REVENUE PROPOSAL 2019 - 2023

Attachment 7

Operating Expenditure

28 March 2017

ElectraNet

Company Information

ElectraNet Pty Ltd (ElectraNet) is the principal electricity transmission network service provider (TNSP) in South Australia.

For information about ElectraNet visit www.electranet.com.au.

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Note

This attachment forms part of our Revenue Proposal for the 2018-19 to 2022-23 regulatory control period. It should be read in conjunction with the other parts of the Revenue Proposal.

Our Revenue Proposal comprises the overview and attachments listed below, and the supporting documents that are listed in Attachment 15:

Revenue Proposal Overview

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Value of imputation credits

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 7 – Operating expenditure (this document)

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 – Pricing methodology

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7. Operating Expenditure

7.1 Key points

- We have built considerable savings into our operating expenditure forecast for the forthcoming regulatory period, with a five year forecast of $435m ($2017-18) that is 11% or $47m lower than our trend allowance for the current period in real terms. This builds on the savings delivered in the current period to date.
- We will continue to work hard to manage and operate South Australia's transmission network as cost effectively as possible, to support the safe, secure and reliable supply of electricity.
- We consulted on our proposed operating expenditure plans through our early engagement on our Preliminary Revenue Proposal.
- There has been no material change in our operating expenditure forecast from that presented in the Preliminary Revenue Proposal. We have applied the Australian Energy Regulators' (AER's) accepted base-step-trend methodology to derive our operating expenditure forecasts, consistent with the approach set out in the Expenditure Forecast Assessment Guideline[1] and as set out in our Expenditure Forecast Methodology previously lodged with the AER[2].
- The AER's annual benchmarking report for 2016[3] indicates that we continue to perform well in overall productivity terms, once allowance is made for external factors that place us at a cost disadvantage compared to our peers. Our base year operating expenditure is efficient.
- We are forecasting minor increases in real labour costs, resulting in an annual real increase of 0.6% in our operating costs, and no real increases in material costs. Our estimates and approach are aligned with the AER's most recent determinations.
- At this stage, we are not proposing any step changes in operating expenditure for the forthcoming regulatory period.
- Our operating expenditure forecasts reflect prudent and efficient costs, in accordance with the requirements of the Rules, built on the savings we have delivered to date.

7.2 Introduction

This attachment presents information on our operating expenditure forecast for the forthcoming regulatory period. The information and calculations presented in this attachment meet the requirements of the Rules.

In particular, clauses 6A.6.6(a) and (c) specify *operating expenditure objectives* and *operating expenditure criteria* that we must satisfy in order for the AER to approve our

1 *Better Regulation: Expenditure Forecast Assessment Guideline for Electricity Transmission*, Australian Energy Regulator, November 2013 available at www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-forecast-assessment-guideline-2013.

2 ElectraNet, *Expenditure Forecast Methodology: Regulatory Control Period 2018-19 to 2022-23*, June 2016, available at www.electranet.com.au/wp-content/uploads/report/2016/09/20160630-Report-ElectraNetExpenditureForecastMethodology.pdf.

3 AER, *Annual Benchmarking Report - Electricity transmission network service providers*, November 2016, page 18, available at www.aer.gov.au/system/files/Final%20TNSP%20annual%20benchmarking%20report%202016%20-%20for%20release_1.pdf.

forecast operating expenditure. These provisions require us to submit a forecast total operating expenditure that we consider is required to meet the following objectives:

- to meet or manage the expected demand for prescribed transmission services over the forthcoming regulatory period;
- to comply with all applicable regulatory obligations or requirements associated with the provision of prescribed transmission services; and
- to maintain the safety of the transmission system through the supply of prescribed transmission services.

The Rules require the AER to determine whether our total forecast operating expenditure reasonably reflects the efficient and prudent costs of meeting these objectives.

Our forecasting methodology, which is described in Section 7.7, is designed to produce operating expenditure forecasts that satisfy these Rules requirements. The information presented in this attachment explains how we have applied our forecasting methodology and why the forecasts should therefore be accepted by the AER.

We also confirm that our operating expenditure forecast relates only to expenditure that is properly allocated to prescribed transmission services in accordance with our approved Cost Allocation Methodology.

This attachment is structured as follows:

- Section 7.3 provides a summary of the key insights from our engagement with customers and how we are responding to this feedback.
- Section 7.4 presents an overview of our actual and expected operating expenditure in the current period alongside our forecast for the forthcoming regulatory period.
- Section 7.5 describes our key obligations relating to operating expenditure.
- Section 7.6 describes our operating expenditure categories.
- Section 7.7 sets out our operating expenditure forecasting methodology.
- Section 7.8 describes the key inputs and assumptions underpinning our operating expenditure forecasts.
- Section 7.9 provides information on the expenditure items that we have forecast using a zero based approach.
- Section 7.10 explains that no step changes have been incorporated into our expenditure forecasts.
- Section 7.11 describes our Directors' Responsibility Statement.
- Section 7.12 presents our operating expenditure forecasts and provides a comparison with our historical operating expenditure.
- Section 7.13 concludes by outlining the benefits and risks to customers that arise from our proposed operating expenditure program.

7.3 Key insights from our engagement with customers

In developing our expenditure plans we have engaged with our customers and wider stakeholders through our early engagement program to better understand their expectations and preferences.

Table 7.1 provides a summary of some of the key insights from this engagement, and how this has helped to shape our operating expenditure forecast.

Table 7-1: How we are responding to customer feedback

What we heard	Our Response
South Australia's blackout on 28 September 2016 crystallised the importance of reliability of electricity supply to business and once the exact causes and their relative contributions to the system failure are determined by relevant inquiries, it will be important for ElectraNet to take reasonable steps at appropriate costs to mitigate future impacts of similar events.	We will continue to efficiently operate and maintain the network to maintain safety, security and reliability in the face of growing system security challenges as outlined in Section 7.4. We are continuing to monitor the multiple ongoing investigations into this event and will continue to assess whether any further expenditure is required.
Support the year 2015-16 as being a reasonable base year for the Operating Expenditure forecasts.	We have continued to base our operating expenditure forecasts on 2015-16 as a representative and efficient base year, as set out in Section 7.8.1.
Support for the headline reduction rate of 10%* which seems reasonable from a customer perspective.	The final operating expenditure forecasts maintain a projected reduction of 11% relative to the trend allowance, as set out in Section 7.4.
After labour, electricity costs are the most significant concern for small business.	We will continue to focus on driving operating costs down as reflected in our forecast reduction of 11%, while maintaining the reliable network expected in a modern society, and pursue broader measures to reduce the delivered cost of energy.
Local wage price drivers remain depressed, and labour cost growth should be capped at CPI.	We have sourced independent expert advice on forecast labour costs movements and applied the AER's standard approach to labour costs based on the average of expert opinions, which shows a minor real forecast cost increase across the period, as set out in Section 7.8.2.
Acknowledge that the early engagement process has been a learning exercise for both ElectraNet and the Consumer Advisory Panel, ElectraNet have shown a genuine degree of openness with customer representatives which has helped to instil a sense of confidence in the processes behind construction of its 2019-23 revenue proposal.	We remain fully committed to our early engagement process and to meaningful ongoing customer engagement that will continue beyond the lodgement of our Revenue Proposal and AER final determination as a business as usual function.

** Estimate subsequently revised to 11%*

Further information on the outcomes of our early engagement program are contained in the Customer Engagement Outcomes Report[4].

[4] ElectraNet, *Customer Engagement Outcomes Report*, March 2017 (ENET049)

7.4 Overview of actual and forecast operating expenditure

In the current regulatory period, we have worked hard to achieve operating expenditure savings compared to our regulatory allowance, as shown below. Figure 7.1 shows our forecast operating expenditure (depicted as the grey dotted line) alongside the trend allowance (the red dotted line), which projects forward from the operating expenditure allowance for the current period.

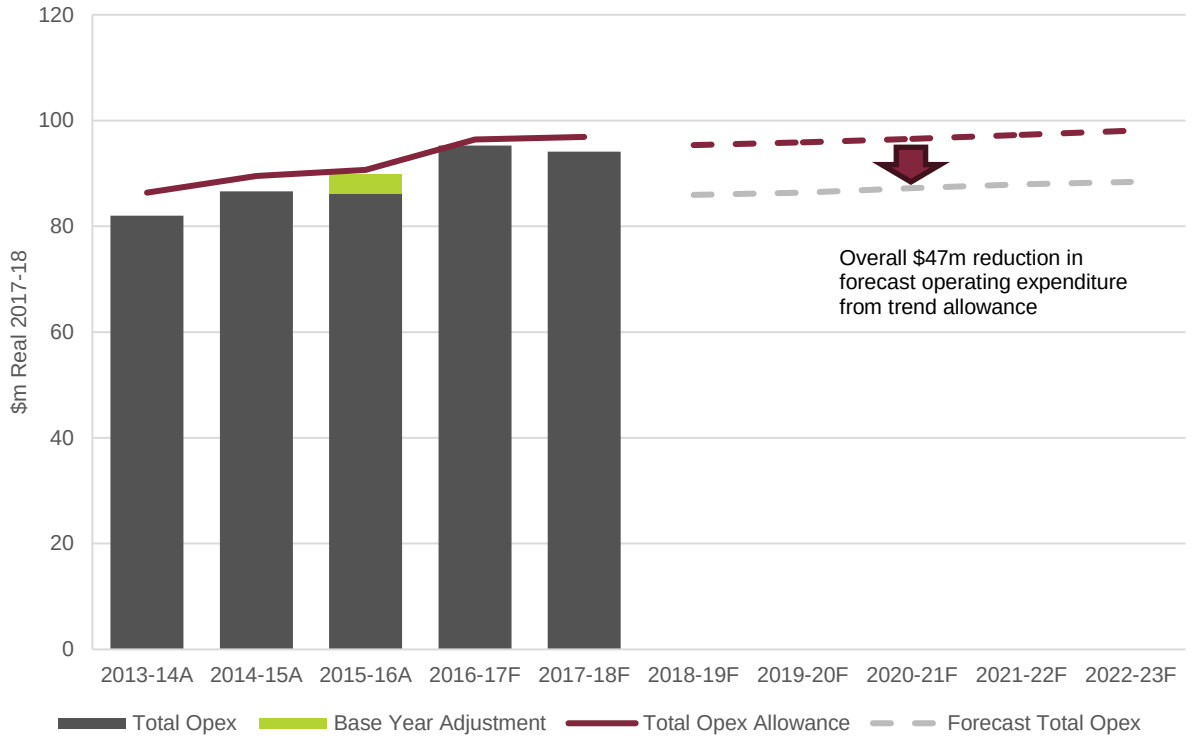


Figure 7-1: Actual and forecast total operating expenditure ($m 2017-18)

In the current period, we have undertaken a number of efficiency initiatives to put downward pressure on our operating expenditure, including:

- Right-sizing the organisation to match an environment of lower demand growth and lower capital expenditure.
- More targeted and cost effective maintenance through a reliability centred maintenance approach.
- Reduced maintenance costs through more efficient procurement and delivery strategies, allowing reinvestment of savings in the maintenance program, and
- Challenging property value assessments to reduce our land tax costs.

In the forthcoming regulatory period, we are expecting to deliver ongoing projected operating expenditure savings of around $9 million per annum compared to the trend allowance ($47m in total, as shown above). In aggregate, our forecast total operating expenditure will be 2% lower than our actual expenditure for the current period in real terms.

These savings are to be passed through to customers in the forthcoming regulatory period. We need to continue to work hard to achieve these savings, particularly given the increasing maintenance cost pressures of an ageing network.

The ongoing savings that are built into our operating expenditure forecasts provide confidence that our forecasts reflect prudent and efficient costs, in accordance with the requirements of the Rules. We will continue to put downward pressure on our operating costs, while at the same time managing the growing system security challenges as high levels of renewable energy are integrated into the NEM, and conventional thermal generators are withdrawn from the market.

7.5 Obligations relating to operating expenditure

Our operating expenditure forecast must be sufficient to enable us to meet our compliance obligations. We are subject to a wide range of both general legislation and regulations and electricity industry specific instruments that impact on operating expenditure requirements. The general obligations include the Corporations Law and other corporate governance obligations, such as work health and safety legislation[5] and SafeWork SA obligations.

Specific obligations under the *Electricity Act 1996 (SA)* and regulations include a range of technical requirements from general safety related provisions to more specific requirements, including managing public access to sites, entry to private property, working in the vicinity of transmission lines, and prescriptive vegetation clearance obligations to manage bushfire risks. The *Electricity Act 1996 (SA)* and regulations make specific reference to accepted industry practices and standards.

For the purposes of this attachment, it is useful to comment briefly on some of the obligations that arise from the following regulatory instruments, which impact our operating expenditure:

- our transmission licence[6] and the Electricity Transmission Code[7] (ETC);
- the National Electricity Rules, and
- our Safety, Reliability, Maintenance And Technical Management Plan (SRMTMP), which is required by our transmission licence.

7.5.1 Transmission licence and ETC obligations

Under section 15 of the *Electricity Act 1996 (SA)*, we are required to be licensed in order to operate a transmission network in South Australia. The transmission licence authorises us to carry on the operation of the transmission network in accordance with the terms and conditions of the licence.

The transmission licence is issued by ESCOSA. A central part of ESCOSA's licensing function is to set standards of service under the terms of each licence. ESCOSA undertakes this task through the provisions of the ETC, made pursuant to Part 4 of the *Essential Services Commission Act 2002* (ESC Act).

5 This includes for example the requirements of the Workplace Health and Safety Act 2012 (SA)

6 Our transmission licence as currently in force (last varied 1 July 2008) is available at www.escosa.sa.gov.au/ArticleDocuments/531/080703-ElectricityTransmissionLicenceVaried-ElectraNet.pdf.aspx?Embed=Y.

7 The version of the Electricity Transmission Code currently scheduled to apply from 1 July 2018 (version TC/09) is available at www.escosa.sa.gov.au/ArticleDocuments/1020/20160922-Electricity-TransmissionCode-TC09.pdf.aspx?Embed=Y.

Compliance with the ETC is a mandatory licence condition for ElectraNet as well as a regulatory obligation in accordance with clause 6A.6.7 of the Rules.

Section 1.6.1 of the ETC makes it clear that any obligations imposed under the ETC are in addition to those imposed under the Rules and the *Electricity Act 1996 (SA)* (and regulations). We must therefore comply with both the ETC and the Rules. The ETC contains provisions relating to:

- service standards;
- interruptions;
- design requirements;
- technical requirements;
- general requirements;
- access to sites;
- telecommunications access; and
- emergencies.

As explained in Attachment 6, a number of inquiries are currently underway following the impact of widespread storms on 28 September 2016. Following the conclusion of these reviews, it is possible that new obligations may be imposed on us through our transmission licence, the ETC or other regulations.

The forecasts presented in this attachment assume that there are no changes to our current obligations. However, we will discuss any new obligations that are imposed and their cost implications with the AER at the earliest opportunity.

7.5.2 Rules requirements

The Rules establish roles and responsibilities for ElectraNet as the principal TNSP and the Jurisdictional Planning Body for South Australia. For example, in accordance with the Rules, we are required to:

- consider public and worker safety paramount when planning, designing, constructing, operating and maintaining the network;
- operate the network with sufficient capability to provide the minimum level of transmission network services required by customers;
- comply with the technical and reliability standards contained in the Rules and jurisdictional instruments such as the ETC;
- plan, develop and operate the network such that there is no need to shed load under normal and foreseeable operating conditions to achieve the quality and reliability standards within the Rules;
- conduct joint planning with distribution network service providers (DNSPs) and other TNSPs whose networks can impact the South Australian transmission network;

- provide information to registered participants and interested parties on projected network limitations and the required timeframes for action; and
- develop recommendations to address projected network limitations through joint planning with DNSPs and consultation with registered participants and interested parties.

In the forthcoming regulatory period, we will continue to comply with these and other requirements specified in the Rules.

7.5.3 Safety, Reliability, Maintenance and Technical Management Plan

In accordance with clause 7 of our transmission licence, we maintain a SRMTMP, which is reviewed on an annual basis and submitted to ESCOSA for approval on the recommendation of the Technical Regulator. We must comply with the SRMTMP, and performance against the plan is subject to an annual audit.

The following matters must be dealt with by the SRMTMP:

- the safe design, installation, commissioning, operation, maintenance and decommissioning of electricity infrastructure;
- the maintenance of a supply of electricity of the quality required to be maintained by or under the *Electricity Act 1996 (SA)* and regulations and the Transmission Licence;
- the implementation and conduct of safety measures and training programs for the purpose of reducing the risk of death or injury, or damage to property, arising out of the operation of electricity infrastructure and ensuring that employees performing work in respect of electricity infrastructure are competent and properly trained, perform their work safely and are provided with a safe system of work;
- ensuring that contractors performing work in respect of electricity infrastructure have processes and procedures for ensuring that the persons personally performing the work are competent and properly trained, perform their work safely and are provided with a safe system of work;
- the manner in which accidents and unsafe situations are to be dealt with, reported and investigated;
- monitoring compliance with safety and technical requirements imposed by or under the *Electricity Act 1996 (SA)* and regulations and the Transmission Licence;
- monitoring electricity infrastructure for the purposes of identifying infrastructure that is unsafe or at risk of failing or malfunctioning;
- monitoring compliance with requirements for vegetation clearance;
- communication of information to the public for the purpose of reducing the risk of death or injury, or damage to property, arising out of the operation of electricity infrastructure; and
- the communication of information to existing and potential customers about the facilities that customers must provide for connection to the network and procedures that customers must follow in order to prevent damage to or interference with the network.

Compliance with these obligations is therefore an important driver of our operating expenditure requirements.

7.6 Operating expenditure categories

Our operating expenditure forecasts are presented by reference to well accepted categories, in accordance with schedule S6A.1.2(1) of the Rules. For forecasting purposes, we separate operating expenditure into controllable and non-controllable expenditure, and then into the following three categories:

- direct operating and maintenance expenditure;
- other controllable expenditure; and
- other operating expenditure.

The categorisation of our expenditure categories is illustrated in Figure 7.2 below.

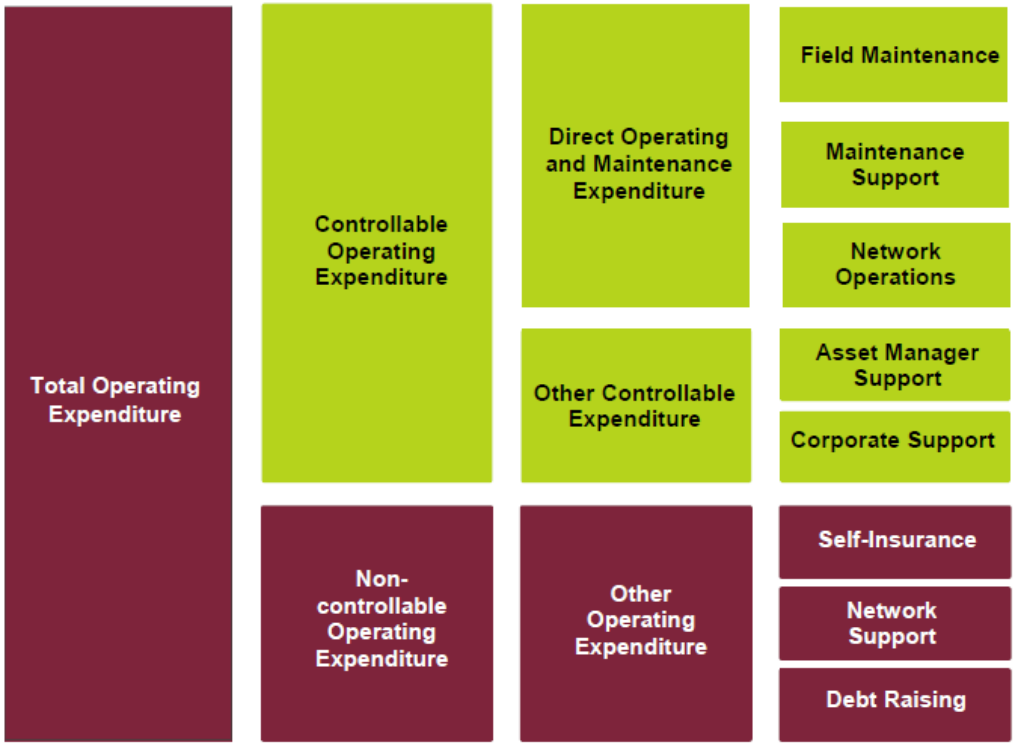


Figure 7-2: Operating expenditure categories

Table 7.2 on the following page describes our operating expenditure categories in detail. We confirm that our operating expenditure forecasts do not include any costs relating to contingent projects. However, the operating expenditure forecast does include the cost of efficient non-network alternatives through the continuation of an existing network support arrangement.

Table 7-2: Description of operating expenditure categories

Expenditure Category	Description	Service Category
Controllable Operating Expenditure - Direct Operating & Maintenance		
Field Maintenance	Includes all field-based maintenance activities: • **Routine maintenance** - field inspections and maintenance activities that are completed to a predetermined schedule and scope; • **Corrective maintenance** - field activities to mitigate short term risks and restore the condition or function of a transmission system asset, or component, to a satisfactory operational state; and • **Operational refurbishment** - planned maintenance project activities to mitigate medium term risks identified through asset condition assessments and to provide asset information required to manage compliance with legal obligations and good electricity industry practice.	Prescribed Exit Services, Prescribed Entry Services, Transmission Use of System Services (TUOS) & Common Services
Maintenance Support	Includes all of our internal functions associated with managing field operating and maintenance contracts, environmental and safety management, asset condition monitoring and analysis, works planning and coordination. Maintenance support also includes functions associated with business processes and systems that directly support the field maintenance activities such as geospatial information systems, maintenance management systems and maintenance field tools, and the activities associated with the management and support of external maintenance service contracts and direct charges such as land taxes, water and council rates.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services
Network Operations	These are activities associated with the control of the network and other network operations activities. The functions in this category include the real-time (24-hour) control room function, off-line system security analysis and support, technical support for the Energy Management System (EMS) and Supervisory Control and Data Acquisition (SCADA) systems and monitoring of asset performance and condition, including fault diagnosis and response management.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services
Other Controllable Expenditure		
Asset Manager Support	Includes the functional activities that support the strategic development and ongoing management of the network, namely: network planning; asset strategy; network support; customer and regulatory support; and IT support.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services
Corporate Support	Includes the activities required to ensure adequate and effective corporate governance and business administration, namely: finance; accounting; administration; legal counsel; employee relations; occupational health and safety; and internal audit. Corporate Support also includes insurance premiums and the associated costs of commercially available insurance cover obtained from external sources, but excludes self-insurance.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services
Non-controllable Operating Expenditure		

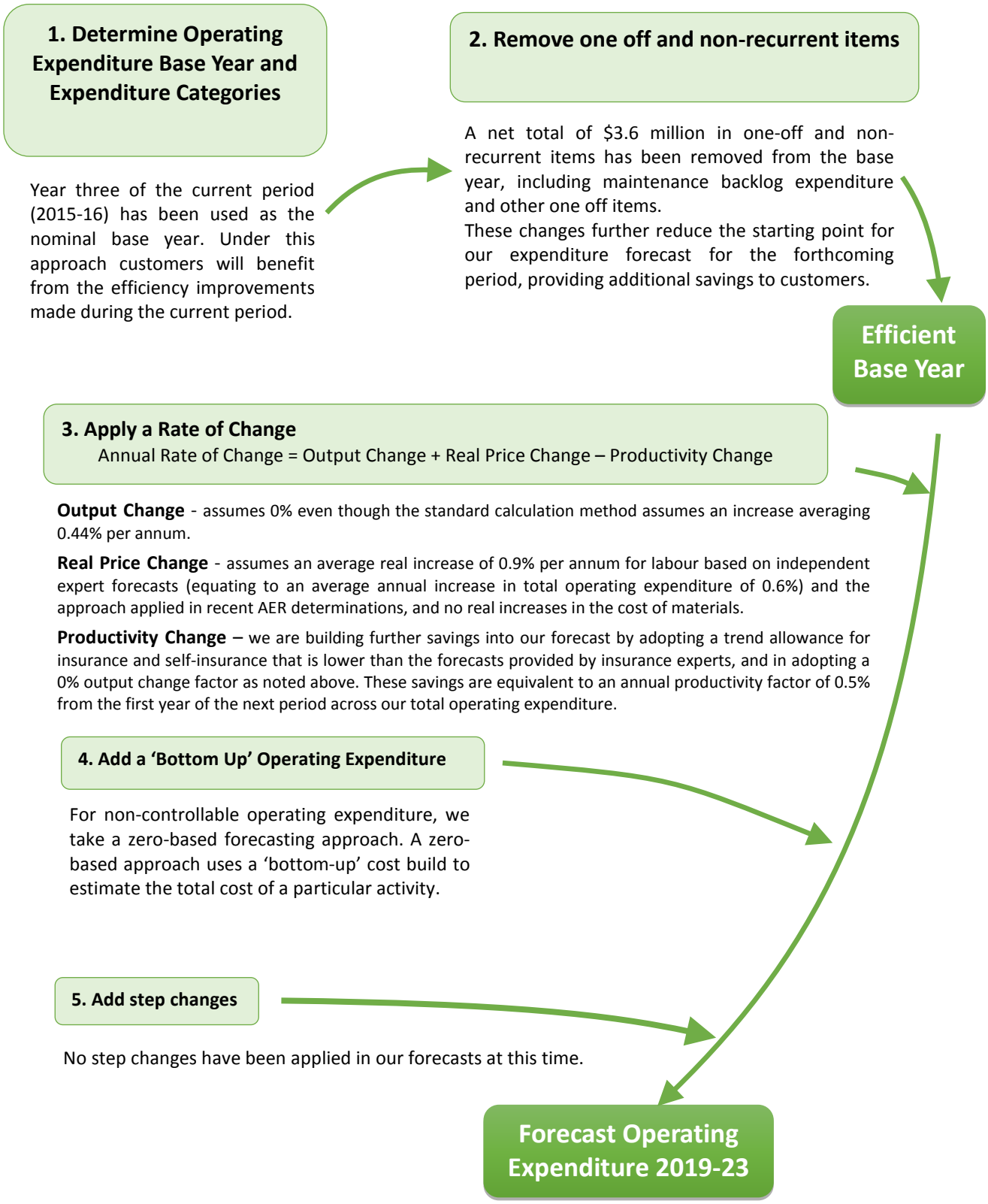
Expenditure Category	Description	Service Category
Self-Insurance	Where external insurance cover is not available or not cost effective for certain risk events, we manage the risk exposure and cost impact of these events internally through a self-insurance allowance based on identification and quantification of the asymmetric risks faced by the business.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services
Network Support	Network support payments fund non-network solutions contracted by us as cost effective alternatives to network augmentation, such as local generation or demand management arrangements. The Rules require the pass through of network support costs subject to the relevant factors set out in clause 6A.7.2 of the Rules.	TUOS
Debt Raising	Includes debt financing and transaction costs incurred over and above the debt margin allowed in the cost of capital when new debt is raised or current lines of credit are refinanced or extended.	Prescribed Exit Services, Prescribed Entry Services, TUOS & Common Services

7.7 Forecasting methodology

In preparing our operating expenditure forecast, we have applied the 'base-step-trend' method set out in the AER's Expenditure Forecast Assessment Guideline [8]. Our forecasting methodology is illustrated in Figure 7.3 on the following page.

[8] *Better Regulation: Expenditure Forecast Assessment Guideline for Electricity Transmission*, Australian Energy Regulator, November 2013 available at http://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-forecast-assessment-guideline-2013.

Figure 7-3: Application of the AERs base step-trend forecasting methodology



In accordance with the Guideline and Figure 7.3, a 'base-step-trend' approach is applied to our operating expenditure categories defined in Table 7.2 above, with the exception of insurance, self-insurance, debt raising and revenue reset costs, which are subject to a zero based forecasting approach.

The 'base step trend' forecasting methodology takes the 'base year' as the starting point for determining our future controllable operating expenditure requirements. This methodology provides for interactions between our operating and capital expenditure forecasts through two mechanisms:

- The rate of change adjustment recognises the link between a growing network and increased operating expenditure requirements; and
- A step change in operating expenditure may have implications for our future capital expenditure requirements. For example, a step change to reflect enhanced maintenance practices may lead to savings in replacement capital expenditure.

For the forthcoming regulatory period, the interaction between our forecast operating and capital expenditure is limited because there is minimal network growth and no step changes are proposed.

As shown in Figure 7.3, a zero based approach uses a 'bottom-up' cost build to estimate the total cost of a particular activity. This forecasting method is appropriate in circumstances where the base year expenditure may not reflect our likely future costs.

Table 7.3 sets out the forecasting approach we have adopted for each operating expenditure category.

Table 7-3: Operating expenditure category forecasting approach

Operating Expenditure Cost Category	'Top Down' Base Year Trend	'Bottom up' Zero Base Items
Controllable Operating Expenditure*		
Routine Maintenance	✔	
Corrective Maintenance	✔	
Operational Refurbishment	✔	
Network Operations	✔	
Maintenance Support	✔	
Asset Manager Support	✔	
Corporate Support		
• Insurance*		✔
• Other Corporate Support	✔	
Non-controllable Operating Expenditure		
Self-insurance*		✔
Network Support	✔	
Debt Raising		✔

* While a bottom up forecast has been developed for these expenditure components which reveals a higher level of expected total costs, a base year trend approach has been applied to these forecasts, as explained below.

The application of the methodology presented in Figure 7.3 is explained in the remaining sections of this attachment.

7.8 Key inputs and assumptions

The key inputs and assumptions used to derive our trend operating expenditure forecast are outlined below, followed by an explanation of our bottom-up forecast components and confirmation we are proposing no step changes in the following sections.

7.8.1 Establishing the recurrent base year cost

The 2015–16 regulatory year is the base year for determining the recurrent component of our operating expenditure forecast. We have chosen 2015-16 as our base year for operating expenditure forecasting because:

- it is the most recent full regulatory year of actual reported and audited operating expenditure at the time of preparing this Revenue Proposal;
- it is representative of our operating conditions for the current and forthcoming regulatory periods;
- it incorporates the efficiency gains that we have achieved to date; and
- its selection is consistent with the design of the Efficiency Benefit Sharing Scheme.

In accordance with the methodology outlined in Section 7.7, we have deducted the following one-off or non-recurrent expenditure items totalling $3.6m so that the base year reflects our expected ongoing expenditure:

- maintenance backlog expenditure on urgent corrective and operational refurbishment maintenance totalling $1.4m[9];
- expenditure on the corrective line remediation program of $1.8m which is scheduled to conclude in the current regulatory period; and
- other one-off items including non-recurrent expenditure associated with the revenue determination process, debt raising costs and movements in provisions for annual and long service leave totalling approximately $0.4m.

Table 7.4 below shows the derivation of our efficient base year operating expenditure.

Table 7-4: Efficient base year operating expenditure (June 2018 $m)

Audited operating expenditure for 2015–16	**88.4**
Deduct non-recurrent / one-off items	3.6
Base year efficient operating expenditure	**84.8**

[9] Net of an increase in the maintenance allowance of approximately $1.0m commencing in 2016-17 approved by the AER in its decision on the Heywood Interconnector Upgrade Contingent Project on 28 March 2014 available at www.aer.gov.au/system/files/ElectraNet%20-%20Heywood%20Interconnector%20upgrade%20-%20%20final%20decision%20-%20for%20publication_0.PDF.

Before proceeding to the next steps of the forecasting methodology, we must first verify that the base year operating expenditure is efficient. This verification provides confidence that the resulting operating expenditure forecasts, which build from the base year, reasonably reflect efficient costs[10].

As described in Attachment 6, the AER's Multilateral Total Factor Productivity (MTFP) index for TNSPs presented in the AER's 2016 annual benchmarking report[11] indicates that we continue to perform well in overall productivity terms, ranking second amongst the five TNSPs, with improving performance since 2014.

In addition to analysing MTFP, the AER's benchmarking report also assesses Multilateral Partial Factor Productivity (MPFP). The MPFP techniques use the same output specification as the MTFP technique, but focus only on the productivity of either operating expenditure or capital expenditure in isolation. This is why these are referred to as 'partial' factor productivity measures.

Figure 7.4 below reproduces Figure 6 of the AER's 2016 benchmarking report. It shows operating expenditure MPFP for all TNSPs since 2006.

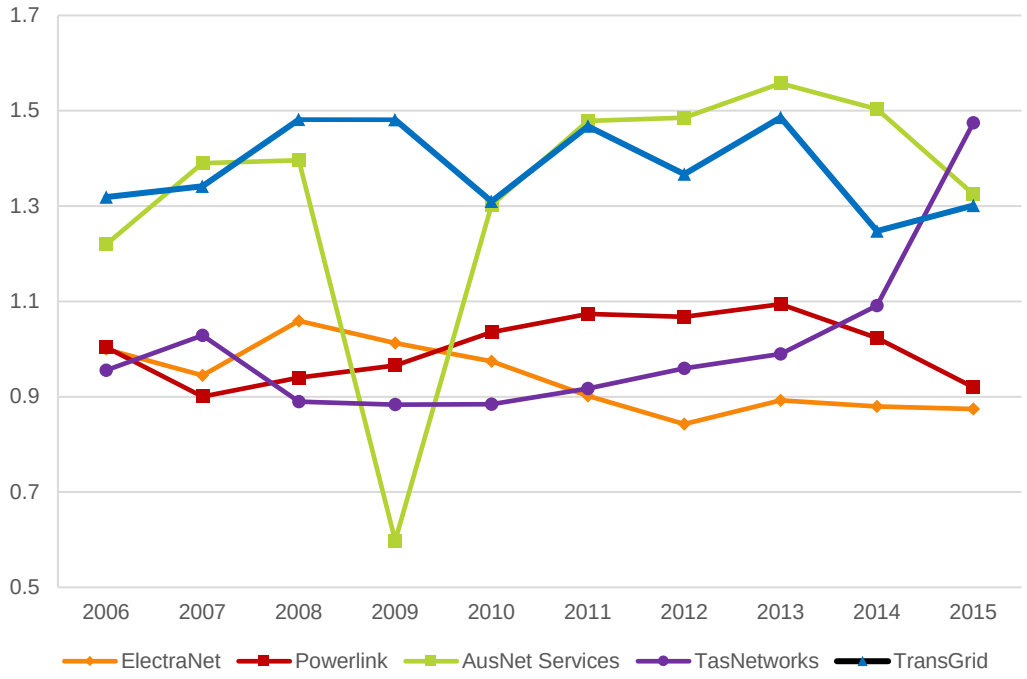


Figure 7-4: Operating expenditure partial factor productivity index, 2006 to 2015

10 In accordance with clause 6A.6.6(c)(1) of the Rules

11 AER, Annual Benchmarking Report - Electricity Transmission Network Service Providers, November 2016 available at www.aer.gov.au/system/files/Final%20TNSP%20annual%20benchmarking%20report%202016%20-%20for%20release_0.pdf.

Notwithstanding our comparatively strong performance in terms of overall productivity and capital expenditure productivity, we would expect the AER's measure of our operating expenditure MPFP to be below that of our peers.

Firstly, we incur higher network support costs than our peers, currently comprising approximately 10% of our total operating expenditure.

Network support is an efficient alternative to network capital expenditure as it provides the least cost solution for customers and allows the efficient deferral of capital expenditure. However, as network support is an operating expenditure item, our partial productivity performance for operating expenditure will be adversely affected.

This and other distortions were acknowledged in the AER's 2016 Annual Benchmarking Report by its benchmarking advisers (Economic Insights)[12].

Secondly, it is noted that the MPFP measure includes as one of its outputs a measure of energy throughput on the network. This means that a region such as South Australia experiencing a more rapid decline in energy consumed on the network relative to interstate counterparts will see a relative decline in operating expenditure performance under this measure. However, energy consumed across the network has no impact on operating expenditures incurred in operating and maintaining the transmission network.

Adjusting for these two factors results in the operating expenditure MPFP measure as shown in Figure 7.5.

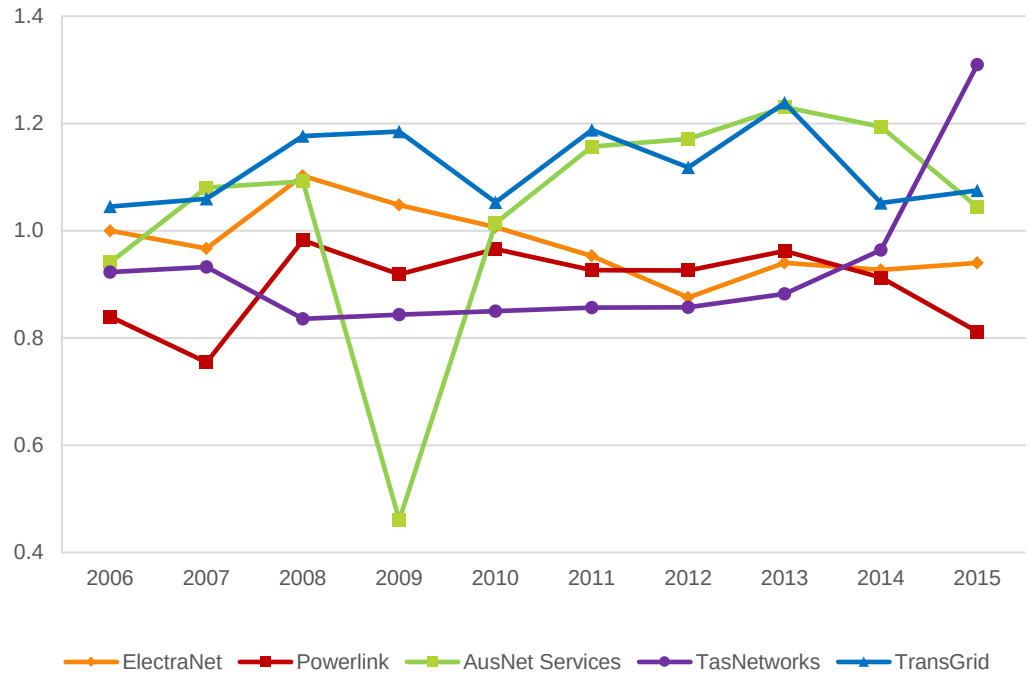


Figure 7-5: Operating expenditure partial factor productivity 2006 to 2015 (adjusted)

[12] Economic Insights, Memorandum to AER, TNSP MTFP Results for AER Benchmarking Report, 8 November 2016, page 3, available at www.aer.gov.au/system/files/Economic%20Insights%20-%20Memo%20on%20TNSP%20multilateral%20total%20factor%20productivty%20results%20-%208%20November%202016_1.pdf.

This shows that our operating expenditure performance compares more favourably with other networks when compared on a like-for-like basis, particularly given the external factors that drive up costs in South Australia, as explained in Section 3 of the Revenue Proposal Overview. This performance trend has also been improving steadily since 2012.

Importantly, the MPFP results should also be viewed in the broader context of the MTFP analysis, which provides a combined measure of capital and operating performance. The AER has highlighted the variation in company performance if capital and operating expenditure is considered in isolation[13]:

> *"The ranking of the TNSPs changes somewhat under the two MPFP results, which reflects differing input combinations. For example, AusNet Services is ranked lower under the capital MPFP metric but ranks higher under the Operating Expenditure MPFP. Conversely, ElectraNet ranks higher under the capital measure and lower under the Operating Expenditure measure."*

Multilateral total factor productivity is effectively a weighted average of the capital and operating expenditure MPFP results. The AER's analysis underscores the importance of assessing productivity holistically - that is, in terms of multilateral total factor productivity. The mix of capital and operating inputs we apply to produce our outputs places us as the second most efficient TNSP in terms of MTFP. This demonstrates that our overall performance is efficient, as is our mix of operating and capital expenditure.

For these reasons, the AER's benchmarking analysis supports the adoption of 2015-16 as the base year for the purpose of forecasting our future operating expenditure, as adjusted for one-off costs.

7.8.2 Applying rate of change

The efficient base year is projected forward by applying a real rate of change, following the AER's Guideline approach. The real rate of change is a function of the forecast change in: output, real price (i.e. labour and material input costs) and productivity, as follows.

$$\boldsymbol{Rate\ of\ change = Output\ change + Real\ Price\ Change - Productivity\ Change}$$

The three subsections below explain the values adopted for each of these 'rate of change' components to develop our forecasts, addressing these in turn.

Output change

For the forthcoming regulatory period, output change is calculated based on the weighted average of the output measures as determined by the AER's consultant, Economic Insights, comprising:

- Energy throughput. The forecast growth in energy delivered for the South Australian network plus net imports.
- Ratcheted maximum demand. Non-coincident historical maximum demand for each individual connection point measured in megawatts (MW).

[13] AER, Annual Benchmarking Report - Electricity transmission network service providers, November 2016, page 18, available at www.aer.gov.au/system/files/Final%20TNSP%20annual%20benchmarking%20report%202016%20-%20for%20release_1.pdf.

- Weighted entry and exit connections. The summation of the number of connection points weighted by the voltage of each connection point measured in kilovolts (kV).
- Circuit length. Total transmission line circuit length measured in kilometres (km).

The weightings applied are also obtained from the AER's consultant's benchmarking analysis as follows:

- Energy - 21.4%;
- Ratcheted maximum demand - 22.1%;
- Voltage weighted entry and exit points - 27.8%; and
- Circuit line length - 28.7%.

Applying this methodology to our forecasts produces an assumed output change averaging 0.44% across the five years of the forthcoming regulatory period. This assumed output change equates to a real increase in operating expenditure totalling $6.1m over the five year period.

However, we have applied an annual output change of 0%[14]. We note that adopting this assumption effectively builds additional efficiencies of $6.1m into our forecast relative to a trend forecast applying the standard AER methodology over the forthcoming regulatory period.

Real price change

Our operating expenditure forecasts assume the following real cost movements, consistent with the approach applied by the AER in recent transmission determinations:

- Annual real increases for labour reflecting the average of Deloitte Access Economics' (DAE) forecasts in the AER's May 2016 Final Determination for Australian Gas Networks in South Australia and BIS Shrapnel's South Australian Utilities Wage Price Index growth forecast as at January 2017[15].
- No real increases in the costs of materials over the forthcoming regulatory period (i.e. cost movements in line with CPI[16]).

A real average price change of 0.6% per annum in operating expenditure for the forthcoming regulatory period has been determined using this methodology. This calculation is based on the average real labour escalation from the two independent sources noted above, applied to the proportion of our total operating expenditure which comprises labour cost.

We have applied a labour proportion of 67% based on historically observed labour costs, consistent with the proportion applied by the AER in our current Revenue Determination. This compares closely to the 62% benchmark percentage mix of labour and materials costs applied by the AER in recent determinations.

These projected real labour cost movements are as shown in the Table 7.5 below.

14 In the event that a contingent project were to be triggered and require us to seek approval for additional revenue from the AER, we would reassess the impact on the size of the network overall as measured by the output change factor at that time.

15 BIS Shrapnel, *Report on Expected Wage Changes to 2022/23: Prepared by BIS Shrapnel for ElectraNet, Final Report*, February 2017 (ENET057).

16 Our inflation forecast approach and assumptions are explained in Attachment 3

Table 7-5: Real labour cost forecast (%)

Labour escalation estimates	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Average 2019 to 2023
Deloitte Access Economics' May 2016	0.20	0.50	0.60	0.70	0.70	0.70	0.70	**0.70**
BIS Shrapnel January 2017	1.00	0.80	0.70	0.80	1.10	1.50	1.60	**1.1**
Average	0.60	0.65	0.65	0.75	0.90	1.10	1.15	**0.91**
Weighted average	0.40	0.44	0.44	0.50	0.60	0.74	0.77	**0.61**

The same average labour cost escalation has been applied to the labour portion of our capital expenditure forecasts, as explained in Attachment 6.

While reflecting the best information available at the time of submission, we also note that these forecasts remain subject to change as updated information becomes available.

Productivity change

Our productivity level has continued to improve steadily during the current period based on the adjusted partial productivity measure discussed above. In view of the cost efficiencies achieved to date and substantial savings already built into our operating expenditure forecast relative to the trend allowance, we will need to continue to work hard to deliver this forecast operating cost performance in the forthcoming regulatory period.

We note that the AER adopted a productivity improvement of 0.2% per annum in its recent draft decisions for Powerlink and AusNet Services. The AER's estimate reflects the trend annual productivity growth rate for the period 2006-2015, by taking a line of best fit through all the data points. As such, the AER departs from its previous methodology, which calculates the annual growth rate from the start of the period to the final year. For AusNet Services and Powerlink, the AER's previous annual growth method results in a negative productivity growth rate over the same period.

We also note that the AER's proposed productivity improvement departs from its other recent decisions, which adopted a forecast productivity change of zero. In particular, the AER adopted a productivity forecast of zero for SA Power Networks for its 2015-16 to 2019-20 determination, although the historic data showed negative productivity growth[17].

For these reasons, we have applied an annual productivity factor of 0% in our base year adjusted trend operating expenditure forecast.

However, as explained below, we are building further savings into our operating expenditure forecast by adopting a trend allowance for insurance and self-insurance that is significantly lower than the forecast provided by independent insurance experts, and by adopting a zero output change assumption as above.

[17] AER, Final decision, SA Power Networks determination 2015−16 to 2019−20, Attachment 7 − Operating expenditure, October 2015, pages 7-51 and 7-52.

These savings are equivalent to an annual productivity factor of 0.5% from the first year of the forthcoming regulatory period across our total operating expenditure forecast.

7.9 Zero based ('bottom up') expenditure items

As noted in Section 7.7, we develop bottom up forecasts in relation to insurance, self-insurance, debt raising and revenue reset costs. The basis of these forecasts is explained in turn below.

7.9.1 Insurance

Variations in insurance premiums do not necessarily follow similar escalation profiles to other costs, and are influenced by a range of factors beyond our control, including movements in the insurance market. For this reason, base year trend costs may not be representative of future expected costs over the forthcoming regulatory period.

We therefore obtained an expert 'bottom up' forecast of our premiums from an independent actuary (Finity Consulting Pty Ltd), taking into account our insurance renewals, claims history, risk profile, recent trends in the insurance market and forecast business growth. The Finity report is provided as a supporting paper to this Revenue Proposal[18].

Table 7.6 sets out the independent bottom up forecast of our insurance premiums for the forthcoming regulatory period.

Table 7-6: Forecast insurance premiums ($m 2017-18)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Insurance	2.7	2.7	2.8	2.8	2.8	**13.8**

Source: Finity Consulting

Our detailed bottom-up forecast of insurance premiums is materially above a trend based forecast, as explained below.

7.9.2 Self-insurance

Our Board has resolved to self-insure against the following specific risks to the extent that they are not covered by an insurance policy (excluding deductible amounts) or eligible for pass-through under the Rules (including under the pass-through events nominated in this Revenue Proposal):

1. Any transmission network related event greater than $20,000 where:
   - (i) insurance is commercially unavailable, uneconomic or is a specific exclusion under a policy of insurance;
   - (ii) insured risks are below the insurance policy deductible, and deductible payments; or
   - (iii) the costs incurred are through emergency actions to mitigate losses;

[18] Refer to *Regulatory Proposal 2018/19 to 2022/23: Self-Insurance Estimates, Premium Forecasts and Nominated Pass Through Events: ElectraNet*, Finity Consulting Pty Limited, February 2017 page 7 (ENET100).

2. Any insured non-network event (e.g. vandalism, theft and damage) for losses incurred below existing insurance policy deductibles and/or deductible payments; and

3. Workers compensation costs (we are a Return to Work SA exempt employer).[19]

These risks are largely consistent with those for which we are self-insured in the current regulatory period, with the exception that these risks specifically exclude transmission network loss events of the nature and magnitude of those experienced due to the extreme weather events of 1979 and 28 September 2016. For these type of events, the associated costs would be recovered under the nominated natural disaster pass through event we propose, rather than through self-insurance. Our nominated cost pass through events are explained further in Attachment 13.

Given that we have in the current regulatory period absorbed the significant capital and operating expenditure impacts of the 28 September 2016 extreme weather event, this change avoids a material increase in the self-insurance premium for the forthcoming regulatory period. Treating such severe storms as a 'natural disaster' pass through event is a more cost effective allocation of risk in the interests of customers. The approach is consistent with the purpose of nominated pass through events for rare and extreme events for which risk cannot be most efficiently managed or borne by a network business.

We also engaged independent actuary Finity Consulting, to evaluate the above risks and the appropriate self-insurance premium. This actuarial analysis specifically excludes the costs associated with the two extreme historical weather events discussed above, as costs associated with events of this nature and magnitude would be subject to pass through.

The bottom up forecast of our total self-insurance premium based on this independent actuarial assessment is shown in Table 7.7. The Finity report includes full details of the amounts, values and other inputs used to calculate this proposed premium, and an explanation of the calculations involved[20].

Table 7-7: Self-insurance allowance ($m 2017-18)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Self-insurance	1.4	1.4	1.4	1.5	1.5	**7.2**

Source: Finity Consulting

Our detailed bottom-up forecast of self-insurance is below a trend based forecast, as explained below.

7.9.3 Efficiency adjustment

The bottom up forecasts we have obtained from independent experts of our expected insurance and self-insurance costs in aggregate exceed the base year trend forecast by a total of approximately $0.9m (or 4%) over the forthcoming regulatory period.

[19] ElectraNet Board Resolution to Self-Insure dated 16 March 2017 (ENET052).

[20] Refer to *Regulatory Proposal 2018/19 to 2022/23: Self-Insurance Estimates, Premium Forecasts and Nominated Pass Through Events: ElectraNet*, Finity Consulting Pty Limited, February 2017 page 5 (ENET100).

However, when considering this shortfall in the context of the overall operating expenditure forecast, we have adopted the base year trend forecast for our insurance and self-insurance costs. This forecasting method is consistent with the AER's preferred approach.

This adjustment to our operating expenditure forecast is set out in Table 7.8.

Table 7-8: Adjustment to self-insurance and insurance forecast ($m 2017-18)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Insurance (bottom up)	3.1	3.2	3.2	3.3	3.3	16.1
Self-insurance (bottom up)	1.2	1.2	1.2	1.2	1.2	5.9
Subtotal	4.3	4.3	4.4	4.4	4.5	**21.9**
Insurance (trend)	2.7	2.7	2.8	2.8	2.8	13.8
Self-insurance (trend)	1.4	1.4	1.4	1.5	1.5	7.2
Subtotal	4.1	4.2	4.2	4.2	4.3	**21.0**
Net forecast reduction	**(0.1)**	**(0.2)**	**(0.2)**	**(0.2)**	**(0.2)**	**(0.9)**

The adoption of a base year forecasting method for these two operating expenditure items, combined with the adoption of a zero output change factor as discussed in Section 7.8.2, results in a reduction to the overall operating expenditure forecast totalling approximately $7.1m across the five year period, equivalent to over $1.4m per annum.

We note this is equivalent to a productivity factor of just over 0.5% from the first year of the forthcoming regulatory period across our total operating expenditure.

7.9.4 Debt raising

Debt raising costs are benchmarked costs associated with raising or refinancing debt. These costs include underwriting fees, legal fees, company credit rating fees and other transaction costs. Debt raising costs are an unavoidable aspect of raising debt that would be incurred by any large company.

An allowance for these costs has been determined by applying the standard benchmark methodology approved by the AER, as reflected in the AER's Post Tax Revenue Model (PTRM).

Table 7.9 below sets out our proposed debt raising cost allowance.

Table 7-9: Forecast debt raising costs ($m 2017-18)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Debt raising	0.2	0.1	0.1	0.1	0.1	**0.7**

7.9.5 Revenue reset

The costs incurred in preparing our Revenue Proposal have been removed from the base year costs, as noted above, as this expenditure is not incurred uniformly throughout the regulatory period. We have estimated the revenue reset costs for the forthcoming regulatory period based on the actual and expected costs of the current revenue reset process and applied these costs to our forecast. These costs total approximately $1.1m over the forthcoming regulatory period in the relevant years.

7.10 Step changes

At this stage, no step changes have been applied in the development of our operating expenditure forecasts based on the information available and requirements applicable to us now. If any new obligations are proposed subsequent to lodging this Revenue Proposal or updated information comes to hand materially impacting on our forecasts, we will explain any cost implications in our revised Revenue Proposal.

7.11 Directors' responsibility statement

Clause S6A.1.2(5) of the National Electricity Rules requires our Revenue Proposal to contain a certification of the reasonableness of the key assumptions that underlie the operating expenditure forecast by the Directors of ElectraNet.

A Directors' Responsibility Statement has been provided addressing this requirement[21].

7.12 Forecast operating expenditure

This section presents our operating expenditure forecast for the forthcoming regulatory period, as a result of applying the forecasting methodology, inputs and assumptions as described in the sections above.

7.12.1 Summary of forecast operating expenditure

Our operating expenditure forecast, derived using the base-step-trend method explained above, is summarised in Table 7.10 below.

[21] ElectraNet Directors' Responsibility Statement dated 16 March 2017 (ENET051)

Table 7-10: Operating expenditure forecasts ($m 2017-18)

Element	Details in	2015-16	2018-19	2019-20	2020-21	2021-22	2022-23
Audited base year expenditure	Section 7.8.1	88.4					
Remove one off / non-recurrent items	Section 7.8.1	(3.6)					
Efficient base year costs	Section 7.8.1	84.8					
Rate of change	Section 7.8.2		1.0	1.5	1.9	2.6	3.2
Zero based forecasts	Section 7.9		0.2	0.2	0.5	0.6	0.4
Step changes	Section 7.10		0.0	0.0	0.0	0.0	0.0
Forecast operating expenditure		**84.8**	**85.9**	**86.4**	**87.2**	**88.0**	**88.4**

Our total forecast operating expenditure for the forthcoming regulatory period is $435.9m in 2017-18 dollars.

Our operating expenditure forecasts by category are presented in Figure 7.6 below.

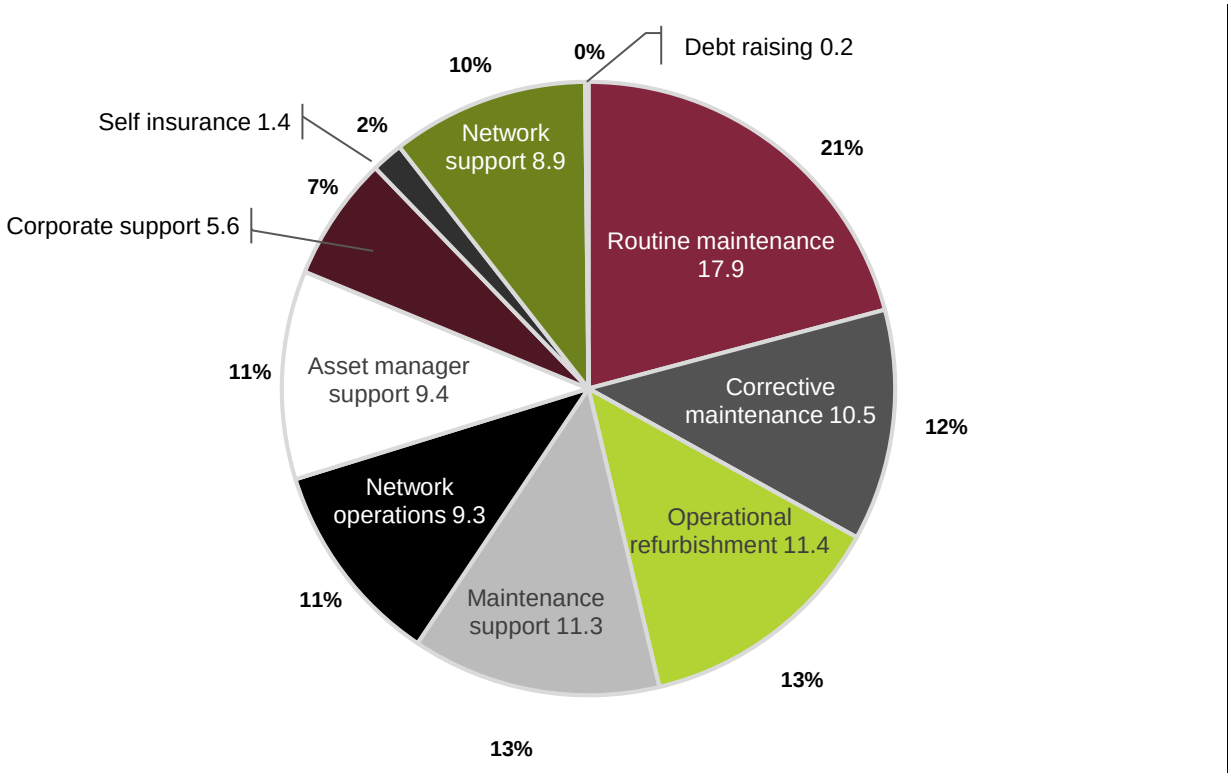


Figure 7-6: Total operating expenditure 2018-19 to 2022-23 by category $m real 2017-18

Approximately 70% of ElectraNet's annual operating expenditure is associated with direct maintenance and operation of the network through our maintenance programs and network operations functions.

7.12.2 Historical operating expenditure

Our actual and estimated operating expenditure in the current and forthcoming regulatory period by category is summarised in the figure below.[22]

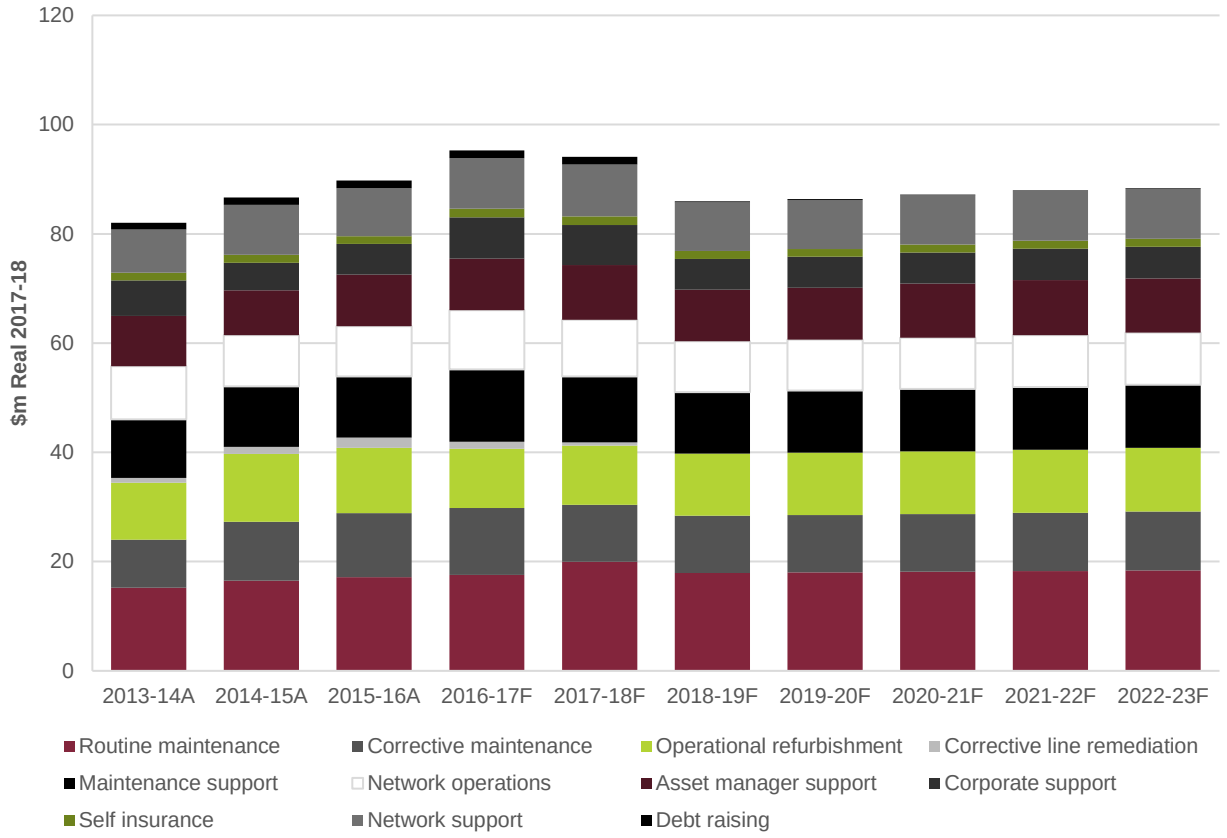


Figure 7-7: Total operating expenditure 2013-14 to 2022-23 by category $m real 2017-18

Our total operating expenditure for the forthcoming period is forecast to be $47m or 11% below our trend expenditure allowance in real terms.

We are confident that our operating expenditure forecast is both efficient and prudent and that it meets the required expenditure objectives set out in the Rules.

[22] Note that a small number of cost items have been reallocated between categories compared with those reported historically in order to more accurately align with the nature of the functions performed. Further information is provided on the revised categorisation in our operational expenditure forecast model, and on the historical categorisation in our response to the Revenue Reset RIN. We propose to report against the revised categorisation from 1 July 2018. Note these forecasts are unadjusted for movements in provisions.

7.13 Benefits and risks for customers

Our operating expenditure program will provide the following benefits for customers:

- Safety – Our operating expenditure plans aim to deliver services that are safe for the communities we serve and the environment.
- Network security and reliability – We continue to maintain the network through our asset management and maintenance programs to maintain the level of security and reliability of supply expected by our customers.
- Efficiency – We will continue to drive improvements in our operating cost performance, building on the significant achievements to date.
- Affordability – We are proposing a significant reduction in our operating program compared with the trend allowance, which will feed through to lower prices for our customers.
- Choice – A key focus of our operating expenditure program is on managing the challenges of an increasingly complex power system to support the differing choices being made by customers over the way energy will be produced and consumed in the future.
- Long term sustainability – We are efficiently managing and maintaining the transmission network to accommodate the changing nature of generation and demand as we move to a low carbon economy, and to deliver the outcomes sought by customers into the future.

We are aiming to efficiently manage the following risks to customers through our operating expenditure program:

- Additional operating expenditure requirements – we are managing the potential cost impact to customers of uncertain events that may trigger the need for additional expenditure through identified contingent projects. If and when further investment is required, our revenue requirement and transmission prices would be higher than set out in our proposal, but only if the benefits to customers can be shown to exceed the costs.
- New obligations – following the conclusion of the current reviews, new security obligations may be imposed on us to further improve network security. While such obligations would provide customer benefits, they could also require increases in our operating expenditure.
- Nominated pass through events – we have proposed the following cost 'pass through events' to most efficiently manage the risk to customers of rare and extreme events outside our control that could lead to higher costs for customers if one or more of these events occurred:
  - Insurance cap event;
  - Terrorism event;
  - Natural disaster event; and
  - Insurer credit risk event.

While the occurrence of such rare events is a risk for customers, it is preferable to providing an upfront amount in our operating expenditure allowance. A detailed explanation of our proposed pass through events is provided in Attachment 13.

- Our plans are based on the best available information at the time of submission in relation to the operating expenditure requirements for the next period, including the issues and implications raised by the 28 September 2016 extreme weather event. However, there remains a possibility that new information may come to light following further internal analysis and external reviews and investigations that results in a need for additional unforeseen operating expenditure requirements.

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