

Draft Decision

TasNetworks

Electricity Distribution

Determination 2024 to 2029

(1 July 2024 to 30 June 2029)

Attachment 5
Capital Expenditure

September 2023

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5 Capital expenditure

Capital expenditure (capex) refers to the money required to build, maintain or improve the physical assets needed to provide standard control services (SCS).¹ Generally, these assets have long lives and a distributor will recover capex from customers over several regulatory control periods. A distributor's capex forecast contributes to the return of and return on capital building blocks that form part of its total revenue requirement.

Under the regulatory framework, a distributor must include a forecast of total capex that it considers is required to meet or manage expected demand, comply with all applicable regulatory obligations, and to maintain the safety, reliability, quality, and security of its network (the capex objectives).²

We must decide whether or not we are satisfied that this forecast reasonably reflects prudent and efficient costs and a realistic expectation of future demand and cost inputs (the capex criteria).³ We must make our decision in a manner that will, or is likely to, deliver efficient outcomes that benefit consumers in the long term (as required under the National Electricity Objective (NEO)).⁴

The *AER's capital expenditure assessment outline* explains our and distributors' obligations regarding capex under the National Electricity Law and Rules (NEL and NER) in more detail.⁵ It also describes the techniques we use to assess a distributor's capex proposal against the capex criteria and objectives.

Total capex framework

We analyse and assess capex drivers, programs and projects to inform our view on a total capex forecast. However, we do not determine forecasts for individual capex drivers or determine which programs or projects a distributor should or should not undertake. This is consistent with our ex-ante incentive-based regulatory framework and is referred to as the 'capex bucket'.

Once the ex-ante capex forecast is established, there is an incentive for distributors to provide services at the lowest possible cost, because the actual costs of providing services will determine their returns in the short term. If distributors reduce their costs, the savings are shared with consumers in future regulatory control periods. Our assessment of the ex-ante capex is consistent with the NEO, which in addition to providing for the lowest possible costs also recognises that services should be valued appropriately and adapt to changing circumstances to maintain efficiencies in the long term interest of consumers. This incentive-based framework provides distributors with the flexibility to prioritise their capex program given their circumstances and due to changes in information and technology.

Distributors may need to undertake programs or projects that they did not anticipate during the revenue determination. Distributors also may not need to complete some of the programs

¹ These are services that form the basic charge for use of the distribution system.

² NER, cl. 6.5.7(a).

³ NER, cl. 6.5.7(c).

⁴ NEL, ss. 7, 16(1)(a).

⁵ AER, *Capex assessment outline for electricity distribution determinations*, February 2020.

or projects proposed if circumstances change, these are decisions for the distributor to make. We consider a prudent and efficient distributor would consider the changing environment throughout the regulatory control period and make decisions accordingly.

Importantly, our decision on total capex does not limit a distributor's actual spending. We set the forecast at a level where the distributor has a reasonable opportunity to recover its efficient costs.

Assessment approach

We provide guidance on our assessment approach in several documents, including the following which are of relevance to this decision:

- *AER's Expenditure Forecast Assessment Guideline*⁶
- *Regulatory Investment Test for Distribution and Transmission (RIT-D and RIT-T) Guidelines*⁷
- *AER's Asset Replacement Industry Note*⁸
- *AER's Information and Communication Technologies (ICT) Guidance Note*⁹
- *AER's Outline of replacement expenditure (repex) model*¹⁰
- *AER's Guidance Note on Network Resilience*¹¹
- *AER's Guidance note on Distributed Energy Resources Integration Expenditure*.¹²

The legal requirements of the AER under the NEL and the NER in assessing capex are outlined in section 2.1 of the *Expenditure Forecast Assessment Guideline*.¹³

We also had regard to the guiding principles in the AER's *Better Resets Handbook – Towards consumer centric proposals* which encourages networks to develop high quality, well-justified proposals that genuinely reflect consumers' preferences.¹⁴

Our draft decision has been based on the information before us, which includes:

- the distributor's regulatory proposal and accompanying documents and models.
- the distributor's responses to our information requests.
- stakeholder comments in response to our Issues Paper.

⁶ AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), 29 November 2013.

⁷ AER, [RIT-T and RIT-D application guidelines \(minor amendments\) 2017](#), 18 September 2017.

⁸ AER, [Industry practice application note for asset replacement planning](#), 25 January 2019.

⁹ AER, [AER publishes guidance on non-network ICT capital expenditure assessment approach](#), November 2019.

¹⁰ AER, [Repex model outline for electricity distribution determinations](#), February 2020.

¹¹ AER, [AER publishes a guidance note on network resilience](#), April 2022.

¹² AER, [Distributed energy resources integration expenditure guidance note](#), June 2022.

¹³ AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), August 2022, Pages 6-7.

¹⁴ AER, [Better Resets Handbook – Towards consumer-centric network proposals](#), December 2021.

5.1 Draft decision

Our draft decision is that we are satisfied that TasNetworks' proposed total net forecast capex of \$729.1 million (\$2023–24) reasonably reflects prudent and efficient costs to maintain the safety, reliability and security of the network.

Table 5.1 shows TasNetworks' proposed forecast capex, which is equivalent to our forecast capex.

Table 5.1 AER's draft decision on TasNetworks' total net capex forecast (\$ million, \$2023–24)

	2024-25	2025-26	2026-27	2027-28	2028-29	Total
TasNetworks' proposal and AER draft decision	155.3	160.7	141.9	136.9	134.4	729.1

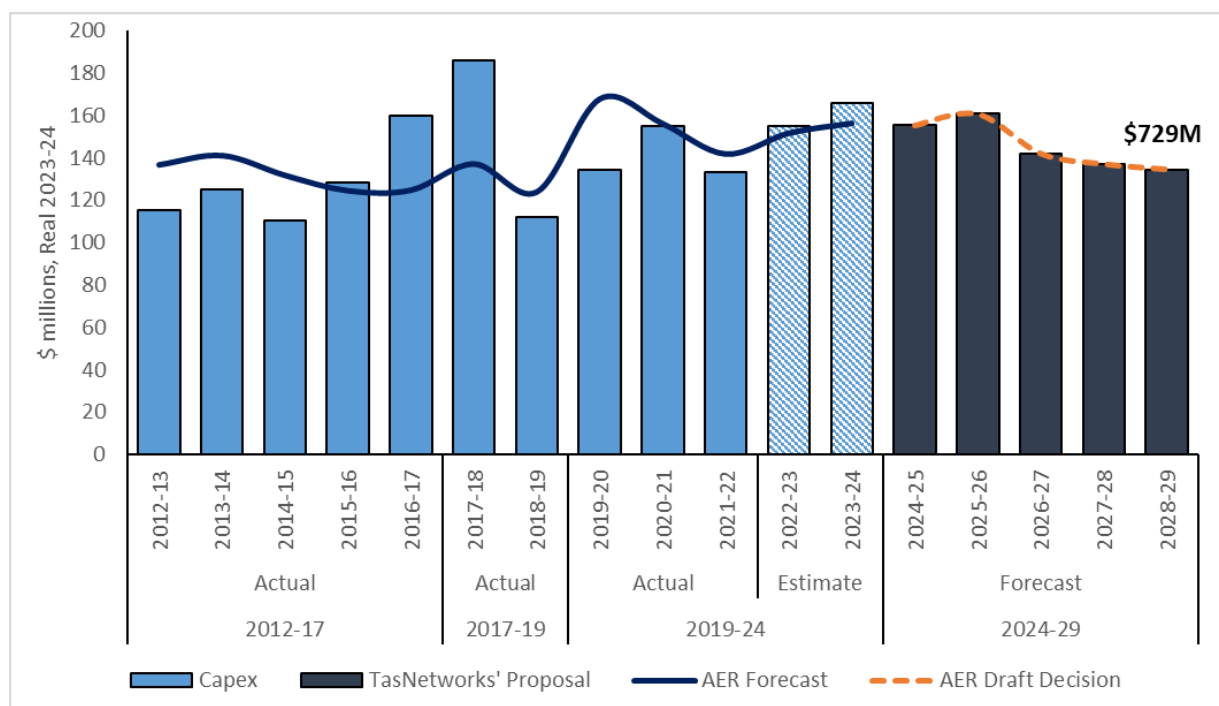
Source: AER analysis and TasNetworks' proposal.

5.2 TasNetworks' proposal

TasNetworks' proposal forecasts \$729.1 million (\$2023–24) capex over the 2024–29 regulatory control period. This represents a decrease of approximately 1.8% compared to actual and expected expenditure over the 2019–24 period.¹⁵

Figure 5.1 outlines TasNetworks' historical capex trend, its proposed forecast for the 2024–29 regulatory control period, and our draft decision.

¹⁵ TasNetworks' original submission for the 2019-24 period included a \$19.9 million capex balancing item. At our request, TasNetworks reallocated this expenditure to other categories. We have accounted for this in all figures presented in this attachment.

Figure 5.1 TasNetworks' historical and forecast capex (\$ million, \$2023–24)

Source: AER analysis. Capex is net of asset disposals and customer contributions.

Table 5.2 provides a breakdown of TasNetworks' capex proposal in more detail.

TasNetworks identified affordability as a key consideration in developing its proposal. It noted that to maintain affordability, it constrained its capex to its actual capex for the 2019-24 regulatory control period which is broadly in line with our 2019-24 final decision.

TasNetworks considered this forecast was sufficient to maintain the safety and reliability of its network. To achieve this, TasNetworks applied a top-down and bottom-up approach to forecasting.¹⁶

The most significant changes between TasNetworks' 2019-24 capex and its 2024-29 forecast are; decreases of \$29.5 million in overheads and \$13.8 million in connections, and an increase of \$12.7 million in augmentation capex (augex).

Table 5.2 TasNetworks' capex category forecast compared with actual/estimated capex in 2019–24 (\$ million, \$2023–24)

Capex category	TasNetworks' 2019–24 capex	TasNetworks' 2024–29 capex	Change from 2019–24 (%)	Proportion of total capex (%)
Repex	272.4	281.6	3.4%	38.6%
Augex	36.8	49.5	34.7%	6.8%
Export Services	0.5	1.3	151.2%	0.2%

¹⁶ TasNetworks, [Combined proposal 2024-29 Attachment 6 capital expenditure](#), January 2023, p. 5.

Capex category	TasNetworks' 2019–24 capex	TasNetworks' 2024–29 capex	Change from 2019–24 (%)	Proportion of total capex (%)
Connections	171.1	157.3	-8.1%	21.6%
ICT	99.4	100.7	1.3%	13.8%
Property	18.1	11.4	-36.8%	1.6%
Fleet	19.6	23.8	21.6%	3.3%
Overheads	234.4	204.9	-12.6%	28.1%
Balancing item	-1.5	0.0	-100.0%	0.0%
<i>Gross Capex</i>	<i>850.7</i>	<i>830.4</i>	<i>-2.4%</i>	
Customer contributions	-104.2	-95.7	-8.1%	-13.1%
Disposals	-3.9	-5.6	42.9%	-0.8%
Net capex	742.6	729.1	-1.8%	

5.3 Reasons for draft decision

We reviewed TasNetworks' capex drivers, programs and projects to inform our view on a total capex forecast that reasonably reflects the capex criteria. We conducted top-down analysis such as examining trends and forecast costs compared with historical capex, and inter-relationships between cost categories. To complement this, we conducted bottom-up analysis of TasNetworks' specific major programs and projects.

Our capex assessment focused primarily on the material capex categories that either represented a significant uplift in expenditure, required further consumer engagement or are new and evolving areas, such as consumer energy resources. Capex that was relatively small and forecast using established modelling approaches and inputs in line with our expectations, meant that we did not need to undertake a more detailed analysis of the individual programs and projects.

5.3.1 Top-down assessment

We have undertaken a top-down assessment of TasNetworks' total capex as well as a top-down assessment of each capex category.

We consider TasNetworks' total forecast capex of \$729.1, which is 1.8% lower than current period capex, reflects TasNetworks' commitment to affordability. We are also satisfied that TasNetworks can maintain its existing levels of safety and reliability. This is because overall, TasNetworks' forecast capex reflects a similar work program to its current period.

We have placed greater weight on the top-down analysis for overall capex than our category assessment. This is because, TasNetworks' forecast capex is below its current period capex and we consider the CESS provides sufficient incentive for TasNetworks' to undertake efficient capex in the current period.

We note that that composition of TasNetworks' capex has shifted, with increases in repex, augex, recurrent ICT and fleet offset by decreases in non-recurrent ICT, property, connections and overheads.

Although we are satisfied that TasNetworks' total capex is prudent and efficient, this does not mean that we consider all the projects within specific capex categories are prudent and efficient.

We have also compared each category at the top-down level against our standard assessment approach for the respective categories. Broadly, we consider for some categories, such as capitalised overheads, we would have a higher forecast than TasNetworks proposed. This offsets most of the capex where we would have adopted a lower forecast such as augex. Overall, we do not consider these issues are material to total forecast capex as the total forecast is below historical capex.

We discuss our specific concerns in section 5.3.2 and Appendix A.

In considering the scope of our review we had regard to how TasNetworks has performed against the Better Resets Handbook expectations for capex.

We have applied the Better Resets Handbook expectations to guide our assessment and identify which areas we consider may require a more in-depth assessment. TasNetworks noted in its proposal that it is guided by the Better Resets Handbook.¹⁷

Our assessment against each expectation is set out in Table 5.3.

Table 5.3 Better Resets Handbook expectations

Driver	Findings and reasons
Top-down testing of the total capital expenditure forecast and at the category level	<p>TasNetworks has met the criteria for top-down testing at the total capex level.</p> <p>TasNetworks proposes forecast capex of \$729.1 million for the 2024–29 period which is 1.8% lower than its actual/estimated capex in the 2019–24 period.</p> <p>TasNetworks did not apply or provide evidence of its top-down methodology for a range of capex categories. The forecast methodologies were also inconsistent with our established top-down assessment approaches. For example, TasNetworks did not apply the repex model.</p>
Evidence of prudent and efficient decision-making on key	<p>TasNetworks' initial proposal did not provide adequate evidence for us to judge the prudence and efficiency of its key projects and programs.</p> <p>The poor quality of documentation in its initial proposal necessitated significant further investigation by AER staff.</p>

¹⁷ TasNetworks, [Combined Proposal 2024-29 overview](#), January 2023, p.13.

Driver	Findings and reasons
projects and programs	
Evidence of alignment with asset and risk management standards	<p>TasNetworks' initial proposal did not provide adequate evidence for us to judge its alignment with asset and risk management standards.</p> <p>This does not mean TasNetworks is not in alignment with said standards. However, the poor quality of documentation in its initial proposal necessitated significant further investigation by AER staff.</p> <p>We acknowledge TasNetworks has conducted risk management to prioritise projects, but it is not clear it has applied best practise asset management. In particular, it has not consistently and explicitly justified capex with reference to the capex criteria in the NER. This is a key requirement of ISO 55000.</p>
Genuine consumer engagement on capital expenditure proposals	<p>TasNetworks has broadly met this expectation.</p> <p>TasNetworks conducted consumer engagement regarding overall capex with individual consumers and retailers, its engagement on specific categories of their program was primarily conducted with their Reset Advisory Committee, a six-member group of public individuals with diverse and relevant expertise.</p>

Source: AER analysis.

5.3.2 Capex category assessment

While we are satisfied that the total forecast capex is prudent and efficient, we do not consider that TasNetworks' initial proposal provided information of an acceptable quality. Detailed information was not provided on the projects that built up the forecast of each capex category, and the select business cases that were provided did not show how costs or benefits were calculated. We issued several information requests to obtain the required supporting information to undertake our assessment.

Table 5.4 summarises, and Appendix A provides further details on, our views on each of the capex categories and whether they are prudent and efficient and reflect the capex criteria. This reflects the way we have assessed TasNetworks' total capex forecast. Our findings on each capex driver are part of our broader analysis and should not be considered in isolation. We do not approve an amount of forecast expenditure for each individual capex driver or project/program. However, we use our findings on the different capex drivers to assess a regulated business' proposal as a whole and arrive at a substitute estimate for total capex where necessary. Our decision on total capex does not limit a regulated business' actual spending.

Table 5.4 Summary of our findings and reasons, by capex driver

Driver	Findings and reasons
Repex	<p>We are satisfied that TasNetworks' repex forecast of \$281.6 million forms part of a total capex forecast that meets the capex criteria. TasNetworks' repex forecast is 3.4% higher than its 2019-24 regulatory control period spend.</p> <p>We have used the repex model to undertake a top-down assessment of the largely recurrent elements of TasNetworks' repex forecast. This accounts for 75.1% of repex. We are satisfied by the modelled repex component of TasNetworks' forecast because it is 21% lower than our repex model threshold.</p> <p>We have also assessed unmodelled repex.¹⁸ We note that TasNetworks' business cases and models were not robust and did not adequately explain the assumptions and the benefit calculations.</p> <p>However, TasNetworks' total repex, excluding operational support services (OSS), falls within our modelled repex threshold. For this reason we are satisfied with TasNetworks' repex forecast.</p> <p>We also note that some OSS assets are classified as repex under our Regulatory Information Notice. Due to how TasNetworks has set out its proposal, we have assessed the OSS component under our ICT assessment as per TasNetworks' preference. We also recommend TasNetworks provide a clear reconciliation of how these costs have been allocated in future proposals to allow for more accurate trend analysis.</p> <p>We have also identified issues of consistency with TasNetworks climate resilience forecast. We discuss these issues in more detail in appendix A.</p>
Augex (including CER integration)	<p>We are satisfied that TasNetworks' augex forecast of \$49.5 million forms part of a total capex that meets the capex criteria.</p> <p>TasNetworks' forecast is 34.7% higher than its 2019-24 regulatory control period spend. Augex accounts for 6.8% of TasNetworks' total forecast net capex. TasNetworks did not explain the drivers of the increase in augex.</p> <p>Our analysis of TasNetworks found that a majority of the augex relates to a continuation of existing augex programs. We have identified no issues with the forecast projects that are in line with current period augex.</p> <p>The main driver of the increase in augex is \$9.7 million for CER. We note that this project is not supported by TasNetworks' cost benefit analysis and is inconsistent with our CER guidance note. We explain our concerns in more detail in appendix A.</p> <p>We also identified an increase in its \$4.7 million bird mitigation project. Although, this project is not a material driver of augex, the increase in costs</p>

¹⁸ TasNetworks did not include modelled and unmodelled repex components in its proposal as it did not use our repex model. For the purposes of our assessment, unmodelled repex reflects the assets that are not included in our repex model.

Driver	Findings and reasons
	<p>between the current and forecast periods is not supported by the data provided in TasNetworks' business case and information request responses.</p> <p>We note that had we not accepted TasNetworks' total forecast capex from a top-down perspective, CER and bird mitigation capex would not be included from a bottom-up assessment perspective.</p>
Connections	<p>We are satisfied that TasNetworks' connections forecast of \$157.3 million forms part of a total capex forecast that meets the capex criteria.</p> <p>TasNetworks' forecast for the 2024-29 regulatory control period is 8.1% lower than its 2019-24 regulatory control period spend. Connections accounts for 21.6% of TasNetworks' total forecast net capex. We have examined the connections unit rates and volumes which are in line with the historical trend. Based on this we are satisfied with the information provided supported the proposed expenditure.</p>
ICT	<p>We are satisfied that TasNetworks' non-network capex forecast of \$100.7 million forms part of a total capex forecast that meets the capex criteria.</p> <p>TasNetworks' forecast for the 2024-29 regulatory control period is 1.3% higher than its 2019-24 regulatory control period spend.</p> <p>We note that from a top-down perspective, TasNetworks' forecast was not consistent with our ICT guidance note. For example, TasNetworks did not adequately explain the drivers of its 15% increase in recurrent ICT.</p> <p>We have assessed TasNetworks' responses to our information requests and are satisfied that the increase in recurrent ICT reflects the inclusion of programs that were previously non-recurrent programs from the current period. These are now classified as recurrent due to being ongoing programs which we consider to be prudent and efficient.</p> <p>We have also assessed TasNetworks' responses to our information requests on non-recurrent ICT and we are satisfied by the information provided.</p> <p>We note that TasNetworks' forecast included an allocation of \$1.6 million for cyber security. We note that this reflects a 20% allocation of total cyber security costs across distribution and transmission. We do not have any material concerns with the capex allocated to distribution. However, we note that TasNetworks included contingency costs which has not been justified.</p> <p>More information on our assessment of cyber security is available in our transmission determination.¹⁹</p>
Operational Support Systems(OSS)	<p>TasNetworks forecast \$27.0 million for OSS capex that relates to capex for asset management information system upgrades, enterprise information systems and network SCADA system enhancements. We note that the costs for OSS have been allocated across a range of capex categories, with a majority allocated to repex. However, due to the type of projects, TasNetworks considers OSS should be assessed under our ICT assessment framework.</p>

¹⁹ AER, *TasNetworks 2019-24 - Transmission - Draft decision - Attachment 5 - Capital expenditure*, October 2023, p. 19

Driver	Findings and reasons
	<p>We have found issues with the Enterprise Asset Management Improvement and Asset Management Information System Improvement programs. This is because these two projects (\$13.1 million) are essentially two parts of an overarching asset management improvement program and consist of overlapped smaller functional projects. TasNetworks has not clearly identified each component and distinguished the project benefits. In regard to the benefits claimed in its project investment evaluation summaries, we found the proposed investment benefits appear to double count the benefits from both projects.</p> <p>We note that had we not accepted TasNetworks' total forecast capex from a top-down perspective, these two OSS projects would not be included from a bottom-up assessment perspective.</p>
Property	<p>We are satisfied that TasNetworks' non-network property capex forecast of \$11.4 million forms part of a total capex forecast that meets the capex criteria.</p> <p>TasNetworks proposed \$11.4 million of property expenditure for the 2024-29 regulatory control period. This is 36.8% lower than its 2019-24 regulatory control period spend. Property accounts for 1.6% of TasNetworks' total forecast net capex.</p> <p>The main project is the \$5.4 million Northwest Coast Depot refurbishment. TasNetworks has provided justification for its proposed capex facilities assets, including details of facility asset lifespans and replacement options. We found that the information provided supported the proposed expenditure.</p>
Fleet	<p>We are satisfied that TasNetworks' non-network fleet capex forecast of \$23.8 million forms part of a total capex forecast that meets the capex criteria.</p> <p>TasNetworks proposed \$23.8 million of fleet expenditure for the 2024-29 regulatory control period. This is 21.6% higher than its 2019-24 regulatory control period spend. Fleet accounts for 3.3% of TasNetworks' total forecast net capex.</p> <p>The main driver of the proposed \$23.8 million fleet capex is its new fleet initiative to dispose of 140 vehicles with a higher forecasted \$5.6 million disposal number to meet its current safety and compliance requirements and targeting an uptake in electric work vehicles.</p> <p>We found that the information provided supported the proposed expenditure.</p>
Capitalised overheads	<p>TasNetworks proposed \$204.9 million of capitalised overheads expenditure for the 2024-29 regulatory control period. This is 12.6% lower than its 2019-24 regulatory control period spend.</p> <p>TasNetworks adopted its own approach rather than the standardised methodology set out in our capex model. TasNetworks' forecast is \$14.9 million lower than our standard approach.</p> <p>In response to our information request, TasNetworks identified the change in methodology was due to its current business transformation. However, TasNetworks did not provide the basis for its calculations.</p>

Driver	Findings and reasons
	<p>We note that had we not accepted TasNetworks' total capex from a top-down perspective and applied a substitute forecast, the increase in this category would offset a majority of other capex categories that we are not satisfied with from a bottom-up perspective.</p>
Asset disposals	<p>We have included TasNetworks' forecast of \$5.6 million for asset disposals for the 2024-29 regulatory control period. This is 42.9% higher than its 2019-24 regulatory control period spend. This reflects the transition in TasNetworks fleet to electric vehicles.</p>
Customer contributions	<p>TasNetworks forecast \$95.7 million of customer contributions expenditure for the 2024-29 regulatory control period. This is 8.1% lower than its 2019-24 regulatory control period spend. The decrease in customer contributions are consistent with the decrease in connections.</p>
Ex-post review	<p>We are required to provide a statement on whether the roll forward of the regulatory asset base (RAB) from the previous period contributes to the achievement of the capex incentive objective. The capex incentive objective is to ensure that, where the RAB is subject to adjustment in accordance with the NER, only expenditure that reasonably reflects the capex criteria is included in any increase in value of the RAB.</p> <p>We may exclude capex from being rolled into the RAB when a distributor has overspent the amount of capex above the allowance that does not reasonably reflect the capital expenditure criteria.²⁰</p> <p>We have reviewed TasNetworks' capex performance for the 2017–18 to 2021–22 regulatory years. TasNetworks incurred total capex below its regulatory forecast for the ex-post review period. On this basis, the overspending requirement for an efficiency review of past capex is not satisfied.</p> <p>We are satisfied that including this actual capex in the RAB is likely to contribute towards achieving the capex incentive objective.</p>

²⁰ AER, *Capital Expenditure Incentive Guideline*, November 2013, p. 17.

A Key issues

This section includes a more in-depth discussion on specific categories that we are not satisfied with. We note that despite being satisfied that TasNetworks' total capex is prudent and efficient, we have identified issues with specific projects.

We note that we do not approve individual capex projects, only the total capex forecast.

This section is to assist TasNetworks and stakeholders to better understand our expectations and what information should be included to support a capex forecast.

A.1 Climate resilience capex

A.1.1 AER's draft decision

We have identified \$17.4 million of TasNetworks' forecast relates to climate resilience. Although we consider TasNetworks' total forecast capex is prudent and efficient, we consider TasNetworks has not provided sufficient information to support its climate resilience forecast.

A.1.2 TasNetworks' proposal

TasNetworks submits that it has proposed climate resilience investment because the projected change in climate reflects an increasing level of risk of supply interruptions to customers.

We note that TasNetworks attributed a range of values to its climate resilience program. This includes \$10 million in its initial proposal and \$48.3 million in an information request response.²¹ We have referred to a total resilience forecast of \$17.4 million as this would be the amount that is consistent with the approach set out in our network resilience guidance note.

For the purpose of our assessment, consistent with our note on network resilience, we consider \$17.4 million of TasNetworks' proposal relates to its climate resilience program.

A.1.3 Reasons for decision

We are cognisant that consumer engagement on the localised impacts from climate change placed an important part in the development of TasNetworks' proposal. We acknowledge TasNetworks' efforts to engage with its stakeholders on the future network impacts and local effects of climate change. We also appreciate that there is much uncertainty around the impact of climate change on electricity networks, and its localised impact on communities. In this regard, we are aware that the electricity industry is still at the early stages of understanding the impact of climate change on networks and local communities, including how to best allocate risks from extreme weather events so that it is in long term interests of consumers.

²¹ TasNetworks, *IR007 TasNetworks (D)-IR007-Repex Resilience Investments-20230315-Public* [spreadsheet], 15 March 2023

To support broader discussions around network resilience, we developed a guidance note to assist stakeholders understand how resilience-related expenditure would be treated under the NER.²²

In coming to our position on the prudence and efficiency of TasNetworks' climate resilience program, we have had regard to the extent that its proposal satisfies relevant criteria in our guidance note on network resilience. In that note, we set out our expectations of the type of evidence businesses should provide to demonstrate that its resilience-related proposal is prudent and efficient; these being:

- *Identified need*; that there is a causal relationship between the proposed resilience expenditure and the expected increase in the extreme weather event;
- *Testing of the preferred option*; that the proposed expenditure is required to maintain service levels and is based on the option that likely achieves the greatest net benefit of the feasible options considered; and
- *Genuine consumer engagement*; that consumers have been fully informed of different resilience expenditure options, including the implications stemming from these options, and that they are supportive of the proposed expenditure.

While we are accepting TasNetworks' overall distribution capex proposal, we consider that TasNetworks could improve future resilience expenditure proposals by addressing each of these expectations more clearly. TasNetworks' proposal did not meet the requirements outlined in our resilience guidance note. Specifically, we are not satisfied that TasNetworks has established an adequate causal relationship between its proposed resilience expenditure and the expected increase in extreme weather events.

We also note that TasNetworks did not clearly identify its resilience forecast in its proposal. TasNetworks' proposal only referred to an increase of \$10 million without additional supporting information.²³

In response to our information request, TasNetworks identified \$48.3 million in network resilience.²⁴ It noted that the \$10.0 million increase identified in the proposal is in comparison to the \$38.3 million proposed in the draft plan. TasNetworks confirmed in an information request that the \$10 million increase to resilience was sourced by an optimisation process which reallocated funding from other BAU activities. Based on our assessment, we found that most of the proposed \$48.3 million resilience expenditure is the total cost of resilience-improving items, which includes BAU requirements, rather than the true incremental cost of resilience-related expenditure. For example, TasNetworks has proposed \$34.3 million of resilience pole programs, which includes BAU condition-based pole replacement of approximately \$30.9 million (i.e. part of this program proposes to install fire-resistant composite poles²⁵ instead of timber poles at an incremental cost).

²² AER, [Network Resilience – a note on key issues](#), April 2022.

²³ TasNetworks, [Combined proposal 2024-29 Attachment 6 capital expenditure](#), January 2023, p. 10

²⁴ TasNetworks, [IR007 TasNetworks \(D\)-IR007-Repex Resilience Investments-20230315-Public \[spreadsheet\]](#), 15 March 2023

²⁵ We note composite poles have a longer technical asset life than wooden poles. We have created a new asset class to reflect a standard asset life of 80 years.

Based on the unit costings provided by TasNetworks in its information request responses, we have estimated the total incremental climate resilience expenditure as \$17.4 million. TasNetworks included resilience as a subset of repex so this recalculation will not impact the overall amount of repex.

We undertook a targeted review of the \$17.4 million of climate resilience expenditure consistent with the resilience proposals from other DNSPs. TasNetworks' resilience expenditure consists largely of composite poles, covered conductors and aerial bundled cables.

We note that from a bottom-up perspective, we do not consider TasNetworks provided sufficient supporting information to justify its climate resilience expenditure. However, climate resilience is a subset of TasNetworks' total repex which we are satisfied with based on top-down assessment methods such as the repex model.

Stakeholder submissions

We received two stakeholder submissions relating to TasNetworks' resilience proposal.

CCP27 noted that details of TasNetworks' proposed actions to address resilience were not provided, although they were described in general terms.²⁶ The submission also noted that some participants were concerned about price impacts of the resilience proposal, and that the change in economic conditions since these consultations may further change consumer preferences. The submission notes that customer preferences should be retested prior to TasNetworks' lodging its revised proposal. We agree that TasNetworks should provide more detail to consumers on resilience project options.

The Tasmanian Small Business Council's (TSBC) submission highlighted that the additional repex for resilience projects may not be justified given the risks involved, their likelihood of eventuating, or the benefit to consumers.²⁷ TSBC also mentioned that the AER needs to ensure that there is no overlap with other expenditures, such as vegetation management, cyber security and insurance. The AER has considered the risk profile of TasNetworks' resilience proposal in its assessment, and has not seen any evidence of overlaps between expenditure categories.

A.2 Consumer Energy Resources

Expenditure to integrate consumer energy resources (CER) enables DNSPs to accommodate more rooftop solar by increasing hosting capacity or maximising available hosting capacity. This allows more customers to connect their rooftop solar and export more of the electricity they generate back to the grid. In 2021, the AEMC confirmed that export services are part of the core services to be provided by DNSPs.²⁸

²⁶ CCP27, *Advice to the AER TasNetworks Combined Revenue Reset Proposal (Transmission and Distribution)*, May 2023, p. 19.

²⁷ TSBC, *Submission to TasNetworks Combined Regulatory Proposal*, May 2023, p. 23.

²⁸ AEMC, [Access, pricing and incentive arrangements for distributed energy resources, Rule determination](#), August 2021.

A.2.1 AER’s draft decision

We consider TasNetworks’ has not provided sufficient information to support its forecast of \$9.7 million for CER related capex in the total capex forecast.

TasNetworks did not meet our expectations for a well justified CER proposal. This is because it was not consistent with our CER guidance note. We are also not satisfied that this project reflects a better outcome for consumers than TasNetworks’ undertaking its business-as-usual processes.

We note that we consider TasNetworks’ total forecast capex is prudent and efficient from our top-down assessment. Had we not considered the total was prudent and efficient, then we would have applied a bottom-up assessment to determine a substitute capex forecast. If this was the case, then TasNetworks’ CER related capex would not have been included in our bottom-up substitute.

A.2.2 TasNetworks’ proposal

TasNetworks has forecasted the uptake of solar PV and household batteries to continue to grow, while the uptake of EVs is expected to accelerate towards the end of this decade. Current modelling suggests that there will be insufficient uptake of CER’s to cause widespread and material constraints in the 2024-2029 regulatory control period for TasNetworks or its customers. Therefore, TasNetworks propose a steady and modest level of investment to enable ongoing connection of CER and improved visibility of the low voltage network.²⁹

TasNetworks forecast \$9.7 million in capex related to CER to address the following:

- Improve visibility and control of the low voltage network
- Undertake trials to enable CER such a dynamic operating envelopes, networks tariffs and community batteries.

The forecast included two business cases, “DER and other projects” (\$6.3 million) and “network asset model development” (\$3.4 million).

A.2.3 Reasons for decision

Our guidance note outlines the types of benefits that may be realised and how DNSPs should quantify them.³⁰ Relatedly, we apply the customer export curtailment value (CECV) methodology to derive CECVs, which we expect DNSPs to use when estimating wholesale electricity market benefits associated with their proposed investments.³¹

Prior to considering network augmentation to increase network hosting capacity, DNSPs should consider the following options:

- Cost reflective prices. Export tariffs signal to customers the additional network costs in the future, and prompt changes in electricity use to avoid these costs.

²⁹ TasNetworks, [Combined proposal 2024-29 Attachment 6 capital expenditure](#), January 2023.

³⁰ AER, [DER integration expenditure guidance note](#), June 2022.

³¹ AER, [Customer export curtailment value methodology](#), June 2022.

- Compliance activities. Many rooftop solar inverters are non-compliant with technical standards, which may require DNSPs to set conservative static export limits.³²
- Voltage management. This includes adjusting transformer tap settings, phase balancing and dynamic voltage management to reduce export curtailment.
- Network visibility. Network visibility can be enabled by smart meter data or network monitoring devices and provides better knowledge about network hosting capacity.
- Flexible export limits. These allow DNSPs to maximise existing hosting capacity by varying export limits in response to live network conditions.

We assessed the proposed CER integration expenditure against our guidance note and the CECV methodology. In particular, we focused on:

- Hosting capacity analysis. DNSPs should study the networks' ability to accommodate more CER connections without experiencing voltage or thermal violations. The output of this analysis is a forecast of export curtailment.
- Options analysis. The preferred investment option should be a credible option which maximises the net economic benefits, relative to a "BAU" base case scenario.
- Benefit quantification. DNSPs should quantify credible types of benefits and use appropriate input assumptions to quantify benefits.

As TasNetworks provided limited evidence to support its CER proposal, we sought further information through information requests. In particular:

- further information about its proposed investment, including evidence of hosting capacity analysis and how benefits have been valued, and
- clarifications on aspects of the NPV analysis, including the rationale for its 25-year NPV period and how costs and benefits have been calculated for all of the investment options it considered.

We have identified the following concerns with 'DER and other projects':

- TasNetworks used a 25-year NPV period rather than a 20-year NPV period.
- the inclusion of new types of benefits, such as customer satisfaction, which are not included in our guidance note.
- Overstated potential sources of benefits such as reliability improvements, avoided augmentation and opex. We were unable to verify the scale of these benefits.

Once we accounted for these issues with the reported benefits, it was not clear if this project provided a higher NPV than TasNetworks business-as-usual scenario, which included no capex in the forecast period, over the life of the project.

³² The AEMC's [Review into consumer energy resources technical standards](#) noted that improving inverter compliance will benefit all customers, and made recommendations for immediate action, which included (among other things) funded training and guidance on CER technical standards for installers and the introduction of commissioning sheets for CER devices.

Similarly, for the “network asset model development” project, we did not consider the quantification of the benefits was clear and we could not verify their nature and how they have been calculated. Further, it is unclear how the benefits identified by TasNetworks would be realised by customers.

Shortened forms

Term	Definition
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASP	Accredited Service Provider
augex	augmentation expenditure
capex	capital expenditure
CCP27	Consumer Challenge Panel, sub-panel 27
CESS	capital expenditure sharing scheme
CSIS	customer service incentive scheme
DER	distributed energy resources
DMIAM	demand management innovation allowance mechanism
DMIS	demand management incentive scheme
DNSP or distributor	distribution network service provider
DUoS	Distribution Use of System Charges
EBSS	efficiency benefit sharing scheme
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ESB	Energy Security Board
F&A	framework and approach
GSL	guaranteed service level
ICT	information and communication technologies
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objectives
NER	National Electricity Rules
opex	operating expenditure
PIAC	Public Interest Advocacy Centre
RAB	regulated asset base
repex	replacement expenditure

Term	Definition
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SAPS	stand-alone power systems
SCS	standard control service
Service classification guideline	electricity distribution service classification guideline 2018
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital
