



DRAFT DECISION
TasNetworks distribution
determination
2017–18 to 2018–19

Attachment 7 – Operating
expenditure

September 2016

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Note

This attachment forms part of the AER's draft decision on TasNetworks' distribution determination for 2017–19. It should be read with all other parts of the draft decision.

The draft 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

Attachment 16 – Alternative control services

Attachment 17 – Negotiated services framework and criteria

Attachment 18 – Connection policy

Attachment 19 – Tariff structure statement

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Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for Electricity Distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure

Shortened form	Extended form
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
WACC	weighted average cost of capital

7 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital 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 annual total revenue requirement.

This attachment outlines our assessment of TasNetworks' proposed opex forecast for the 2017–19 regulatory period.

7.1 Draft decision

Our draft decision is to accept TasNetworks' opex forecast of \$123.1 million (\$2016–17) over the 2017–19 regulatory period. TasNetworks' proposal is 14.5 per cent lower (in real terms)¹ than its annual opex spend over 2012–17 (section 7.2). Stakeholder submissions were broadly supportive of TasNetworks' proposal (section 7.2.1).

We developed an alternative estimate of efficient costs to assess TasNetworks' proposal. We used our standard 'base-step-trend' approach (section 7.3).² This is a 'top-down model' that allows us to leave the day-to-day decisions to the business—and is consistent with an economic, incentive-based regulatory framework.

Our benchmarking results indicate TasNetworks is operating efficiently relative to other businesses in the National Electricity Market (NEM). We therefore used its past (actual) costs as the starting point for our forecast (as proposed by TasNetworks). We then forecast growth in prices, output and productivity using our standard approach in accordance with our Guideline (section 7.4).³

Our alternative estimate of forecast total opex is \$140.6 million (\$2016–17).⁴ This is \$17.5 million higher than TasNetworks' proposal.

The key difference between our estimate and TasNetworks' forecast is:

- different approaches to calculating the change in opex between the base year (2014–15) and the final year of the current regulatory control period (2016–17). This is discussed further in section 7.2.
- different assumptions about productivity growth over 2017–19. TasNetworks forecast higher productivity growth of 2.2 per cent compared to our estimate of zero productivity growth. TasNetworks expects the merger of the transmission and

¹ Excluding debt raising costs.

² AER, *Better Regulation—Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013.

³ AER, *Better Regulation—Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013.

⁴ Including debt raising costs.

distribution networks in Tasmania to deliver further costs savings over 2017–19. This is discussed further in section 7.4.2.

7.2 TasNetworks' proposal

TasNetworks proposes total opex of \$120.9 million (\$2016–17) for the 2017–19 regulatory control period (excluding debt raising costs totalling \$2.2 million). TasNetworks' proposed total opex forecast is set out in Table 7.1.

Table 7.1 TasNetworks' proposed opex (\$million, 2016–17)

	2017–18	2018–19	Total
Total opex excluding debt raising costs	61.2	59.7	120.9
Debt raising costs	1.1	1.1	2.2
Total opex	62.3	60.8	123.1

Source: TasNetworks, *Regulatory proposal*, 29 January 2016, opex model.

TasNetworks was established in 2014 with the merger of the electricity transmission and distribution networks previously owned and operated by Transend Networks and Aurora Energy, respectively. TasNetworks submitted the merged business is delivering network synergies and operating efficiencies, and it expects these to continue over 2017–19.

TasNetworks forecast further cost savings over 2017–19 compared to 2012–17, which are attributed to reduced staffing levels, rationalisation of duplicate systems and improved ways of delivering services to customers.

Figure 7.1 compares TasNetworks' forecast opex with its historical opex, historical allowance and our alternative opex forecast.

Figure 7.1 TasNetworks' historical and forecast opex

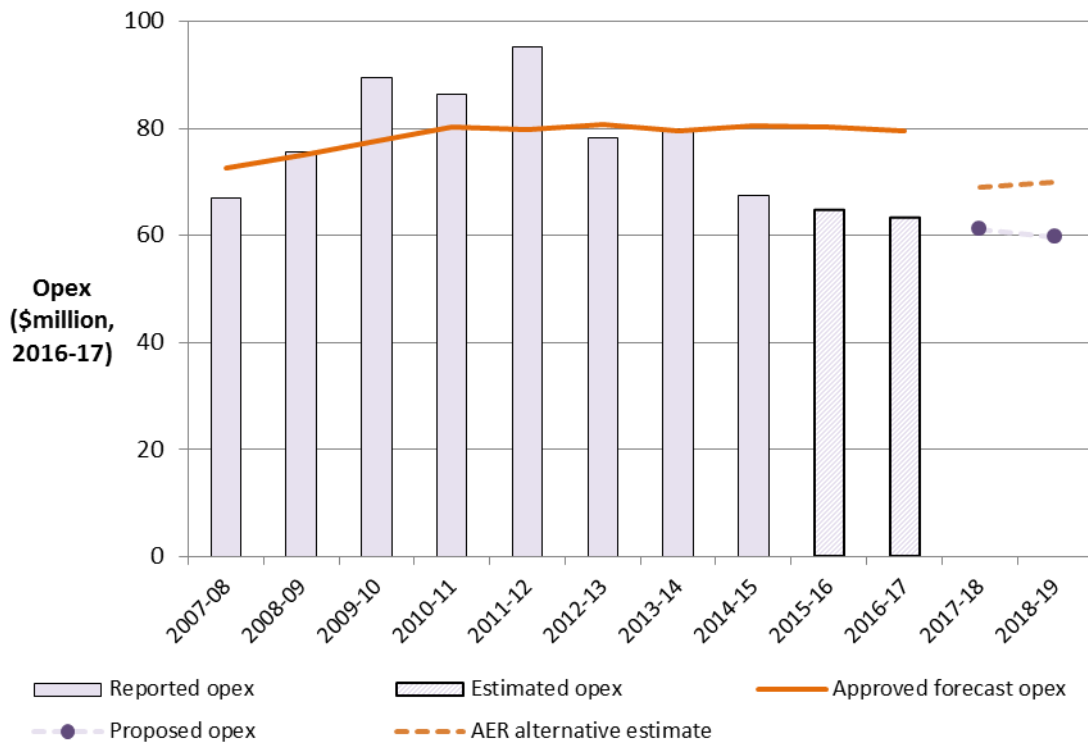
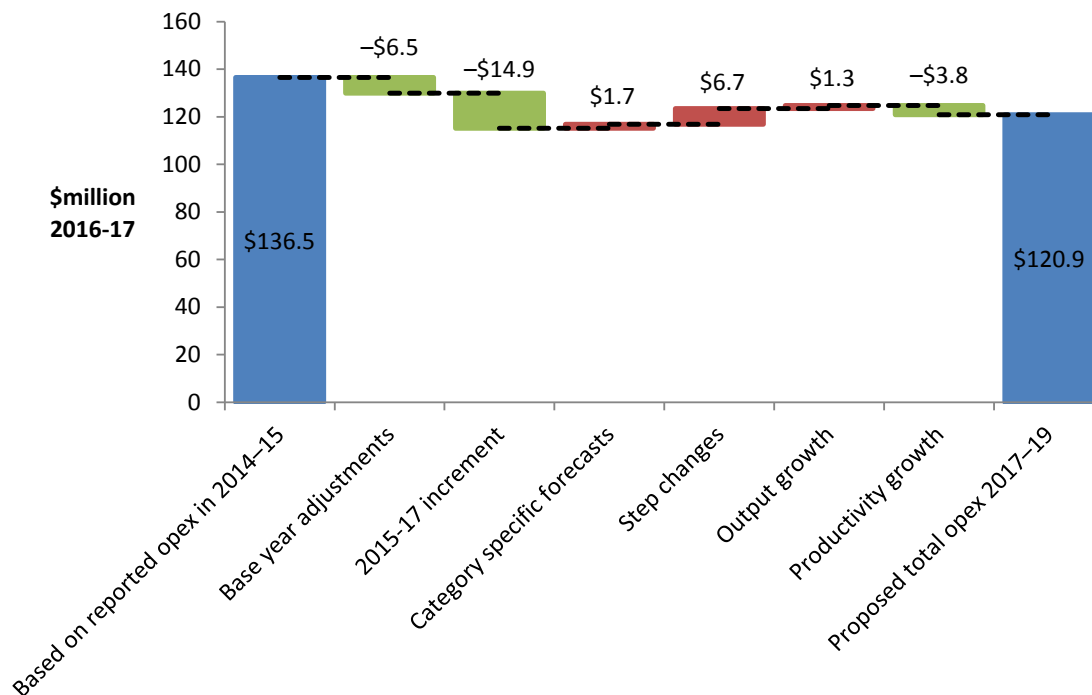


Figure 7.1 shows TasNetworks expects that it will outperform its opex allowance over 2014–15 to 2016–17. In 2014–15 there was a noticeable fall in TasNetworks' opex, following the merger of its transmission and distribution networks on 1 July 2014. In the years preceding 2014–15, TasNetworks' actual opex was close to or above its opex allowance.

TasNetworks will be rewarded for its recent efficiency improvements because under the regulatory framework, it is allowed to retain the difference between its actual opex and our forecast for a portion of time. Consumers will also benefit as we use these lower 'revealed costs' as a basis for forecasting the business' opex needs for the future.

Figure 7.2 separates TasNetworks' opex proposal into the different elements that make up its forecast for the 2017–19 regulatory control period.

Figure 7.2 TasNetworks' opex forecast (\$ million, 2016–17)



Source: AER analysis.

The key elements of TasNetworks' proposal are:

- TasNetworks adopted our 'base-step-trend' approach to forecast its opex for the 2017–19 regulatory control period.
- TasNetworks used the actual opex it incurred in 2014–15 as the base for forecasting its opex over 2017–19. If no other adjustments were made, this would lead to base opex of \$136.5 million (\$2016–17) for 2017–19.
 - TasNetworks removed non-recurrent costs from its base opex, comprising abnormal GSL payments. This decreased its opex forecast by \$6.5 million (\$2016–17).
 - In support of using 2014-15 as its base year, TasNetworks noted its raw efficiency scores are close to the 'efficiency frontier' (around 5 per cent below the 'unadjusted comparison point') and would be superior to the adjusted comparison point if 'operating environment factors' were taken into account.
- TasNetworks removed self-insurance costs from its base year opex, instead including a category specific forecast for self-insurance. This decreased its forecast by \$0.8 million (\$2016–17).
- To forecast the change in opex between the base year (2014–15) and the commencement of the 2017–19 regulatory period, TasNetworks added the growth it forecast in output and productivity. In doing this, it incorporated an efficiency gain made between the base year and the start of the regulatory period in its opex

forecast. This differs from the approach set out in our *Expenditure forecast assessment guideline* (the Guideline).⁵ As a result of TasNetworks' strong productivity forecast over 2015–17, this decreased its forecast by \$14.9 million (\$2016–17).

- TasNetworks identified five step changes in costs that it would incur during the forecast period, which were not incurred in 2014–15. This increased its forecast by \$6.7 million (\$2016–17). TasNetworks noted these step changes will be offset by forecast productivity growth (outlined below).
- TasNetworks did not forecast any growth in both labour and non-labour prices. TasNetworks stated this reflects its commitment to addressing customers' concerns about electricity prices and delivering services for the lowest sustainable cost.
- TasNetworks forecast output growth using our forecasting approach. This increased its opex forecast by \$1.3 million (\$2016–17).
- TasNetworks forecast strong productivity growth. This reduced its opex forecast by \$3.8 million (\$2016–17). TasNetworks noted its forecast productivity growth reflects its commitment to managing its opex so that it remains flat in nominal terms relative to its base year.

7.2.1 Submissions on TasNetworks' proposal

Stakeholders' submissions on TasNetworks' proposal generally supported the view that its total forecast opex reasonably reflects the opex criteria.

Consumer Challenge Panel (CCP) member David Headberry considered TasNetworks' proposed opex is acceptable. The CCP member considered our benchmarking results generally support the approaches taken by TasNetworks to set its base year opex. The CCP member does not see the necessity of carrying out a detailed assessment of step changes and trend approaches as these are effectively 'washed out' of the forecast opex through the proposed productivity gains.⁶

CCP member David Headberry noted that increased IT capex by TasNetworks should lead to substantial opex savings to justify such expenditure. This, it stated, is not reflected in the claimed opex, although there has been a reduction in forecast 'business-as-usual' opex when using 2014-15 as the benchmark.⁷

⁵ Our Expenditure forecast assessment guideline (p. 23) sets out how we will estimate opex in the final year of the preceding regulatory control period (2016–17 in this case). Estimating 2016–17 this way allows TasNetworks to retain efficiency gains made after the base year (2014–15). TasNetworks did not adopt this approach to forecasting opex for 2016–17 and in effect assumed it would make efficiency gains in 2015–16 and 2016–17.

⁶ CCP (David Headberry), *Submission to the AER, Response to the proposal from Tasmania's electricity distribution network service provider (TasNetworks - TND) for a revenue reset for the 2017–19 regulatory period*, 4 May 2016, p. 21.

⁷ CCP (David Headberry), *Submission to the AER, Response to the proposal from Tasmania's electricity distribution network service provider (TasNetworks - TND) for a revenue reset for the 2017–19 regulatory period*, 4 May 2016, p. 20.

Similarly, TasCOSS stated that while it welcomes the further reductions in opex proposed by TasNetworks, its significant investment in asset management and IT systems in the current period and proposed for 2017-18 do not appear to have been reflected in reductions in opex as one might expect.⁸

A summary of stakeholder submissions on TasNetworks' opex proposal and our response to the issues raised is presented in section 7.4.6.

7.3 Assessment approach

In assessing a business' forecast of total opex, we must form a view about whether the total of the forecast reasonably reflects each of the opex criteria.⁹ If we are satisfied it reasonably reflects those criteria, we must accept the business' forecast.¹⁰ If we are not satisfied, we substitute the business' forecast with our alternative estimate of the business' opex.¹¹

Our view as to whether a network business' proposal is reasonable is not a separate exercise from determining an alternative opex forecast. We assess a business' opex proposal by determining our own opex forecast. We have discretion to determine whether the difference between our forecast opex and the business' proposed opex is such that we should accept the business' opex as reasonable.

We apply the 'base-step-trend' forecasting approach to develop our alternative estimate of efficient costs to compare against the business' proposal. This approach is consistent with an economic, incentive-based regulatory framework. It allows us to leave the minutiae of input and output decision-making to the business. Our role is to allow the business the flexibility to manage its assets and labour as it sees fit to achieve the NEO.

First, we use the business' audited historical costs in a recent year as a starting point for our forecast. We call this 'base opex'. Our benchmarking results provide information about whether the business is operating efficiently. We look for evidence of 'material inefficiencies' in a network business' base opex to determine if we can rely on 'revealed costs', or if an adjustment to base opex is required. Benchmarking a network business against others provides an indication of whether the proposal is reasonable and if not, what a substitute should be.

Second, we trend base opex forward by applying our forecast of the 'rate of change'. This accounts for forecast growth in input prices, output and productivity over the

⁸ Tasmanian Council of Social Service (TasCOSS), Submission on AER issues paper regarding TasNetworks' regulatory proposal, 28 April 2016, p. 1.

⁹ The opex criteria are: the efficient costs of achieving the opex objectives; the costs that a prudent operator would require to achieve the opex objectives; a realistic expectation of the demand forecast and cost inputs required to achieve the opex objectives. NER, cl. 6.5.6(c), 6.12.1(4). The opex objectives are set out in cl 6.5.6(a).

¹⁰ NER, cl. 6.5.6(c), 6.12.1(4)(i).

¹¹ NER, cl. 6.5.6(d), 6.12.1(4)(ii).

regulatory control period. We make use of expert and independent information sources, such as forecasts of labour price growth.

Third, we add or subtract any components of opex that are not captured in base opex or the rate of change—that is, 'step changes' or, possibly, category specific forecasts. In particular, we consider whether new regulatory obligations have been imposed on a network business and, if so, we assess the prudence and efficiency of the associated forecast cost increases or decreases.

If a business' total opex forecast is materially higher than our estimate, we undertake further investigation and analysis. We identify all differences between our estimate and the business' forecast. Having identified the differences, we assess whether the business' forecasting method, inputs and assumptions are reasonable, and assess the business' explanation of how that method results in a prudent and efficient forecast. We may seek further information from the business, or other stakeholders.

If we ultimately find no satisfactory explanation for the difference between our estimate and the business' total opex forecast, we may form the view the business' forecast does not reasonably reflect the opex criteria, and substitute it with our own forecast.

If our alternative estimate demonstrates that the business' total opex forecast reasonably reflects the opex criteria, we will accept the forecast.¹² If so, we are unlikely to undertake a more detailed assessment of the business' proposal.

7.3.1 The National Electricity Objective, and the opex criteria, objective and factors

We must make determinations that will or will be likely to contribute to the achievement of the National electricity objective (NEO)—that is, that promote efficient outcomes for the benefit of consumers in the long term.

We must form a view on whether the business' opex proposal reasonably reflects the 'opex criteria' as mentioned above.¹³

The opex criteria direct attention to the opex objectives.¹⁴ The focus of the opex objectives is on the performance outputs of the business, including: meeting demand for distribution services, compliance with regulatory obligations, maintaining the quality, reliability and security of supply of services, and maintaining the reliability, security and safety of the distribution system.

¹² AER, *Expenditure forecast assessment guideline*, November 2013, p. 7. NER, clauses 6.5.6(c).

¹³ NER, cl. 6.5.6(c).

¹⁴ NER, cl. 6.5.6(a).

In considering whether the opex forecast reasonably reflects the opex criteria, we must have regard to the 'opex factors' specified in the NER.¹⁵ Section 7.4.7 describes the opex factors and how we have had regard to each of these in our draft decision.

7.4 Reasons for draft decision

Our alternative estimate of forecast total opex is \$140.6 million (\$2016–17).¹⁶ This is \$17.5 million higher than TasNetworks' proposal.

Our draft decision is to accept TasNetworks' opex forecast of \$123.1 million (\$2016–17) over the 2017–19 regulatory period. We are satisfied the opex forecast reasonably reflects the efficient costs that a prudent operator would require to maintain the quality of supply, reliability, security and safety of the network, while complying with all regulatory obligations and given expected demand and cost inputs.

This section outlines the key inputs and assumptions we made in developing our alternative estimate of efficient costs over 2017–19. The key difference between our estimate and TasNetworks' proposal is how we calculated the change in opex between the base year and beginning of the 2017–19 regulatory control period (discussed in section 7.2). We also differ in our respective forecasts of productivity growth (section 7.4.2). The opex model we used to calculate our alternative estimate is published on our website.¹⁷

Table 7.2 presents a summary of the components that make up TasNetworks' proposal and our alternative estimate (both excluding debt raising costs) for comparative purposes.

Table 7.2 Comparison of TasNetworks' opex forecast to our alternative estimate by component (\$ million, 2016–17)

	TasNetworks	Our alternative estimate	Difference
Based on reported opex in 2014–15	136.5	135.1	-1.3
Base year adjustments	-6.5	-1.9	4.6
Movement in provisions	-	7.7	7.7
2014–15 to 2016–17 increment	-14.9	-1.7	13.2
Output growth	1.3	1.2	-0.1
Price growth	-	0.3	0.3
Productivity growth	-3.8	0.0	3.8

¹⁵ NER, cl. 6.5.6(e).

¹⁶ Including debt raising costs.

¹⁷ www.aer.gov.au/networks-pipelines/determinations-access-arrangements/tasnetworks-formerly-aurora-energy-2017-2019.

Step changes	6.7	0.8	-5.9
Category specific forecasts	1.7	-2.6	-4.3
Total opex	120.9	138.9	18.0

Source: AER analysis.

Note: Both TasNetworks' proposed opex and our alternative estimate exclude debt raising costs.

7.4.1 Base opex

We have relied on TasNetworks' reported opex in 2014–15 to forecast its opex over the 2017–19 regulatory control period, as proposed by TasNetworks.

Our benchmarking results indicate TasNetworks is operating relatively efficiently when compared to other service providers in the NEM.¹⁸ We therefore consider past (actual) costs are a reasonable starting point for TasNetworks' opex forecast.¹⁹

Our alternative estimate includes a base opex amount of \$64.5 million (\$2016–17).

7.4.2 Rate of change

Having determined an efficient starting point, or base opex, we trend it forward to account for the forecast growth in prices, output and productivity. We refer to this as the rate of change.²⁰

Forecast price growth

We have forecast real average annual price growth of 0.2 per cent in our alternative opex forecast.

Our opex forecast takes into account expected growth in labour and non-labour prices. Specifically:

- To forecast labour price growth we use forecast growth in the wage price index for the utilities industry.²¹ We have used forecasts from Deloitte Access Economics for the Australian utilities industry in the absence of Tasmania specific forecasts. This is our typical approach to forecasting labour price growth.
- We forecast no real price growth for non-labour prices. Therefore, consistent with our usual approach, we apply the forecast change in CPI to non-labour prices.

¹⁸ AER, *Annual Benchmarking Report—Electricity distribution network service providers*, November 2015.

¹⁹ AER, *Expenditure forecast assessment guideline*, November 2013, pp. 22.

²⁰ AER, *Expenditure forecast assessment guideline*, November 2013, pp. 23-24.

²¹ DAE, *Forecast growth in labour costs in NEM regions of Australia*, 15 June 2015, p. 10.

- To account for the proportion of opex that is labour and the proportion that is non-labour we weight the forecast price growth.²²

In comparison, TasNetworks assumed no real price growth for both labour and non-labour prices.²³ Consequently our price growth forecast is higher than TasNetworks' forecast.

Forecast output growth

We have forecast average annual output growth of 0.6 per cent in our alternative opex forecast.

We assume the opex of an efficient provider would reasonably increase with increases in output. The outputs we have regard to are: customer numbers, circuit line length, and maximum demand.

We weight the forecast output growth to account for the proportion of opex that is attributable to each of the three measures.²⁴ We use the forecast customer numbers, circuit length and ratcheted maximum demand reported by TasNetworks.²⁵

TasNetworks also forecast output growth of 0.6 per cent because it adopted our approach to forecasting output growth.²⁶

Forecast productivity growth

We have applied zero productivity growth in our alternative opex forecast.

We forecast our change in productivity measure based on our expectations of the productivity an efficient service provider in the distribution industry can achieve. We generally consider past performance to be a good indicator of future performance under a business-as-usual situation.

To reach our best estimate of forecast productivity we have considered the historical change in productivity from Economic Insights' economic benchmarking analysis²⁷ and

²² We applied Economic Insights' benchmark opex price weightings for labour and non-labour: 62 per cent weighting for labour and 38 per cent for non-labour. For more detail refer to our determination for AusNet Services distribution in Victoria.

²³ TasNetworks, Regulatory proposal, January 2016, p. 102.

²⁴ The weightings we applied to each measure of network output are the same as those we used in our benchmarking analysis: customer numbers 67.6%; circuit length 10.7%; and ratcheted maximum demand 21.7%. Economic Insights discussed the process for selecting the output specification in its economic benchmarking assessment of opex for the NSW and ACT electricity distributors; Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 17 November 2014, pp. 9–10.

²⁵ in its reset RIN (TasNetworks - TN069 - Reset RIN Template - January 2016).

²⁶ TasNetworks, Regulatory proposal, January 2016, p. 102. TasNetworks also based its forecast output growth on Economic Insights' operating expenditure cost function.

²⁷ Economic Insights, Economic benchmarking assessment of operating expenditure for NSW and ACT electricity DNSPs, 20 October 2014, p. 38.

whether this reflects a reasonable expectation of the benchmark productivity that can be achieved for the forecast period.

We do not expect negative productivity trends to continue for the forecast period. Rather we have applied a zero productivity forecast for TasNetworks for the following reasons:

- While productivity for most electricity distribution businesses was negative between 2006 and 2012, the rate of decline levelled off for most businesses or in some cases improved between 2012 and 2014.²⁸ A significant factor contributing to negative productivity was the increase in the service providers' inputs, which we do not expect to continue for the forecast period.
- TasNetworks' productivity declined between 2006 and 2010 but increased slightly between 2010 and 2014.²⁹
- It is consistent with Economic Insights' recommendation to apply zero productivity growth for other distribution network service providers, which we adopted in our recent distribution determinations for South Australia and Victoria.³⁰ Economic Insights' assessed trends in annual output growth and input quantity at an industry level, so this informs our assessment of TasNetworks.
- Measured productivity for most electricity transmission and gas distribution industries are positive for the 2006–14 period and are forecast to be positive.³¹ These sectors share some common drivers of productivity with distribution, such as input prices, regulatory obligations and demand.

In comparison to our forecast, TasNetworks proposed strong productivity growth over the regulatory control period.

TasNetworks' regulatory proposal indicated its forecast is based on further efficiencies it identified related to the merger of transmission and distribution networks.³² Further, we note TasNetworks is undertaking considerable investment in information technology, which is expected to lead to productivity improvements—as highlighted by CCP members and TasCOSS.

²⁸ AER, 2015 Annual benchmarking report (Distribution), November 2015, pp. 11-12.

²⁹ AER, 2015 Annual benchmarking report (Distribution), November 2015, pp. 11-12.

³⁰ Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 8 September 2014, p. 52; Economic Insights, *Response to consultants' reports on economic benchmarking of electricity DNSPs*, 22 April 2015, p. 71. We applied zero productivity growth in our recent distribution determinations for South Australia and Victoria: AER, SA Power Networks distribution determination 2015-20, preliminary decision, Attachment 7, p. 7-64; AER, Jemena Distribution determination 2016-20, Attachment 7, preliminary decision, pp. 7-57.

³¹ AER, 2015 Annual benchmarking report (Transmission), November 2015, p. 17; AER, 2015 Annual benchmarking report (Distribution), November 2015, p. 12.

³² TasNetworks, *Tasmanian Distribution Regulatory Proposal—Regulatory Control Period 1 July 2017 to 30 June 2019*, 29 January 2016, pp. 92, 94 (TasNetworks, Regulatory proposal, January 2016).

In response to a subsequent information request, TasNetworks clarified that the "productivity savings identified in the distribution regulatory proposal are not specific to individual initiatives but are an estimate of overall productivity savings".³³ Nevertheless, TasNetworks noted it is "planning to undertake a number of initiatives during the 2017–2019 regulatory control period, that will provide productivity improvements, including:

- continued productivity improvements from network merger including enterprise-wide transformation programs underpinned by IT investment, for example, Ajilis; and
- a number of business improvement initiatives".³⁴

7.4.3 Step changes and category specific forecasts

We add or subtract any other opex components that would not otherwise be captured in base opex or the rate of change, such as step changes or category specific forecasts.

Step changes

TasNetworks proposed five step changes totalling \$6.7 million or 5.3 per cent of its total opex forecast.³⁵

In developing our alternative estimate, we typically include step changes for cost drivers such as new regulatory obligations or efficient capex/opex trade-offs. As we explain in our Guideline, we will include a step change if efficient base opex and the rate of change in opex of an efficient service provider do not already include the proposed cost.³⁶

We have included one step change of \$0.8 million (\$2016–17) for a metering rule change in our alternative forecast because it is driven by a regulatory change. We consider additional opex will be required to administer new processes and systems associated with metering contestability, which is expected to commence in December 2017.

We did not include the other step changes TasNetworks proposed. Specifically, these were for:

- overhead switchgear and overhead system asset repair
- increase in access track and corridor maintenance

³³ TasNetworks, response to AER information request 'TasNetworks IR#016', *AER Information Request—TasNetworks response to questions raised by the AER*, 25 August 2016, p. 6.

³⁴ TasNetworks, response to AER information request 'TasNetworks IR#016', *AER Information Request—TasNetworks response to questions raised by the AER*, 25 August 2016, p. 6.

³⁵ TasNetworks, Regulatory proposal, January 2016, pp. 97-100.

³⁶ AER, Expenditure forecast assessment guideline, November 2013, p. 24.

- increase in inspection of overhead lines and structures and increase in overhead system asset repair
- increase in low conductor span rectification.

These proposed step changes are for repairs, maintenance, inspection and rectification work which we consider are business-as-usual activities for a network service provider. As a consequence we consider these costs are already accounted for in our base opex forecast.

Category specific forecasts

We have included four expenditure items in our opex forecast outside of the base-step-trend approach. These are debt raising costs, GSL payments, electrical safety levy and National energy market (NEM) levy. We have not included a category-specific forecast for self-insurance, as proposed by TasNetworks.

Debt raising costs

Debt raising costs are transaction costs incurred each time debt is raised or re-financed. Our standard forecasting approach for these costs sets the forecast equal to the costs incurred by a benchmark firm. Our assessment approach and the reasons for those forecasts are set out in the debt and equity raising costs appendix in the rate of return attachment.

TasNetworks forecast debt raising costs consistently with our approach.³⁷

Guaranteed service level payments

We have forecast guaranteed service level (GSL) payments as the average of GSL payments made by TasNetworks over the most recent five years for which we have data.³⁸ We note the GSL revenue and incentives provided under this approach is almost identical to adopting a single year revealed cost approach and applying the EBSS. We have adopted the historical averaging approach to maintain consistency with how GSL payments have been forecast for previous regulatory control periods.

Electrical safety levy and NEM levy

TasNetworks pays an electrical safety inspection levy and a NEM levy to the State government. Both payments are subject to an annual true up as part of our revenue control mechanism.³⁹ We calculate the difference between the forecast allowance and the actual costs TasNetworks incurs. Where the amount TasNetworks incurs is lower than the allowance, we make a negative revenue adjustment. Table 7.3 sets out our allowance for the levies.

³⁷ TasNetworks, Regulatory proposal, January 2016, p. 104.

³⁸ The five years are 2010–11 to 2014–15. We will update this in the final decision.

³⁹ This is consistent with our *final framework and approach, for TasNetworks distribution*, July 2015, p. 54.

Table 7.3 Electrical safety levy and NEM levy (\$ million, 2016–17)

	2017–18	2018–19	Total
Electrical safety levy	2.0	2.0	4.0
NEM levy	0.4	0.4	0.8

Source: AER analysis

Self-insurance

TasNetworks included a self-insurance allowance of \$0.9 million per year in its opex forecast outside of the base-step-trend approach.

We have not included a separate forecast for self-insurance in our alternative opex forecast. Rather, consistent with recent determinations, we have left self-insurance in the base year and applied a base-step-trend approach.

We make our assessment about total forecast opex and not about particular categories or projects in the opex forecast. Expenditure for some categories will be higher relative to the base year, while other categories will be lower relative to the base year. We expect these variations to offset each other so that total opex is relatively stable over time.

Using a category specific forecasting method may produce a more accurate forecast of a particular opex category in isolation. However, information asymmetries make it difficult for us to identify all offsetting costs. The network businesses have an incentive to identify cost categories that are forecast to be higher than the base year. TasNetworks' proposal to include a separate cost category for self-insurance potentially creates a bias in the forecast.

We consider our 'top-down model' produces a total opex forecast that meets the requirements of the National electricity rules (NER) and, moreover, is in the long term interests of consumers. It allows us to leave the day-to-day decisions to the businesses and is consistent with an economic, incentive-based regulatory framework.

A more detailed explanation of our forecasting approach and why we do not include a category-specific forecast for self-insurance can be found in our recent determination for AusNet Services Distribution.⁴⁰ AusNet Services appealed our decision on this matter. We anticipate the Australian Competition Tribunal will make its decision by early 2017, before we make our final decision for TasNetworks' distribution determination in April 2017.

⁴⁰ AER, *AusNet Services distribution determination 2017–22, final decision, Attachment 7*, pp. 7-94 to 7-98.

7.4.4 Safety and reliability

Under the NER, we must assess the amount of forecast opex that is required to achieve the opex objectives, which include quality, reliability, security and safety considerations. We have considered whether there are safety and reliability risks if TasNetworks cannot achieve its proposed opex productivity gains.

We consider that our draft decision to accept TasNetworks' proposal appropriately accounts for safety and reliability obligations because:

- TasNetworks met its safety and reliability obligations in the previous regulatory period, including in 2014-15 when there was a significant reduction in TasNetworks' actual opex (see figure 7.1).
- our draft decision sets the revenue TasNetworks can recover from consumers, but it does not direct or constrain the quantum or allocation of a business' spending⁴¹
- the enforcement of safety regulations is not determined by the quantum of regulatory revenue
- the Service Target Performance Incentive Scheme, which applies to TasNetworks, balances the business' incentive to reduce expenditure with the need to maintain or improve service quality—it achieves this by providing financial incentives to maintain and improve service performance where customers are willing to pay for these improvements
- TasNetworks must comply with jurisdictional reliability standards. The Tasmanian Electricity Code sets out the requirements on TasNetworks as a holder of a Network service provider licence to comply with voltage and reliability standards.⁴²

If TasNetworks cannot achieve the proposed opex productivity gains, it may incur costs above what we consider are efficient levels.

7.4.5 Interrelationships

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

- the operation of the EBSS in the 2012–17 regulatory control period, which provided TasNetworks an incentive to reduce opex in the 2014–15 base year

⁴¹ Network businesses have the flexibility (and indeed the responsibility) to reallocate funds and resources during the regulatory period in response to changing circumstances, events and risks. The revenue allowance determined by us does not set a business' actual operating budget. The businesses are not constrained to current plans and processes or by the assumptions and forecasts in either their proposals or the determinations we make. This may require a departure from a 'business as usual approach'.

⁴² Tasmanian Electricity Code, July 2014, Chapter 8, pp. 8–4 to 8–6.

- the impact of cost drivers that affect both forecast opex and forecast capex—for example, forecast maximum demand affects forecast augmentation capex and forecast output growth used in estimating the rate of change in opex
- 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
- the outcomes of TasNetworks' consumer engagement in developing its regulatory proposal.

7.4.6 Summary of submissions on TasNetworks' opex proposal

Table 7.4 provides a summary of stakeholder submissions on TasNetworks' opex proposal.

Table 7.4 Summary of submissions on TasNetworks' opex proposal

Stakeholder	Issue	Our response
CCP (Jo De Silva), Tasmanian small business council	The proposed opex is acceptable. However, further cuts may/should be possible. ⁴³	Our benchmarking results indicate TasNetworks is operating relatively efficiently when compared to other service providers in the NEM. ⁴⁴ TasNetworks has proposed strong productivity growth, which should move it closer to the efficiency frontier. ⁴⁵ Further, our incentive framework provides an incentive for TasNetworks to improve its productivity over time.
CCP (David Headberry)	Other large capital intensive operations achieve greater opex reductions.	Because some capital intensive industries have achieved good productivity growth does not necessarily mean TasNetworks can achieve the same productivity growth. In particular, declining demand reduces TasNetworks' ability to achieve productivity growth.
CCP (David Headberry)	TasNetworks significantly underspent its previous opex allowances.	Applying a revealed cost approach to forecasting opex means efficiency gains (underspends) will be passed on to consumers through a lower opex forecast.
CCP (David Headberry), TasCOSS	High levels of capex and IT capex in the current and forecast periods should lead to opex savings. ⁴⁶	TasNetworks has forecast strong productivity growth over the regulatory period reducing its opex forecast.

⁴³ CCP (Jo De Silva), *Submission to the Australian Energy Regulator on TasNetworks' Distribution Regulatory Proposal 2017–19*, April 2016, p. 21. Tasmanian Small Business Council, *TasNetworks' Electricity Distribution Regulatory Proposal*, 1 July 2017 to 30 June 2019 and Tariff Structure Proposal, May 2016, pp. 7, 31.

⁴⁴ AER, Annual Benchmarking Report Electricity distribution network service providers, November 2015, p. 12.

⁴⁵ AER, Expenditure forecast assessment guideline, November 2013, pp. 22.

⁴⁶ Tasmanian Council of Social Service (TasCOSS), *Submission on AER issues paper regarding TasNetworks' regulatory proposal*, 28 April 2016, p. 1; CCP (David Headberry), *Submission to the AER, Response to the proposal from Tasmania's electricity distribution network service provider (TasNetworks - TND) for a revenue reset for the 2017–19 regulatory period*, 4 May 2016, p. 20.

7.4.7 Assessment of opex factors under the Rules

In deciding whether or not we are satisfied the service provider's forecast reasonably reflects the 'opex criteria' under the NER, we have regard to the 'opex factors'.⁴⁷

We attach different weight to different factors when making our decision to best achieve the NEO. This approach has been summarised by the AEMC as follows.⁴⁸

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.

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

Table 7.5 Our consideration of the opex factors

Opex factor	Consideration
The most recent annual benchmarking report that has been published under rule 6.27 and the benchmark opex that would be incurred by an efficient distribution network service provider over the relevant regulatory control period.	<p>We have considered the results of our most recent annual distribution benchmarking report in estimating TasNetworks' efficient base opex (section 7.4.1). Our benchmarking results show TasNetworks is operating relatively efficiently as compared to other distribution businesses in the NEM.⁴⁹</p> <p>We have used economic benchmarking, opex cost function modelling and expert forecasting information to estimate the benchmark opex that would be incurred by an efficient provider over the forecast period. Based on this, we have formed a view on the efficiency of TasNetworks' proposed total forecast opex compared to the benchmark efficient opex that would be incurred over the relevant regulatory control period. We have found TasNetworks' forecast opex to be lower than our independent estimate. We have assessed the reasons for this difference to be reasonable.</p>
The actual and expected opex of the Distribution Network Service Provider during any proceeding regulatory control periods.	<p>We have forecast TasNetworks' efficient opex over 2017–19 using its actual opex in 2014-15 as the starting point. We have compared several years of TasNetworks' 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.</p> <p>We have taken into account an expected decrease in TasNetworks' opex in the last year of the proceeding regulatory control period (2016-17) in forecasting efficient opex over 2017–19.</p>
The extent to which the opex forecast includes expenditure to address the	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

⁴⁷ NER, cl. 6.5.6(e).

⁴⁸ AEMC, Final Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 29 November 2012, p. 113.

⁴⁹ AER, *Annual Benchmarking Report Electricity distribution network service providers*, November 2015.

Opex factor	Consideration
concerns of electricity consumers as identified by the Distribution Network Service Provider in the course of its engagement with electricity consumers.	<p>consumers in preparing their regulatory proposals, such that they factor in the needs of consumers.⁵⁰</p> <p>We consider TasNetworks' opex forecast includes expenditure to address concerns of electricity consumers identified by TasNetworks in the course of its engagement with electricity consumers. TasNetworks identified its customers had concerns about insufficient savings in opex. TasNetworks subsequently changed its opex proposal from maintaining expenditure at 2014-15 levels in real terms to maintaining this expenditure in nominal terms in response to customer concerns. This resulted in cumulative savings of \$33.1 million.⁵¹</p>
The relative prices of capital and operating inputs	<p>We have had regard to multilateral total factor productivity benchmarking when deciding whether or not TasNetworks' forecast opex reflects the opex criteria—rather than looking at opex productivity in isolation. Our multilateral total factor productivity analysis considers the overall efficiency of networks in the use of both capital and operating inputs.</p> <p>We adopted price escalation factors that account for the relative prices of opex and capex inputs.</p> <p>One reason we will include a step change in our alternative opex forecast is if the service provider proposes a capex/opex trade-off. We consider the relative expense of capex and opex solutions in considering such a trade-off. TasNetworks did not propose any step changes as capex/opex trade-offs.</p>
The substitution possibilities between operating and capital expenditure.	<p>The efficiency incentive schemes that we have applied to TasNetworks recognise the substitution possibilities between opex and capex. These schemes set the incentives to reduce opex and capex equal so that there is an incentive to undertake efficient capex/opex trade-offs.</p> <p>In developing our benchmarking models, we have had regard to the relationship between capital, opex and outputs. We have used our benchmarking to assess whether TasNetworks' base opex is efficient (section 7.4.1).⁵²</p> <p>We also had regard to multilateral total factor productivity benchmarking when deciding whether or not TasNetworks' forecast opex reflects the opex criteria—rather than looking at opex productivity benchmarking results in isolation. Our multilateral total factor productivity analysis considers the overall efficiency of networks in the use of both capital and operating inputs. We have considered how different capitalisation policies of the service providers may affect opex performance under benchmarking.⁵³ TasNetworks confirmed it did not change its capitalisation policy.⁵⁴</p> <p>In considering TasNetworks' forecast of higher opex productivity we have considered TasNetworks' increased IT capex. TasNetworks noted its stakeholders expected savings in opex given the proposed level of capital expenditure in the network and new IT systems. As noted above, TasNetworks now proposes to maintain opex at 2014-15 levels in nominal terms rather than real terms in response to customer feedback.⁵⁵</p>

⁵⁰ AEMC, *Rule Determination*, 29 November 2012, pp. 101, 115.

⁵¹ TasNetworks, *Regulatory Proposal*, 29 Jan 2016, pp. 63.

⁵² AER, *Annual Benchmarking Report Electricity distribution network service providers*, November 2015.

⁵³ AER, *Annual Benchmarking Report Electricity distribution network service providers*, November 2015.

⁵⁴ TasNetworks, *Regulatory Proposal*, 29 Jan 2016, p. 21.

⁵⁵ TasNetworks, *Regulatory Proposal*, 29 Jan 2016, p. 63.

Opex factor	Consideration
	As noted above, we consider substitution possibilities between opex and capex in considering step changes proposed as opex/capex trade-offs. TasNetworks did not propose any step changes as capex/opex trade-offs.
Whether the opex 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.	<p>The incentive scheme that we applied to TasNetworks' opex in the 2012–17 regulatory control period, the EBSS, is intended to work in conjunction with our revealed cost forecasting approach.</p> <p>We have applied our estimate of base opex consistently in applying the EBSS and forecasting TasNetworks' opex for the 2017–19 regulatory control period.</p>
The extent the opex 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.	<p>We have assessed TasNetworks' total opex efficiency in deciding whether or not to accept TasNetworks' opex forecast. Given this, we are not necessarily concerned whether arrangements between TasNetworks and another person do or do not reflect arm's length terms. A service provider which uses related party providers can be efficient or it can 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.</p> <p>TasNetworks did however confirm that its opex forecast did not contain any costs arising from transactions with related parties.⁵⁶</p>
Whether the opex 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). TasNetworks did not propose any opex step changes that would be more appropriately included as a contingent project.
The extent the Distribution Network Service Provider has considered, and made provision for, efficient and prudent non-network alternatives.	TasNetworks has proposed no expenditure for non-network alternatives. TasNetworks included its Network Demand Management Plan in its regulatory proposal to detail how they plan to implement efficient non-network alternatives under the DMIS.
Any relevant final project assessment report (as defined in clause 5.10.2) published under clause 5.17.4(o), (p) or (s);	In having regard to this factor, we identify any RIT-D project submitted by the business and ensure the conclusions are appropriately addressed in the total forecast opex. TasNetworks did not submit any RIT-D project.
Any other factor the AER considers relevant and which the AER has 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.	We did not identify and notify TasNetworks of any other opex factor.

Source: AER analysis.

⁵⁶ TasNetworks, *Regulatory Proposal*, 29 Jan 2016, p. 21.