FINAL DECISION

TasNetworks
Distribution Determination
2019 to 2024

Attachment 15
Alternative control services

April 2019

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's final decision on TasNetworks' 2019–24 distribution determination. It should be read with all other parts of the final decision.

The final decision includes the following attachment:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

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Attachment 18 – Tariff structure statement

Attachment B – Negotiating framework

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Shortened forms

Shortened form	Extended form
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CCP 13	Consumer Challenge Panel, sub-panel 13
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIAM	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
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for Electricity Distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider

Shortened form	Extended form
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SCS	standard control services
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital
LED	Light Emitting Diode

15 Alternative control services

This attachment sets out our final decision on the prices TasNetworks is allowed to charge customers for the provision of alternative control services (ancillary network services, public lighting and metering).[1]

Alternative control services are customer specific or customer requested services, so the full cost of the service is attributed to a particular customer, or group of customers, benefiting from the service. We set service specific prices to provide a reasonable opportunity to the distributor to recover the efficient cost of each service from customers using that service. This is in contrast to standard control services, where costs are spread across the general network customer base.

15.1 Final decision

Our final decision is to reject TasNetworks' revised proposal for ancillary network services and public lighting.

Specifically, our final decision is:

- to reject TasNetworks' revised ancillary network services proposal in relation to the administration labour rate and consequential impacts on charges for fee-based services and the labour rate for quoted services. We will substitute TasNetworks' proposed labour rates with our own, consistent with our draft decision
- to reject TasNetworks' revised public lighting proposal of a 59 per cent overhead cap on direct costs. Instead, our final decision is to cap overheads at 35 per cent of direct costs. We have also adjusted TasNetworks' public lighting model for updated WACC and labour escalators
- our final decision for metering is to accept TasNetworks' revised proposal. TasNetworks' revised proposal accepted our draft decision to not accelerate the depreciation of metering assets, as well as our revised overhead rates.

The detail of our final decision is set out in the following sections:

- 15.4 - Ancillary network services
- 15.5 - Public lighting
- 15.6 - Metering.

15.2 TasNetworks' revised proposal

TasNetworks' revised proposal for ancillary network services, accepted most of our draft decision, including our maximum total labour rates (except for administration labour rates); maximum overhead rate; and the separation of charges for de-

[1] Note - TasNetworks uses the terminology 'ancillary services'.

energisation, re-energisation and special meter reads. TasNetworks also continued to apply an allowance for the additional direct costs of market support staff involved in fee-based services, although at different values than their initial proposal.[2]

Following discussions with TasNetworks, they submitted an amended version of their revised fee-based ancillary network services model. The amended model provides charges for fee-based ancillary network services that reduced the overhead rate applied to materials to 8.2 per cent; removed the vehicle allowance for technical specialists and corrected several modelling issues.[3]

For public lighting, TasNetworks' revised proposal rejected our draft decision overhead rate on direct costs of 25 per cent, and submitted a cap of 59 per cent.

To support their revised proposed overheads of 59 per cent, TasNetworks submitted an independent consultant report from Sankofa. The report draws comparison with other distributors' cost structures that influence the calculation of public lighting costs, particularly overheads, and argues that a 25 per cent cap on TasNetworks' overheads is unreasonable.

TasNetworks' revised proposal for metering accepted our draft decision. This included accepting our draft decision to not accelerate the depreciation of metering assets, as well as our revised overhead rates.

15.3 Assessment approach

Our final decision assessment approach is the same as for our draft decision. In terms of labour rates, in our draft decision we indicated that while our consultant, Marsden Jacob, had provided maximum reasonable labour rates, we considered them efficient for our purposes.[4] We maintain this view for our final decision.

In reaching our final decision, we have considered additional information submitted by TasNetworks, both with their revised proposal and in response to our information requests. We have also taken into account stakeholder submissions.

15.4 Ancillary network services

Ancillary network services share the common characteristic of being non-routine services provided to individual customers as requested. Ancillary network services are either grouped as 'fee based' or 'quoted' services, depending on how the service price is determined.

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2 TasNetworks, *Tasmanian Transmission and Distribution Revised Proposal*, *1 July 2019 to 30 June 2024*, 29 November 2018, p. 112.

3 TasNetworks, *Response to information request #040 – Alternative Control Services*, 14 January 2019.

4 AER, *Draft Decision: Power and Water Corporation distribution determination 2019 to 2024 - Attachment 15 - Alternative Control Services*, September 2018, p. 14.

We determine fee based service prices for the next regulatory control period as part of our determination, based on the cost inputs and the average time taken to perform each service. These services tend to be homogenous in nature and scope, and can be costed in advance of supply with reasonable certainty. By comparison, prices for quoted services are based on quantities of labour and materials, with the quantities dependent on a particular task. Prices for quoted services are determined at the time of a customer's enquiry and reflect the individual requirements of the customer's service request. For this reason, it is not possible to list prices for quoted services in this decision.

15.4.1 Ancillary network services—Final decision

Our final decision X-factors for ancillary services are provided in appendix A. They have changed marginally from the draft decision based on our revised labour escalation forecasts.

Fee based services

TasNetworks' revised proposal incorporated many aspects of our draft decision in their pricing model for ancillary network services, including our:

- decision on efficient labour rates (except for administration)
- recommendation to split charges for disconnection, reconnection; and special meter reads to better reflect the differing time requirements of these services
- maximum overhead rate of 61 per cent which TasNetworks applied to their direct labour costs.[5]

TasNetworks' also made other changes to their pricing model, including:

- applying the premium service escalation rates that we approved
- adding a $20 vehicle allowance to the technical specialist rate
- applying the maximum overhead rate to materials
- continuing to apply an allowance for the additional direct costs of market support staff involved in the delivery of fee-based services.

Following further feedback, TasNetworks removed the $20 vehicle allowance on the technical specialist rate; revised the overhead rate on materials to 8.2 per cent; as well as making other minor changes and corrections.

Our final decision is to accept the revised model (following TasNetworks' further amendments), except for services that rely on the administration labour rate, some

[5] The cost-build up for ancillary network service fees is primarily based on labour, relying on labour time, type of labour, and the total labour rate. The total labour rate includes the raw wage, on-costs (leave, superannuation etc.), and related overheads. This overhead rate is specifically applied to labour costs, which distinguishes it from public lighting overheads, which are based on direct costs (both opex and capex).

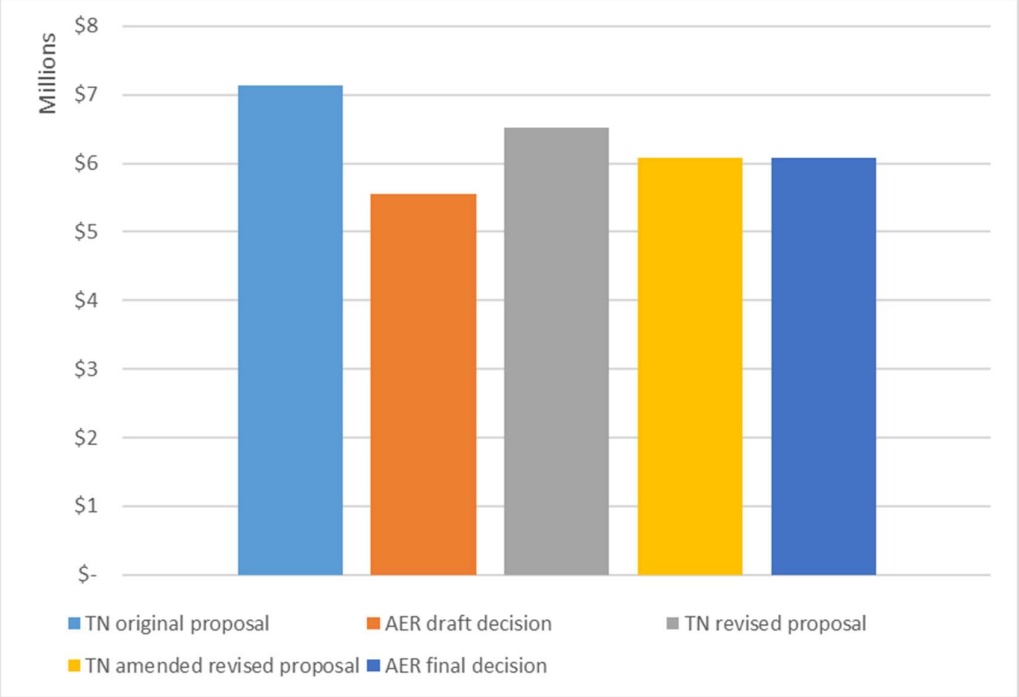
minor modelling corrections and an update to inflation. Our final decision is to base TasNetworks' administration labour rate on the highest of the mainland NEM jurisdictions considered in the Marsden Jacob report[6] (rather than lowest, as per our draft decision), as per Table 15-1 below.[7] Our final decision prices, based on substitution of this labour rate, are outlined in appendix A.

Table 15-1 Administration labour rate

	Administration labour rate (base plus on-costs)			AER final decision - maximum total hourly rate (base plus on-costs plus overheads)
	TasNetworks' initial and revised proposal	AER draft decision	AER final decision	
Administration hourly labour rate $19-20	$71.60	$57.49	$65.14	$101.43

The indicative impact of these changes on expected revenue is shown below.

Figure 15-1: Indicative $2019–20 revenue for fee-based services



6 Marsden Jacob, *Review of alternative control services*, September 2018.

7 Note: This Marsden Jacob report only considered New South Wales, the Australian Capital Territory, the Northern Territory and Tasmania.

Note: based on same volume of services. AER draft decision revenue is based on separate prices for de-energisation, re-energisation; and special meter reads rather than the lower price applying to both services.

New ancillary network services

Consistent with our draft decision, if new services arise in the 2019–24 regulatory control period with characteristics that are the same or essentially the same as other alternative control services,[8] we consider that they should be priced as a quoted service until the next regulatory period. This service and pricing methodology should be disclosed through each distributor's annual pricing process.

Quoted services

TasNetworks' revised proposal accepted our draft decision labour rates except for administration.[9] They also proposed adding three new labour rates that include a specific vehicle allowance of $20, as set out in our draft decision:

- Distribution electrical technician – including vehicle
- Distribution operator – including vehicle
- Asset inspector – including vehicle.

o Our final decision is to accept these proposed new labour rates as they provide clarity for customers for services that require a vehicle, as well as to substitute a new administration labour rate (as outlined above). These final decision labour rates (revised for our final decision on WACC)[10] are outlined in appendix A in Source: TasNetworks, Fee-based services model distribution, revised December 2018, AER Analysis.

Table 15-4. We note that, consistent with our draft decision, the total quoted service labour rates are net of the margin (WACC), which is applied as a separate component of the quoted services form of control formula.

15.4.2 Ancillary network services—Reasons for final decision

[8] Service classification is set out in attachment 12 of our draft decision see: AER, *TasNetworks 2019–24 - Distribution determination – final decision – Overview*, April 2019, section 5.1). We generally classify services in groupings rather than individually. This obviates the need to classify services one-by-one and instead defines a service cluster, such that where a service is similar in nature it would require the same regulatory treatment. This provides distributors with flexibility to alter the exact specification (but not the nature) of a service during a regulatory control period.

[9] TasNetworks, *Tasmanian Transmission and Distribution Revised Proposals 2019-2024*, 29 November 2018, p. 113.

[10] Per our draft decision (and accepted by TasNetworks), the overhead rate applied for quoted services is adjusted by the WACC.

Administration labour rate

In our draft decision, we did not accept TasNetworks' proposed administration labour rate[11] and instead substituted a rate based on the lowest of jurisdictions considered and in line with the recommendations of our consultant, Marsden Jacob.

TasNetworks' revised proposal maintained that their initial proposed administration labour rate is appropriate.[12] TasNetworks argued that applying the lower rate of jurisdictions considered is not appropriate as there are limitations to using Average Weekly Earnings as a method of comparing jurisdictions as well as with the Hays labour benchmarking survey data.[13] TasNetworks also engaged Sankofa Consulting who supported these arguments and analysed RIN data to demonstrate that TasNetworks' support staff hourly labour rate is at the lower range of rates of distributors.[14]

We consider that TasNetworks has put forward reasonable arguments in response to our draft decision. However, TasNetworks' proposed administration labour rate is higher than both the Marsden Jacob recommended maximum labour rate for Tasmania (based on the lowest of jurisdictions considered), as well as the maximum labour rate if we used the highest of the jurisdictions considered. Consistent with our draft decision, we continue to consider that the Marsden Jacob recommended maximum labour rates are efficient.[15] However, we consider TasNetworks arguments around the need to pay higher wages to have some merit, as staff may be willing to relocate to other jurisdictions to earn higher wages. Therefore, our final decision is to reject TasNetworks' proposed labour rate, and instead substitute the administration labour rate based on the highest of considered jurisdictions to provide TasNetworks with a reasonable opportunity to recover their efficient costs.

Fee based services

TasNetworks' revised prices for fee-based services (as amended) are based on its own model, updated for some of our inputs, including the maximum overhead rate recommended by our consultant for labour costs of 61 per cent.

This maximum overhead rate was based on benchmarking work undertaken by our consultant, Marsden Jacob.[16] It encapsulates all other costs included in a distributor's total labour rates aside from raw labour and labour related on-costs. This means that

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11 For the purposes of this discussion, administration labour rate refers to the base/raw labour rate plus on-costs, but NOT overheads.

12 TasNetworks, *Tasmanian Transmission and Distribution Revised Proposals 2019-2024*, 29 November 2018, p. 112.

13 TasNetworks, *Tasmanian Transmission and Distribution Revised Proposals 2019-2024*, 29 November 2018, p. 113.

14 Sankofa Consulting, *Sankofa – Review for TN on the AER's draft decision for ACS*, November 2018, pp. 10–11.

15 AER, *Draft Decision: TasNetworks Distribution Determination 2019 to 2024 – Attachment 15 – Alternative Control Services*, September 2018, p. 17.

16 Marsden Jacob, *Review of alternative control services*, September 2018, p. 8.

this overhead rate is specifically applicable to labour, which is the key cost input for ancillary network services. This distinguishes it from other overhead rates that might be applied on the basis of operating or capital costs. We consider that 61 per cent is a reasonable percentage to build up to a total labour rate, and it is consistent with benchmarking of the range of overhead rates Ausgrid, Essential and Evoenergy proposed in their initial proposals.[17] It is also comparable to the 65 per cent that Marsden Jacob recommended for the previous regulatory period.[18] Marsden Jacob also advised that:

> In our experience reviewing commercially confidential information in other capital intensive industries such as water and gas, overhead rates for non-retail businesses in the order of 45 to 65 per cent are not unreasonable.[19]

TasNetworks also included an amount for the direct costs of market support staff, which we rejected in our draft decision, instead adopting our maximum overhead rate. This means that all of the revised prices proposed by TasNetworks are higher than those we considered efficient in our draft decision.

Likewise, by TasNetworks applying our overhead methodology to their model, some of the revised prices proposed by TasNetworks are higher than their initial proposal. We discuss each of these below.

Additional direct costs of market support staff

We have considered whether additional direct costs of market support staff involved in the delivery of fee-based services should be included in the charges for fee-based services, or whether there is a risk of double-counting with the overhead rate. TasNetworks' submitted that these costs are directly allocated and were not included in the overheads allocated in their initial proposal.[20] This cost is the time that market support officers spend on the service, charged at the average market support officer rate, which is then escalated by overheads.

Our final decision is to accept these costs as part of the generation of fee-based service charges as we are satisfied that they are not captured by the general overhead rate applied. We also note that the labour rate applied is below the Marsden Jacob maximum for administration, so we consider that it is efficient. This means that the revised charges we are accepting in our final decision are above the maximum we considered efficient in our draft decision, as we now agree a small amount should be added to each service for the market support officer costs so that TasNetworks has a reasonable opportunity to recover their efficient costs.

Application of AER's overhead rate

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17 Marsden Jacob, *Review of alternative control services*, September 2018, pp. 7–8.

18 Marsden Jacob, *Review of alternative control services*, September 2018, p. 7.

19 Marsden Jacob, *Review of alternative control services*, September 2018, p. 7.

20 TasNetworks, *Response to AER Information Request #040 – Alternative Control Services,* 14 January 2019.

TasNetworks' revised proposal incorporated our maximum overhead rate of 61 per cent to their modelling. This is compared to their initial proposal where there were several overhead related costs included in the pricing cost build-up, including a profit margin and several types of cost allocation methodology overheads.

TasNetworks application of the maximum overhead rate reduced their proposed prices for some services relative to their initial proposal (where the effective total overhead rate was above 61 per cent). However, for other services, applying the maximum overhead rate led to TasNetworks' proposing prices that are higher than their initial proposal and our draft decision.

In considering these latest proposed prices, we were cognisant of the changes TasNetworks has made to their pricing model to incorporate our draft decision. Given the revised ancillary network services model adopts our overhead rates, it is not reasonable to hold TasNetworks to prices that were generated using their original methodology. Therefore, on balance, we consider that TasNetworks should be allowed to apply our maximum overhead rate to all of their ancillary network services, noting that this leads to some higher prices than their initial proposal. Notably, our final decision still results in total revenue expected from ancillary network services that is much lower than TasNetworks' revised (as amended) and initial proposals.

Quoted services

TasNetworks proposed three new quoted service labour categories and rates where a vehicle is required.[21] The labour rate was based on the amounts we accepted in the draft decision, increased by the $20 vehicle allowance recommended by Marsden Jacob for the field worker labour category.[22] In our draft decision, we matched these labour categories to the technical specialist labour category in our 2017–19 decision. This labour category does not specifically have a vehicle allowance applied to it (as it is covered by overheads). Our final decision is to accept these proposed labour rates, inclusive of a vehicle allowance. Our reasoning is that if TasNetworks considers that a vehicle is needed for some jobs then this should be recognised in the total labour rate applied, and the $20 maximum recommended by Marsden Jacob is an efficient maximum. We consider that these labour rates are acceptable as they fall below the maximum allowed for the technical specialist and field worker labour category.

Table 15-2 Comparison of total labour rates (base plus on-costs plus overheads) for proposed new labour categories ($19–20)

	TasNetworks proposed total labour rate	AER maximum - Technical Specialist	AER maximum - Field worker
Distribution technician - electrical including	$121.87	$143.21	$139.32

[21] TasNetworks, *Tasmanian Transmission and Distribution Revised Proposals 2019-2024*, 29 November 2018, p. 113.

[22] Marsden Jacob, *Review of alternative control services*, September 2018, p. 8.

	TasNetworks proposed total labour rate	AER maximum - Technical Specialist	AER maximum - Field worker
Vehicle			
Distribution operator - including Vehicle	$134.72	$143.21	$139.32
Asset inspector - including vehicle	$107.93	$143.21	$139.32

Note: AER maximum rates will differ marginally to draft decision given changes in the WACC which is netted off overheads in recognition of its separate application as part of the margin, as well as a minor change to inflation.

15.5 Public lighting

15.5.1 Public lighting—Final decision

Our final decision is to reject TasNetworks' revised proposal for public lighting. Specifically, we consider that TasNetworks has not demonstrated that an increase in overheads to 59 percent represents the recovery of efficient costs for these services. Instead, we have capped overheads at 35 per cent of direct costs for the 2019–24 regulatory control period.

Our final public lighting prices for 2019-20 and the relative X factors are set out at appendix B.

15.5.2 Public lighting—Reasons for final decision

To support their proposed 59 per cent cap on overheads, TasNetworks submitted a consultant report by Sankofa. This report argued that our draft decision of a 25 per cent cap on overheads is insufficient. The report stated that due to fundamental differences in the mechanism of deriving public lighting charges, variation in maintenance profiles, ownership of public lighting assets and types of technology across different NEM jurisdictions, TasNetworks cannot be viewed as inefficient based on benchmarking their proposed level of overheads against Victorian distributors. In addition to the 25 per cent overhead cap allowed for public lighting in Victoria, the Victorian distributors are allowed expenditure items such as call centre, complaints handling, accounts management and GIS, as direct opex costs.[23]

Stakeholder submissions raised concerns over proposed increases in overheads being arbitrary in nature. They also pointed to insufficient stakeholder consultation and a lack of appropriate service level agreements.[24]

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[23] TasNetworks – *Sankofa- Review of AER's draft decision on benchmarking public lighting overheads*, p. 3 submitted with revised proposal.

[24] Consumer Challenge Panel 13, *Submission on AER draft decision and TasNetworks' revised proposal*, January 2019 and Local Government Association of Tasmania submissions, *Submission on AER draft decision and TasNetworks' revised proposal*, January 2019.

Having reviewed the Sankofa report, we accept that our draft decision benchmark cap on TasNetworks' public lighting overheads of 25 per cent of direct costs does not provide TasNetworks with a reasonable opportunity to recover their efficient costs. This is because it did not include a range of additional costs that are allowed to Victorian distributors, which amount to around an additional 6 per cent.

The Sankofa report does not however provide support for TasNetworks' proposed 59 per cent overhead cap. A 59 per cent overhead cap would see public lighting prices increase significantly—in the order of 30 per cent, in 2019–20. We do not consider the 59 per cent cap, and the resulting price increase that would flow from it, to represent the recovery of efficient costs.

We note that TasNetworks' revised proposal phased in the impact of the increased overheads, and proposed to contain their average nominal price increase to 9.4 per cent in 2019–20, to take into account the price sensitivity of councils. We agree with this approach, and have sought to avoid price shocks and also smooth out the nature of the price increases faced by councils, but the increases provided by this decision are lower than those sought by TasNetworks.

Factoring in the additional costs identified in the Sankofa report, we consider that our final decision overhead cap of 35 per cent on direct costs provides TasNetworks with a reasonable opportunity to recover their efficient costs. This allows for the addition of up to 6 per cent for costs we did not include in our draft decision overhead cap of 25 per cent. These include expenditure items such as call centre, complaints handling, accounts management and GIS as direct opex costs that are accounted for outside of the overhead cap for Victorian distributors.

Further, we also accept, that given the difficulties of benchmarking overheads with the limited information available, it is prudent to further increase the overhead cap by an additional 4 per cent. Given the uncertainty of forward-looking cost trends at this point, we consider this will provide a reasonable opportunity for TasNetworks to recover their efficient costs.

Our final decision results in an increase in TasNetworks' average nominal price for public lighting services of 3.0 per cent in 2019–20, followed by real price increases of 1.7 per cent in each of the remaining four years.

Stakeholder submissions further highlighted that TasNetworks' process for reviewing and developing public lighting costs lacked transparency. The Local Government Association of Tasmania (LGAT) and the CCP 13 commented that TasNetworks did not explore the possibility of service level agreements for public lighting and cost saving avenues in developing their 2019–24 proposal. LGAT is keen to work with TasNetworks to ensure a service level agreement for public lighting is developed.

We recommend that TasNetworks engage with interested stakeholders on service level agreements and improve their customer engagement with public lighting customers during the 2019–2024 regulatory period.

15.6 Metering

Metering assets are used to measure electrical energy flows at a point in the network to record consumption data for billing purposes. We are responsible for the economic regulation of type 6 and 7 metering services provided by TasNetworks. TasNetworks' type 6 metering services are classified as alternative control services, while type 7 metering services are classified as standard control services.[25]

Since the introduction of the Power of Choice reforms on 1 December 2017, TasNetworks is no longer permitted to install or replace type 6 meters. Therefore, our final decision settles the prices for type 6 metering services TasNetworks provides to support the continued operation of existing type 6 meters.

15.6.1 Metering—Final decision

TasNetworks accepted our draft decision on metering.[26] Therefore, our final decision only updates the inputs in TasNetworks' metering model to reflect actual metering expenditure in 2017–18, our final decision on weighted average cost of capital, and the most recent CPI escalation. The final decision metering prices, effective for the first year of the 2019–24 regulatory period, are set out in appendix C.

Accelerated Depreciation

TasNetworks acknowledged our comments that they had not demonstrated customer support for accelerated depreciation of metering assets. TasNetworks noted customers' concern regarding affordability, and removed it from their revised proposal. Both the Tasmanian Council of Social Service Inc.[27] and Aurora Energy[28] commented on TasNetworks' proposed accelerated depreciation, stating that they welcomed the removal of accelerated depreciation.

TasNetworks' revised proposal indicates that their stance on depreciation is unchanged, and they will seek customer support to apply accelerated depreciation in the 2024–29 period.

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[25] AER, *Draft decision – TasNetworks distribution determination 2019 to 2024 – Attachment 12 Classification of Services,* September 2018, p. 24.

[26] TasNetworks, *Tasmanian Transmission and Distribution Revised Proposals 2019-2024,* November 2018, pp. 105–108.

[27] TasCOSS, *Submission to the Australian Energy Regulator's draft decision on the TasNetworks transmission and distribution determination 2019 to 2024*, December 2018, p. 5.

[28] Aurora Energy, *Submission to AER draft decision and TasNetworks revised proposal*, December 2018, p. 4.

A Ancillary network services prices

Table 15-3 Fee based ancillary network service prices for 2019–20, AER final decision ($2019–20)

Fee based service	AER final decision
De-energisation, re-energisation, special reads and retail contract terminations	
Site visit - no appointment - De-energisation, Re-energisation	$78.76
Site visit - no appointment - special reads	$49.99
Site visit - non-scheduled visit	$131.78
Site visit - same day premium service	$198.87
Site visit - after hours	$315.96
Site visit - credit actions or site issues	$141.09
Site visit – credit actions pillar box/pole top	$246.58
Site visit – current transformer (CT) metering	$126.71
Site visit – pillar box/pole top	$246.58
Site visit - pillar box/pole top Wasted Visit	$141.09
Meter test	
Meter test - single phase	$228.93
Meter test - multi phase	$451.03
Meter test – current transformer (CT)	$500.39
Meter test - after hours	$883.04
Meter test - wasted visit	$80.87
Supply abolishment	
Remove service & meters	$250.68
Supply abolishment - after hours	$618.34
Supply abolishment - wasted visit	$154.78
Tee-up	
Tee-up/Appointment	$131.59
Tee-up/Appointment – after hours	$665.67

Fee based service	AER final decision
Tee-up/Appointment – no truck – after hours	$339.63
Tee-up/Appointment – wasted visit	$82.23
Miscellaneous service	
Open turret	$117.88
Data download	$253.61
Alteration to unmetered supply	$191.92
Meter Relocation	$167.24
Tiger tails - standard single/multi-phase	$616.71
Tiger tails - scaffolding single phase	$982.64
Tiger tails - scaffolding multi-phase	$1,081.35
Miscellaneous service	$105.54
Miscellaneous service – after hours	$520.76
Miscellaneous service – wasted visit	$80.87
Administration	$47.80
Statutory right - access prevented	$1,183.99
Tariff change	$47.80
Emergency maintenance contestable meters	$51.25
Emergency maintenance contestable meters - after hours	$339.63
Meter recovery and disposal	$93.21
Connection establishment charges	
Creation of a NMI	$39.06
Overhead service, single span - single phase	$554.08
Overhead service, single span - multi phase	$791.95
Underground service in turret/cabinet - single phase	$167.09
Underground service in turret/cabinet - multi phase	$218.98
Underground service with pole mounted fuse - single phase	$421.31
Underground service with pole mounted fuse - multi phase	$537.44
Basic connection – after hours	$1,054.06
Connection establishment - wasted visit	$141.15

Fee based service	AER final decision
Temporary Disconnection/Reconnection	
Disconnect/reconnect overhead service for facia repairs - single phase	$411.24
Disconnect/reconnect overhead service for facia repairs - multi phase	$509.96
Temporary disconnect/reconnect – retailer requested outage	$361.89
Temporary disconnect/reconnect – after hours	$883.04
Temporary disconnect/reconnect – wasted visit	$164.47
Basic connection alteration	
Connection alteration – overhead single phase	$313.90
Connection alteration – overhead multi-phase	$412.61
Connection of new consumer mains to an existing installation – underground single phase to turret	$190.51
Connection of new consumer mains to an existing installation – underground single phase to pole	$363.25
Connection of new consumer mains to an existing installation – underground multi-phase to turret	$239.87
Connection of new consumer mains to an existing installation – underground multi-phase to pole	$461.97
Augment single phase overhead service to multi-phase supply	$865.98
Augment multi-phase overhead service to single phase supply	$628.11
Augment single phase overhead service to underground supply (turret)	$389.19
Augment multi-phase overhead service to underground supply (turret)	$487.90
Augment single phase overhead service to underground supply (pole)	$495.34
Augment multi-phase overhead service to underground supply (pole)	$611.47
Basic connection alteration – after hours	$1,136.63
Basic connection wasted visit	$153.49

Source: TasNetworks, Fee-based services model distribution, revised December 2018, AER Analysis.

Table 15-4 Quoted service ancillary network services hourly labour rates for 2019–20, final decision ($2019–20)

TasNetworks' labour category	AER labour category[1]	AER final decision - maximum total hourly rate (base plus on-costs plus overheads)[2]
Cable jointer	Field Worker	$112.83
Customer connections - commercial metering	Field Worker	$135.33
Customer connections - service crew	Field Worker	$122.34

TasNetworks' labour category	AER labour category[1]	AER final decision - maximum total hourly rate (base plus on-costs plus overheads)[2]
Designer	Engineer	$120.90
Distribution electrical technician	Technical Specialist	$102.02
Distribution electrical technician - including vehicle		$122.02
Distribution linesman	Field Worker	$110.56
Distribution linesman - live line	Field Worker	$122.55
Distribution operator	Technical Specialist	$114.89
Distribution operator - including vehicle		$134.89
Asset inspector	Technical Specialist	$88.06
Asset inspector - including vehicle		$108.06
Field services co-ordinator	Technical Specialist	$110.03
Labourer - overhead	Field Worker	$99.99
Meter reader	Field Worker	$94.16
Project Manager	Engineer	$135.85
General Administration	Administration	$101.43
Engineer	Engineer	$130.48
Senior engineer	Senior Engineer	$150.20

Source: AER analysis.

[1] AER labour categories are based on Marsden Jacob, and are consistent with the mapping used in the AER's draft 2017–19 TasNetworks' decision which was carried through to the final decision except for Distribution Electrical Technician which has been mapped to Technical Specialist per Marsden Jacob's report.

[2] Consistent with Marsden Jacob's recommendations, an overhead rate of 61 per cent has been applied less a margin equal to TasNetworks' WACC. Field Workers have had an additional $20 added for vehicle costs per Marsden Jacob's recommendations.

Table 15-5 AER final decision on X factors for each year of the 2020–24 regulatory control period for ancillary network services (per cent)

	2020–21	2021–22	2022–23	2023–24
X factor	-0.3383%	-0.4122%	-0.4258%	-0.4733%

Source: AER analysis.

Note: To be clear, labour escalators themselves are positive for each year of the regulatory control period. However, the labour escalators in this table are operating as defacto X factors. Therefore, they are negative.

B Public lighting services prices

Table 15-6 AER's final decision on X factors for each year of the 2020–24 regulatory control period for public lighting services.

Period	2020–21	2021–22	2022–23	2023–24
X factor	-1.70%	-1.70%	-1.70%	-1.70%

Table 15-7 AER's final decision on public lighting prices for the 2019–20 ($nominal)

2019-20 Private Contract Lights	TasNetworks' Revised Proposal price	AER Final Decision
32W Compact Fluorescent	19.17	18.67
42W Compact Fluorescent	19.17	18.67
42W Compact Fluorescent - Bottom Pole Entry	19.17	18.67
2x24W Compact Fluorescent	19.58	19.05
1x20W Fluorescent	19.04	18.55
1x40W Fluorescent	19.06	18.56
2x20W Fluorescent	19.32	18.81
2x24W Fluorescent	19.19	18.69
T5 Fluorescent 2 x 24W	19.32	18.81
20 Fluorescent 1X20FL	19.04	18.55
2x40W Fluorescent	19.36	18.84
3x40W Fluorescent	23.15	22.32
4x20 Fluorescent	19.90	19.34
4x40W Fluorescent	23.45	22.60
100W Sodium Vapour	23.35	22.51
150W Sodium Vapour	23.61	22.75
250W Sodium Vapour	23.78	22.91
250W Sodium Vapour - Flood Light	23.78	22.91
400W Sodium Vapour	23.84	22.96
400W Sodium Vapour - Flood Light	23.84	22.96
70W Sodium Vapour	19.44	18.92
100W Incandescent	22.36	21.60
60W Incandescent	18.87	18.40
18W LED	13.51	13.47

2019-20 Private Contract Lights	TasNetworks' Revised Proposal price	AER Final Decision
18W LED Decorative - Bottom Pole Entry	13.51	13.47
18W LED Decorative - Side Entry	13.51	13.47
18W LED Decorative - Top Entry	13.51	13.47
25W LED	13.51	13.47
25W LED Decorative - Bottom Pole Entry	13.51	13.47
25W LED Decorative - Side Entry	13.51	13.47
25W LED Decorative - Top Entry	13.51	13.47
30W LED	13.51	13.47
88 LED Light	13.51	13.47
100W Metal Halide	23.61	22.75
150W Metal Halide	23.41	22.56
250W Metal Halide	23.41	22.56
400W Metal Halide	24.09	23.19
70W Metal Halide	20.11	19.53
250W Metal Halide - Flood Light	23.41	22.56
400W Metal Halide - Flood Light	24.09	23.19
125W Mercury Vapour	22.39	21.62
250W Mercury Vapour	22.39	21.62
400W Mercury Vapour	22.54	21.76
50W Mercury Vapour	18.99	18.51
80W Mercury Vapour art decorative	18.95	18.47
80W Mercury Vapour	18.95	18.47
14W LED	13.72	13.07
New technology - Minor	13.72	13.07
New technology - Major	14.49	13.74

2019-20 Public Road Lights	TasNetworks' Revised Proposal price	AER Final Decision
32W Compact Fluorescent	41.39	39.01
42W Compact Fluorescent	41.41	39.03
42W Compact Fluorescent - Bottom Pole Entry	41.41	39.03
2x24W Compact Fluorescent	42.11	39.66
1x20W Fluorescent	43.33	40.72

2019-20 Public Road Lights	TasNetworks' Revised Proposal price	AER Final Decision
1x40W Fluorescent	42.26	39.77
2x20W Fluorescent	43.61	40.98
2x24W Fluorescent	43.58	40.95
T5 Fluorescent 2 x 24W	43.61	40.98
20 Fluorescent 1X20FL	43.33	40.72
2x40W Fluorescent	42.56	40.05
3x40W Fluorescent	49.40	46.24
4x20 Fluorescent	44.19	41.51
4x40W Fluorescent	50.79	47.49
100W Sodium Vapour	48.57	45.52
150W Sodium Vapour	51.21	47.85
250W Sodium Vapour	52.45	48.95
250W Sodium Vapour - Flood Light	56.16	52.25
400W Sodium Vapour	53.04	49.49
400W Sodium Vapour - Flood Light	55.49	51.67
70W Sodium Vapour	41.69	39.27
100W Incandescent	45.17	42.46
60W Incandescent	38.64	36.55
18W LED	39.59	37.24
18W LED Decorative - Bottom Pole Entry	52.62	48.86
18W LED Decorative - Side Entry	52.62	48.86
18W LED Decorative - Top Entry	52.62	48.86
25W LED	39.81	37.44
25W LED Decorative - Bottom Pole Entry	52.85	49.06
25W LED Decorative - Side Entry	52.85	49.06
25W LED Decorative - Top Entry	52.85	49.06
30W LED	39.81	37.44
88 LED Light	39.81	37.44
100W Metal Halide	48.98	45.88
150W Metal Halide	51.39	48.01
250W Metal Halide	52.34	48.83
400W Metal Halide	57.05	53.07

2019-20 Public Road Lights	TasNetworks' Revised Proposal price	AER Final Decision
70W Metal Halide	40.91	38.60
250W Metal Halide - Flood Light	57.35	53.30
400W Metal Halide - Flood Light	57.05	53.07
125W Mercury Vapour	48.64	45.52
250W Mercury Vapour	49.08	45.91
400W Mercury Vapour	50.62	47.29
50W Mercury Vapour	39.18	37.04
80W Mercury Vapour Art decorative	55.51	51.58
80W Mercury Vapour	39.17	37.03
14W LED	37.79	36.88
New technology - Minor	37.79	36.88
New technology - Major	49.69	47.32

C Metering service prices

Table 15-8 Metering X factors for 2019–24

Period	2020-21	2021-22	2022-23	2023-24
Metering X factor	-1.0741%	-1.0741%	-1.0741%	-1.0741%

Note: We do not apply an X factor for 2019-20 because we set the 2019-20 metering charges in this decision.

Table 15-9 Annual Metering Charges for 2019–20

		2019-20
Business LV – Single phase	Capital	$12.76
	Non-capital	$11.55
Business LV – Multi phase	Capital	$25.52
	Non-capital	$23.11
Business LV – CT meters	Capital	$33.01
	Non-capital	$29.88
Domestic LV – Single phase	Capital	$12.33
	Non-capital	$11.17
Domestic LV – Multi phase	Capital	$25.60
	Non-capital	$23.17
Domestic LV – CT meters	Capital	$31.68
	Non-capital	$28.68
Other meters	Capital	$22.52
	Non-capital	$20.39

Source: AER analysis.

Note: Prices for the remaining years of the period will be adjusted for actual CPI during the AER's annual pricing approval process.