ISSUES PAPER

TasNetworks
Distribution and Transmission Determination

2019 to 2024

March 2018

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au

Public forum and invitation for submissions

A public forum on TasNetworks' proposals will be held on 10 April 2018 in Hobart. Interested parties are invited to register their interest in attending the forum by emailing tasnetworks2019@aer.gov.au with their name, the business or agency they represent (if relevant) and contact details by Wednesday, 4 April.

Written submissions on TasNetworks' proposals are invited by 16 May 2018.

We will consider and respond to all submissions received by that date in our draft determination.

Submissions should be sent to: tasnetworks2019@aer.gov.au

Alternatively, submissions can be sent to:

Chris Pattas
General Manager
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Submissions should be in Microsoft Word or another text readable document format.

We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information should:

(1) clearly identify the information that is the subject of the confidentiality claim

(2) provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on our website. For further information regarding our use and disclosure of information provided to us, see the *ACCC/AER Information Policy* (June 2014), which is available on our website.[1]

[1] https://www.aer.gov.au/publications/corporate-documents/accc-and-aer-information-policy-collection-and-disclosure-of-information

Contents

Shortened forms

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
capex	capital expenditure
CESS	capital expenditure sharing scheme
COAG	Council of Australian Governments
CPI	consumer price index
DMIA Mechanism	demand management innovation allowance mechanism
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
GSL	guaranteed service level
F&A	Framework and approach
kWh	kilowatt hours
NEM	National Electricity Market
NEO	National Electricity Objective
NER or the Rules	National Electricity Rules
next regulatory control period	2019-24 period from 1 July 2019 to 30 June 2024
opex	operating expenditure
PRWG	TasNetworks' pricing reform working group
RAB	regulatory asset base
ROLR	retailer of last resort
Repex	Replacement capital expenditure

Shortened Form	Extended Form
STPIS	service target performance incentive scheme

1 About our distribution determination process

The Australian Energy Regulator (AER) works to make all Australian energy consumers better off, now and in the future. We regulate energy networks in all jurisdictions except Western Australia. We set the amount of revenue that network businesses can recover from customers for using these networks.

The National Electricity Law and Rules (NEL and NER) provide the regulatory framework governing electricity networks. Our work under this framework is guided by the National Electricity Objective (NEO):[2]

> …to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system.

TasNetworks is the sole owner and operator of the monopoly electricity transmission and distribution networks in Tasmania. The networks comprise the towers, poles, wires and transformers used for transporting electricity to homes and business. TasNetworks designs, constructs, operates and maintains the distribution and transmission electricity networks in Tasmania. On 31 January 2018, TasNetworks submitted joint regulatory proposals covering both its distribution and transmission networks for the five years commencing 1 July 2018. Its proposals set out the revenue it proposes to recover from its customers for the provision of electricity distribution and transmission services, and the methodology it proposes to use to set its prices each year.

Although TasNetworks has submitted joint regulatory proposals for its distribution and transmission networks, under our legislative framework we must undertake separate assessments and make separate transmission and distribution determinations.

This issues paper highlights some of the key elements of the proposals, and how stakeholders can assist in our review. Interested parties are invited to join us on 10 April for a public forum in Hobart on TasNetworks' proposals. Registrations for the public forum will remain open until Wednesday, 4 April.

As part of this review, we're also seeking written submissions from stakeholders on TasNetworks' proposals, their priorities for this review and where our assessment should focus.

---

[2] NEL, s. 7.

1.1 How can you get involved?

The decisions we make and the actions we take affect a wide range of individuals, businesses and organisations. Effective and meaningful engagement with stakeholders across all our functions is essential to fulfilling our role, and it provides stakeholders with an opportunity to inform and influence what we do. Engaging with those affected by our work helps us make better decisions, provides greater transparency and predictability, and builds trust and confidence in the regulatory regime. This is reflected in our Stakeholder Engagement Framework and in the consultation process set out for our distribution determinations in the NER, which we will follow in this review.

Throughout this review we will also have the benefit of advice from our Consumer Challenge Panel (CCP13).[3] The expert members of the CCP13 help us to make better regulatory decisions by providing input on issues of importance to consumers and bringing consumer perspectives to our processes.

The table below sets out the key milestones and engagement opportunities in our review:

Milestone	Date
TasNetworks submitted its proposals	31 January 2018
AER issues paper published	28 March 2018
Public forum on TasNetworks' proposals	*10 April 2018*
Submissions on TasNetworks' proposals due	*16 May 2018*
AER draft decision to be published	September 2018
Public forum on draft decision	*October 2018*
TasNetworks submits its revised proposals	November 2018
Submissions on draft decision and TasNetworks' revised proposals due	*January 2019*
AER final decision to be published	April 2018

3 Members of CCP13 are Andrew Nance, Chris Fitz-Nead and Mark Grenning. Member biographies are available on our website: https://www.aer.gov.au/about-us/consumer-challenge-panel.

2 What do the proposals mean for TasNetworks' customers?

TasNetworks' proposals would allow it to recover $2200 million ($nominal) from its customers over the five years from 1 July 2019 to 30 June 2024. We estimate this would flow through to customers as a nominal increase of $26 per year for residential electricity consumers, and $77 per year for small businesses.

TasNetworks submits that it prepared its proposals to achieve the lowest price outcome for its customers while maintaining network reliability and safety now and into the future.[4] As a result of this, TasNetworks estimates this will result in average annual nominal transmission price decreases of 1.7 per cent, and distribution price increases of 4.2 per cent. Overall, we expect the proposals to lead to nominal decreases in residential transmission tariffs of 0.2 per cent per annum, and increases in residential distribution tariffs of 1.5 per cent per annum.[5] The change in individual prices may not reflect these average changes.

TasNetworks submits that it has "heard loud and clear" that its customers consider service levels and reliability to be generally acceptable, but affordability is their primary concern.[6] TasNetworks' customers expect them to make a clear case for any expenditure decisions that will increase prices.[7]

TasNetworks is proposing to continue a process of tariff reform to gradually move towards more cost reflective pricing. This includes adjusting the prices for existing network tariffs to unwind cross-subsidies between tariffs and between different classes of customer. TasNetworks is also proposing new types of tariffs that more accurately reflect the impact that customers' use of electricity has on the cost of running the network.

In the sections that follow, we discuss some of the key elements of TasNetworks' proposals, and how TasNetworks' explains these have been guided by the key themes emerging from its engagement with consumers. We are particularly interested to hear from stakeholders whether these themes reflect their own priorities for this determination, and how well TasNetworks' proposals has addressed them.

---

4 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals Overview 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 14.

5 Source: TasNetworks, *TasNetworks - Reset RIN Final Template 1 - Regulatory Determination Distribution*, worksheet 7.6 Indicative Bill Impact, Jan 2018

TasNetworks, *TasNetworks - Reset RIN Final Template 1 - Regulatory Determination Transmission*, worksheet 7.6 Indicative Bill Impact, Jan 2018

6 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 9.

7 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 9.

2.1 Expected impact on electricity bills

TasNetworks has proposed to decrease its average annual transmission revenues for the 2019-24 regulatory control period by $16 million ($nominal) from the current, 2014–19 regulatory period. For its distribution network, TasNetworks has proposed to increase its annual revenues for 2019-24 by $40 million ($nominal) from the current, 2017–19 regulatory control period.

We estimate that in the forthcoming 2019-24 period, these proposals would result in an average:

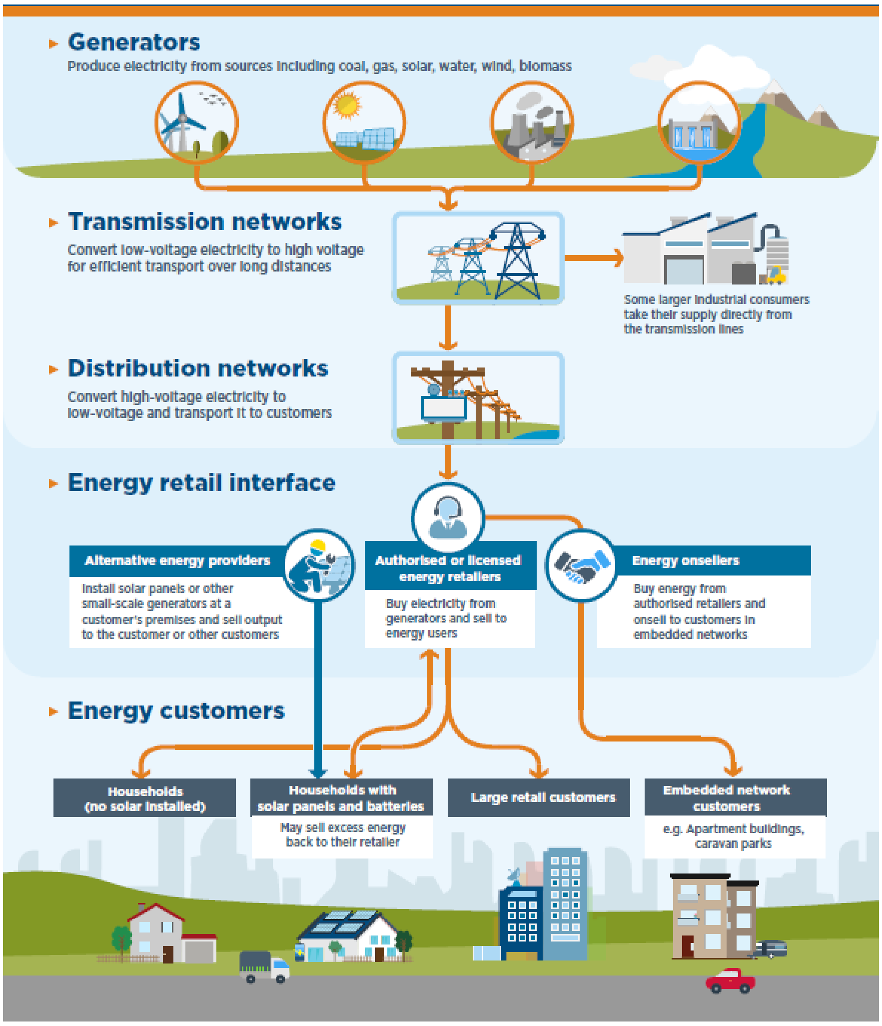
- decrease of 1.7 per cent ($nominal) to TasNetworks' forecast transmission network charges from current prices
- increase of 4.2 per cent ($nominal) to TasNetworks' forecast distribution network charges from current prices.

TasNetworks' network charges make up a significant component—around 43 per cent—of the electricity bills paid by customers in Tasmania. Other components of the bill include wholesale electricity costs and retail costs, which make up around 36.8 per cent and 11.8 per cent respectively.[8] Figure 1 illustrates the different components of the electricity supply chain.

The cost of the network components of the electricity supply chain are ultimately recovered through electricity retail charges. We are not responsible for the regulation of electricity retail prices in Tasmania. Amongst other things, the Office of the Tasmanian Economic Regulator is responsible for setting maximum retail prices for the sale and supply of electricity services to (regulated) standing offer customers.

8 https://www.auroraenergy.com.au/your-home/bills-and-payments/your-bill-explained/electricity-cost-breakdown

Figure 1 Electricity supply chain



Source: AER - State of the Energy Market - May 2017, p. 18.

Context for the proposals

Tasmania's electricity market is different in a number of ways to those in other states of Australia. In Tasmania, more than half the energy delivered in the State is used by major industrial customers connected to the transmission network.[9] In Tasmania, peak demand occurs in winter at times of lower temperature and is driven by the heating demands of customers. In contrast, peak demand in most other states in Australian occurs during summer at times of high temperature and is driven by air-conditioner use. Tasmania also has a relatively high number of vulnerable electricity customers with more than one per cent of electricity retail customers on hardship programs.[10]

---

9 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 29.

10 AER retail statistics: https://www.aer.gov.au/retail-markets/retail-statistics/2017-18-q1-customers-on-a-hardship-program-by-jurisdiction

Tasmania also faces some unique energy security issues. During 2015-16, the combined impact of two rare events – record low rainfall during spring and the Basslink interconnector being out of service – resulted in Hydro Tasmania's water storage levels falling to historically low levels and the need for the rapid commissioning of more than 200 MW of temporary diesel generation capacity. Water storage levels have now recovered to the mid-40 per cent range, from a low point of 12.5 per cent in late-April 2016.[11] The Tasmanian Government established an Energy Security Taskforce to advise how it can better prepare for, and mitigate against, the risk of future energy security events. In its final recommendations in June 2017,[12] he Energy Security Taskforce's assessment is that, due to the dominance of hydro-electricity generation in Tasmania and the observed variability of rainfall, the volume of energy supply in Tasmania's water storages prevails as the most important factor in setting Tasmania's energy security.[13]

The Commonwealth and Tasmanian Governments previously commissioned a feasibility study of whether a second interconnector between Victoria and Tasmania would help to address long-term energy security issues and facilitate investment in renewable energy in the National Electricity Market (NEM). The finalised study found that there is uncertainty as to whether a second interconnector would be in the long-term interest of consumers.[14] Subsequently, the Australian Renewable Energy Agency (ARENA) and TasNetworks announced plans to work together to explore a more detailed feasibility and business case assessment for a second interconnector across the Bass Strait between Tasmania and the mainland.[15]

Other relevant AER reviews

We have embarked on a number of parallel reviews that may affect our final determinations for TasNetworks. We outline these reviews in appendix D. These include a review of our Rate of Return (ROR) Guideline and a review of the application guidelines for the regulatory investment tests for transmission (RIT-T) and distribution (RIT-D).

Key themes from TasNetworks' stakeholder consultations

TasNetworks consulted extensively in developing its regulatory proposal. This consultation included the publication of a Directions and Priorities Paper which set out

---

11 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 42.

12 Tasmanian Energy Security Taskforce, *Final Report, Executive Summary*, June 2017

13 Tasmanian Energy Security Taskforce, *Tasmanian Energy Security Taskforce Final Report Executive Summary*, June 2017, p.5.

14 Dr John Tamblyn, *Feasibility of a second Tasmanian interconnector, Final study*, April 2017.

15 ARENA, Building the case for a second interconnector for Bass Strait, November 2017 https://arena.gov.au/news/building-case-second-interconnector-bass-strait/

a preliminary regulatory proposal.[16] Figure 2 shows the consultation steps undertaken by TasNetworks.

According to TasNetworks, the key themes from its consultation with transmission customers were:

- positive feedback that TasNetworks' costs have remained stable over the past few years
- sustained low cost is important for forecasting and future viability
- greater risk to businesses if power is interrupted and although reliability is good, this is still a key focus
- keen to see TasNetworks demonstrate benefits and efficiencies resulting from investment in technology
- engaging with customers before making investment decisions which may impact their electricity prices has been appreciated.[17]

Key messages from TasNetworks' residential and distribution customer engagement activities were:

- TasNetworks is meeting most customers' needs from an overall reliability perspective, but some customers' needs and expectations are changing
- overall satisfaction with current reliability levels is quite high, and the majority of customers support TasNetworks' proposed strategy to maintain reliability rather than investing more to improve it
- while improvements in reliability and outage response could strengthen satisfaction, customers are not willing to pay higher prices for these improvements
- continual improvement in how TasNetworks communicates with its customers is critical, including use of social media platforms, such as Facebook
- customers recognise that technology is changing the electricity industry, particularly in relation to solar panels, battery storage and electric vehicles
- customers recognise that the nature of the grid is changing and are interested in distributed energy resources and the capacity to use the network to trade energy
- the majority of TasNetworks' customers are concerned about affordability, but some want new technologies and/or better outcomes and are prepared to pay for these improvements within reasonable bounds.[18]

---

16 TasNetworks, *Direction and Priorities Consultation Paper Transmission and Distribution Determination 2019-24*, August 2017.

17 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, pp. 47–48.

18 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024, January 2018, p. 48.

Figure 2 TasNetworks' Revenue Reset Engagement timeline

Source: TasNetworks Website: https://www.tasnetworks.com.au/our-network/network-revenue-pricing/revenue-proposals/revenue-reset-2019-2024/

3 What's driving TasNetworks' revenue proposals

In section 2, we looked at TasNetworks' proposals in nominal terms, taking into account the expected impact of inflation. The impact of inflation—which changes over time—makes it difficult to compare revenue from one period to the next on a like-for-like basis. To do this we use 'real' values based on a common year (in this case 2018–19), which have been adjusted to remove the impact of inflation.

For transmission, TasNetworks is proposing a real 17 per cent decrease in average annual revenues from our previous determination for 2014–19. We expect that this will result in a real decrease in transmission bills of 19 per cent over the 2019-24 period.

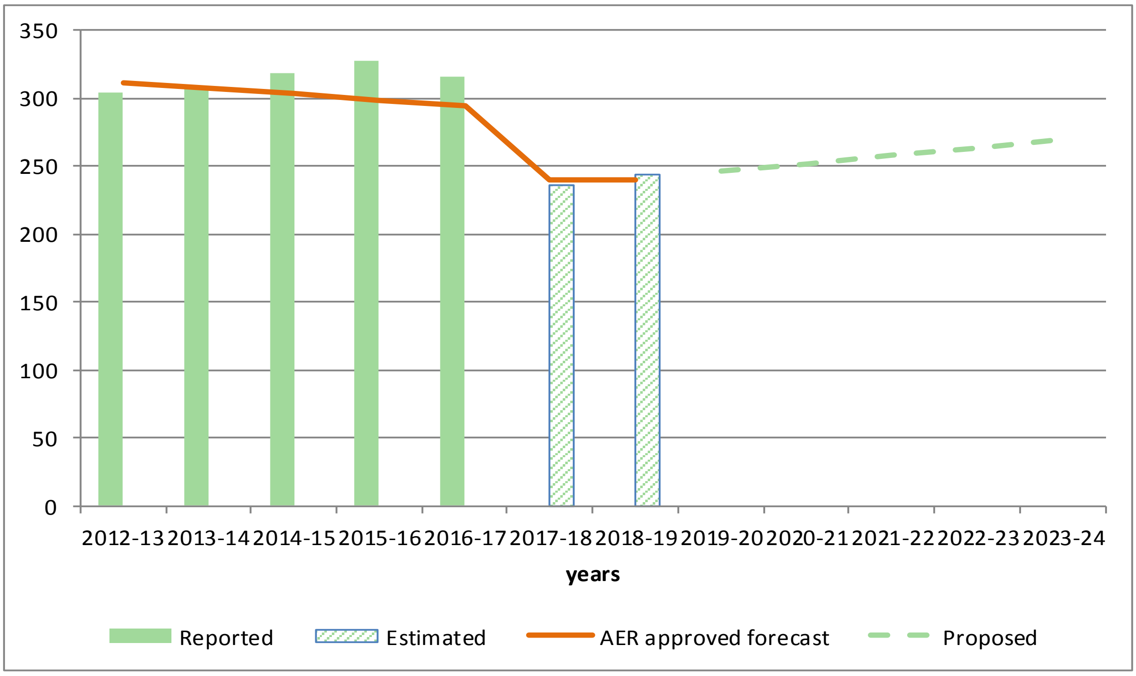
Our previous determination for TasNetworks distribution only covered the 2017–19 two–year period. TasNetworks proposed significant expenditure reductions for the 2017-19 regulatory period for distribution. However, for the forthcoming 2019-24 regulatory period, TasNetworks is proposing a real increase in average annual revenues for distribution of 7 per cent from our previous 2017-19 determination. We expect that this will result in a real increase in distribution bills of 9.1 per cent over the 2019-24 period.

Taking these effects together, we expect TasNetworks' total network charges to be 1.8 per cent higher at the end of the 2019-24 regulatory control period in real terms.[19]

Figure 3 and Figure 4 show TasNetworks' actual and forecast revenues for the 2019-24 regulatory period. Figure 3 shows that TasNetworks is proposing to increase its distribution revenues in the 2019-24 period, following a decrease in 2017-18.

[19] Note: under our legislative framework we will have to make separate transmission and distribution determinations. Under this framework we will consider TasNetworks' distribution and transmission proposals separately and will not consider their combined effect.

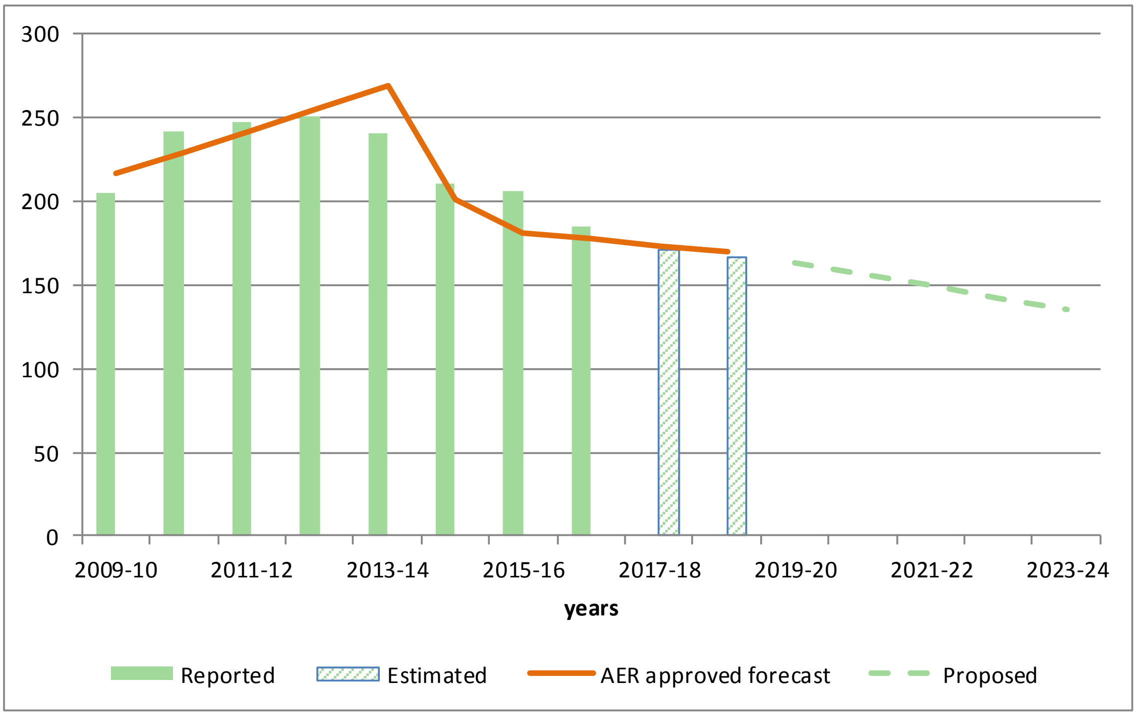
Figure 3 TasNetworks' distribution actual and forecast revenues ($millions, June 2019)



Source: AER analysis

Figure 4 shows TasNetworks' proposed revenues for transmission. This shows that TasNetworks is proposing a decline in revenues in the 2019-24 period.

Figure 4 TasNetworks' transmission actual and forecast revenues ($millions, June 2019)



Source: AER analysis

Figure 5 and Figure 7 compare TasNetworks' proposals, broken down by the 'building blocks' that make up our revenue determinations.[20] These figures illustrate that TasNetworks' transmission proposal and distribution proposal are quite different. Average annual revenue for distribution is increasing due to increases in the return on capital, depreciation and opex building blocks. However, each building block for transmission is decreasing.

TasNetworks is proposing the same rate of return for both transmission and distribution which is lower than its current rates of return for distribution and transmission. All other things being equal, lowering the rate of return should reduce TasNetworks' revenues.

Distribution building blocks

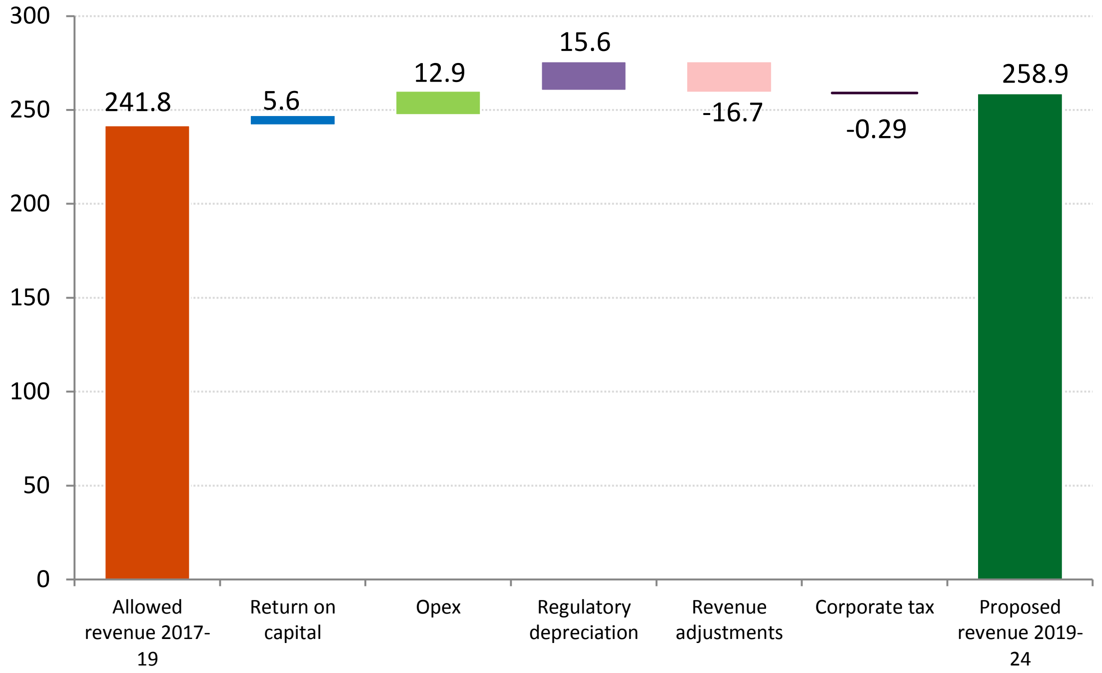
Figure 5 shows the change in the building blocks of TasNetworks' proposed distribution revenues. It shows that the return on the regulatory asset base (RAB) (or return on capital) and depreciation of the RAB (or return of capital) are increasing. These are increasing because TasNetworks is proposing to increase its Regulatory Asset Base (RAB). The increase in the RAB is caused by an increase in capital expenditure.

TasNetworks also has a large negative revenue adjustment. This is due to a negative carry-over from our efficiency benefit sharing scheme (EBSS). TasNetworks has incurred this negative carry-over because it increased its opex significantly in 2016–17.

---

[20] These comparisons are of average annual revenues because our previous determination for TasNetworks only spanned two financial years (2017-19).

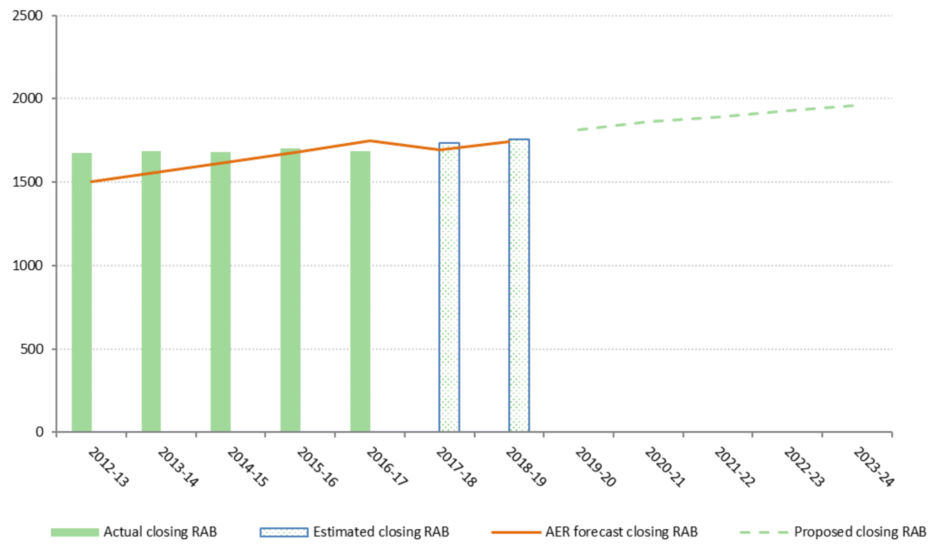
Figure 5 Change in distribution revenue from 2017-19 to 2019-24 ($million, June 2019)



Source: AER analysis

Figure 6 shows the forecast increase in TasNetworks' distribution RAB, driven by its proposed capex increase. TasNetworks' proposal will lead to a real 8 per cent increase in its distribution RAB. The reasons for the proposed increase in capital expenditure is explained in further detail in section 4.3 and attachment B.

Figure 6 Projected RAB growth for distribution ($million, 2018-19)

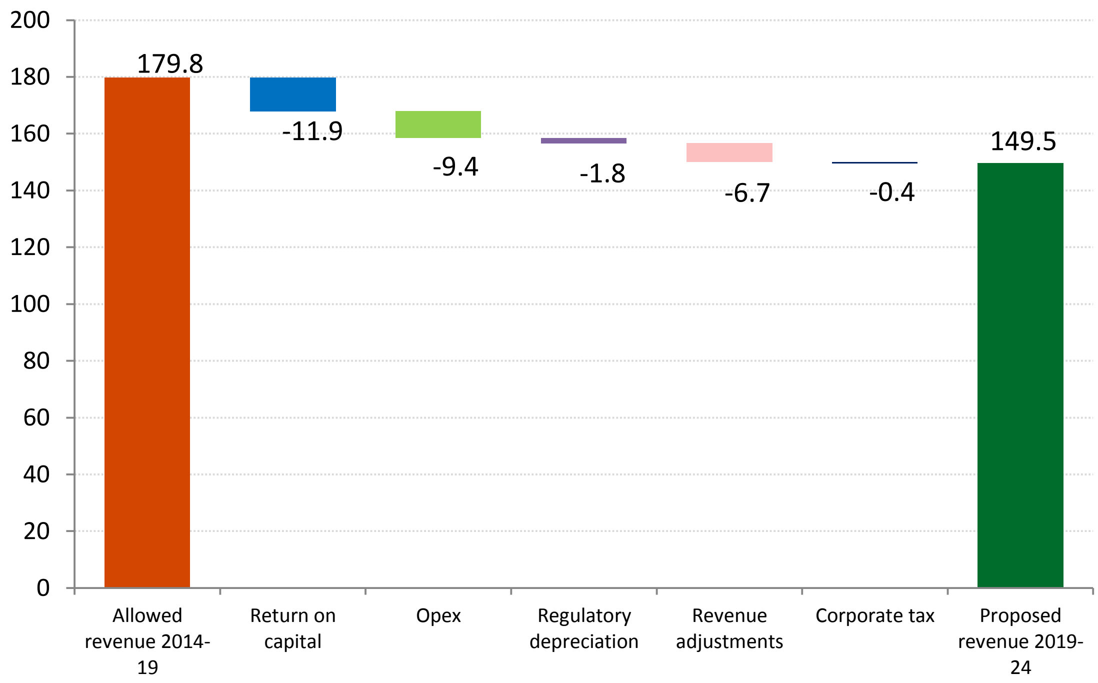


Source: AER analysis

Transmission building blocks

Figure 7 shows that, unlike distribution, every component of TasNetworks' revenue build-up for transmission is falling. TasNetworks is also proposing to increase its capex for transmission for 2019-24 compared to the previous five-year period. However, the increase in transmission capex is not leading to an increase in TasNetworks' transmission RAB because the increase is not enough to offset the depreciation.

Figure 7 Change in transmission revenue from 2014-19 to 2019-24 ($million, June 2019)



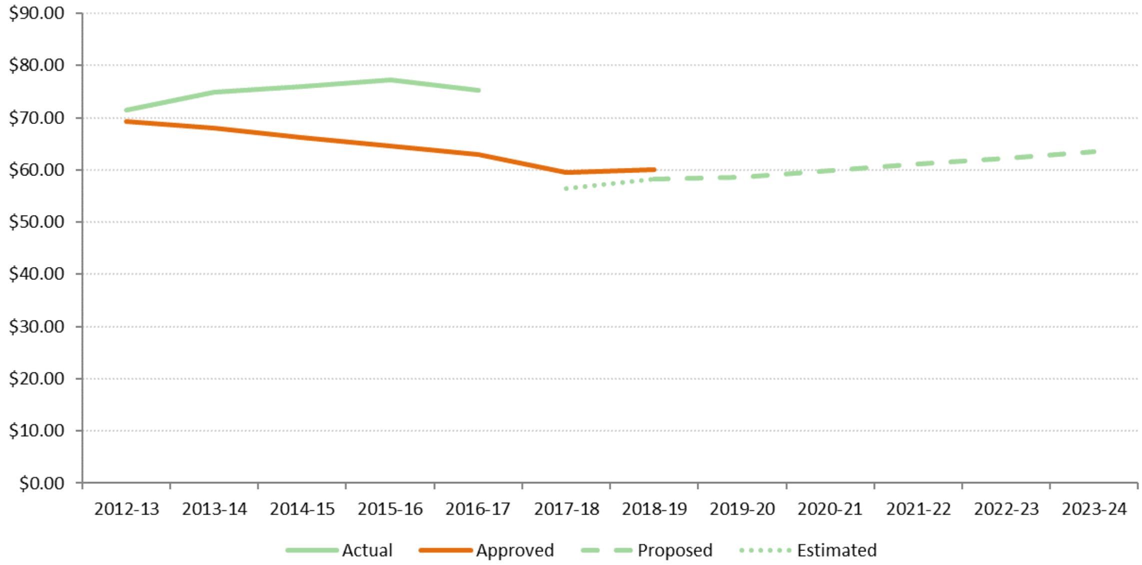
Source: AER analysis

3.1 Price path

TasNetworks has proposed annual increases to its distribution revenues of 4.8 per cent in nominal terms. This equates to an average annual increase in the price path of 2 per cent in real terms. Based upon this we expect that TasNetworks' prices for its distribution services will increase slightly over the 2019-24 regulatory control period. Figure 8 illustrates indicative prices for TasNetworks' distribution services.[21]

[21] Note: This estimate is indicative only, and the effect on individual customers' bills will depend on their usage patterns and the structure of their chosen retail tariff offering.

Figure 8 Indicative distribution price path ($/MWh, $2018-19)

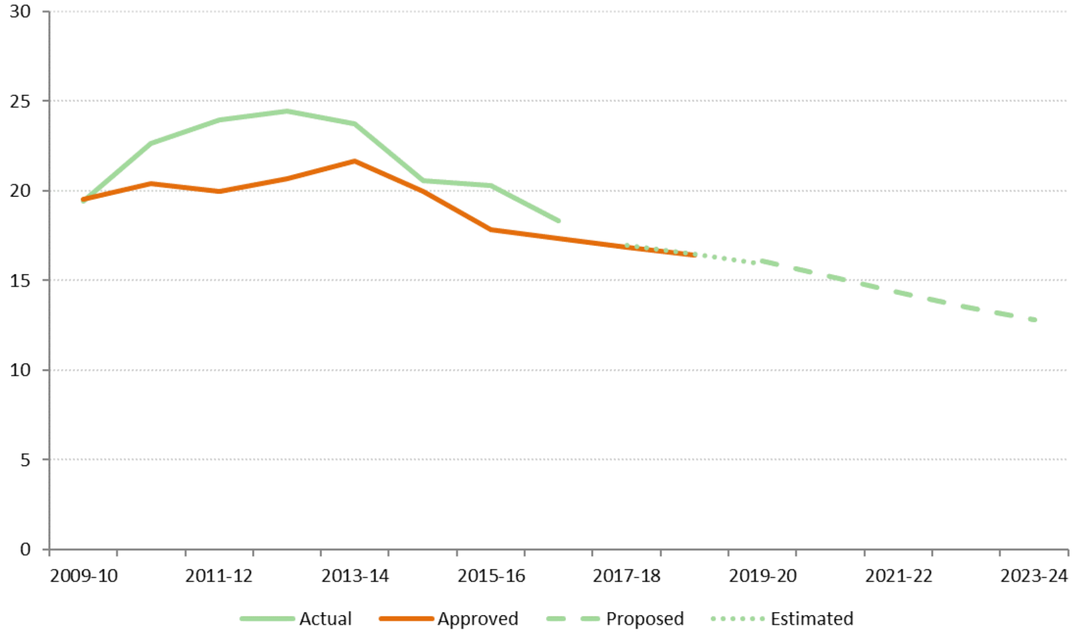


Source: AER analysis

However, we expect that prices for TasNetworks' transmission services will decline steadily over the 2019-24 period. This is because TasNetworks is proposing an average nominal revenue decrease of 2.6 per cent. This will lead to real price declines of 5.6 per cent over the 2019-24 period. Figure 9 shows indicative prices for TasNetworks' transmission services based on its proposal.[22]

[22] Note: This estimate is indicative only, and the effect on individual customers' bills will depend on their usage patterns and the structure of their chosen retail tariff offering.

Figure 9 Indicative transmission price path ($/MWh, $2018-19)



Source: AER analysis

On the face of it, TasNetworks' declining transmission prices appear to be beneficial to customers. However, the profile of transmission prices reductions may be considered inappropriate. This is because the smoothed revenue recovered in the last year of the upcoming (2019-24) regulatory period is considerably lower than the building block revenue requirement for that year. This may result in a significant step-up in transmission prices in 2024-25. In section 5.2 we consider this in further detail.

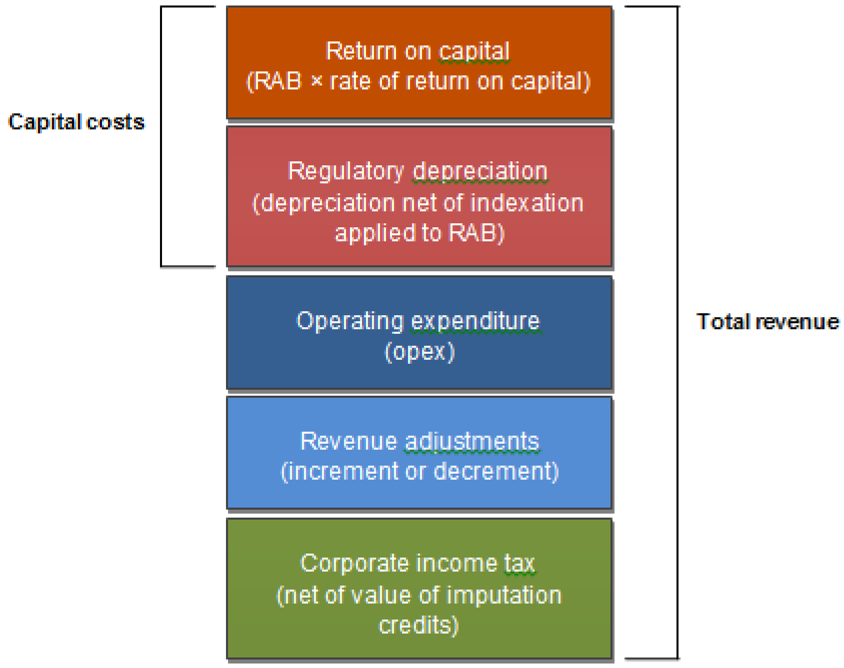
4 Key elements of TasNetworks' proposals

This section summarises the different elements (building blocks) that contribute to TasNetworks' forecast revenues. We use the building block model to determine how much revenue a business requires to cover its efficient costs—as required under the NER.[23] The building block approach consists of five costs (illustrated in Figure 10) that TasNetworks is allowed to recover through its revenue allowance.

These include:

- a return on the RAB (or return on capital)
- depreciation of the RAB (or return of capital)
- forecast opex
- revenue increments or decrements resulting from the application of incentive schemes, such as the EBSS that applied to TasNetworks in the 2014–19 period
- the estimated cost of corporate income tax.

Figure 10 The building block approach for determining total revenue



4.1 RAB and depreciation

The size of the RAB is determined by the level of capital expenditure and the rate of depreciation. We consider TasNetworks' capex in section 4.3. We do not consider that

[23] NER: Rule 6.4.3; 6A.5.4

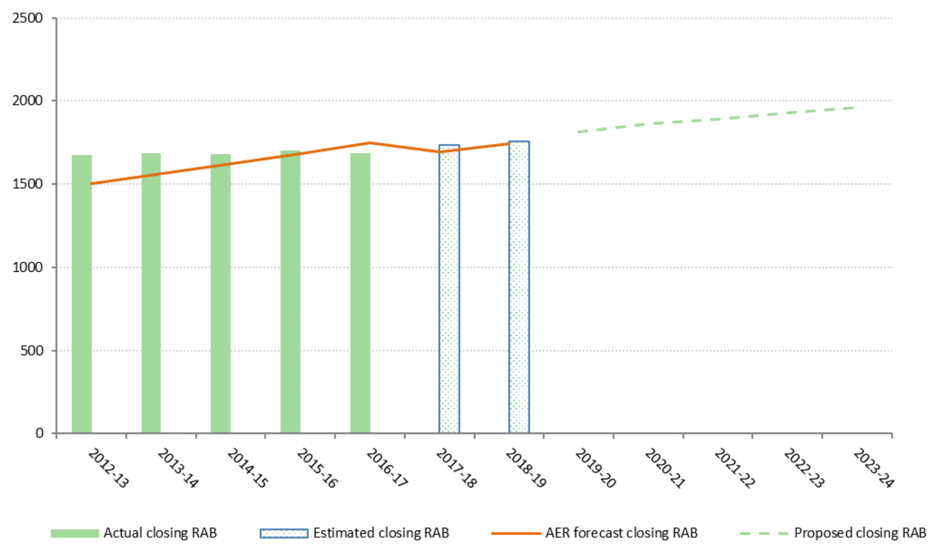
TasNetworks' proposed depreciation is contentious. TasNetworks is proposing to apply the same depreciation approach as it has in the past for both distribution and transmission.

Below we consider TasNetworks' proposed RAB for distribution and transmission separately.

Distribution RAB

Figure 6 shows the forecast real 8 per cent increase in its distribution RAB, driven by its proposed capex increase. The reasons for the proposed increase in capex is explained in further detail in section 4.3 and attachment B.

Figure 11 Projected RAB growth for distribution ($million, 2018-19)

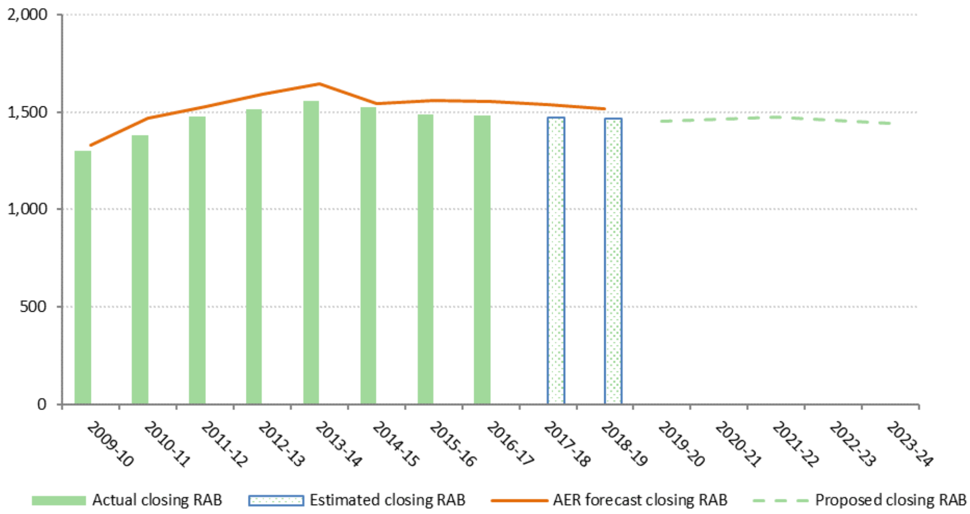


Source: AER analysis

Transmission RAB

Figure 12 shows the forecast real 0.5 per cent reduction in TasNetworks' transmission RAB by the end of the period. However, TasNetworks' transmission RAB may well increase by the end of the period. TasNetworks has proposed five contingent projects estimated at over $938 million, or more than three times TasNetworks' proposed capex. Should all these contingent projects proceed, they would increase TasNetworks' transmission RAB by more than 60 per cent. These contingent projects cover a second Bass Straight interconnector and upgrades to manage new generation. We consider the contingent projects in more detail in appendix C.

Figure 12 Projected transmission RAB ($millions, June 2019)



Source: AER analysis.

4.2 Rate of return and value of imputation credits

The rate of return is a key determinant of the revenue allowance. It is applied to the RAB to determine TasNetworks' return on capital. In its proposals, TasNetworks has applied a rate of return of 5.89 per cent. This is a placeholder, to be updated with more recent data at key milestones throughout this review (our draft decision, TasNetworks' revised proposals and our final decision).

TasNetworks has largely applied the December 2013 ROR Guideline in estimating the ROR for transmission and distribution. That guideline is now under review, with a revised 2018 guideline scheduled for release by the end of this year.

TasNetworks has deviated from our 2013 ROR Guideline in one respect. A strict application of the Guideline would produce a higher ROR for TasNetworks transmission compared to distribution. However, TasNetworks have proposed to use the same ROR. Strict application of our ROR Guideline results in a transmission ROR for TasNetworks of 6.15 per cent. Hence, the adoption of the lower cost of debt leads to a reduction in the ROR of 26 basis points.

The COAG Energy Council published a bulletin on 2 March 2018 setting out their intention to implement a binding rate of return guideline.[24] The bulletin suggests that the binding guideline is intended to apply to TasNetworks 2019-24 final determination.[25] Consultation on proposed amendments to the NEL to give effect to

---

[24] COAG Energy Council - Bulletin: Consultation on binding rate of return amendments - 2 March 2018.

[25] COAG Energy Council - Bulletin: Consultation on binding rate of return amendments - 2 March 2018, p. 3.

this intent is still in progress and the exact legislative outcomes, their timing and implementation, are not certain. However, the COAG bulletin is the most recent public indication of the intended outcomes, and as such we think it is prudent to account for the possibility that our revised 2018 guideline will be binding on our final decision for TasNetworks.

On that basis, we plan to consider all relevant rate of return and value of imputation credits (gamma) materials submitted to us in this and other concurrent determination processes as also being relevant material for our guideline review (and vice versa). We have published the rate of return material included in TasNetworks' proposal on the guideline section of our website to bring them to the attention of stakeholders participating in the guideline review.

4.3 Capital expenditure

Capital expenditure (capex) refers to the investment in assets to provide services. This investment mostly relates to assets with long lives (30–50 years is typical) and these costs are recovered over several regulatory periods. On an annual basis, however, the financing cost and depreciation associated with these assets are recovered (return of and on capital) as part of the building blocks that form part of TasNetworks' total revenue requirement.

In comparison to the actual and expected expenditure for TasNetworks in the current period, TasNetworks has proposed to increase transmission capex by 30 per cent and distribution capex by 23 per cent. This increase is leading to a revenue increase in distribution as it is increasing the size of TasNetworks' distribution RAB.

There is a possibility that actual capex for transmission may be much higher than forecast capex. TasNetworks has proposed five contingent projects valued at over $938 million. These cover projects that are not sufficiently certain to be included in the capex proposal but may occur in the 2019-24 period. The largest of these projects is for a second Bass Straight interconnector. We consider the contingent projects in more detail in appendix C.

TasNetworks' proposed capex is somewhat different to its forecast capex in its Directions and Priorities Paper.[26] TasNetworks' transmission capex is 2 per cent less than, and its distribution capex is 11 per cent greater than, that in its Directions and Priorities Paper.

TasNetworks has forecast low demand driven capex. This makes sense given that maximum demand and customer connections aren't forecast to grow significantly in the 2019-24 period. Other capex on operational support systems and non-network fleet and facilities is also forecast to be in line with or below historical levels of expenditure. However, TasNetworks has forecast an increase forecast replacement capital

[26] TasNetworks, *Direction and Priorities Consultation Paper Transmission and Distribution Determination 2019-24*, August 2017.

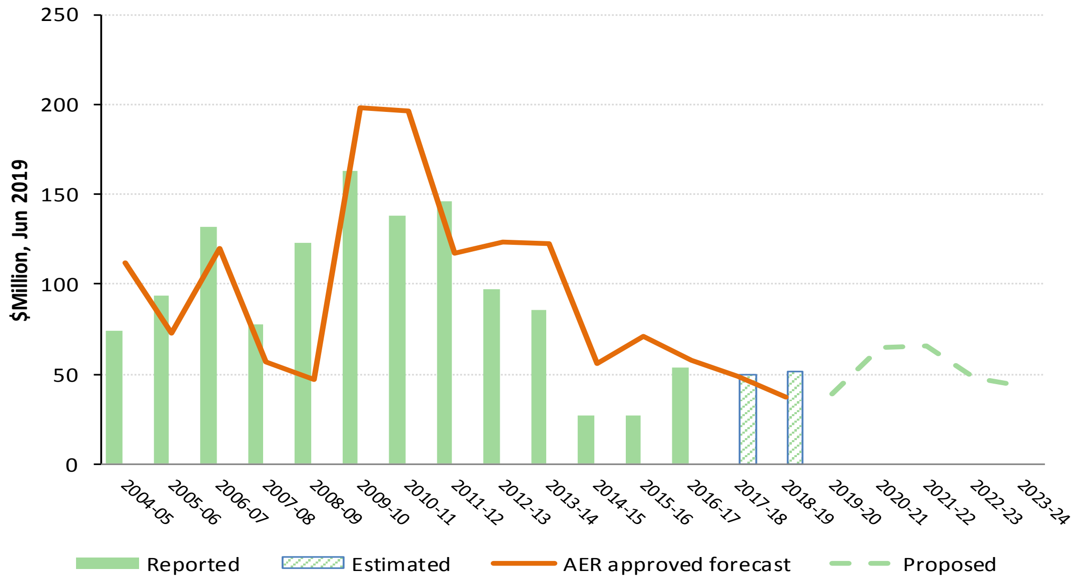
expenditure (or repex) and distribution information and communications technology (ICT) capex.

In the following sections, we outline TasNetworks' capex proposals at a high level. We consider TasNetworks' forecast capex in further detail in attachment B.

4.3.1.1 Transmission capital expenditure

Figure 13 presents TasNetworks' forecast, estimate and actual historical capex as well as our forecast capex. This shows that TasNetworks has underspent against our forecast of capex in recent years.

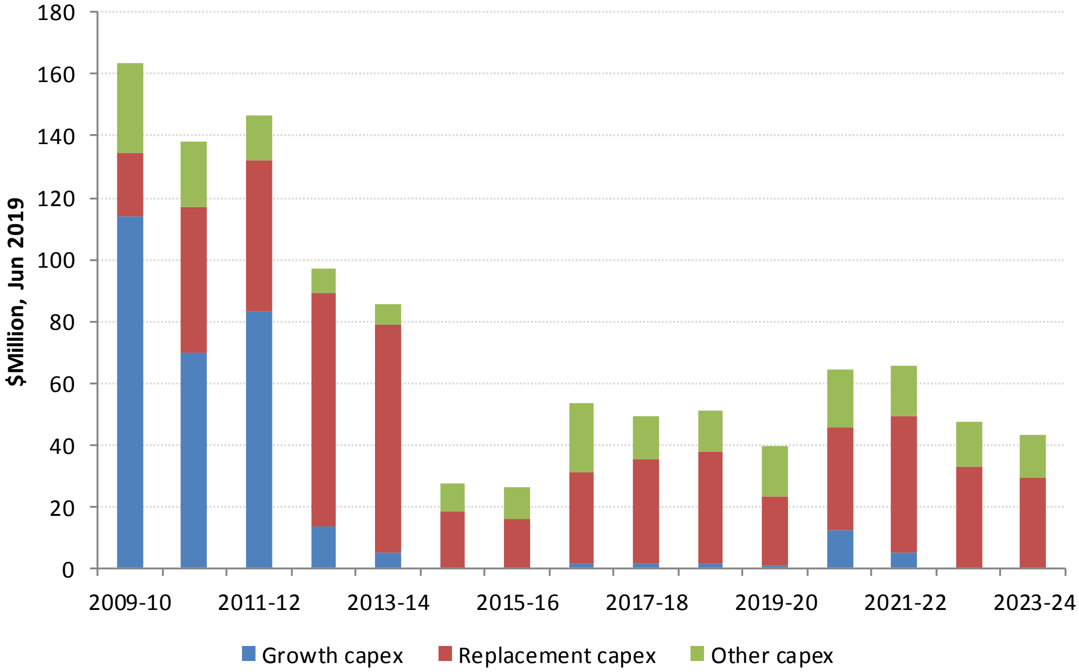
Figure 13 TasNetworks' transmission capex compared to our forecasts



Source: AER analysis

Figure 14 shows the different components of TasNetworks' capex for its transmission network. This shows that repex is the largest category of capex. We consider the different categories of TasNetworks' forecast capex in more detail in attachment B.

Figure 14 Categories of TasNetworks' transmission capex

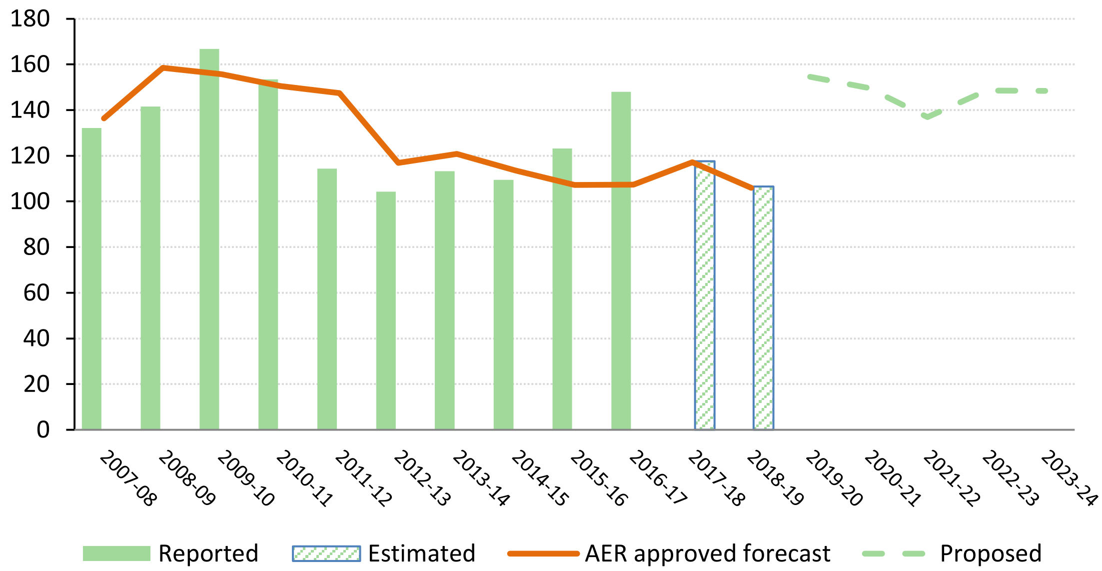


Source: AER analysis.

4.3.1.2 Distribution capex

Figure 15 presents TasNetworks' historical and forecast capital expenditure and our capex allowance. This figure shows that TasNetworks has generally underspent against our allowance, but has overspent in recent years. Figure 15 shows that TasNetworks' forecast of capex is higher than most recent years.

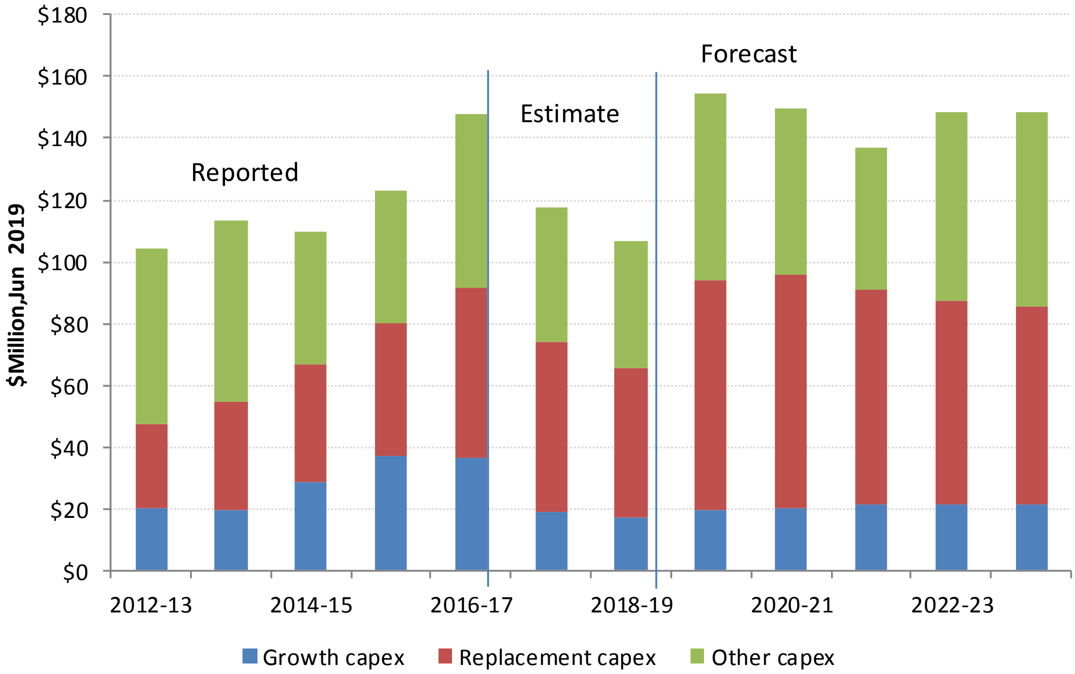
Figure 15 Historical and forecast distribution capex



Source: AER analysis

Figure 16 shows the different categories of TasNetworks' forecast and historical capex. This figure shows that repex is the most significant component of TasNetworks' capex forecast. We consider the different categories of TasNetworks' forecast capex in more detail in attachment B.

Figure 16 Categories of TasNetworks' distribution capex



Source: AER analysis

Our approach to the assessment of TasNetworks' forecast capex is set out in our Expenditure forecast assessment guideline.[27] In our final Framework and Approach paper last year, we confirmed our intention to apply that guideline to our assessment of TasNetworks' proposal.[28] To assist us in that assessment, we are interested in stakeholder views on the reasonableness of TasNetworks' capex proposal and how well it reflects the key themes emerging from its consumer engagement.

4.3.2 Capital expenditure sharing scheme

The CESS provides incentives to network service providers to undertake efficient capex by further rewarding efficiency gains and penalising efficiency losses. Consumers benefit from improved efficiency through lower network prices in the future.

---

27 AER, *Expenditure forecast assessment guideline*, November 2013.

28 AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, pp. 68–69.

The CESS approximates efficiency gains and efficiency losses by calculating the difference between forecast and actual capex. It shares these gains or losses between a network service provider and network users. We propose to apply our current CESS to TasNetworks for both transmission and distribution in the 2019-24 period.[29]

We applied our CESS in our current determinations for TasNetworks. We expect that, for transmission, TasNetworks will have a moderate positive CESS reward for underspending against our forecast capex. The reward or penalty for TasNetworks' current distribution CESS will not apply to it in the 2019-24 period, but rather will apply in the subsequent regulatory control period. This is because actual capex for 2017-19 is not currently known.

4.4 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenses incurred in the provision of network services. Forecast opex is one of the building blocks we use to determine TasNetworks' total regulated revenue requirement.

TasNetworks has used a 'base-step-trend' approach to forecasting opex for the 2019-24 regulatory control period. This is consistent with our preferred approach to assessing opex, as outlined in our Expenditure Forecast Assessment Guideline. It involves using a business’s revealed costs in a ‘base year’ and forecasting at an aggregate level rather than preparing forecasts for each category of opex. TasNetworks is proposing a 'base year' of 2017-18 as this will be the most recent 'actual year' when we make our final decision and it is representative of TasNetworks' underlying operating conditions. While actual opex for 2017-18 is currently not available, it will be when TasNetworks is due to submit its revised proposal.

TasNetworks has proposed moderate reductions in its opex for the 2019-24 regulatory control period when compared to actual and expected opex for the five years prior. TasNetworks has proposed to reduce transmission opex by 0.8 per cent and distribution opex by 0.2 per cent.

TasNetworks reduced its opex forecasts from those in its Directions and Priorities Paper.[30] The transmission reduction was 1.2 per cent and the distribution reduction was 4.6 per cent.

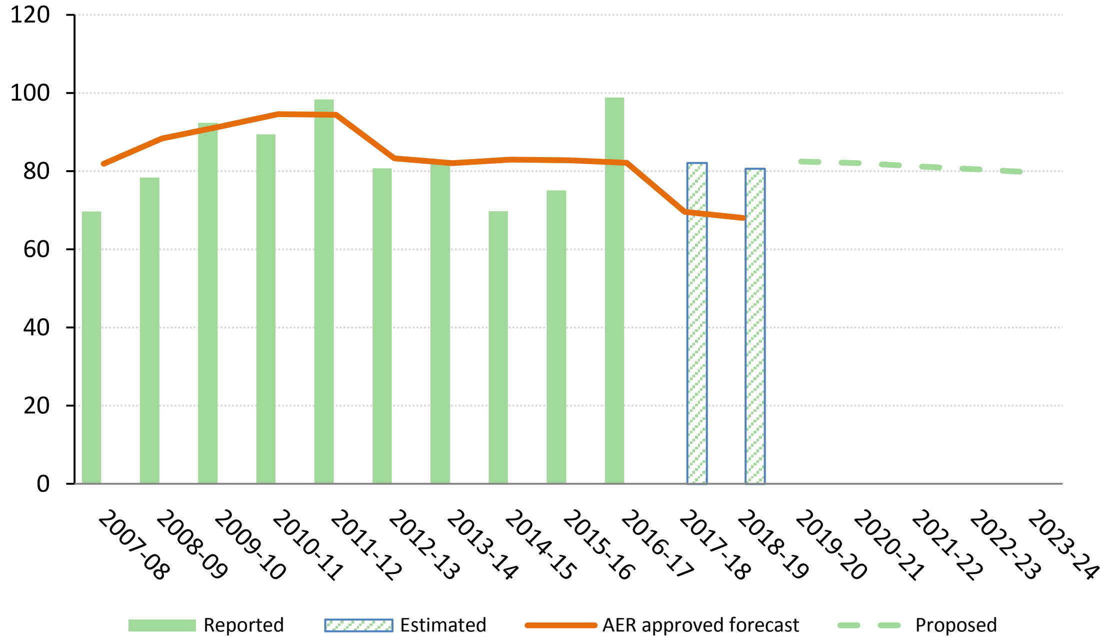
Figure 17 and Figure 18 show TasNetworks' historical and forecast opex for its distribution and transmission businesses, respectively. Figure 17 demonstrates that TasNetworks' proposed distribution opex in the 2019-24 period is forecast to be less than in 2016-17 (the most recent year of actual opex) and slightly less than in its

[29] AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, p. 60.

[30] TasNetworks, *Direction and Priorities Consultation Paper Transmission and Distribution Determination 2019-24*, August 2017, pp. 21–23.

proposed 'base year' of 2017-18. This figure also shows that TasNetworks has underspent against our approved forecast in the first two years of the current period, but has overspent significantly in 2016-17 and, on the basis of estimated opex, appears likely to do so in 2017-18 and 2018-19.

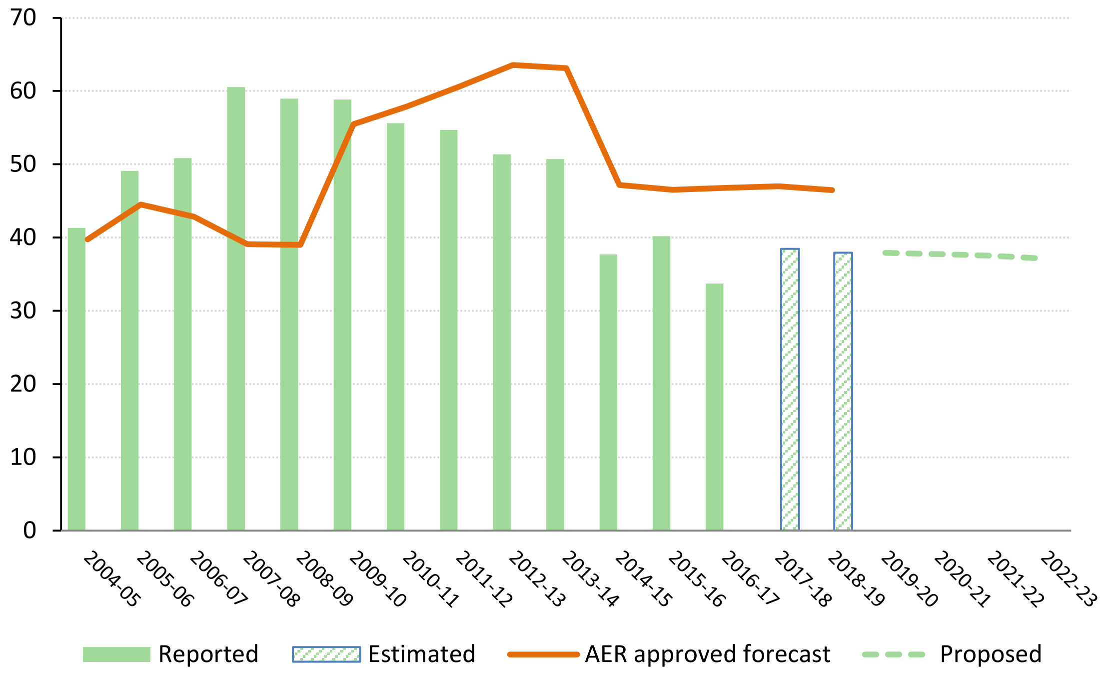
Figure 17 Distribution opex over time ($million, June 2019)



Source: AER analysis

Figure 18 shows that TasNetworks has reduced its transmission opex in the current regulatory period when compared to the previous regulatory period. TasNetworks is forecasting opex in the 2019-24 period that is higher than its actual opex in 2016-17 (the most recent year of actual opex) but that is marginally lower than in its proposed 'base year' of 2017-18.

Figure 18 Transmission opex over time ($million, June 2019)



Source: AER analysis

4.4.1 Opex efficiency benefit sharing scheme

Our EBSS is intended to provide a continuous incentive for transmission and distribution network service providers to pursue efficiency improvements in opex, and to fairly share these with consumers. Consumers benefit from improved efficiencies through lower network prices in future regulatory control periods. We propose to apply our EBSS to TasNetworks for both transmission and distribution in the 2019-24 period if we are satisfied the scheme will fairly share efficiency gains and losses between TasNetworks and consumers.[31] [32]

We expect that the application of the EBSS in the current period will lead to a negative adjustment of $21.5 million ($2018-19) to TasNetworks' distribution revenues. This is driven by TasNetworks' overspend against our allowance in 2016-17 as shown in Figure 17. We expect that the application of the EBSS in the current period will lead to TasNetworks incurring a small penalty under our transmission EBSS.

4.5 Corporate income tax

---

[31] NER, cl. 6.5.8(a).

[32] AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, p. 58.

The building block approach to calculation of revenue includes an allowance for the estimated cost of corporate income tax payable by TasNetworks.

Adopting our current approach to the corporate income tax allowance, TasNetworks' proposal begins with its estimate of the taxable income that would be earned by a benchmark efficient company operating its network. This estimate takes into account estimated tax expenses such as interest (using our benchmark 60 per cent gearing) and depreciation. Tax expenses (including other expenses such as opex) are then offset against TasNetworks' forecast revenue to estimate the taxable income. The statutory income tax rate of 30 per cent is then applied to the estimated taxable income to arrive at a notional amount of tax payable. Finally, a discount is applied to the notional amount of tax payable to account for the value of imputation credits (gamma).

TasNetworks has adopted a gamma of 0.4, consistent with our 2013 ROR Guideline and recent decisions. As we noted in section 4.2, the guideline is under review. It is possible that our revised 2018 guideline, which will include a positon on the value of imputation credits, will be binding on our final decision for TasNetworks.

TasNetworks' proposed corporate income tax allowance is marginally lower than we allowed in our previous decisions. This overall decrease is a product of decreases to other components of its revenue calculation (the return on capital, depreciation, opex), which we've discussed in the sections above. Under our current approach, any changes to those components as a result of our assessment would have a corresponding impact on the tax calculation.

4.6 Other schemes

TasNetworks proposes the continued application of our Service Target Performance Incentive Schemes (STPIS), and the application of our newly revised Demand Management Incentive Scheme (DMIS). These provide important balancing incentives to encourage TasNetworks to pursue expenditure efficiencies and demand side alternatives to capex and opex, while maintaining the reliability and overall performance of the network.

4.6.1 Service target performance incentive scheme

We have two STPIS – one for distribution and one for transmission. Both schemes provide a financial incentive to maintain and improve service performance. The schemes aim to ensure that cost efficiencies incentivised under our expenditure schemes do not arise through the deterioration of service quality for customers.

Distribution STPIS

We are currently reviewing our STPIS for distribution. We expect to finalise this review by June 2018. We expect to apply our updated STPIS to TasNetworks in our final determination. In undertaking this review, we are also developing a Distribution Reliability Measures Guideline to set out common definitions of reliability measures that can be used to assess and compare the reliability performance of distributors.

Transmission STPIS

TasNetworks has proposed that we make two changes to our transmission STPIS. The proposed changes are to:

(3) **Move performance reporting from a calendar year to a financial year basis.** This would align their reporting obligations with the distribution STPIS, reduce compliance costs and to explain their performance to external stakeholders

(4) **Adjust the thresholds for loss of supply (LoS) events**. LoS events are part of the service component of the STPIS. We have two thresholds for LoS events:

   - the number of system events greater than x system minutes per annum (moderate events)
   - and the number of system events greater than y system minutes per annum (major events)

   The transmission STPIS sets x as 0.1 and y as 1 for TasNetworks. Under the STPIS for other TNSPs, x is 0.05 and y is between 0.20 and 0.40. TasNetworks proposes making x 0.05 and y 0.4.

In its proposal, TasNetworks submitted that:

- it has improved its LoS performance in recent years
- this would mean that they cannot be rewarded for improving their performance
- the effect of the current STPIS settings therefore means the STPIS would continue to incentivise TasNetworks to maintain its current reliability performance
- under its proposal, TasNetworks could be rewarded for further performance improvements.

TasNetworks submits the LoS parameters do not provide appropriate incentives to improve and maintain performance and instead lead to an ‘all or nothing’ incentive scheme, presenting limited scope to manage service performance.[33] TasNetworks submits that, such a target may also create increased pricing volatility for its customers. As such, the continued application of the current thresholds would not be consistent with the objectives of the scheme, and would be contrary to the interests of TasNetworks' customers due to the potential for increased pricing volatility. [34]

As the STPIS is established under chapter 6A of the NER, the parameters specified in the scheme are binding on the AER until the scheme is modified in accordance with the guideline amendment provisions of the NER. The penalty for the LoS parameters is capped at 0.3 per cent of TasNetworks' transmission annual maximum allowed revenue.

---

[33] TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 179.

[34] TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 179.

We consulted on the application of the schemes to TasNetworks in developing our Framework and Approach paper for the 2019-24 period.[35] In its submission to our paper, TasNetworks proposed aligning the reporting periods. Our position in the paper was not to amend the STPIS to align the reporting periods. TasNetworks did not propose adjusting the loss of supply event thresholds in its submissions to the Framework and Approach process.

While changing the reporting periods from calendar years to financial years may appear procedural, such a change will result in a 6-month transition period between the two methods. To manage the 6-month transition period, we must either:

- set a 6-month target for this period; or
- not implement STPIS for this period.

Further, the 6-month January-June transition period covers two-thirds of the summer months and one-third of the winter months, this potentially adds to the complexity of setting the target and incentive rate for the market impact component of the STPIS.

Amending the loss of supply event thresholds would also need careful review of the parameters, detailed assessment of the historical data and the impacts on network users.

To make these changes to the STPIS we would need to undertake a national consultation on the STPIS and our information guidelines. In our Framework and Approach, we decided not to amend the STPIS and the information guidelines to allow TasNetworks to report on a financial year basis for this Framework and Approach process. We considered that amending the information guidelines and the transmission STPIS would require extensive consultation with all stakeholders and is beyond the scope of a regulatory determination.[36] We are interested in stakeholder views on whether we should amend the transmission STPIS to address the issues that TasNetworks has raised.

4.6.2 Demand management incentive scheme and innovation allowance

On 13 December 2017, we published a new DMIS, including a revised demand management innovation allowance (DMIA). This rewards electricity distribution businesses for using efficient demand management projects to deliver value to consumers. We also released an improved version of our previous demand management innovation allowance, which provides research and development funding to electricity distribution businesses so they can better use demand management to reduce long-term network costs.

[35] AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, pp. 55-58.

[36] AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, p. 56.

At this time, we requested a rule change to allow us to apply the DMIS before the next regulatory period for each distribution business. On 20 February 2018, the Australian Energy Market Commission (AEMC) commenced consulting on this as an expedited rule change. The AEMC's proposed rule change process will allow distribution businesses—including TasNetworks—to apply for early application of the DMIS from 3 April 2018.[37]

Our consultation on our Framework and Approach paper last year took the development of the new scheme into account. We indicated that we wanted the new DMIS and Allowance Mechanism to apply to TasNetworks.[38] TasNetworks prepared its proposal in anticipation of our updated scheme applying.

TasNetworks proposes to incur expenditure of approximately $410,000 per annum under the DMIA.[39] In the 2019-24 period, TasNetworks is proposing the following DMIA projects:[40]

- a 'smart inverter program' which aims to encourage customers who are already considering a battery purchase to select a smart battery, enabling TasNetworks to better manage its embedded generation and reduce future network costs
- a peer to peer energy trading trial, which will enable TasNetworks to better understand the issues associated with this trading and how it may contribute to lower network costs
- advanced load control trials to understand how deeper integration with energy control systems may provide network benefits.

TasNetworks also identified an initial project to be undertaken under the new DMIS provision. This is a demand response trial to aiming to defer capex on transformers that supply north Hobart.[41]

If TasNetworks proceeds with these projects, approval of the expenditures will be subject to such projects meeting the approval criteria under the new DMIA; and processed by us under the annual compliance submissions by TasNetworks each year.

All claims by TasNetworks for DMIS incentive payments are subject to the projects meeting the approval criteria under the new DMIS; and processed by us under the annual compliance submissions by TasNetworks each year.

---

37 https://www.aemc.gov.au/rule-changes/implementation-of-demand-management-incentive-sche

38 AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, p. 63.

39 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 185.

40 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 185.

41 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 185.

5 Network pricing

In the Framework and Approach paper we published last year, we set out our intended classification of the distribution services TasNetworks provides its customers:[42]

- Standard control services are those that can only be provided by TasNetworks, and are common to most, if not all, of TasNetworks' customers. The costs of providing these services are captured in the building block revenue determination (we discussed in section 4) and shared between all customers.
- Alternative control services, which are either:
    - services that can only be provided by TasNetworks, but will only be required by some of its customers, some of the time; or
    - services that can be purchased from TasNetworks, but which can also—or have the potential to be—purchased from a competing provider.

The cost of providing alternative control services is recovered from users of those services only.

TasNetworks has proposed changes in its new tariff structure statement (TSS), which sets out the tariff structures through which TasNetworks will recover its regulated revenue for standard control services. It has also proposed a number of changes to prices for alternative control services. We discuss the key features of these elements of TasNetworks' proposal below.

We don't determine the classification of TasNetworks' transmission services. The classification of these services is set under the NER. However, like in distribution, we do determine the revenue path for these services, which affects the price path.

5.1 Tariff structure statement

The requirement on distributors to prepare a TSS arises from a significant process of reform to the NER governing distribution network pricing. The purpose of the reforms is to empower customers to make informed choices by:

- providing better price signals—tariffs that reflect what it costs to use electricity at different times so that customers can make informed decisions to better manage their bills
- transitioning to greater cost reflectivity—requiring distributors to explicitly consider the impacts of tariff changes on customers, and engaging with customers, customer representatives and retailers in developing network tariff proposals over time

[42] AER, *Framework and approach TasNetworks electricity transmission and distribution Regulatory control period commencing 1 July 2019*, July 2017, pp. 14–31.

- managing future expectations—providing guidance for retailers, customers and suppliers of services such as local generation, batteries and demand management by setting out the distributor's tariff approaches for a set period of time.

Among other matters, a TSS must set out a distributor's proposed tariffs, structures and charging parameters for each proposed tariff, and the policies and procedures the distributer proposes to apply assigning customers to tariffs or reassigning customers from one tariff to another.[43] A TSS must also be accompanied by an individual pricing schedule.[44] The final prices for each tariff continue to be determined on an annual basis.

This is TasNetworks' second TSS and applies to the 2019-24 regulatory period. Its first TSS applies to the current 2017-19 period. In the 2019-24 period, TasNetworks proposes to move towards more cost reflective network pricing through:

- Continuing to progressively reduce longstanding cross-subsidies between customers and between tariffs
- Introducing two new demand tariffs for residential and small business customers who invest in distributed energy resources (DER) like solar generation, batteries and electric vehicles. TasNetworks proposes to apply an 'introductory' discount to the off-peak component of these tariffs to encourage take up on an opt-in basis only. While these DER tariffs are new, TasNetworks proposes to price these tariffs the same as its existing demand tariffs which are available to customers both with and without DER (as least for the 2019-24 period).
- Introducing two new tariffs for embedded networks
- Collecting smart mater and trial data to help TasNetworks better manage customer impacts in future phrases of network tariff reform

In our final decision on TasNetworks' first TSS, we stated that the move to cost reflective pricing will take time to implement. We also noted that the distribution pricing principles encourage movement towards more cost reflective tariffs with every tariff statement proposal over upcoming regulatory control periods.

In our previous decision, we also stated that there were some elements of TasNetworks' first TSS proposal which comply with the distribution pricing principles but which, in our view, would benefit from further consideration in future TSSs. We identified those matters to provide guidance to TasNetworks, and the industry more generally, on our views on the direction the industry should be heading, to maintain compliance with the distribution pricing principles in the future. Accordingly, in each round of TSSs, we stated that we expect distributors to propose additional reforms in order to be compliant with the NER.

43 NER, cl. 6.18.5.

44 NER, cl. 6.8.2(d1).

The following table lists the matters previously identified by us to provide guidance to TasNetworks' for its next (2019-24) TSS and compares these with TasNetworks' actual 2019-24 TSS proposal. That is, how TasNetworks has responded to these comments on the future direction of tariff reform. We encourage stakeholders to look at our 2017-19 final decision regarding the future direction for network tariff reform and provide their views on how TasNetworks has responded to these.[45]

Issues identified to assist compliance with distribution pricing principles	Comparison with TasNetworks' 2019-24 proposal
Distributors to move from opt-in centred approaches to opt-out centred approaches to network tariff reform	TasNetworks proposes to continue with an opt-in centred approach to network tariff reform. TasNetworks proposes to discount its cost reflective network tariffs as the mechanism to encourage greater uptake of cost reflective network tariffs. We discuss this topic in detail below.
Reconsideration of the 30 minute window to measure demand used by some distributors	TasNetworks stated that its approach to setting demand charges already addresses the underlying concern the AER had in making this comment.[46]
Refinement of charging windows to more closely reflect the times of congestion on a distributor's network	Tasmania's demand for electricity peaks in winter. All else being equal, we consider this would suggest that TasNetworks' peak rates should only apply in winter with lower rates available for the rest of the year. However, TasNetworks stated it chose not to introduce seasonality in its charging windows for simplicity and based on customer feedback. Alternatively, TasNetworks has proposed changes to the number of charging windows and the times of day these apply. For simplicity, TasNetworks proposed to move from three charging periods (peak, shoulder and off-peak) to two periods (peak and off-peak) for its new demand network tariffs. For its residential and small business demand tariffs, TasNetworks proposed a peak charging window of 10am to 4pm and 7pm to 9pm weekdays. Off-peak rates would apply at other times on weekdays and all day on weekends.
Refinement of a distributor's method for estimating long run marginal cost (LRMC), including the inclusion of replacement capex within marginal cost estimates	TasNetworks stated its existing LRMC methodology incorporates augmentation and relevant replacement and capital and operating expenditures.[47]

45 See pages 19-12 to 19.13 of our 2017-19 TSS final decision which provides a guide on where to find our future direction commentary on different topics. AER, *Final decision—TasNetworks distribution determination—2017-18 to 2018-19—Attachment 19—Tariff structure statement*, April 2017.

46 TasNetworks, *Tariff Structure Statement—Regulatory control period 1 July 2019 to 30 June 2024*, 31 January 2018, pp.120-121.

47 TasNetworks, *Tariff Structure Statement—Regulatory control period 1 July 2019 to 30 June 2024*, 31 January 2018, pp.121-124.

Updated timeframe for the unwinding of cross-subsidies	TasNetworks stated its new TSS proposal continues the gradual (multi-period) process of unwinding cross-subsidies between some of its tariffs.[48] .

Source: AER final decision on TasNetworks' 2017-19 TSS proposal

Should TasNetworks' network tariffs place a stronger incentive on Aurora and other Tasmanian retailers to reform their retail offerings?

TasNetworks proposes a number of measures designed to create more cost reflective network tariffs and includes a tariff assignment policy which relies on retailers 'opting-in' to discounted cost reflective network tariffs. TasNetworks submits that this policy will assist with the transition from flat consumption based network tariffs to cost reflective network tariffs.

We seek stakeholder views on:

- Whether retailers are likely to take up cost reflective network tariffs under the proposed 'opt-in' regime and whether it will, in stakeholders' opinion, provide an adequate pace of reform
- Whether an 'opt out' arrangement, whereby retailers are charged a cost reflective network tariff by default, is more appropriate

TasNetworks states that many of its existing network tariffs need to change. It states that when network tariffs were introduced in Tasmania, they were developed based on the existing retail electricity tariffs, and did not reflect underlying network cost drivers for many of its customers. TasNetworks states:

> This means many of our tariffs do not meet the needs of Tasmania's energy market, nor are they consistent with the cost reflective pricing principles.
>
> Technological and customer driver changes in the electricity market mean that flat, consumption based network tariffs which have been used to recover the cost of building and operating the electricity distribution network from customers are no longer fit for purpose.[49]

We agree with TasNetworks' statement. And we acknowledge TasNetworks efforts in designing new more cost reflective network tariffs. However, we note the experience with opt-in arrangements in other states and territories, where opt-in arrangements have been implemented, has resulted in low uptake of cost reflective tariffs. This compares to opt-out arrangements which have been more successful (e.g. in the Australian Capital Territory). In the first round of TSS final decisions, we stated our

---

48 TasNetworks, *Tariff Structure Statement—Regulatory control period 1 July 2019 to 30 June 2024*, 31 January 2018, p.9.

49 TasNetworks, *Tariff Structure Statement—Regulatory control period 1 July 2019 to 30 June 2024*, 31 January 2018, p.5.

expectation for distributors to move to opt-out arrangements in the next round of proposals. For TasNetworks, this would mean in its 2019-24 TSS.

It is important to understand that network tariffs are charged to retailers. Network tariffs are not charged directly to end customers (apart from some large industrial customers). An opt-out approach means retailers are, by default, charged a cost reflective network tariff, with the option for the retailer to opt-out of this arrangement. End customers continue to have a choice in their retail offering. The retail offerings available to end customers are determined by the retail price regulation arrangements in Tasmania, and by the market offers available by Aurora and the currently limited number of other retailers.

One objective of network tariff reform is that retailers are exposed to the costs of network congestion or the costs of using the network when it is under the greatest demand pressure. Being exposed to these costs will mean that retailers will have an incentive to manage this exposure and take actions that reduce network congestion and other network cost drivers. Such actions are not limited to providing a direct signal to customers.

One option retailers have to manage these risks is to develop retail tariff structures that reflect the network tariff structure—either in full or in a simplified form. Retailers may develop such retail offerings and customers would have a choice as to whether they want to sign up to these offers. However, this is not the only option retailers have to manage this risk. Other options for retailers might include retail offerings which are:

- Based on flat rate retail tariffs, but have automated responses that manage the load of the end customer during times of peak network congestion (and therefore times when the retailer is paying the peak network charges), if the end customer agrees to allow the retailer to manage its consumption in this way (this is a form of non-price or demand management solution). As the uptake of solar PV and batteries increases in Tasmania, this may become an attractive option for a number of end customers.
- Based on flat rate retail tariffs, but include a risk premium to compensate the retailer for the risk it faces in the mismatch between the cost reflective network tariffs it pays, and the flat retail tariffs it receives.
- An alternative to a risk premium is to provide the customer an incentive in the form of a rebate to reduce their demand at certain times.

These are just some of the possible options open to retailers. When retailers face the costs of network congestion in network tariffs, we expect this will spur retailers and other third parties to develop innovative solutions to manage this cost. While this reform refers to the restructuring of network tariffs, it is equally important for retailers to engage with the tariff reform process and consider what reforms to retail tariffs will be necessary to provide customers with the ability to understand the implications of the changes to network tariffs to make better decisions about their energy choices.

The Energy Networks Association has estimated that cost reflective network tariffs can lead to savings of $17.7 billion across the NEM in present value terms over a 20 year period.[50] Lower network costs will place downward pressure on retail prices for customers. Network tariff reform may also increase the reliability of the grid, by reducing the pressure on the grid during peak times.

In the first round of TSS decisions, we elaborated on the merits we see in moving to opt-out arrangements to network tariff reform. We also outlined potential tariff assignment criteria that could be used under opt-out arrangements.[51] We encourage stakeholders to review these elements of our previous decisions and seek their views on whether TasNetworks should move to an opt-out approach.

5.2 Transmission revenue path

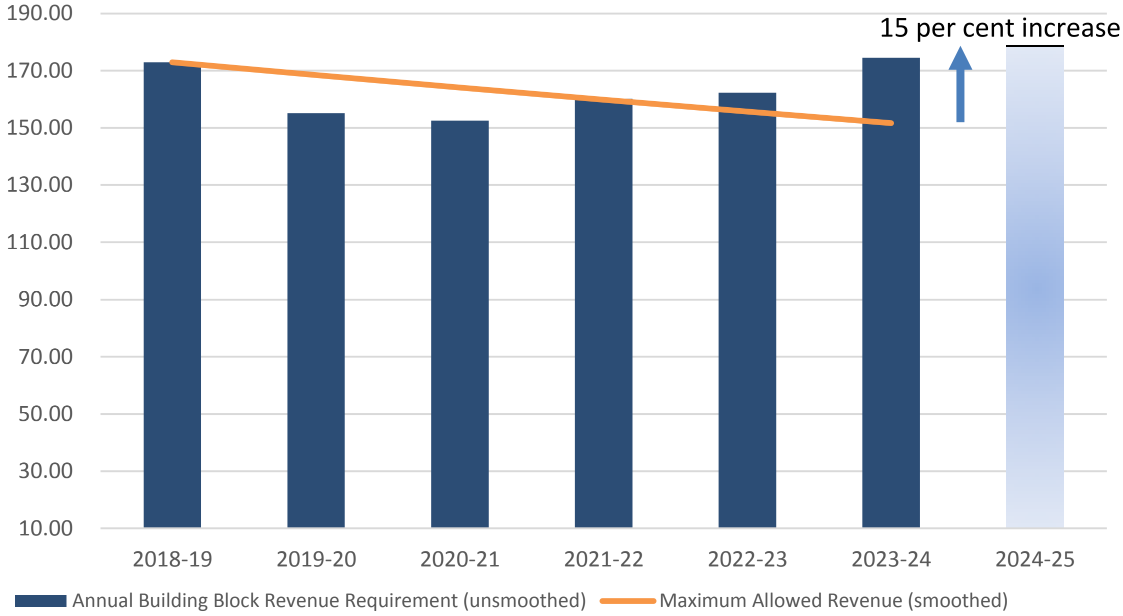
TasNetworks is proposing an unusual transmission revenue path. It is proposing to reduce its revenues over a period whilst its building block costs involve a step down initially and then increasing in nominal terms. Figure 19 illustrates this, showing that TasNetworks proposes to progressively decrease its forecast revenues from expected revenues in 2018–19 by less than the initial step down, whilst its building block costs are increasing.

---

50 Energy Networks Association, *Network pricing and enabling metering analysis*, Prepared by ENERGEIA for the Energy Networks Association, November 2014, p.5.

51 For potential tariff assignment criteria see AER, *Final decision—TasNetworks distribution determination—2017-18 to 2018-19—Attachment 19—Tariff structure statement*, April 2017, pp.19-34 to 19-38; For further background on the AER's views on the purpose and benefits of network tariff reform see AER, *Final decision—Tariff structure statements—Ausgrid, Endeavour and Essential Energy,* February 2017, pp. 21 to 25.

Figure 19 Proposed transmission revenue path and building blocks ($ nominal)



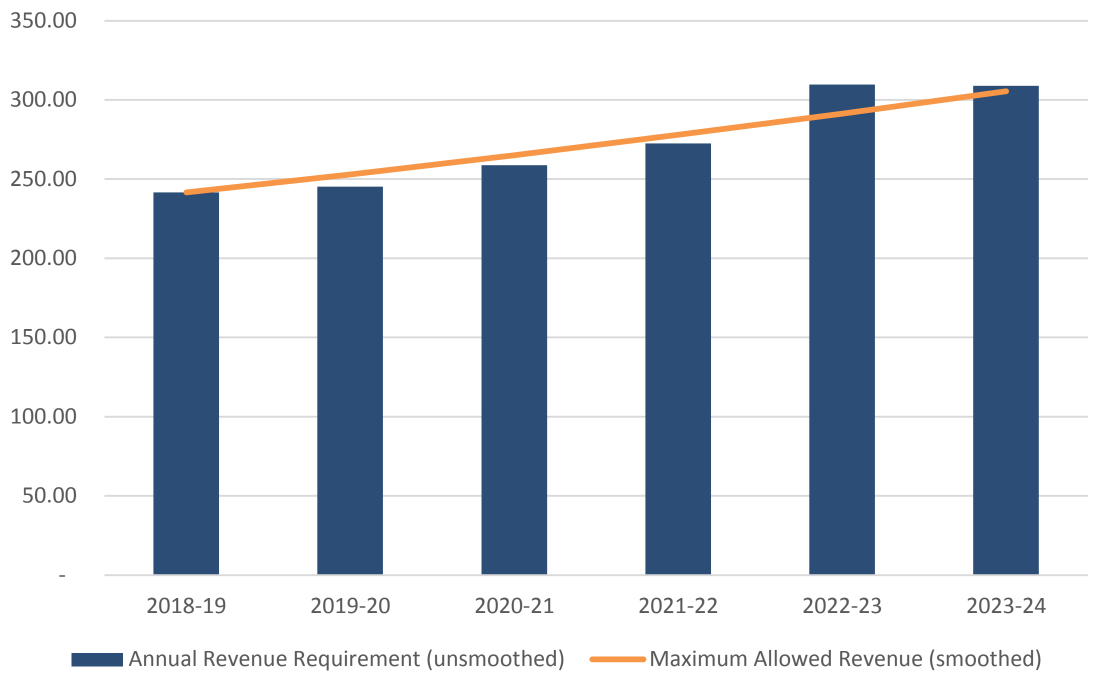
Source: TasNetworks transmission post tax revenue model

The NER requires that the expected maximum allowed revenue for TasNetworks for the last regulatory year is as close as reasonably possible to the annual building block revenue requirement for the provider for that regulatory year.[52] This minimises expected price shocks between regulatory periods. The difference between TasNetworks' expected revenue and unsmoothed building block revenue in 2023-24 is 13 per cent. If costs remain similar in 2024-25, and we align revenues with costs, revenues would increase in 2024-25 by 15 per cent, all things being equal.

TasNetworks' distribution revenue path closely tracks its costs. Figure 20 shows TasNetworks' proposed revenue path and building blocks for distribution. TasNetworks' revenue in 2023-24 is about 1 per cent from its total building blocks. This means there is less likely to be a significant price fluctuation in 2024-25 where we align revenues with costs for TasNetworks' distribution network.

[52] NER cl. 6A.6.8(c)(2)

Figure 20 Proposed distribution revenue path and building blocks ($ nominal)



Source: TasNetworks distribution standard control services post tax revenue model

5.3 Legacy meters

The AEMC made a change to the NER opening metering services to competition in 2015. As a result, on 1 December 2017 the responsibility for the provision of metering services in Tasmania shifted from TasNetworks to Aurora Energy.[53] TasNetworks was previously the monopoly provider of type 5 (interval) and 6 (accumulation) meters in Tasmania and still owns a significant fleet of these meters. Now TasNetworks is no longer be permitted to install or replace these existing meters. However, TasNetworks may still recover the capital cost of the type 5 and 6 meters installed before 1 December 2017 as an alternative control service.

TasNetworks proposes to recover the full capital cost of its type 5 and 6 meter fleet in the 2019-24 period. This would increase standard meter prices by 49 per cent or $9.29 per annum.

TasNetworks is proposing this on the basis that its accumulation meters (Type 6) are likely to be retired from service before they reach the end of their normal operating life.[54] TasNetworks considers accelerating the depreciation on its meters is appropriate, as this will reflect the shorter expected remaining live. Also, TasNetworks

---

53 Aurora Energy is the Tasmanian Government-owned electricity retailer in Tasmania

54 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals Overview 1 Jul 2019 to 30 Jun 2024, January 2018, p. 199.

does not believe customers will be supportive of continuing to pay for the recovery of its meters as type 6 meters are progressively removed.[55] Accelerating the recovery of the metering regulated asset base would reduce the number of customers paying both a capital charge for a retired regulated meter and a charge for a new advanced meter.

TasNetworks consulted its Pricing Reform Working Group (PRWG) seeking feedback on its proposed metering services approach. Some stakeholders expressed concern regarding the increase in metering charges resulting from accelerating the depreciation of the metering RAB. These stakeholders noted that the increase in metering charges may present difficulties for people on low incomes who are already struggling with electricity prices and cost of living pressures.[56]

We are unsure as to whether it is in consumers' best interests to allow TasNetworks to fully recover the capital costs of its meter fleet in the 2019-24 period. Aurora Energy has indicated that, at this time it, will only be replacing meters in the following instances:

- to replace old or faulty meters
- for connections on newly built properties, or
- if a customer requires electrical work that results in a meter change.[57]

Also, we are unsure that it is in the consumers best interest to increase metering charges should the wholesale replacement of smart meters occur. This would lead to price increases at a time when customers would have to pay for a new meter.

We would be interested in stakeholder views on whether TasNetworks should recover the full capital costs of its meters in the 2019-24 period.

5.4 Public lighting prices

TasNetworks submits that its current prices for public lighting assets fall significantly short of full cost recovery. TasNetworks has proposed to increase its public lighting prices over the 2019-24 and 2024-29 regulatory periods to transition public lighting to fully cost reflective pricing. Accordingly, TasNetworks proposes to increase the prices charged for public lighting services by consumer price index (CPI) plus 2.5 per cent annually.[58] TasNetworks submits that it will still under-recover its costs over this period. However, TasNetworks proposes to absorb these costs, resulting in reduced shareholder returns.

---

55 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals Overview 1 Jul 2019 to 30 Jun 2024, January 2018, p. 199.

56 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals Overview 1 Jul 2019 to 30 Jun 2024, January 2018, p. 199.

57 https://www.auroraenergy.com.au/your-home/metering#

58 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals, 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 200.

A The regulatory framework for this determination

The NEL requires us to make our decision in a manner that contributes, or is likely to contribute, to achieving the NEO.[59] The focus of the NEO is on promoting efficient investment in, and operation and use of, electricity services (rather than assets) in the long-term interests of consumers.[60] This is not delivered by any one of the NEO's factors in isolation, but rather by balancing them in reaching a regulatory decision.[61]

We consider that the long-term interests of consumers are best served where consumers receive a reasonable level of safe and reliable service, which they value, at least cost in the long run.[62] A decision that places too much emphasis on short term considerations may not lead to the best overall outcomes for consumers once the longer term implications of that decision are taken into account. [63]

There may be a range of economically efficient decisions that we could make in a revenue determination, each with different implications for the long-term interests of consumers.[64] A particular economically efficient outcome may nevertheless not be in the long-term interests of consumers, depending on how prices are structured and risks allocated within the market.[65] There are also a range of outcomes that are unlikely to advance the NEO, or advance the NEO to the degree that others would. For example, we consider that:

- the long-term interests of consumers would not be advanced if we encourage over-investment which results in prices so high that consumers are unwilling or unable to efficiently use the network.[66] This could have significant longer term pricing implications for those consumers who continue to use network services.
- equally, the long-term interests of consumers would not be advanced if allowed revenues result in prices so low that investors do not invest to sufficiently maintain the appropriate quality and level of service, and where customers are making more use of the network than is sustainable.[67] This could create longer term problems in the network, and could have adverse consequences for safety, security and reliability of the network.

59 NEL, section 16(1).
60 This is also the view of the Australian Energy Markets Commission (the AEMC). See, for example, the AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, p. 5.
61 Hansard, SA House of Assembly, 26 September 2013, p. 7173. See also the AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, pp. 7–8.
62 Hansard, SA House of Assembly, 9 February 2005, p. 1452.
63 See, for example, the AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, pp. 6–7.
64 Re Michael: Ex parte Epic Energy [2002] WASCA 231 at [143].
65 See, for example, the AEMC, *'Applying the Energy Objectives: A guide for stakeholders'*, 1 December 2016, p. 5.
66 NEL, s. 7A(7).
67 NEL, s. 7A(6).

The legislative framework recognises the complexity of this task by providing us with significant discretion in many aspects of the decision-making process to make judgements on these matters.

Electricity determinations are complex decisions, made up of a number of interrelated parts. Examining any one part in isolation ignores the importance of the interrelationships between components of the overall decision, and would not contribute to the achievement of the NEO. For example:

- There are underlying drivers and context which are likely to affect many constituent components of our decision. For example, forecast demand affects the efficient levels of capex and opex in the regulatory control period.
- There are direct mathematical links between different components of a decision. For example, the level of gamma has an impact on the appropriate tax allowance; the benchmark efficient entity's debt to equity ratio has a direct effect on the cost of equity, the cost of debt, and the overall vanilla rate of return.
- There are trade-offs between different components of revenue. For example, undertaking a particular capex project may affect the need for opex, or vice versa.

In most cases, the provisions of the NER do not point to a single answer, either for our decision as a whole or in respect of particular components. They require us to exercise our regulatory judgement. For example, in making our determination the NER requires us to prepare forecasts, which are predictions about unknown future circumstances. Very often, there will be more than one plausible forecast,[68] and much debate amongst stakeholders about relevant costs. For certain components of our decision there may therefore be several plausible answers or several plausible point estimates.

When the constituent components of our decision are considered together, this means there will almost always be several potential, overall decisions. More than one of these may contribute to the achievement of the NEO. In these cases, our role is to make an overall decision that we are satisfied contributes to the achievement of the NEO to the greatest degree.[69]

We approach this from a practical perspective, accepting that it is not possible to consider every permutation specifically. Where there are choices to be made among several plausible alternatives, we have selected what we are satisfied would result in an overall decision that contributes to the achievement of the NEO to the greatest degree.

68 AEMC, *Rule Determination: National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006*, 16 November 2006, p. 52.

69 NEL, s. 16(1)(d).

B Review of TasNetworks' capex

In this section, we consider TasNetworks' forecast capex, and how we will assess this forecast, in more detail.

We must consider TasNetworks' forecast transmission and distribution capex against separate but similar capex criteria and factors set out in the NER. If we are satisfied that TasNetworks' proposals reasonably reflects each of the capex criteria in achieving the capex objectives, we will accept it.[70] If we are not satisfied the forecast adheres to the capex criteria or objectives, the NER requires us to put in place a substitute estimate that we are satisfied reasonably reflects the capex criteria.[71] Where we do this, our substitute estimate is based on our alternative estimate.

We intend to assess TasNetworks' capex proposals against the capex criteria and objectives by considering the need for the capex and the efficiency of the proposed capex to meet the need. This is likely to include consideration of the timing, scope, scale of the capex. We intend to apply a number of top-down and bottom-up techniques to conduct this assessment. We also intend to engage an independent engineering consultant to provide us with expert advice on TasNetworks' forecast capex.

In undertaking our review of TasNetworks' capex we will consider stakeholder views. TasNetworks has already consulted on its forecast capex in consultation on its preliminary regulatory proposals. A key theme in submissions on TasNetworks' preliminary proposals was concern with the proposed increases in capital expenditure, particularly areas with higher than trend expenditure, namely on new IT and communication systems and on transmission development expenditure.[72] In response to this concern raised by stakeholders, we will pay careful attention to areas of TasNetworks' capex that are higher than trend expenditure.

We note that in response to customer feedback about the desire for lower costs rather than improved service, TasNetworks reviewed its forecast expenditure for IT and communication systems compared to its Directions and Priorities paper forecasts.[73]

The need for further and more detailed information was also regular theme from submissions received on TasNetworks' preliminary proposals.[74] We have published all of the non-confidential components of TasNetworks' regulatory proposals on our

---

[70] Slightly different criteria and factors apply in distribution and transmission: ref NER, cl. 6.5.7(a) and cl. 6A.6.7(a). NER, cl. 6.5.7(c) and cl. 6A.6.7(a).

[71] NER, cl. 6.12.1(3)(ii) 6A.13.2(4)

[72] TasNetworks, Revenue Reset 2019, Direction and Priorities Paper, Summary of Submissions and Key Themes, November 2017, p. 9.

[73] TasNetworks, Revenue Reset 2019, Direction and Priorities Paper, Summary of Submissions and Key Themes, November 2017, p. 10.

[74] TasNetworks, Revenue Reset 2019, Direction and Priorities Paper, Summary of Submissions and Key Themes, November 2017, p. 9.

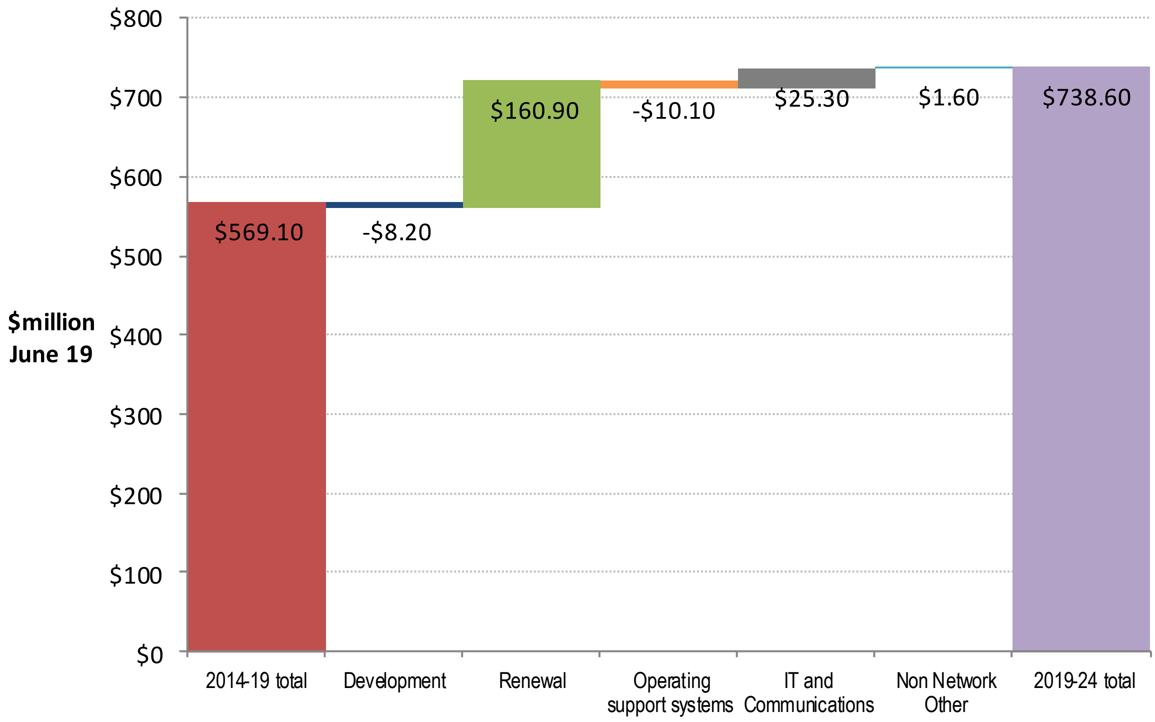
website. TasNetworks has also published these documents on its website. We intend to publish as much of our analysis of TasNetworks' forecast capex as we can.

Our CCP13 will consult directly with stakeholders on TasNetworks' regulatory proposals. We will consider their advice when preparing our final decision.

B.1 TasNetworks forecast capex

Figure 21 shows the forecast change in the categories of TasNetworks' distribution capex relative to that of the five years from 2014-15 to 2018-19. TasNetworks is proposing a substantial replacement expenditure (repex) increase. TasNetworks is also proposing an increase in IT and communications capex. The increase in IT and communications capex is to replace ageing systems and to address cyber security concerns.[75]

Figure 21 Drivers of the change in TasNetworks' distribution capex

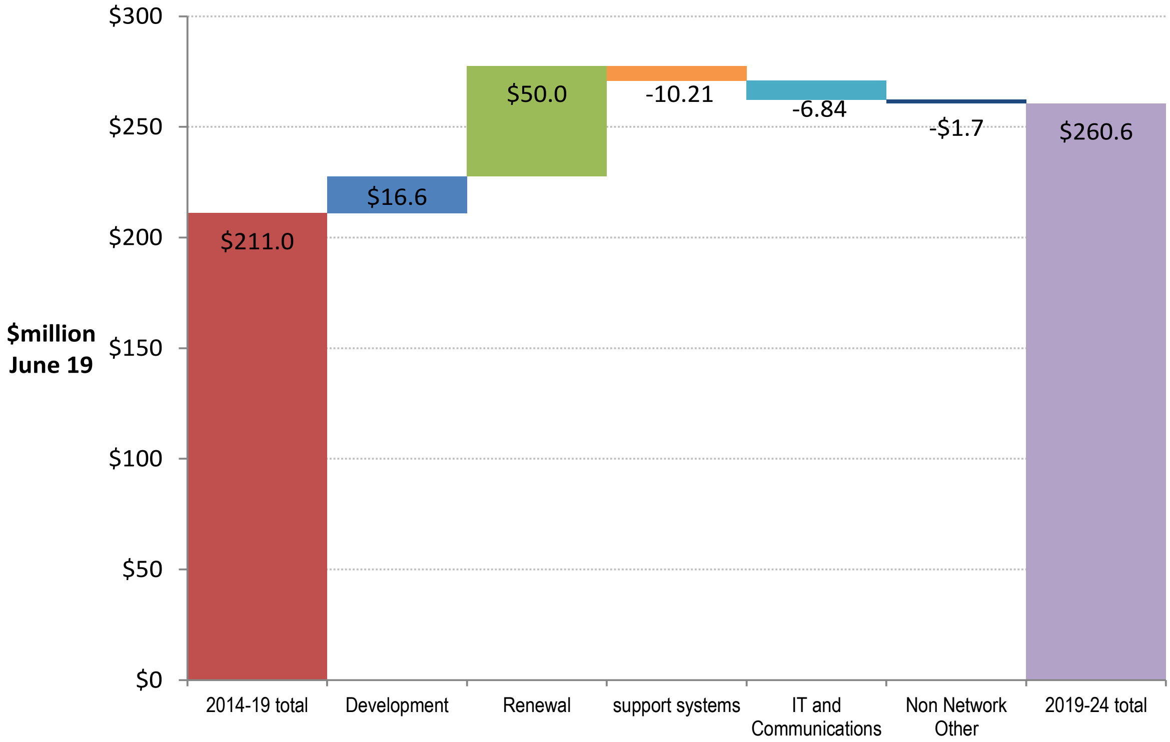


Source: AER analysis.

Figure 22 illustrates the changes in the different categories of TasNetworks' forecast transmission capex. The main driver in TasNetworks' increased capital expenditure is an increase in repex. The other categories of capital expenditure are shifting around but largely cancel each other out.

[75] TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, pp. 126–129.

Figure 22 Drivers of the change in TasNetworks' transmission capex ($millions June 19)



Source: AER analysis.

Figure 22 shows an increase in development capex. This is not driven by demand growth, which remains flat. Instead, it principally relates to a single $15 million project to install a new static VAR compensator.[76] TasNetworks submits that the compensator will support more stable and efficient operation of its transmission network with changing generation and interconnector flows, and allow dispatch of lower cost generation.[77]

In the following sections, we consider the components of TasNetworks' forecast capex in more detail.

Replacement expenditure

TasNetworks' forecast distribution repex is $463.1 million for 2019-24 compared to actual expenditure of $302.1 million for the previous five-year period.[78] This represents a 53 per cent increase.

---

[76] A VAR compensator provides fast-acting reactive power and regulate voltage, power factor and harmonics.

[77] TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 87.

[78] TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 111. Figures include capitalised overheads.

TasNetworks' transmission repex is forecast to increase from $154.5 for the previous five-year period to $204.5 million.[79]

A key question for us is whether such a significant increase in repex is justified. TasNetworks submits that the repex is focused on maintaining current performance and managing risk, including network safety and reliability, having regard to asset condition.[80] TasNetworks submits that a modest increase in replacement volumes is prudent, based on deteriorating health indices and increasing risk profiles.[81]

Our repex model is an important tool that we will use to review TasNetworks' proposed distribution repex. TasNetworks' consultant, GHD, has said that there is likely to be a difference between the repex predicted by our repex model and TasNetworks' forecast:

> GHD analysis has suggested that the AER's view of 'modelled' proportion of the repex range will likely be approximately $35m to $40m per year (real June 2019 $) during the 2019-24 period as compared to the proposed $66m annual average in its 2019-24 Reset RIN Table 2.2.1. This is also similar to TasNetworks distribution historic average modelled repex spent ignoring the recent year repex spike…
>
> The modelled benchmark versions or scenario repex forecast are significantly less as compared to the TasNetworks proposal. This is because the benchmark input variables (unit cost, mean replacement life) used in recent AER determinations and in these scenarios, in general, are efficient (i.e. lower cost and longer asset life than assumed by TasNetworks), which the AER considers are the frontier benchmark performance in the NEM.[82]

We will consider any difference between our repex model forecast and TasNetworks' forecast having regard to TasNetworks' Asset Management Plans and associated analysis, business frameworks and practices.

Growth capex

Growth capex includes capex to connect new customers to TasNetworks' network (connections capex) and capex to meet and manage maximum demand growth (augmentation capex). We consider the growth capex for transmission and distribution separately below.

Distribution growth driven capex

---

79 TasNetworks, *Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024*, January 2018, p. 85. Figures include capitalised overheads.

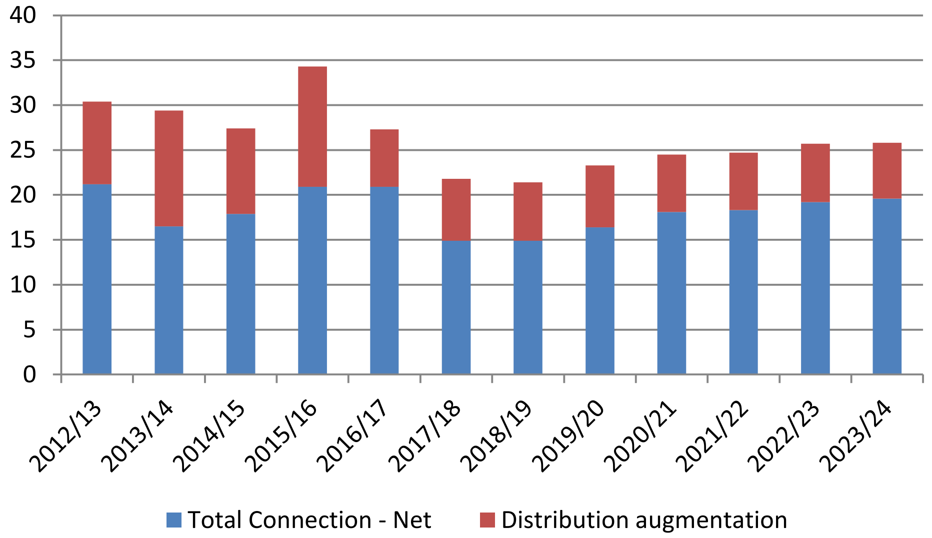
80 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, pp. 91, 120.

81 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 91.

82 GHD Advisory, Modelled Repex Forecast 2019-24 TasNetworks Distribution, January 2018, p. 27.

Figure 23 shows TasNetwork's forecast growth capex. This shows that growth capex is forecast to be lower than recent years, though higher than expected in the 2017–18 and 2018–19 years.

Figure 23 Distribution growth driven capex, net of contributions ($million, June 2019)



Source: TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, pp. 116–118.

TasNetworks' augmentation requirements in distribution are linked to forecast growth in maximum demand. TasNetworks has adopted the Australian Energy Market Operator's (AEMO) independent 2017 connection point maximum demand forecasts.[83] AEMO's connection point forecasts show no significant growth in maximum demand.[84] As a result, TasNetworks' forecast augmentation expenditure is relatively low and is largely driven by non-demand related constraints, such as fault level, community reliability, together with renewal strategy and rationalising projects.[85]

TasNetworks' connections capex arises directly from the connection of new customers to the distribution network. TasNetworks has forecast increasing levels of net connections capex across the 2019–24 regulatory control period, from a historically low base level in 2018-19. We will examine the underlying drivers of TasNetworks' forecast growth in customer connections in assessing the justification for this expenditure.

83 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 69.

84 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 69.

85 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 69.

Transmission growth capex

TasNetworks expects that the number of new generation connections to its transmission network will increase. Generation connections are negotiated transmission services, and therefore outside the scope of TasNetworks' capex forecast, however the connection of new generation has implications for TasNetworks' augmentation capital expenditure in transmission.

TasNetworks has included one transmission connection project of $2.9 million.[86] This project provides for a new connection point at the Sheffield substation, and is intended to reduce the frequency and duration risk of outages for local distribution customers.

TasNetworks has proposed an increase in augmentation capex driven by a single significant augmentation project which accounts for the majority of forecast growth capex. This is for the installation of a static VAR compensator (a dynamic reactive power device) at the George Town substation.[87] TasNetworks submitted that this project is driven both by the need to address voltage control issues to maintain compliance with the NER, as well as market benefits associated with alleviating constraints that limit power flows on Basslink. This project will therefore be subject to a RIT-T assessment.

TasNetworks has also included five contingent projects, valued in excess of $938 million.[88] We consider the contingent projects further below in attachment C.

Other capital expenditure

This category of capex includes expenditure on operational support systems and non-network ICT, fleet and facilities.

For transmission, TasNetworks has forecast a reduction in other capex. For distribution, TasNetworks has forecast an increasing requirement for investment in IT assets and systems. A large component of TasNetworks' proposed IT capex relates to market systems, including the replacement of its market data management system. This project has a total cost of $63 million, with $30 million of this allocated to the 2019–24 regulatory control period. We will consider the need, timing and costs for this project and other significant IT investments to assess the prudency and efficiency of this proposed expenditure.

---

86 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 88.

87 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 89.

88 TasNetworks, Tasmanian Transmission and Distribution Regulatory and Revenue Proposals 1 Jul 2019 to 30 Jun 2024, January 2018, p. 84.

C Contingent projects

TasNetworks proposed five contingent projects for its transmission system. A contingent project is a significant network augmentation project that may be required during the regulatory period but for which the need, timing and costs are currently uncertain. The expenditure for such projects does not form part of the total forecast capital expenditure that we will approve in this determination. But, if certain conditions (project-specific 'trigger events') are met, TasNetworks may apply to the AER to amend the revenue determination to include the incremental revenue required to undertake the project.

In proposing contingent projects, TasNetworks submitted it must account for the material uncertainty facing the industry in the medium to longer term. It submitted that transmission network investments must respond to new generation developments that are commercially driven. This means the location, timing and scale of new generation are influenced by market conditions and changes in policy (such as renewable targets).

TasNetworks proposed in excess of $938 million for contingent projects.

We must determine that a proposed contingent project is a contingent project if we are satisfied that:

1. the proposed contingent project is reasonably required to be undertaken to achieve any of the capex objectives
2. the proposed contingent capex:
   (a) is not provided for in the ex ante forecast capex for the regulatory period
   (b) reasonably reflects the capex criteria, taking into account the capex factors
   (c) exceeds the defined materiality threshold
3. the proposed contingent project and expenditure comply with requirements in our regulatory information notice (RIN), and
4. the trigger events in relation to the proposed contingent project are appropriate.

At the revenue determination stage, our assessment is focused on the nature of the contingent project and whether the trigger events for the proposed contingent projects are appropriate. In doing this we will consider whether the trigger event is:

5. reasonably specific and capable of objective verification
6. a condition or event which, if it occurs, makes the project reasonably necessary to achieve any of the capex objectives
7. a condition or event that generates increased costs affecting a specific location rather than the transmission network as a whole
8. described in such terms that it is all that is required for the revenue determination to be amended, and

9. probable to occur during the regulatory period, but the inclusion of the project's cost in the ex ante forecast capex is not appropriate because (i) the costs associated with the event are not sufficiently certain, or (ii) it is not sufficiently certain that the event will occur during the regulatory period, or after the period or not at all.

Below we set out the five proposed contingent projects and TasNetworks' rationale, estimated expenditure, and trigger events for each project.

C.2 Second Bass Strait Interconnector

Estimate: $550 million

TasNetworks submits that a second Bass Straight interconnector would allow Tasmania to expand the amount of renewable energy it provides to the NEM, facilitate greater investment in wind and solar projects in Tasmania and support efficient use of Tasmania's hydro resource.[89] The estimated total project capex of $1.1 billion will be funded by TasNetworks and AEMO in its role as Victorian Network Planner. Total project opex per year is $16.7 million for operation and maintenance. TasNetworks will undertake a more detailed feasibility assessment with financial and other assistance from ARENA.

C.3 Sheffield to Palmerston 220 kV Augmentation

Estimate: $120 million

If significant future generation flows from the North West and West Coast transmission networks, there could be significant constraints in transmitting energy from Sheffield into the rest of the network. Similar constraints could also arise if a second interconnector were to connect into the Tasmanian system. The location of the second interconnector or significant future generation development in the North West/West Coast could trigger the construction of a new double circuit 220 kV transmission line between Sheffield and Palmerston and converting a section of the existing single circuit 220 kV transmission line into a 110 kV circuit.

C.4 Rationalisation of Upper Derwent 110 kV Network

Estimate: $118 million

TasNetworks submits that the southern 110 kV transmission circuits from Tungatinah to New Norfolk Substation (the Upper Derwent 110 kV network) are approaching end of life, and TasNetworks has a strategy to rationalise the existing assets. However, Hydro Tasmania is undertaking a pre-feasibility study to relocate and replace its Tarraleah Power Station. The new network connection arrangements for the

---

89 More information can be found in Dr Tamblyn's feasibility study. See Dr John Tamblyn, *Feasibility of a second Tasmanian interconnector*, Final Study, April 2017.

replacement power station will have a material impact on the power flows in the southern Tasmanian transmission network, and may also affect the rationalisation of the Upper Derwent 110 kV network. TasNetworks states it is in regular contact with Hydro Tasmania, but the timing of the Hydro Tasmania project or connection arrangements are still unclear.

C.5 North West 110 kV Network Redevelopment

Estimate: in excess of $70 million

TasNetworks has received connection applications for 114 MW of new wind generation projects in NW Tasmania and enquiries about other wind generation projects in the area. There are also ongoing feasibility studies examining a possible increase in pumped hydro storage capacity in the zone. Based on new generation, TasNetworks may need to augment its 110 kV transmission system. The quantity of new generation seeking to connect to the network will determine the extent of this project, and TasNetworks estimates this new generation to be up to 150 to 200 MW. TasNetworks also expects that a 'tripping scheme' (similar to a network control system protection scheme) may be required to utilise existing assets to the maximum.

C.6 North West 220 kV Network Redevelopment

Estimate: in excess of $80 million

Based on connection applications and enquiries about new generation, works may be required to utilise existing assets to the maximum. These works are (a) minor under clearance reinforcement along the Sheffield-Burnie 220kV corridor and (b) a 'tripping scheme' (network protection scheme). These works are likely to be followed by:

- the Northwest 110 kV network redevelopment (separate contingent project), and
- augmentation of the Sheffield-Burnie 220kV system, which includes:
    - establishing a new double circuit 220kV transmission line, and
    - re-configuring the Sheffield-Burnie 100kV transmission line to facilitate the new 220kV line.

C.7 Trigger events

TasNetworks proposed the same trigger events for each project:

- Successful completion of a RIT-T, or a decision by government(s) or regulatory body that results in a requirement for the project, and
- TasNetworks Board approval to proceed with the project, subject to the AER amending the revenue determination.

We will assess whether TasNetworks' proposed trigger events are appropriate. We may amend the wording of trigger events, if necessary, to ensure consistency across our determinations. For example, triggers that include the successful completion of a RIT-T, and a determination by us that the preferred network investment option satisfies the RIT-T, have been a consistent feature of our transmission determinations in recent years. These RIT-T triggers assure stakeholders that a contingent project is activated only after a comprehensive and transparent assessment of credible options to demonstrate that the proposed investment maximises net economic benefits or is required for system reliability.

D Other AER reviews that may be of interest

Review of Rate of Return Guideline

Our Rate of Return (ROR) Guideline sets out the approach by which we will estimate the rate of return (comprising the return on debt, the return on equity, and the value of imputation credits).

Estimation of the rate of return is complex and the rate of return is a significant driver of regulated revenue. We have sought stakeholder views on whether our current approach to setting the allowed rate of return remains appropriate.

We expect to publish the final guideline in December 2018. Our final ROR Guideline will apply to our final determination for TasNetworks.

More information can be found on our website: Review of rate of return guideline.[90]

Review of the service target performance incentive scheme

We create and administer the Service Target Performance Incentive Scheme (STPIS) in accordance with the requirements of the NER. The purpose of the scheme is to provide incentives to electricity distributors to maintain the existing supply reliability performance and to make improvement to the extent to match customers' value on supply reliability.

We currently apply the scheme to distributors in the NEM. Our last review of the STPIS was in 2009 and we now consider it timely to review the scheme to account for the lessons learnt in implementing the scheme.

We are conducting this review in conjunction with the establishment of a Distribution Reliability Measures Guideline to set out common definitions of reliability measures that can be used to assess and compare the reliability performance of distributors.

We expect to finalise this review by June 2018.

More information can be found on our website: Service target performance incentive scheme - 2017 amendment.[91]

---

90 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-rate-of-return-guideline

91 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-2017-amendment

Review of operating environment factors for distribution network service providers

We are currently reviewing our analysis of operating environment factors for the economic benchmarking of electricity distributors, in consultation with industry and other stakeholders.

In our annual benchmarking reports, we examine the relative efficiency of the distribution and transmission electricity service providers. In doing this we consider the characteristics of each network business, and how their productivity compares at the aggregate level given the outputs they deliver to consumers.

We also analyse the operating environment factors that may be unique to particular network service providers and which are not captured by our econometric benchmarking models. This helps us to identify the material factors driving apparent differences in estimated operating efficiency between the electricity distributors in the NEM.

We expect to finalise this review by May 2018.

More information can be found on our website: Review of operating environment factors for distribution network service providers.[92]

Distribution service classification guidelines and asset exemption guidelines

The AEMC has made a rule change to require the AER to prepare two new guidelines: a distribution service classification guideline and an asset exemption guideline.

Service classification determines the regulatory treatment of a service offered by a network service provider. This includes whether or not a service is subject to regulation, the approach to cost recovery, and whether or not a service will need to be ring-fenced from other services offered by a distribution network service provider (DNSP).

The AEMC's new restricted asset rule aims to aid the development of new markets for services where the participation of a DNSP could be harmful to consumers. A restricted asset is any asset owned by a DNSP located on the customer's side of a connection point to a network ('behind the meter'). A DNSP cannot add a restricted asset to its regulatory asset base unless it has obtained an exemption from us. The asset exemption guideline will set out our approach to exempting restricted assets.

---

92 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-operating-environment-factors-for-distribution-network-service-providers

Both guidelines aim to make the regulatory process more transparent and effective and will apply across the NEM. We have commenced consultation with the publication of an issues paper on 16 February 2018.

We will publish the guidelines by end-September 2018.

More information can be found on our website: Distribution service classification guidelines and asset exemption guidelines.[93]

Review of the application guidelines for the regulatory investment tests for transmission and distribution

We have commenced our review of the application guidelines for our regulatory investment tests (RITs). The RITs are cost–benefit analyses that network businesses must perform and consult on before making major investments in their networks. When undertaking RITs, network businesses must give due consideration to what options are out there, before identifying the best way to address needs on their networks.

We currently have separate RITs for transmission and distribution networks (the RIT-T and RIT-D). Each RIT has its own application guidelines to guide businesses on how to apply the RITs consistently and transparently.

After extensive stakeholder engagement, we expect to finalise the review in September 2018.

More information can be found on our website: Review of the application guidelines for regulatory investment tests.[94]

93 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/distribution-service-classification-guidelines-and-asset-exemption-guidelines

94 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-the-application-guidelines-for-the-regulatory-investment-tests-for-transmission-and-distribution