⁷⁴ Using our definition of labour, and if we assume the labour weight of field services contractors is equal to the services providers', then the historic labour weights for CitiPower and Powercor are less than 62 per cent.¹⁷⁵ Further, Jemena and United Energy proposed labour weights of 62 per cent.¹⁷⁶ Given this we are satisfied that a benchmark labour weight of 62 per cent reasonably reflects a realistic expectation of the cost inputs required to achieve the opex objectives.

AusNet Services noted that its proposed labour weight of 82.8 per cent, based on its revealed costs, was consistent with the finding in our preliminary decision that the benchmark labour weighting was between 43 per cent and 83 per cent.¹⁷⁷

As noted by Economic Insights, a benchmark labour weight of 83 per cent would represent allocating all contracts (both field–related and non–field–related) to labour. For the reasons we discuss above, we do not consider this to be a realistic assumption. Alternatively, we could allocate all contracts to materials and services which would produce an estimated labour share of opex of 43 per cent. We agree with Economic Insights that neither of these extreme assumptions is likely to be accurate.¹⁷⁸

¹⁷¹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-21.

¹⁷² AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-17.

¹⁷³ Economic Insights, *Memorandum to AER, Opex input price index weights*, 19 February 2016, pp. 2–4.

¹⁷⁴ Economic Insights, *Memorandum to AER, Opex input price index weights*, 19 February 2016, pp. 4–5.

¹⁷⁵ AER, *Final decision: CitiPower distribution determination* 2016 to 2020, Attachment 7, May 2016, p. 86.

AER, *Final decision: Powercor distribution determination 2016 to 2020*, Attachment 7, May 2016, p. 85. Jemena, *Revised regulatory proposal*, 6 January 2016, p. 52.

United Energy, Revised regulatory proposal, 6 January 2016, p. 63.

¹⁷⁷ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-18.

¹⁷⁸ Economic Insights, *Memorandum to AER, Opex input price index weights*, 19 February 2016, p. 4.

B.4.2 Forecast output growth

The forecast output growth rate we have applied in our estimate of the overall rate of change averages 1.6 per cent per annum We consider this reasonably reflects the increase in output a prudent and efficient service provider would require to achieve the opex objectives. There is a small difference between AusNet Services' forecast output growth rate, which also averaged 1.6 per cent per annum, because we updated our output weights to match those in our latest benchmarking report.

Our approach to forecasting output growth

We have maintained our preliminary decision method to forecast output growth.¹⁷⁹ We updated our output weights to match those in our latest benchmarking report. The output growth factors we used and their respective weights are:

- customer numbers (73.9 per cent)
- circuit line length (8.7 per cent)
- ratcheted maximum demand (17.4 per cent).

AusNet Services adopted our approach to forecasting output growth in its revised regulatory proposal.

We used the customer numbers forecasts adopted by AusNet Services in its revised regulatory proposal opex model. AusNet Services updated its customer numbers growth forecast to reflect updated population forecasts from the Victorian Government. Given these revised forecast are based on the same forecasting approach as AusNet Services' initial proposal, and reflect the most up to date available information, we are satisfied they reflect the customer growth an efficient service provider is required to serve to meet its opex objectives. This produces an average annual growth rate of 1.73 per cent for customer numbers.

We used the forecast circuit length adopted by AusNet Services in its revised regulatory proposal opex model, which was consistent with our preliminary decision and AusNet Services' initial regulatory proposal. This produces an average annual growth rate of 0.86 per cent for circuit length.

We have used the forecast ratcheted maximum demand numbers adopted by AusNet Services in its revised regulatory proposal opex model. For the reasons discussed in attachment 6, appendix C, we are satisfied that AusNet Services' forecasts of maximum demand reasonably reflect a realistic expectation of the demand forecast a prudent and efficient service provider would require to achieve the opex objectives. This produces an average annual growth rate of 1.41 per cent for ratcheted maximum demand, consistent with AusNet Services' revised regulatory proposal.

¹⁷⁹ AER, *Preliminary decision*, Attachment 7, October 2015, pp. 59–60.

B.4.3 Forecast productivity growth

We have applied a zero per cent productivity growth forecast in our estimate of the overall rate of change. This reflects our expectations of the forecast productivity for an efficient service provider in the short to medium term. This is consistent with Economic Insights' recommendation to apply zero forecast productivity growth for other distribution network service providers such as Ergon Energy.¹⁸⁰ This is also consistent with our preliminary decision and AusNet's proposal.

The Guideline states that we will incorporate forecast productivity in the rate of change we apply to base opex when assessing opex. Forecast productivity growth will be the best estimate of the shift in the productivity frontier.¹⁸¹

We consider past performance to be a good indicator of future performance under a business as usual situation. We have applied forecast productivity based on historical data for the electricity transmission and gas distribution industries where we consider historical data to be representative of the forecast period.

To reach our best estimate of forecast productivity we considered Economic Insights' economic benchmarking, AusNet Services' proposal, our expectations of the distribution industry in the short to medium term, and observed productivity outcomes from electricity transmission and gas distribution industries. We discuss these further in our preliminary decision.¹⁸²

VECUA, however, stated that our decision to apply zero productivity growth 'is illogical and is not supported by the evidence'. It stated that we need to forecast positive productivity growth for the Victorian distributors to bring their productivity back into line with their previous productivity levels and into line with the levels the electricity transmission, gas distribution and other asset intensive industry sectors achieve.¹⁸³

VECUA asserted that a key reason for the distributors' productivity declines during the previous regulatory period was our provision of excessive opex allowances. It considered this has been a strong driver of the networks' inefficient labour practices. It stated that such factors must not be used to justify poor productivity outcomes in future years.¹⁸⁴ VECUA, however, provided no evidence to support these assertions. Productivity declines have not been unique to Australian electricity distribution networks. We have seen similar declines in productivity in Ontario and New Zealand, which operate different regulatory frameworks. Further, we are unaware of any incentive for the Victorian DNSPs to increase their actual opex when it is not efficient to

¹⁸⁰ Economic Insights, *Response to Ergon Energy's Consultants' Reports on Economic Benchmarking*, 7 October 2015, p. 29.

¹⁸¹ AER, Better regulation explanatory statement expenditure forecast assessment guideline, November 2013, p. 65.

¹⁸² AER, *Preliminary decision*, Attachment 7, October 2015, pp. 68–73.

¹⁸³ VECUA, Submission to the AER, 6 January 2016, p. 5.

¹⁸⁴ VECUA, Submission to the AER, 6 January 2016, p. 67.

do so. We consider the drivers of recent productivity declines in our assessment of AusNet Services' base opex in appendix A.

Although it stated that forecast productivity growth should be positive, VECUA did not suggest a basis on which to forecast positive productivity growth. VECUA did state that some of its participants operate in asset intensive industries that have delivered positive productivity growth during the 2006–13 period.¹⁸⁵ However it did not identify which industries it was referring to or why those industries would be an appropriate benchmark for electricity distribution.

The CCP also considered forecast productivity should be positive. However, it did suggest we should consider the approach IPART uses to forecast productivity growth for the industries it regulates.¹⁸⁶ The approach the CCP referred to was the approach used by IPART to regulate rural and regional buses and local council rates. IPART forecast productivity based on the 15-year average of the ABS market sector value-added multifactor productivity (MFP) based on quality adjusted hours worked. They set forecast productivity growth to zero when the 15 year average is negative.¹⁸⁷ The 15 year average productivity growth for the EGWWS industry is –3.3 per cent. Consequently IPART's approach to forecasting productivity also results in a forecast growth of zero.

Consistent with previous submissions, the Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR) stated that:¹⁸⁸

... with the rollout of smart meters in Victoria substantially complete, the AER should expect the Victorian DNSPs to realise efficiency gains from the rollout. These efficiency gains should be passed through to customers as the benefits are realised, as it is their customers, rather than the DNSPs, that have funded the investment in smart meters through a cost recovery regulatory regime.

We stated in our preliminary decision that DEDJTR had not identified or quantified the 'value added benefits' or the further benefits it expected to be realised over the 2016–20 regulatory control period. We stated that without this information we could not incorporate them into our opex forecast. We also note that DEDJTR had not provided us the independent assessment of the benefits of the AMI program that it had referred to.¹⁸⁹

DEDJTR stated in its submission on our preliminary decisions that Deloitte forecast the benefits associated with the rollout of smart meters in a public report it prepared in 2011 for the Department of Treasury and Finance.¹⁹⁰ The most significant benefits identified in this report relate to capex and metering expenditure. Deloitte also

¹⁸⁵ VECUA, Submission to the AER, 6 January 2016, p. 67.

¹⁸⁶ CCP, *Submission*, 25 February 2016, p. 30.

¹⁸⁷ IPART, *IPART cost indices—productivity factor*, Fact sheet, October 2014, pp. 1–2.

¹⁸⁸ DEDJTR, *Submission*, 14 January 2016, p. 1.

¹⁸⁹ AER, *Preliminary decision*, Attachment 7, p. 72.

¹⁹⁰ Deloitte, Advanced metering infrastructure cost benefit analysis, 2 August 2011.

identified some 'other smaller benefits' that may be relevant to standard control services opex. Of these smaller benefits, the most material reductions in standard control services opex were from:¹⁹¹

- the avoided cost of investigation of customer complaints about voltage and quality of supply
- the avoided cost of investigation of customer complaints about loss of supply which turn out not to be a loss of supply
- reduction in calls to faults and emergencies lines
- reduced cost of network loading studies for network planning.

DEDJTR stated that a recent review it undertook indicates that the DNSPs are in the early stages of realising these benefits and therefore their revealed 2014 operating expenditure would not reflect them.¹⁹² DEDJTR did not provide this review. It also did not identify how the savings are allocated across the DNSPs and the extent to which these savings are reflected in base opex.

We are satisfied that the majority of the benefits of the AMI rollout that relate to AusNet Services' standard control services opex are already reflected in its base opex. We are satisfied that the future benefits of the AMI rollout will primarily relate to capex, rather than opex. Access to AMI data mostly provides future capex savings, for example by enabling improved network and community safety and improved network investment decisions, including the potential to defer network augmentation.

While there could be some minor opex benefits, based on the available information, it is unclear whether base opex already reflects these minor benefits. We do not think the available information provides a basis to make any adjustment for these minor benefits. Any benefits that have not yet been realised will be shared with consumers through our revealed cost forecasting framework and the EBSS.

¹⁹¹ DEDJTR, *Submission*, 14 January 2016, p. 3.

¹⁹² DEDJTR, *Submission*, 14 January 2016, p. 3.

C Step changes

In assessing a service provider's total opex forecast, we recognise that there may be changed circumstances in the forecast period that may impact on the service provider's expenditure requirements. We consider those changed circumstances as potential 'step changes'.

We typically allow step changes for changes to ongoing costs in the forecast period associated with new regulatory obligations and for efficient capex/opex trade-offs. Step changes may be positive or negative. We would not include a step change if the opex that would otherwise be incurred to reasonably reflect the opex criteria is already covered in another part of the opex forecast, such as base opex or the rate of change.

This appendix sets out our consideration of step changes in determining our opex forecast for AusNet Services for the 2016–20 regulatory control period.

C.1 Final position

We have included step changes in our final decision opex forecast for the following proposals:

- Power of Choice customer access to data
- Power of Choice cost reflective pricing
- Power of Choice metering contestability
- Power of Choice shared market protocol
- Power of Choice demand response mechanism
- National Energy Customer Framework (NECF)

In total these step changes contribute \$5.4 million (\$2015) or 0.5 per cent to our total opex forecast for AusNet Services for the 2016–20 regulatory control period.

Table C.1 Step changes (\$ million, 2015)

	AusNet Services initial proposal	AER preliminary decision	AusNet Services revised proposal	AER final decision
Power of Choice customer access to data	-	-	0.6	0.6
Power of Choice cost reflective pricing	-	_	0.9	0.3
Power of Choice metering contestability	-	-	2.8	2.8
Power of Choice shared market protocol	-	_	0.3	0.3
Power of Choice demand response mechanism	-	-	0.1	-
National Energy Customer Framework	-	-	2.1	1.4
Demand management	4.8	-	-	-
Total	4.8	-	6.9	5.4

Source: AusNet Services, *Regulatory proposal*, April 2015, AER, *Preliminary decision attachment 7*, October 2015, AusNet Services, *Revised regulatory proposal*, January 2016 and AER analysis.

Note: Numbers may not add due to rounding

C.2 Preliminary position

In its initial proposal, AusNet Services proposed 1 step change, for demand management, above its base opex equal to \$4.8 million (\$2015).¹⁹³

In our preliminary decision, we did not include any step changes in our opex forecast.

C.3 AusNet Services' revised proposal and submissions

In its revised proposal, AusNet Services proposed \$6.9 million (\$2015) in step changes. As shown in Table C.1 AusNet Services proposed six new step changes related to the AEMC's Power of Choice reforms and new pricing obligations.

We received several submissions supporting our preliminary position on most step changes. These include submissions from:

• Consumer Challenge Panel (CCP)

¹⁹³ AusNet Services, *Regulatory proposal*, 30 April 2015, p. 211.

• Victorian Energy Consumer and User Alliance (VECUA).

We received general comments about our consideration of step changes from VECUA and the CCP. While VECUA has some residual concerns with the step changes we allowed in our preliminary decision, overall, it agreed with our assessments of the Victorian service providers' proposed step changes.¹⁹⁴ The CCP considered we were correct to reject most of the step changes in the Victorian service providers' proposals. It considered there is a tendency for the service providers to present a range of small cost increases without considering the overall ups and downs from year to year. It considered this results in a cumulative bias in the DNSPs' proposals.¹⁹⁵

The Victorian Government submitted that in our preliminary decisions we did not accept step changes in operating expenditure that were not considered material. It stated it expects us to adopt the same approach in assessing the operating expenditure forecasts in the revised regulatory proposals.¹⁹⁶

C.4 Assessment approach

We have adopted the same assessment approach we used in our draft decision. This was set out in section C.3 of the preliminary decision.

Our assessment of proposed step changes must be understood in the context of our overall method of assessing total required opex using the "base step trend" approach. When assessing a service provider's proposed step changes, we consider whether they are needed for the total opex forecast to reasonably reflect the opex criteria.¹⁹⁷ Our assessment approach is specified in the Guideline¹⁹⁸ and is more fully described in section 7.3 of this attachment.

As a starting point, we consider whether the proposed step changes in opex are already compensated through other elements of our opex forecast, such as base opex or the 'rate of change' component. Step changes should not double count costs included in other elements of the opex forecast.

We generally consider an efficient base level of opex (rolled forward each year with an appropriate rate of change) is sufficient for a prudent and efficient service provider to meet all existing regulatory obligations. This is the same regardless of whether we forecast an efficient base level of opex based on the service provider's own costs or the efficient costs of comparable benchmark providers. We only include a step change

 ¹⁹⁴ VECUA, Submission to the AER Preliminary Decision 2016--20 Revenue Determinations for the Victorian DNSPs,
 6 January 2016, p. 63.

¹⁹⁵ Consumer Challenge Panel Sub Panel 3, Response to Preliminary Decisions made by the AER in response to proposals from Victorian electricity distribution network service providers for a revenue reset for the 2016–20 regulatory period, 10 February 2016, p. 17.

¹⁹⁶ Victorian Government, Submission on the revised regulatory proposals, Victorian EDPR 2016–20, 12 February, p. 4.

¹⁹⁷ NER, cl. 6.5.6(c).

¹⁹⁸ AER, *Expenditure forecast assessment guideline*, November 2013, pp.11, 24.

in our opex forecast if we are satisfied a prudent and efficient service provider would need an increase in its opex to reasonably reflect the opex criteria.

We forecast opex by applying an annual 'rate of change' to the base year for each year of the forecast regulatory control period. The annual rate of change accounts for efficient changes in opex over time. It incorporates adjustments for forecast changes in output, price and productivity. Therefore, when we assess the proposed step changes we need to ensure that the cost of the step change is not already accounted for in any of those three elements included in the annual rate of change. The following explains this principle in more detail.

For example, a step change should not double count the costs of increased volume or scale compensated through the forecast change in output. We account for output growth by applying a forecast output growth factor to the opex base year. If the output growth measure used captures all changes in output, then step changes that relate to forecast changes in output will not be required. To give another example, a step change is not required for the maintenance costs of new office space required due to the service provider's expanding network. The opex forecast has already been increased (from the base year) to account for forecast network growth.¹⁹⁹

By applying the rate of change to the base year opex, we also adjust our opex forecast to account for real price increases. A step change should not double count price increases already compensated through this adjustment. Applying a step change for costs that are forecast to increase faster than CPI is likely to yield a biased forecast if we do not also apply a negative step change for costs that are increasing by less than CPI. A good example is insurance premiums. A step change is not required if insurance premiums are forecast to increase faster than CPI because within total opex there will be other opex items where the price may be forecast to increase by less than CPI. If we add a step change to account for higher insurance premiums we might provide a more accurate forecast for the insurance category in isolation; however, our forecast for opex as a whole will be too high.

Further, to assess whether step changes are captured in other elements of our opex forecast, we will assess the reasons for, and the efficient level of, the incremental costs (relative to that funded by base opex and the rate of change) that the service provider has proposed. In particular, we have regard to:²⁰⁰

- whether there is a change in circumstances that affects the level of expenditure a prudent service provider requires to meet the opex objectives efficiently
- what options were considered to respond to the change in circumstances

¹⁹⁹ AER, *Explanatory statement: Expenditure forecast assessment guideline*, November 2013, p.73. See, for example, our decision in the Powerlink determination; AER, *Final decision: Powerlink transmission determination 2012–17*, April 2012, pp. 164–165.

²⁰⁰ AER, *Expenditure forecast assessment guideline*, November 2013, p. 11.

- whether the option selected was the most efficient option—that is, whether the service provider took appropriate steps to minimise its expected cost of compliance
- the efficient costs associated with the step change and whether the proposal appropriately quantified all costs savings and benefits
- when this change event occurs and when it is efficient to incur expenditure, including whether it can be completed over the regulatory period
- whether the costs can be met from existing regulatory allowances or from other elements of the expenditure forecasts.

One important consideration is whether each proposed step change is driven by an external obligation (such as new legislation or regulations) or an internal management decision (such as a decision to use contractors). Step changes should generally relate to a new obligation or some change in the service provider's operating environment beyond its control in order to be expenditure that reasonably reflects the opex criteria. It is not enough to simply demonstrate an efficient cost will be incurred for an activity that was not previously undertaken. As noted above, the opex forecasting approach may capture these costs elsewhere.

Usually increases in costs are not required for discretionary changes in inputs.²⁰¹ Efficient discretionary changes in inputs (not required to increase output) should normally have a net negative impact on expenditure. For example, a service provider may choose to invest capex and opex in a new IT solution. The service provider should not be provided with an increase in its total opex to finance the new IT since the outlay should be at least offset by a reduction in other costs if it is efficient. This means we will not allow step changes for any short-term cost to a service provider of implementing efficiency improvements. We expect the service provider to bear such costs and thereby make efficient trade-offs between bearing these costs and achieving future efficiencies.

One situation where a step change to total opex may be required is when a service provider chooses an operating solution to replace a capital one.²⁰² For example, it may choose to lease vehicles when it previously purchased them. For these capex/opex trade-off step changes, we will assess whether it is prudent and efficient to substitute capex for opex or vice versa. In doing so we will assess whether the forecast opex over the life of the alternative capital solution is less than the capex in NPV terms.

C.5 Reasons for position

C.5.1 Power of Choice

We have included a \$4.0 million step change related to AusNet Services' Power of Choice step change.

²⁰¹ AER, *Expenditure forecast assessment guideline*, November 2013, p. 24.

²⁰² AER, *Expenditure forecast assessment guideline*, November 2013, pp. 24 and 51–52.

In its revised proposal, AusNet Services proposed a new \$4.8 million (\$2015) step change related to the AEMC's Power of Choice reforms. AusNet Services proposed costs for the following reforms:

- Customer access to data: \$0.6 million (\$2015)
- Cost reflective pricing: \$0.9 million (\$2015)
- Metering contestability: \$2.8 million (\$2015)
- Access to smart meter services and SMP / B2B integration: \$0.3 million (\$2015)
- Demand response mechanism \$0.1 million (\$2015).

We discuss AusNet Services' proposed cost for each item in the sections below.

Customer access to data

We have included a \$0.6 million step change for customer access to data.

In its revised proposal, AusNet Services proposed \$0.6 million to comply with a new requirement that allows a customer to request electricity consumption data.

The format of this data is set out in AEMO's Meter Data Provision Procedure which takes effect from 1 March 2016.

AusNet Services requires additional staff to:

- manage the authentication of customer or authorised representative and their validation based on the customer information data
- manage the request lifecycle within specified timeframes
- initiate the extraction of meter data from the database and process and format the resulting meter data
- initiate the billing of requests for multiple customers, and
- manage the expected increase in exception handling and customer queries.²⁰³

We have assessed AusNet Services' proposed costs and consider it is prudent and efficient.

Cost reflective pricing

We have included \$0.3 million (\$2015) step change for the introduction of cost reflective tariffs.

In November 2014, the Australian Energy Market Commission (AEMC) made a new rule to require network businesses to set prices that reflect the efficient cost of

²⁰³ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4–29.

providing network services to individual consumers.²⁰⁴ Prices based on these new rules are to apply in Victoria from 1 January 2017.

In its revised proposal, AusNet Services proposed a new step change to implement and manage its new tariff structures. AusNet Services proposed additional staff to:

- define and develop new demand tariffs
- load and test new tariffs
- manage more complex revenue reconciliation and budgeting activities, and
- manage an increase in customer bill enquiries.²⁰⁵

New demand tariffs

We have assessed AusNet Services' cost build up provided in its revised proposal.²⁰⁶ AusNet Services included annual costs related to defining and developing new demand tariffs. We consider AusNet Services should have already undertaken most of its tariff development work as part of its Tariff Structure Statement (TSS). For example, clause 6.18.1A of the NER requires AusNet to develop an indicative pricing schedule to accompany a TSS.²⁰⁷ AusNet Services' indicative pricing schedule includes its new cost reflective demand tariff.²⁰⁸

We do not consider AusNet Services requires additional opex in each year of the 2016–20 regulatory control period to define new tariffs when it has already undertaken this activity in its TSS. However, AusNet Services may need to develop new tariffs following the expiration of its current TSS. For this reason we consider AusNet Services' costs of defining new tariffs in 2020 are prudent and efficient.

Customer bill enquiries

We have also not included AusNet Services' proposed costs to manage increases in customer bill enquiries. In our preliminary decision for Jemena we included Jemena's proposed costs for cost reflective pricing. Jemena's proposal included additional costs related to customer enquiries.²⁰⁹ In reassessing these costs as part of our Jemena final decision, we realised costs to manage customer enquiries are not specifically required by the AEMC's Distribution Network Pricing Arrangements rule. We need to be satisfied that the total opex forecast in our final decision reflects the opex criteria. This is not the case if we include costs in our total opex forecast that are not required to comply with regulatory obligations.

²⁰⁴ AEMC, Rule Determination, National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, 27 November 2014.

²⁰⁵ AusNet Services, *Attachment 4 AusNet Services revised proposal Power of Choice opex build up.xls*, January 2016.

²⁰⁶ AusNet Services, *Attachment 4 AusNet Services revised proposal Power of Choice opex build up.xls*, January 2016.

²⁰⁷ NER, cl. 6.18.1A

AusNet Services, *Tariff Structure Statement 2017–20*, 26 October 2015, p. 46.

²⁰⁹ AER, Jemena preliminary decision attachment 7 operation expenditure, October 2015, pp. 77–78.

The AEMC agrees that the role of retailers in providing information to facilitate understanding of pricing signals is critical:

Most consumers will gain an understanding of pricing signals through the retail tariffs they are charged. This is because for most consumers, their primary relationship will be with their retailer. As such, the role of retailers in providing information to facilitate understanding of pricing signals is critical.²¹⁰

The AEMC also noted that retailers have a significant incentive to pass on network price signals in some form when deciding how to structure their retail prices.²¹¹

Since retailers rather than distributors will be the main point of contact for cost reflective pricing enquiries, we have not included the costs of managing customer enquiries in our forecast.

We informed AusNet Services of our changed position from Jemena's preliminary decision and invited AusNet Services to comment.

In its response AusNet Services considered that there would be a significant increase in the number of customer enquiries directed to either AusNet Services or retailers. Under clause 9.8 of the Victorian Default Use of System Agreement, AusNet Services is obliged to respond to retailers on a range of issues if a retailer requires information from AusNet Services.²¹²

AusNet Services also noted that clause 9.8 results in a clear obligation to communicate with customers either directly or through the retailer regardless of statements made in the AEMC's rule determination.

We note that clause 9.8 is an existing obligation and we consider AusNet Services has overstated its potential role in managing customer enquiries. In its TSS, AusNet Services noted that from past experience in tariff reform retailers were the primary interface with end-users.²¹³ AusNet Services also conducted extensive consultation with retailers which included bilateral meetings and workshops.²¹⁴

Based on this we do not consider it is reasonable that there would be an increase in enquiries from customers directly or through retailers to justify a step change. In our view, AusNet Services' extensive stakeholder engagement program would have provided retailers with sufficient information to inform the retailer's customers and address customer concerns.

²¹⁰ AEMC, Rule Determination, National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, 27 November 2014, p. 67.

²¹¹ AEMC, Rule determination National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, 27 November 2014, p. viii

²¹² AusNet Services, *Response to information request 46* [email to AER], 8 March 2016, pp. 1–2.

²¹³ AusNet Services, *Tariff Structure Statement 2017–20*, 26 October 2015, p. 32.

²¹⁴ AusNet Services, *Tariff Structure Statement* 2017–20, 26 October 2015, p. 33.

Our forecast

We consider in transitioning to new tariffs, AusNet Services may incur implementation costs to test and review its new tariffs and to manage its more complex revenue reconciliation activities. AusNet Services forecast \$0.3 million for these transition costs in its cost build up.²¹⁵ We have assessed the volume and nature of these processes related to transitioning to cost reflective tariffs and we consider these costs are prudent and efficient.

Our forecast of \$0.3 million reflects the following components of AusNet Services' forecast:

- defining and developing new tariffs costs in 2020
- load and test new tariffs
- managing revenue reconciliation and budgeting activities.

Other submissions

The Victorian Government submitted that customers must opt in to, rather than opt out from, cost reflective network tariffs and that the AER must assess whether the DNSPs' proposals are consistent with an opt-in approach.²¹⁶

We consider the transition costs included in our forecast opex are largely fixed. These costs relate to transition costs that enable AusNet Services to implement its new demand tariffs rather than the volume of customers on new tariffs. Under an opt-in arrangement AusNet Services still incur these costs.

Metering contestability and shared market protocol

We have included \$3.1 million (\$2015) for metering contestability and shared market protocol.

In its revised proposal, AusNet Services proposed a new \$2.8 million step change to comply with the AEMC's new metering contestability rule change to take effect on 1 December 2017. AusNet Services also proposed \$0.3 million for its new shared market protocol (SMP) system.²¹⁷

The metering contestability rule change will introduce competition in metering effective from 1 December 2017. The Shared Market Protocol (SMP) and Business to Business (B2B) obligations will provide a standard form of communication for energy companies seeking access to services enabled by advanced meters.

²¹⁵ AusNet Services, Attachment 4 AusNet Services revised proposal Power of Choice opex build up.xls, January 2016.

²¹⁶ Victorian Government, Submission on the Victorian electricity distribution network service providers' revised regulatory proposals for 2016–20, January 2016, p. 6

²¹⁷ AusNet Services, *Revised regulatory proposal*, January 2016, pp. 4-31 to 4-32.

AusNet Services proposed costs related to:

- coordinating with Metering Coordinators for installation of new, contestable meters in AusNet Services' network area.
- exception management for new connections
- carrying out new exit fee processes
- requesting data from Metering Coordinators for billing purposes.²¹⁸

We have assessed the volumes, unit rate and scope of opex costs proposed by AusNet Services and we consider these cost appear reasonable. Therefore we consider the proposed opex is prudent and efficient.

To comply with these obligations, AusNet Services proposed a predominantly capex based approach totalling \$34.4 million. We discuss our assessment of AusNet Services' proposed capex to comply with these obligations in attachment 6.

Consistent with our capex approach discussed in attachment 6, we have combined our assessment of these two step changes because SMP/B2B integration is linked to metering contestability requirements.

Demand response mechanism

We have not included a step change for AusNet Services' proposed demand response mechanism.

In its revised proposal, AusNet Services proposed \$0.1 million in opex for its demand response mechanism project. This project is predominantly a capex based project, AusNet Services proposed \$2.1 million in capex.

We note the AEMC issued a consultation paper on this in November 2015.²¹⁹ This rule change is therefore still at an early stage and as such there are no regulatory obligations on the distributors.

Therefore we have not included an amount for this proposed rule change in our alternative estimate. AusNet Services may be able to apply for a pass through for the costs of any regulatory obligations that may arise during the regulatory control period, subject to the cost materiality threshold. This position is consistent with our capex assessment discussed in attachment 6.

C.5.2 National Energy Customer Framework

We have included a step change of \$1.4 million (\$2015) for the implementation of NECF connections arrangements in Victoria related to Chapter 5A of the NER.

²¹⁸ AusNet Services, *Revised regulatory proposal*, January 2016, p. 4-31.

²¹⁹ AEMC, Consultation Paper: National Electricity Amendment (Demand Response Mechanism and Ancillary Services Unbundling), 5 November 2015.

In its revised proposal, AusNet Services proposed a new step change of \$2.1 million (\$2015) related to the Victorian Government's intention to adopt Chapter 5A of the NER. AusNet Services considered the application of Chapter 5A would increase the scope and complexity of AusNet Services' connection charging obligations, which reflected Guideline 14 during the 2011–15 period. The proposed costs related to additional staff to process to carry out the following activities:

- Connection policy manager to develop and maintain a new connections policy and provide management oversight
- Connection charging analyst to develop and maintain rebate scheme databases, calculate and administer rebates and comply with new reporting processes and requirements
- Connection relationship officer to respond to the expected increase in customer enquiries.²²⁰

We are satisfied that the intention of the Victorian Government to adopt Chapter 5A of the rules to apply no later than 1 January 2017 will result in a change in regulatory obligation for AusNet Services.

However, we consider AusNet Services' forecast costs are not efficient for the following reasons.

- Its annual costs include both a policy development and dealing with customer enquiries component. Initial development costs should only apply in the first year of the forecast period. For example, we do not consider AusNet Services would be required to develop its connection policy, reporting processes and charging framework design annually.
- The forecast number of enquiries is the same each year even though the number of enquiries in 2016 should be less since the new framework will commence 1 July 2016 at the earliest and may not commence until 1 January 2017.
- AusNet Services' forecasts are high relative to all the other DNSPs.

We consider it would be reasonable for a prudent service provider to incur some costs in developing its connections policy. However, these costs should not be ongoing as the obligation remains the same for the 2016–20 regulatory control period.

We also do not consider it is reasonable to forecast the same number of enquiries for 2016 as the other years because the new connections framework will not commence until 1 July 2016 or 1 January 2017 at the latest.

We have compared AusNet Services' proposed costs and forecasting methodology to the other Victorian DNSPs. Table C.2 shows the proposed amounts for each DNSP.

²²⁰ AusNet Services, *Revised regulatory proposal*, January 2016, p. 4–27

	2016	2017	2018	2019	2020	Total
AusNet Services	0.42	0.42	0.42	0.42	0.42	2.12
CitiPower	0.13	0.08	0.08	0.08	0.08	0.44
Powercor	0.13	0.22	0.22	0.22	0.22	1.02
Jemena	0.30	0.10	0.10	0.10	0.10	0.71
United Energy	0.19	0.13	0.13	0.13	0.13	0.71

Table C.2Victorian DNSPs proposed NECF (Chapter 5A) costs (\$million, 2015)

Source: AusNet services opex model, CitiPower opex model, Powercor opex model, Jemena opex model and United Energy opex model.

As shown in Table C.2 AusNet Services proposed materially more opex to comply with Chapter 5A than the other DNSPs. In general all the DNSPs except for AusNet Services have forecast set up costs in 2016 followed up by enquiry costs from 2017 to 2020.

We have reduced AusNet Services' forecast FTE requirement from three to two. This reduces AusNet Services' forecast costs from \$2.1 million (\$2015) to \$1.4 million (\$2015). This reduction addresses our concerns about AusNet Services' annual development costs in 2017 to 2020 and customer enquiries in 2016.

This forecast is also broadly comparable to CitiPower and Powercor's costs combined. We consider this amount is reasonable because we do not consider AusNet Services should incur more costs to comply than a combined CitiPower and Powercor which services more customers and has a similar customer demographic.

C.5.3 Changes to Electrical Safety (Electric Line Clearance) Regulations

We have not included a step change related to changes to Electric Line Clearance Regulations (ELC) 2015. We consider AusNet Services' base level of opex would provide sufficient level of opex to recover the prudent and efficient cost of meeting its vegetation management obligations.

AusNet Services did not propose any change in costs related to vegetation management.

In our preliminary decision, we identified the potential for a negative step change for AusNet Services' vegetation management. We noted that Energy Safe Victoria (ESV) reintroduced exceptions in the *Electricity Safety (Electric Line Clearance) Regulations*

2015 (ELC 2015) for reduced clearance distances for structural branches. ESV noted that the removal of these exceptions in the 2010 version of the ELC increased costs over time and expects that the reintroduction of these exceptions in ELC 2015 should decrease pruning costs over time.²²¹

Based on this we considered there was scope for AusNet Services to reduce its costs to comply with its vegetation management obligations in the 2016–20 regulatory control period. However, we noted that the net impact of changes to ELC 2015 on AusNet Services' vegetation management costs was unclear and expected AusNet Services to address this after receiving guidance from ESV.²²²

In its submission to our preliminary decision, the Victorian Government identified an increase in vegetation management expenditure under ELC 2010 compared ELC 2005 for AusNet Services, Powercor and United Energy. It considered that the AER should assess both negative and positive step changes associated with the introduction of ELC 2015.²²³

In its revised proposal and response to submissions, AusNet Services considered its base year costs are reflective of its vegetation management obligations and does not expect it to decline as a result of the reintroduced exceptions²²⁴ for the following reasons:

- AusNet Services obtained exemptions in October 2013 from ESV so it did not incur additional vegetation management costs in 2014 to comply with ELC 2010 to manage its insulated service cables.²²⁵
- It will be able to manage changes in costs arising from other amendments to ELC 2015.²²⁶

The CCP also asked us to assess the impact of changes to ELC 2010 and ELC 2015 on the 2014 base year.²²⁷

Based on the information provided by AusNet Services, we are satisfied that changes to ELC regulations to apply in the forecast period would not have a material impact on AusNet Services' vegetation management costs. This is because the obligations for ELC 2015 are largely the same for AusNet Services as its current vegetation management practices and reflected in the base year.

²²¹ Energy Safe Victoria, Response to AER email on electricity distribution proposals – ESV audit intent, 28 July 2015, p. 4.

AER, Preliminary decision attachment 7: operating expenditure, October 2015, pp. 43-44

²²³ Victorian Government, Submission on the Victorian electricity distribution network service providers' revised regulatory proposals for 2016–20, January 2016, p. 7.

AusNet Services, Revised regulatory proposal, January 2016, p. 4–25

²²⁵ AusNet Services, *Revised regulatory proposal*, January 2016, 4–25

²²⁶ AusNet Services, *Revised regulatory proposal*, January 2016, 4–25

²²⁷ Consumer Challenge Panel Sub Panel 3, *Submission to the Australian Energy Regulator (AER)*, 25 February 2016, p. 32.

We are also satisfied that AusNet Services' existing vegetation management practices and its base year opex is sufficient to comply with new obligations introduced in ELC 2015.

The CCP also queried whether, if ESV did not enforce its ELC requirements as a result of providing exemptions to the DNSPs, the DNSPs would receive EBSS payments.²²⁸

The EBSS applies to total opex rather than the opex for individual regulatory obligations. Although in this circumstance the CCP have identified the costs to comply with an obligation has decreased, the costs of complying with other obligations may have increased. Under an incentive based regulatory regime, therefore, it would generally not be reasonable to make an ex-ante adjustment for the actual costs of complying with each individual regulatory obligation.

C.6 Other costs not included in the base year

We prefer a 'base-step-trend' approach to assessing most opex categories. However, when appropriate, we may asses some opex categories using other forecasting techniques, such as an efficient benchmark amount. We also assess whether using alternative forecasting techniques in combination with a 'base-step-trend' approach produces a total opex forecast consistent with the opex criteria.

In our final decision opex forecast, we have included a category specific forecast for:

- guaranteed service level payments (GSL)
- debt raising costs.

We forecast GSL costs using a five year historical averaging approach to maintain consistency with our forecasting method for previous regulatory control periods. The incentives provided by using a five year historical average are consistent with adopting a single year revealed cost approach and applying the EBSS. We forecast debt raising costs using the costs incurred by a benchmark firm to be consistent with our approach to forecasting the cost of debt.

We have not included any other category specific forecasts in our final decision opex forecast.

C.6.1 Guaranteed service level payments

We have forecast guaranteed service level (GSL) payments for the 2016–20 regulatory control period using an average of GSL payments made by AusNet Services between 2010 and 2014. Our forecast also reflects changes in the Electricity Distribution Code (EDC).²²⁹

²²⁸ Consumer Challenge Panel Sub Panel 3, *Submission to the Australian Energy Regulator (AER)*, 25 February 2016, p. 32.

²²⁹ Essential Services Commission, *Electricity Distribution Code Version 9*, December 2015, pp. 19–20.

We have included \$41.5 million (\$2015) for GSL payments in our final decision opex forecast.

In its initial proposal, AusNet Services forecast GSL payments of \$28 million (\$2015). AusNet Services forecast GSL payments as the average of GSL payments made by AusNet Services between 2010 and 2014.²³⁰ AusNet Services did not account for regulatory changes to GSL obligations because the new EDC rules were not finalised at the time.

In our preliminary decision, we included \$28 million (\$2015) for GSL payments. We accepted AusNet Services' forecast methodology.²³¹

In its revised proposal, AusNet Services forecast GSL payments of \$46.3 million (\$2015). AusNet Services increased its forecast to reflect anticipated increases in the size and the frequency of GSL payments under the new EDC.

The basis for AusNet Services' revised proposal was the draft EDC rules rather than the final EDC rules. The final version of the code requires lower/fewer GSL payments in some circumstances. AusNet Services subsequently provided a response to submissions adjusting its GSL forecast by applying the final version of the code to historical data.²³² AusNet Services submitted a revised forecast for GSL payments of \$41.5 million (\$2015). We have assessed the likely increase in the size and frequency of GSL payments, due to the changes to the EDC and we consider AusNet Services' incorporation of these changes into its forecast is reasonable.

The CCP noted the increased GSL payment forecast and suggested that the AER examine the forecast.²³³ The CCP also suggested that GSL costs "could be recovered during the course of the regulatory period".²³⁴ We consider providing for GSL payments in our ex-ante opex forecast provides network service providers with an incentive to minimise those payments and to maintain service levels at an efficient level. Actual GSL costs may be either higher or lower than forecast as they depend on the frequency of unplanned outages. Recovering GSL costs ex-post, as the CCP suggests may reduce the incentive for distributors to maintain service levels.

C.6.2 Debt raising costs

Consistent with our preliminary decision, we have forecast debt raising costs using the costs incurred by a benchmark firm. Our assessment approach and the reasons for

²³⁰ AusNet Electricity Services, *Electricity Distribution Price Review 2016-20*, 30 April 2015, p. 200.

²³¹ AER, Preliminary decision AusNet distribution determination, Attachment 7, Operating Expenditure, October 2015, p.7-20.

²³² AusNet, Response to submissions on AER preliminary decision VIC EDPR 2016-20, 4 February 2016, p. 2.

²³³ Consumer Challenge Panel Sub Panel 3, *Submission to the Australian Energy Regulator (AER)*, 25 February 2016, p. 33.

²³⁴ Consumer Challenge Panel Sub Panel 3, Submission to the Australian Energy Regulator (AER) an overview, 22 February 2016, p. 16.

those forecasts are set out in the debt and equity raising costs appendix in the rate of return attachment.

C.6.3 Other category specific forecasts

We have not included any other category specific forecasts in our final decision opex forecast.

In its initial proposal, AusNet Services proposed five category specific forecasts in addition to GSL and debt raising costs:²³⁵

- insurance
- self-insurance
- non-recurrent VBRC costs
- superannuation (defined benefit contributions)
- demand management.

AusNet Services stated it proposed the category specific forecasts to account for unique drivers of cost increases that are not reflected in the rate of change, for example insurance.²³⁶

In our preliminary decision, we did not include any base year adjustments or other category specific forecasts in our opex forecast. The difference between the total opex forecast using our approach and AusNet Services' forecasting approach (all other things being equal) was small.²³⁷ The small difference in the impact on total opex was due to the fact that AusNet Services' base year adjustments and category specific forecasts offset each other.

In support of our approach we noted that we make our assessment about the total forecast opex amount and not about particular categories or projects in the opex forecast. Within total opex we would expect to see some variation in the composition of expenditure from year to year. That is, expenditure for some categories may be higher than usual in a given year while other categories may be lower than usual. However, these variations tend to offset each other so that total opex is relatively stable. AusNet Services' opex forecast was a case in point. Using a category specific forecasting method may produce more accurate forecasts of expenditure for those categories. However, because such an approach does not enable appropriate consideration of efficiency overall, we do not consider it produces a forecast of total opex that reasonably reflects the opex criteria.

²³⁵ AusNet Services, *Regulatory proposal*, 30 April 2015, opex model.

²³⁶ AusNet Services, *Regulatory proposal*, 30 April 2015, p. 181.

²³⁷ Excludes proposed costs for AMI which we have allocated to alternative control services opex. Assumes the same rate of change. To the extent AusNet Services applies a different rate of change, the total opex forecast will be different.

In its revised proposal, AusNet Services appeared to select when it did and did not accept our base-step-trend forecasting approach:

- It accepted our forecasting approach for non-recurrent VBRC costs, superannuation for defined benefits and demand management which increased its total opex forecast.²³⁸
- It accepted our forecast of insurance as part of base year opex on the grounds that it was not materially different to AusNet Services' latest insurance forecast.²³⁹
- It did not accept our approach for self-insurance which would have reduced its total opex forecast.²⁴⁰

AusNet Services maintained the position that, depending on the specific drivers and materiality of specific cost categories, a bottom-up forecasting approach may be required to determine a total opex forecast that meets the opex criteria.²⁴¹

Table C.3AusNet Services response to the preliminary decision onbase year adjustments and category specific forecasts (\$ million 2015)

Ор	ex category	Impact of base-step-trend approach on total opex forecast	AusNet Services' response to base-step-trend approach
•	Demand management	increase	accept
•	Superannuation defined benefits	increase	accept
•	Non-recurrent VBRC costs	increase	accept
•	Insurance	no material impact ^a	accept
•	Self-insurance	reduction	reject

Source: AusNet Services, *Revised regulatory proposal*, 6 January 2016 and opex model.Note: (a) AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-7.

As a result of rejecting our forecasting approach for self-insurance but accepting it for everything else, AusNet Services' revised forecast for these costs is \$5.6 million higher than its initial proposal and \$7.7 million higher than our preliminary decision.

Consideration of self-insurance forecast

We do not consider AusNet Services provided sufficient new information for us to move from our preliminary position not to include a category specific forecast for self-insurance in the opex forecast. We prefer a 'base-step-trend' approach for the reasons discussed below.

²³⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-2.

²³⁹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-7.

²⁴⁰ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-33.

²⁴¹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-7.

In its revised proposal, AusNet Services proposed a category specific forecast for selfinsurance of \$16.9 million (\$2015).²⁴² This increased its total opex forecast by \$7.7 million (\$2015) compared to leaving self-insurance costs in the base year.

AusNet Services considered self-insurance losses are volatile and can vary markedly from year to year.²⁴³ For this reason, it stated the quantification of these losses is best suited to an actuarial analysis that forecasts self-insurance based on expected losses determined from historical data, rather than on actual losses in a single year. It stated the AER's approach will not result in a more accurate forecast of total opex than such an analysis, particularly when base year opex is materially influenced by losses due to abnormal events.

Both we and AusNet Services have forecast opex for 2016–20 by predominantly using a top down revealed cost methodology. That is, both we and AusNet Services have taken the costs incurred in 2014 and used them to estimate total opex for 2016–20.

We use this approach because total opex tends to be relatively recurrent - suggesting it is a reasonable basis for forecasting total opex for the next regulatory control period. As Figure C.1 illustrates, AusNet Services' total opex has been similar in the three most recent regulatory years.²⁴⁴ This is the case even though AusNet Services incurred a self-insurance loss of \$10 million in 2015.²⁴⁵



Figure C.1 AusNet Services - Opex, 2013–2015 (\$million, 2015)

Source: AusNet Services Annual RIN 2013 and 2014, AusNet Services reset RIN 2016-20.

²⁴² AusNet Services, *Revised regulatory proposal, Reset RIN 2016-20*, Table 15.6.4 and opex model.

²⁴³ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-33.

²⁴⁴ To the extent there is any variability, the cost increase or decrease will be shared between consumers and service providers. With the application of the EBSS the cost increase or decrease is shared approximately 30:70 between service providers and consumers.

²⁴⁵ AusNet Services, *Revised regulatory proposal*, January 2016, p. 4-35.

By using a revealed cost approach neither we nor AusNet Services are forecasting that the opex AusNet Services incurred in 2014 for each specific program or category will be the same in each year of the next regulatory control period. We have not considered what forecast opex AusNet Services will spend on each opex program and project in the next regulatory control period. The top down nature of this approach (which is consistent with the NER requirement to determine opex in total²⁴⁶) means it is not necessary to consider exactly how AusNet Services will allocate opex to programs and projects in the next regulatory control period. AusNet Services seems to accept this given it did not present evidence analysing what it expects to spend on each program and project in the next regulatory control period.

We would generally expect that to keep opex relatively recurrent, a service provider can reallocate resources between different projects and between different categories.

We also have concerns about category specific forecasting approaches when used in conjunction with a revealed cost forecasting approach. Under such a hybrid approach, a service provider has an incentive to use a bottom-up forecasting approach for new projects or programs, or where the cost is expected to rise in the forecast period. Where a service provider expects the costs of projects or programs to decline, its incentive is to use a base year approach. Under such a hybrid forecasting approach, a service provider would be financially rewarded as a result of the costs of projects and programs that are declining but would not be penalised for the costs of the projects and programs that are increasing.

AusNet Services considered our preliminary decision failed to recognise the impact of self-insurance losses on total opex.²⁴⁷ It stated that if it paid a \$10 million deductible during 2014 (the base year for the current period) rather than in 2015, its opex forecast for the current period would be at least \$50 million higher under the AER's self-insurance approach.²⁴⁸ However, AusNet Services' statement assumes we do not assess the efficiency of the base year before we use it as a starting point for our estimate of total opex. If the base year appears to be inefficient, we may choose to undertake a more detailed review or substitute it with our own estimate.

AusNet Services' submission also assumes that if AusNet Services incurred a large self-insurance loss it would not adjust any of its costs in response. If a service provider incurred a large increase in costs in one area, it may try to reduce its costs in other areas to limit the net impact to the business. For example, AusNet Services incurred a self-insurance loss of \$10 million in 2015; however, its actual total opex only increased by \$5.6 million (\$2015) in that year.²⁴⁹

In any case, in the next regulatory control period, the revenue impacts of one off selfinsurance losses in the base year will be addressed by including self-insurance in the

²⁴⁶ NER, clause 6.5.6(c).

²⁴⁷ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-33.

²⁴⁸ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-35.

²⁴⁹ Source, AER analysis, AusNet Services, *Revised regulatory proposal, Opex model*, 6 January 2016.

EBSS. The interaction of the EBSS with a revealed cost forecasting approach means the net impact on total revenue of a self-insurance loss (or savings) in the base year is small. For example, if AusNet Services incurs a \$10 million self-insurance cost in the base year, its opex forecast for the following period will be \$50 million higher. However, its EBSS reward will be lower by a similar magnitude, offsetting the higher opex forecast. Similarly, if AusNet Services pays no self-insurance costs in the base year, its opex forecast going forward will be lower but it will receive an offsetting EBSS reward. When the EBSS applies, the costs of a self-insurance event will be shared between the network service provider and network consumers according to the sharing ratio in the EBSS. That is, regardless of the timing of the event the cost will be shared approximately 30:70 between the service provider and network consumers.²⁵⁰

AusNet Services also stated our preliminary decision did not treat self-insurance consistently with insurance.²⁵¹ It stated self-insurance is analogous to insurance, with the "premium" being a self-insurance allowance. Therefore, just like for insurance, the relevant cost in the base year is the allowance, or premium, not the self-insurance losses incurred. It stated by accepting that insurance premiums are a cost that should be allowed for in opex forecasts, but not adopting the same position on self-insurance, the preliminary decision provides a perverse incentive to rely solely on insurance, rather than self-insurance, to manage insurable risks.²⁵² We disagree. Our forecasting approach does not create incentives for a network service provider to spend opex on one category rather than another. We do not forecast expenditure for individual categories of opex such as insurance and self-insurance. Rather we forecast total opex. In other words, we provide network service providers with a total opex forecast which they are free to allocate as they determine. This means AusNet Services has an incentive to choose the most efficient mix of total opex including insurance, self-insurance and risk mitigation for its circumstances.

²⁵⁰ AER, *Explanatory statement, EBSS for electricity network service providers*, November 2013, p. 19.

²⁵¹ AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-33.

²⁵² AusNet Services, *Revised regulatory proposal*, 6 January 2016, p. 4-34.