DRAFT DECISION

TasNetworks Distribution Determination 2019 to 2024

Attachment 15 Alternative control services

September 2018

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585165

Email: AERInquiry@aer.gov.au

AER reference: 61052

Note

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

The draft decision includes the following attachment:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

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Attachment 12 – Classification of services

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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

15 Alternative control services

This attachment sets out our draft 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 and so the full cost of the service is attributed to that particular customer. We set service specific prices to provide a reasonable opportunity to enable 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.

Revenue from alternative control services represents around 11.5 per cent of TasNetworks' total regulated revenue.[2]

15.1 Draft decision

Our draft decision is to classify ancillary network services, public lighting and metering as alternative control services, as set out in our final Framework and Approach. Our draft decision also maintains our position from our final Framework and Approach to apply caps on the prices of individual services in the next regulatory control period to all alternative control services. We consider capping individual services prices promotes cost reflective pricing which outweighs any detriment from increased administration costs.

Our draft decision is to not accept some elements of TasNetworks' proposed charges for ancillary network services, metering and public lighting where the proposed fees exceed the efficient cost of providing the services. We also do not accept TasNetworks' proposal to accelerate depreciation of its metering stock.

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

- Section 15.4 - Ancillary Network Services
- Section 15.5 - Public Lighting
- Section 15.6 - Metering.

15.2 TasNetworks' Proposal

We received separate proposals from TasNetworks for ancillary network services, public lighting and metering. In each case TasNetworks adopted our service

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

2 Estimate drawn from TasNetworks' regulatory proposal.

classification and control mechanisms as set out in our final Framework and Approach.[3]

For ancillary network services TasNetworks proposed separating these into fee-based and quoted services consistent with the approach in the current period. For fee-based services TasNetworks proposed an increase in prices reflecting an updated allocation of overhead costs and labour costs that are increasing slightly faster than CPI.[4] TasNetworks utilised a cost build up approach to its fees, with the majority of costs relating to labour costs and the remainder comprising contractor costs, overhead costs and materials.[5]

For quoted services TasNetworks proposed to charge prices based on labour costs (including on-costs and overheads), materials and contractor costs. TasNetworks also proposed to add a margin to promote competitive neutrality with alternative providers of some connection services.[6]

For public lighting TasNetworks submitted that charges currently fall short of the cost of provision. To achieve cost reflectivity, TasNetworks proposed to increase public lighting charges over 10 years during both the 2019–24 and 2024–29 regulatory control periods. Consistent with the current regulatory period TasNetworks proposed to continue to apply an annuity model approach to derive public lighting charges.

Underlying TasNetworks' proposed increase in public lighting charges is a larger allocation of overhead costs compared to the current period. TasNetworks submitted that its existing overhead allocation was based on information from prior to the formation of TasNetworks (now incorporating both distribution and transmission services). Also, that its proposed allocation of overheads is consistent with its approved cost allocation method and is insufficient to cover allocated costs.[7]

For metering TasNetworks proposed to depreciate its entire fleet of metering assets over the 2019–24 regulatory control period. TasNetworks did not propose any metering capex due to no longer being responsible for installation of new meters. TasNetworks developed its metering charges using the building block model, based on the Post-tax Revenue Model. [8]

15.3 Assessment approach

The National Electricity Rules (NER) afford more discretion for determining the control mechanism for alternative control services than those set out for standard control services. For example, there is no requirement to establish a full building block model

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3 AER, Framework and Approach paper for TasNetworks, July 2017, pp. 11 and 13.

4 TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024, January 2018, p. 208.

5 TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024 - Alternative Control Services Descriptions Paper, January 2018, p. 20.

6 TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024, January 2018, p. 209.

7 TasNetworks response to information request 011, section 2.1.1 part a, p. 6 of 8.

8 TasNetworks, *Transmission and Distribution Regulatory Proposal 2019-2024*, 31 January 2018, pp. 201–202.

to set the revenue to be earned from the services as there is for standard control services. The control mechanism may be either a control on the price of the service, or the revenue to be earned from the service, or both. As a general principle we attempt to regulate alternative control services in a lighter handed manner than standard control services.

Our distribution determination must state the basis of the control mechanism to apply to alternative control services.[9] Our decision on the form of control mechanism for alternative control services must be in accordance with our final Framework and Approach.[10] The formulae that give effect to the form of control must be as set out in the Framework and Approach unless we consider that unforeseen circumstances justify a departure.

In deciding on a control mechanism for alternative control services, we must have regard to potential competition in the relevant market, administrative costs, applicable regulatory arrangements, consistency between regulatory arrangements, and any other relevant factor.[11] The control mechanism for alternative control services may use elements of the building block model for standard control services but there is no requirement to apply the building block model exactly as set out in Part C of the NER.

The different regulatory requirements for alternative control services compared to standard control services recognise their different characteristics. Standard control services are central to electricity supply and are relied on by all customers. In contrast, alternative control services tend to be customer specific. Accordingly our approach to assessing alternative control services is different to that of standard control services.

For the fee-based component of ancillary network services we undertook a bottom up cost assessment. Labour costs are the major input in the cost build-up of prices for ancillary network services. Therefore, our assessment focuses on comparing TasNetworks' proposed prices to those that would be derived from applying our maximum efficient labour rates to TasNetworks' labour time estimates. If these are higher, then we apply our maximum efficient price. This is slightly different to the approach for other distributors where we directly compare our maximum labour rates to the distributor's labour rates. This is because TasNetworks' modelling splits out several categories of overheads and costs. Section 15.4.2 discusses our maximum total labour rates.

We also assess the proposed time taken to perform the service as well as the escalators and allocators applied by TasNetworks as these are also cost inputs which determine the final price for some services. Our assessment of these inputs is informed by benchmarking against inputs applied by other distributors and based on the recommendations of our consultant Marsden Jacob Associates (Marsden Jacob).

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9 NER, cl. 6.2.6(b).

10 NER, cl. 6.12.1(12).

11 NER, cl. 6.2.5(d).

For the quoted services component of ancillary network services, we compared TasNetworks' proposed labour rates (which were inclusive of on-costs but not overheads) to the corresponding maximum labour rate recommended by our consultant. We then applied our consultant's recommended maximum overhead rate (adjusted for the margin introduced by TasNetworks) to determine the maximum overheads that TasNetworks can recover when applying these labour rates.

For public lighting, we maintain our Framework and Approach position to apply price caps for individual public lighting services as the form of control.

We assessed TasNetworks' proposal by analysing its public lighting model, studying historical data, and by benchmarking proposed costs against other NEM distributors and against independent data and information. In particular we assessed proposed labour rates and input costs (such as hardware, luminaire costs) used to derive charges. We also relied on recommendations of Marsden Jacob.

For metering, we maintain our final Framework and Approach position to apply price caps for individual public lighting services as the form of control.

We have assessed TasNetworks' proposal by analysing the metering Post-tax Revenue Model, studying historic data and benchmarking costs against other NEM distributors. In particular we have assessed the opex costs on a category basis and how these costs have trended over time. We also relied on recommendations of Marsden Jacob for labour rates when assessing metering. Further, we considered stakeholder feedback with regards to TasNetworks' proposal on accelerated depreciation.

15.4 Ancillary network services

Ancillary network services are provided to individual customers on an 'as needs' basis (e.g. relocating poles or temporary supply at a customer's request.). Ancillary network services involve work on, or in relation to, parts of TasNetworks' distribution network.

For the purposes of this draft decision, we refer to the service groups 'fee based services' and 'quoted services' collectively as a single group called 'ancillary network services'.

Prices for fee based services are predetermined based on the cost of providing the service and the average time taken to perform it. 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 and service requested.

15.4.1 Ancillary network services—Draft decision

Service classification - Ancillary network services

Our draft decision is to classify ancillary network services as alternative control services. This is consistent with our final Framework and Approach and TasNetworks' proposed classification of ancillary network services.[12]

Form of control - Ancillary network services

Our draft decision is to apply a price cap form of control for fee based and quoted services. This is consistent with our final Framework and Approach and TasNetworks' proposed form of control for fee based services.[13] Under a price cap form of control, we set a schedule of prices for the first year of the regulatory period, 2019–20. For 2020–21 and subsequent years the prices for fee based services are determined by adjusting the previous year's prices by the formula set out in Attachment 13.

For quoted services, our draft decision is to accept TasNetworks' proposed addition of a 'margin' equal to its nominal vanilla WACC to its quoted services price formula.[14] See the formula set out in Attachment 13.

Consistent with previous decisions, we have also applied a labour escalator as the X factor. Our proposed X factors in this draft decision are set out in Appendix A. This is different to TasNetworks' proposed model which uses the X factor as a smoothing factor, as well as separately applying a labour escalator.

Fee based services - Ancillary network services

Our draft decision is to accept TasNetworks' proposed ancillary network service fee based services, but to not accept most proposed charges associated with these services. We consider not all of TasNetworks' proposed charges are efficient, primarily due to the level of overheads allocated, and have substituted our own maximum total labour rates to generate efficient charges, outlined in Appendix A. A discussion of the reasons for our decision is at section 15.4.2. It is open to TasNetworks to explain further why the proposed level of overheads and fees should be considered efficient.

Changes to fee based services

TasNetworks proposed several changes to fee based services. These include the introduction of miscellaneous service charges to cover:

- creation of National Metering Identifier
- statutory right - access prevented
- network tariff change (back office)

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12 AER, *Framework and Approach paper for TasNetworks*, July 2017, p. 15.
TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024*, January 2018, pp. 22 and 207.

13 AER, *Framework and Approach paper for TasNetworks*, July 2017, pp. 44-45.
TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 20*19-2024, January 2018, pp. 207–209.

14 TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024*, January 2018, p. 209.

- emergency maintenance contestable meters
- meter recovery and disposal
- tiger tails.[15]

TasNetworks also proposed:

- including an additional connection service to provide temporary disconnection and reconnection in response to a retailer's request for an outage[16]
- that the service 'connection of new consumer mains to an existing installation' be separated into different fees for a connection to a turret as compared to a pole, to reflect the need for two technicians for the latter service.[17]

TasNetworks also proposed to abolish a number of services made redundant by the Power of Choice metering reforms.

We accept the above changes to fee-based services.

Premium services and After hour services

Our draft decision is consistent with our 2017–19 determination in relation to premium service escalators as shown in table 15.1 below.

Table 15.1: Premium service escalators

Premium service	AER Final 2017–19 Determination - Margin	TasNetworks proposed margin - 2019–24
Non-scheduled visit	10 per cent	10 per cent
After hours	5 per cent	5 per cent
Same day premium	10 per cent	15 per cent

Source: AER, *TasNetworks distribution final determination 2017-19 - Attachment 16 - Alternative control services,* April 2017, p.16-12. Note that the table in the 2017–19 determination is incorrect in relation to After hours and same day premium, the correct figures are in the model approved as part of the Determination.

Source: TasNetworks, *TN-Fee Based Services Model Distribution*, January 2018.

We accept premium service escalators included in TasNetworks' proposed model as they are consistent with our 2017–19 decision, except for the proposed margin for the Same Day Premium. Subsequent to submitting its regulatory proposal TasNetworks

[15] TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024*, January 2018, pp. 207.

[16] TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024*, January 2018, p. 208.

[17] TasNetworks, *Response to information request #024 - Alternative Control Services and Overheads*, June 2018.

has agreed that it will change the Same Day Premium back to 10 per cent in its revised proposal.[18]

We also affirm our 2017–19 decision in relation to the treatment of after hour services, that:

- travel time of 60 minutes is reasonable
- back office time of 16 minutes is reasonable
- labour rates for after-hours services could be escalated by a maximum of 67 per cent.[19]

These components of TasNetworks' proposed model are consistent with our previous decisions. Our draft decision is to accept them for application in the 2019–24 regulatory control period.

Quoted services - Ancillary network services

In TasNetworks' proposed quoted services model, proposed labour rates include the base cost[20] plus on-costs but not overheads.[21] This is somewhat different to the price cap formula, which states that *Labour* may include overheads.

Nevertheless, we approve all labour rates (raw labour cost plus on-costs) proposed by TasNetworks, except for Administration, as they fall below the maximum recommended by our consultant. We do not approve TasNetworks' labour rate (raw labour cost plus on-costs) for Administration and instead substitute our consultant Marsden Jacob's recommended maximum. We consider Marsden Jacob's recommended maximum labour rates better achieve the National Electricity Objective because they are independently derived, based on authoritative data sources and reflect benchmarking across multiple distributors.

To apply a price cap to overheads, which are not addressed in TasNetworks' quoted services model, we applied the maximum overhead rate of 61 per cent recommended by our consultant to the approved labour rates (raw labour cost plus on-costs).[22] We have also adjusted for the margin, as our consultant recommended that it should be considered as part of the overall overhead allowance. This provides an approved

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18 TasNetworks, *Response to information request #030 - Additional question on Alternative Control Service Overheads*, July 2018.

19 AER, *TasNetworks distribution final determination 2017-19 - Attachment 16 - Alternative control services*, April 2017, pp.16–13.
AER, *TasNetworks distribution draft determination 2017-19 - Attachment 16 - Alternative control services*, April 2017, pp. 16–19.

20 Base cost is referred to as 'raw labour' by TasNetworks. For the purposes of this draft decision we utilise the terminology base cost and raw labour cost interchangeably.

21 TasNetworks, *Response to information request #033 - Alternative control services overheads - including quoted services*, July 2018.

22 Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 8.

maximum total hourly rate (base plus on-costs plus overheads) that TasNetworks should apply for the *Labour* component of quoted services.

Table 15.2: Comparison of TasNetworks' labour categories and rates to AER ($2019–20)

TasNetworks' labour category	TasNetworks proposed hourly rate (base plus on-costs)	AER labour category[1]	AER draft decision - maximum hourly rate (base plus on-costs)	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads)[2]
Cable jointer	$59.62	Field Worker	$59.62	$112.70
Customer connections - commercial metering	$74.07	Field Worker	$74.07	$135.17
Customer connections - service crew	$65.72	Field Worker	$65.72	$122.19
Designer	$77.64	Engineer	$77.64	$120.73
Distribution electrical technician	$65.51	Technical Specialist	$65.51	$101.87
Distribution linesman	$58.16	Field Worker	$58.16	$110.43
Distribution linesman - live line	$65.86	Field Worker	$65.86	$122.40
Distribution operator	$73.78	Technical Specialist	$73.78	$114.72
Asset inspector	$56.55	Technical Specialist	$56.55	$87.93
Field services co-ordinator	$70.66	Technical Specialist	$70.66	$109.87
Labourer - overhead	$51.37	Field Worker	$51.37	$99.87
Meter reader	$47.62	Field Worker	$47.62	$94.05
Project Manager	$87.24	Engineer	$87.24	$135.66
General Administration	$71.60	Administration	$57.49	$89.40
Engineer	$83.79	Engineer	$83.79	$130.29
Senior engineer	$96.46	Senior Engineer	$96.46	$149.98

Source: TasNetworks, *TN-Quoted Services Labour Rates Model - PUBLIC*, January 2018; 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.

New ancillary network services

If new services arise in the period and are classified as Alternative Control Services based on Attachment 12 - Service Classification, then we consider that they should be priced as a quoted service until the next regulatory period. This price should be disclosed through the Annual Pricing regulatory process.

15.4.2 Ancillary network services—Reasons for draft decision

Form of control - Ancillary network services

TasNetworks proposed the inclusion of a margin in its price cap formula for quoted services. TasNetworks submitted that 'inclusion of a margin is consistent with the principle of competitive neutrality, which is that publicly owned businesses should not enjoy a competitive advantage simply because they are publicly owned'.[23] TasNetworks proposed this margin be set equal to WACC.

In support of this proposal TasNetworks advised that from January 2016 it has offered 'Connection Choice' for the design and construction of certain connection elements of new underground developments including:

- high voltage underground networks
- low voltage underground networks
- kiosk substations and switching stations
- public lighting.

For these projects, developers may choose who they engage to undertake the contestable design and construction elements. TasNetworks submitted that in April 2018 it had 109 projects in this process, however 74 per cent of customers were still choosing TasNetworks to undertake both the design and construction of these projects. TasNetworks submitted this is evidence that external providers may not be able to match its prices and the inclusion of a margin in TasNetworks' charges may assist in addressing this issue.[24]

We accept TasNetworks' proposed inclusion of a modest margin. However, in accepting the margin we also accept Marsden Jacob's recommendation 'where these [profit margins] are explicitly identified, however, this allocation is to be recovered – and therefore benchmarked – within the overall overhead allowance'.[25] In practice this means we will offset the margin against the overhead component of labour. By doing

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[23] TasNetworks, *TasNetworks' Transmission and Distribution Regulatory Proposal 2019-2024*, January 2018, p. 209.

[24] TasNetworks, *Response to information request #024 - Alternative Control Services and Overheads*, June 2018.

[25] Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 7.

so we cap TasNetworks' total service charge at what we consider to be efficient levels and avoid accounting for the margin more than once.

Fee based and quoted services

We do not accept all of TasNetworks' proposed prices for fee-based ancillary network services or all proposed labour rates (raw labour plus on-costs) for quoted services . As TasNetworks does not provide total labour rates (raw labour plus on-costs plus overheads) for quoted services we have generated maximums based on Marsden Jacob's recommendations.

For ancillary network services we consider it important to review each of the services with specific focus on the key inputs in determining the price for the service. We consider the key inputs in determining an efficient level of fees for ancillary network services include the underlying labour rates, time taken to perform the service and any material and vehicle costs associated with providing the service.

In considering these inputs we had regard to benchmarks for such services developed by Marsden Jacob. By inputting the maximum benchmarks for labour rates, vehicle costs and times taken to perform services, as developed by Marsden Jacob, we were able to assess TasNetworks' proposed charges for fee based services against a maximum efficient charge.

Figure 15.1: Summary of Marsden Jacob's report to the AER - Review of Alternative Control Services

We engaged Marsden Jacob to provide advice in relation to estimates of reasonable maximum total labour rates for the distributors currently undergoing resets as well as benchmarking of certain fee-based services. Marsden Jacob also provided advice on public lighting and metering input costs.

Marsden Jacob found that although each of the distributors reviewed used different category names and descriptions, the types of labour used to deliver ancillary network services broadly fell into the following five categories:

- administration
- technical services
- engineers
- field workers and
- senior engineers.[1]

Using these categories Marsden Jacob developed benchmark labour rates based on *Hays 2017 Energy sector and office support salary data* against which the efficiency of the proposed labour rates could be assessed.

In assessing the reasonableness of proposed labour rates, Marsden Jacob 'normalised' the rates provided by each business and separated them into 'raw' labour rates, on-costs and overheads.[2]

1. Raw labour costs – based on the Hays salary data and the figures used included a 8.5 per cent escalator.[3]
2. On-costs – to cover both basic leave entitlements and standard on-costs.[4]
3. Overheads – to cover all additional costs. Overall Marsden Jacob recommended a maximum overhead rate of 61 per cent Marsden Jacob also accepted the inclusion of an explicit profit margin, however where these are identified this allocation was benchmarked within the overall overhead allowance.[5]

Based on its study, Marsden Jacob recommended the maximum reasonable benchmark labour rates as set out below. Marsden Jacob recommended that we apply these maximum rates to any services it did not benchmark, to arrive at a maximum rate.

Table 15.3 Maximum total hourly rates (base plus on-costs plus overheads), $2018–19

	Ausgrid	Endeavour	Essential	Evoenergy[1]	TasNetworks[2]	Power and Water
Admin	$102.26	$102.26	$102.26	$108.37	$90.36	$89.94
Technical specialist	$153.39	$153.39	$153.39	$153.00	$144.56	$179.87
Engineer	$191.74	$191.74	$191.74	$191.25	$168.65	$167.88
Field Worker[3]	$147.83	$147.83	$147.83	$147.50	$140.45	$169.89
Senior Engineer	$210.91	$210.91	$210.91	$210.37	$198.75	$203.86

Source: Marsden Jacob Associates, Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version, September 2018, Tables 5 and 7, pp. 8, 10.

Notes: [1] For Evoenergy, Marsden Jacob applied Sydney rates for all labour categories except for Administration as Hays only reports Administration rates for Canberra.

[2] For TasNetworks, Marsden Jacob used the lowest rate for Sydney, Canberra and Darwin for Administration and lower of Sydney and Darwin for other staff as there are no Hays figures for Tasmania. Marsden Jacob has applied the lowest rate as Tasmania has the lowest Average Weekly Earnings rates of any capital city in Australia.

[3] Field worker rate includes an allowance of $20 for a vehicle as an additional overhead.

The maximum hourly rates include the highest of the Hays salary rates for each labour category. Marsden Jacob noted that while these are reasonable maximum rates, more efficient rates may be gained by reference to a different point in the Hays salary bands. For our next distribution determination for these distributors, Marsden Jacob recommended the AER consider whether it is appropriate to reduce the maximum rates to reflect efficiency frontier benchmarks rather than the highest of the Hays rates for each labour category.[6] We note Marsden Jacob's recommendation in the context of future determinations. For the purposes of this draft decision we consider the maximum reasonable rates provided by Marsden Jacob should be considered efficient for our purposes.

References:

1. Marsden Jacob Associates, Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version, September 2018, p. 3.
2. Ibid., p.3.
3. Ibid., p.4.
4. Ibid., pp.5-6.
5. Ibid., pp.7-8.
6. Ibid., p. 8.

Regulatory treatment of overheads and cost allocation

In its discussion of maximum overhead rates, Marsden Jacob noted that capping the overhead rate may have unintended consequences for the broader cost allocation methodology.[26]

We reviewed the objectives of our Cost Allocation Guideline.[27] A distributor's cost allocation method sets out the principles and policies for attributing costs to, or allocating costs between, the categories of distribution services a distributor provides. Hence, in approving a distributor's cost allocation method we approve the methodology it uses to allocate costs. This does not equate to approving the costs.

The approval of actual costs is subject to applicable requirements set out in the NER. Proper application of the cost allocation method does not indicate whether the distributor's expenditure, including overheads, is at efficient levels or otherwise reflects the requirements of the NER, having regard to the revenue and pricing principles and the national electricity objective. By extension, proper application of the cost allocation method does not indicate whether the resulting overhead rates represent efficient levels.

Fee based services

To calculate charges for fee based services TasNetworks used a cost build up approach. Underlying costs include labour, time taken to perform the service, vehicle and material costs and an allocation of direct and indirect overheads (incorporating back office time).

Table 15.4: TasNetworks' labour categories for fee based services

TasNetworks' labour category	AER labour category
Electrical Technician	Technical Specialist[1] Field worker for specific services benchmarked by Marsden Jacob.[2]
Electrical Technician (After hours)	Technical Specialist escalated by 67 per cent[3] Field worker escalated by 67 per cent for specific services benchmarked by Marsden Jacob.
Market Support Officer	Administration

1 This is based on Appendix 2 to the Marsden Jacob report, which is different to the approach in the AER's 2017–19 decision.

2 Based on the Marsden Jacob report the field worker rate has been used for services in the 'De-energisation, re-energisation, special reads and retail contract terminations' and 'Supply abolishment' service groups.

26 Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 8.

27 AER, *Cost Allocation Guideline (Distribution)*, 2008.

[3] Consistent with the AER's 2017–19 decision on After Hour labour rates. When escalating these rates we have not escalated the overhead component.

TasNetworks calculated charges by multiplying the base labour rate (for the labour category required to perform the service) including on-costs by the number of crew and the time taken to perform the service. Vehicle costs are also included where a vehicle is required to perform the service as well as material costs. Escalators are applied to these 'direct costs' for after hours, non-scheduled visits and same day premium services.

To these 'direct costs' TasNetworks added network and corporate overhead costs both for direct administration and supervision and for indirect overhead costs. The proportion of overhead costs allocated to each service is determined by TasNetworks in several ways, with one major component based on the number of times the service is performed and the back office time required for the service. This means services more frequently requested are allocated higher overheads. TasNetworks also has a 'pool' of overheads which it aimed to recover from fee-based services.

Finally, TasNetworks applied a profit margin to generate a total fee for the service.

To determine whether we consider TasNetworks' proposed fees are efficient we applied the Marsden Jacob maximum recommended labour rates including on-costs and overheads to the proposed labour times, accepted the premium service escalators in dollar terms (if relevant) and accepted TasNetworks' material costs. We could not incorporate our labour rates directly into TasNetworks' model, or directly compare them, due to TasNetworks method of overhead allocation. We used the Marsden Jacob maximum benchmarks for our test because we consider these are well considered and reasoned and can be readily adopted to test TasNetworks' proposed fees. In undertaking this comparison we used TasNetworks' fees in $2019–20, and escalated our calculations (based on TasNetworks inputs in $2016–17) accordingly.

Based on a comparison of TasNetworks' proposed fees to our calculated maximums we have assessed that most of TasNetworks proposed fees are higher than we consider efficient and we have instead imposed our maximum efficient fees. The main driver of our interventions is the level of overheads TasNetworks applied to its fee-based services.

In determining efficient labour rates for TasNetworks, we must base our considerations on utility labour rate information from other jurisdictions because equivalent information is not available for Tasmania. In our 2017–19 determination the labour rates we used for Tasmania were the highest of the jurisdictions assessed as we considered, at the time, this approach would provide TasNetworks to recover at least its efficient cost of labour. However, consistent with Marsden Jacob's recommendations, for this determination we allocate TasNetworks the lowest labour rate of other jurisdictions considered as Tasmania has the lowest Average Weekly Earnings of any capital city in Australia. By doing so we provide TasNetworks with opportunity to respond with an alternative labour rate in its revised proposal.

Site visit - no appointment

Based on Marsden Jacobs' benchmarking, we looked carefully at the "Site visit - no appointment' service as it is the most common service. For TasNetworks this service covers special meter reads, connections, disconnections and reconnections. For other DNSPs the special meter read component tends to be separate and charged at a lower rate. Marsden Jacob recommended that either this service be charged at the lower rate for a special meter read, or disaggregated so that there is a lower special meter read, and a separate higher fee for disconnections, connections, reconnections (which Marsden Jacob has recommended have a longer task time consistent with its benchmarking of DNSPs).[28] In this draft determination we approve the lower fee, however it is open to TasNetworks to consider disaggregating this service instead. We expect TasNetworks may address this issue in its revised proposal.

Quoted services

For quoted services we consider it appropriate to use the individual business' labour rate if the business' proposed rates fall within Marsden Jacob's maximum efficient rates. If not, we consider it appropriate to use Marsden Jacob's recommended rates (as applicable) for each of raw labour rates, on-costs and overheads.

As the labour rates in TasNetworks' quoted service model only cover raw labour and on-costs we have taken a two stage approach to considering TasNetworks' proposed labour rates:

- we compared TasNetworks' proposed 2019–20 labour rates (raw labour and on-costs) to the corresponding Marsden Jacob rates (inflated to $2019–20 by CPI). Through this process we consider that all labour rates except for Administration are efficient as they fall below the maximums recommended by Marsden Jacob.
- we escalated labour rates for Marsden Jacob's recommended overhead rate less TasNetworks' proposed margin. This provides an approved maximum total hourly rate (base plus on-costs plus overheads) that TasNetworks should apply for the calculation of charges for the *Labour* component of quoted services as there is no equivalent TasNetworks' labour rates to compare against.

15.5 Public lighting

15.5.1 Public lighting—Draft decision

Our draft decision is to not accept TasNetworks proposed public lighting charges. This is because we do not consider all of the underlying costs for these services to be efficient.

We accept the labour rates and luminaire input costs proposed by TasNetworks. However, we do not accept TasNetworks proposed increase in overheads. Instead we consider overheads should be capped at 25 per cent of direct costs.

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[28] Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 17.

Also, in place of TasNetworks' proposed inputs for the calculation of public lighting charges we substitute a rate of return and labour cost escalators consistent with those we apply to standard control services.

We also found and corrected errors in TasNetworks' public lighting model with regards to CPI escalation of prices, labour escalation, the proposed rate of return and the calculation of charges for six light types.

15.5.2 Form of control

We maintain our final Framework and Approach position to apply price caps for individual public lighting services as the form of control. This means a schedule of prices is set for the first year. For the following years the previous year's prices are adjusted by CPI and an X factor. The control mechanism formula is set out in Attachment 13 of this draft decision. Our draft decision on X factors is provided in Appendix C of this document.

15.5.3 Public Lighting—Reasons for draft decision

We do not accept TasNetworks' proposed public lighting charges because we do not consider TasNetworks demonstrated all of its proposed costs to be prudent and efficient. We also found some errors in the model, which when corrected result in a reduction in proposed charges. We also do not support TasNetworks' proposal to set prices over a 10 year period. Rather, we assess costs for each five year regulatory control period.

Price path

TasNetworks proposed that the costs incurred towards provision of public lighting services are not being fully recovered through current public lighting charges. Therefore TasNetworks projected a gradual glide price path for the next 10 years after which public lighting charges would become cost reflective.

We note that TasNetworks proposed to forego under recovered revenue during the transition to full cost recovery by reducing the shareholder returns. However, we consider information submitted by TasNetworks does not clearly explain what is driving the proposed cost recovery gap. We discuss this issue in more detail below.

Errors in model

We found some errors in the public lighting model submitted by TasNetworks. In our draft decision model we corrected the following errors:

- calculation of the escalation of nominal revenues to real revenues—this correction reduces proposed charges by around 10 percent
- calculation of the labour escalation rate
- an incorrect rate of return number inserted into the model
- calculation of charges for six light types.

We also removed data and code in the model beyond the 2019–24 regulatory control period.

The above errors are detailed and corrected in our published draft decision TasNetworks public lighting model.

Cost inputs

We accept the proposed luminaire and labour costs that are consistent with input costs for the current regulatory control period.

We have applied the rate of return for public lighting consistent with that applied for standard control services. In our attachment 3 to this draft decision we set out detailed analysis of the constituent components that make up our draft decision on the rate of return.

TasNetworks proposed a substantial increase in public lighting overheads from $1 million per annum in the current period to $2.5 million per annum for the 2019–24 period. TasNetworks submitted it changed its overhead allocations on the basis of its cost allocation method which incorporates activity based costing surveys of staff. Also, that as a merged distributor and transmission business TasNetworks now understands better its actual costs of service. This results in public lighting overhead increases of up to 40 per cent for both capex and opex.

We received submissions from the Consumer Challenge Panel and Local Government Association of Tasmania (LGAT) raising concerns over the increase in public lighting costs driven by increased overheads.[29] LGAT submitted that it did not consider that the increase in overheads had been justified by TasNetworks. The CCP 13 recommended that the AER should reject the increase in overheads proposed by TasNetworks.

We consulted with TasNetworks seeking more information on parameters driving the increase in overheads for public lighting. TasNetworks submitted that the increase in its public lighting costs reflected survey results showing its staff are actually spending a greater amount of time on public lighting than previously estimated. We note that time dedicated to public lighting by TasNetworks staff may not be efficient, even if it may be greater than previously understood. We use benchmarking and other analysis to assess distributor efficiency.

After we requested additional information, TasNetworks provided a revised public lighting model in April 2018 that updated the overheads allocated to public lighting. The new allocation lowers the glide path price increase in the 2024–29 period but does not change the proposed price increase in 2019–24. We do not consider that the revised April 2018 estimate of overheads and the information provided by TasNetworks has

[29] Consumer Challenge Panel subpanel 13 - Issues paper TasNetworks electricity network revenue proposal 2019-24 - 16 May 2018. Local Government Association of Tasmania - Submission on TasNetworks pricing reset 2019-24 - 16 May 2018.

addressed our concerns. We are not satisfied that the increase in overheads proposed by TasNetworks is prudent and efficient.

We sought an independent assessment from Marsden Jacob[30] to evaluate the proposed overheads. Marsden Jacob recommended overheads for public lighting be capped at 25 per cent of the direct and indirect operating costs. Alternatively, if TasNetworks prefers to distribute overheads across both capital and operating expenditure, the combined total should not exceed 25 per cent of operating costs only. By applying a 25 per cent cap, the public lighting overheads for 2019–24 would be $1.03 million per annum on average.

In deciding on the appropriate level of overheads for TasNetworks' public lighting we have benchmarked TasNetworks against Victorian distributors. The 25 per cent overhead cap we have applied for TasNetworks' public lighting overheads is consistent with the AER's application of a 25 per cent opex overhead for Victorian distributors. TasNetworks public lighting overheads for the current regulatory period 2017–19 are also broadly in line with this 25 per cent overheads cap.

With respect to TasNetworks' references to its approved cost allocation methodology, we have previously noted that while allocations may be undertaken according to an approved cost allocation methodology the proposed levels of forward looking overheads may not be efficient. On that basis proposed forward looking overheads may be adjusted downwards by the AER through adjusted overhead rates. This still provides TasNetworks with opportunity to recover its efficient costs.

We expect TasNetworks may address overhead allocations in the context of its revised proposal. It is open to TasNetworks to submit further information in support of its proposed overhead allocations or to adopt an alternative approach.

To calculate our draft decision public lighting charges we applied labour escalators consistent with those applied for standard control services. Our draft decision public lighting charges are set out in Table 15.12 in Appendix C.

15.6 Metering

15.6.1 Metering—Draft decision

Service classification - Metering services

Our draft decision is to classify type 5 and 6 metering services as alternative control services. This is consistent with our Final Framework and Approach and TasNetworks' proposed classification of metering services.

Form of control - Metering services

[30] Marsden Jacobs - Review of Alternative Control Services, p. 21.

Our draft decision is to apply a price cap form of control for metering services. This is consistent with our Final Framework and Approach and TasNetworks proposed form of control for metering services. Under a price cap form of control, we set a schedule of prices for the first year of the regulatory period, 2019–20. For 2020–21 and subsequent years the prices for metering services are determined by adjusting the previous year's prices by the formula set out in Attachment 13.

Metering services

Our draft decision is, with minor modifications, to accept TasNetworks' metering models as received on 9 April 2018. Our draft decision is to approve the following elements of TasNetworks' metering model, which we consider are consistent with the pricing principles and promotion of the national pricing objective:

- Opening metering asset base

  Our draft decision is to approve an opening metering asset base (MAB) value as at 1 July 2019 of $45.02 million ($nominal). Our final decision is based on our assessment of TasNetworks' application of the Roll Forward Model.

- Rate of return

  Our draft decision accepts that the same weighted average cost of capital (WACC, rate of return) and imputation credit (gamma) values for standard control services should apply to alternative control metering services.

  See attachments 3 and 4 for our draft decision on rate of return and gamma values, along with our reasons.

  However, unlike for standard control service, we will not be annually adjusting TasNetworks' return on debt.

- Forecast capex

  Our draft decision is to accept TasNetworks' proposed forecast capex building block of $0.

Our draft decision is to not accept the following elements of TasNetworks' proposal:

- accelerated depreciation
- forecast opex.

In respect of TasNetworks' proposal of accelerating depreciation of its metering assets over the 2019–2024 regulatory control period, we do not consider this to be adequately justified. Our reasoning is discussed further below. Therefore, we are minded to revert to depreciating these assets over their expected remaining lives. Likewise, we consider tax depreciation should remain depreciated over the tax remaining lives.

We modified TasNetworks' forecast opex to align the overhead rate with Marsden Jacobs' recommendation of a 25 per cent mark-up on directly incurred public lighting costs.

15.6.2 Metering services—Reasons for draft decision

Accelerated Depreciation

TasNetworks proposed to fully depreciate its entire fleet of metering assets over the 2019–24 regulatory control period. The metering assets have an approximate average remaining life of 10 years.[31] In effect, the proposed accelerated depreciation would halve the depreciation period of all the metering assets.

Under TasNetworks' proposal, customers would face higher charges during the 2019–24 regulatory control period, but these would fall significantly after this time. Hence from 1 July 2024 customers would no longer have to pay a capital charge for any remaining type 6 meters still in use.[32] TasNetworks submitted that its proposed accelerated depreciation would increase metering charges by around $9.29 per annum for the majority of customers, with a small number of customers paying up to an additional $24.85 per annum for more complex metering.

TasNetworks submitted that the cost of the existing metering assets should be recovered over the 2019–24 regulatory control period because customers will want to benefit from advanced metering supplied by Aurora Energy and therefore prefer to pay lower metering charges after 1 July 2024.[33] Aurora Energy currently installs advanced meters on an as-needs basis (new and replacement) and there is no indication of a mass roll-out of advanced meters at this stage.[34] TasNetworks also submitted that this is an opportunity to provide smoother price outcomes for customers in the medium term by accelerating residual metering capital costs while other network price inputs are low.[35]

While the proposed annual price increases associated with accelerated depreciation are modest, it is unclear how this proposal would provide a net benefit to customers other than by removing the regulated metering capital charge from bills a few years earlier than otherwise.

We consider accelerated depreciation is more appropriate in cases of technological obsolescence.[36] This is not strictly the case here as existing meters are in working

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31 Weighted average remaining life (WARL) calculation based on TasNetworks' proposed RFM at 2019–20 of all metering assets. Mechanical meters have an average remaining life of approximately 13 years and electronic meters approximately 9 years.

32 TasNetworks, *Transmission and Distribution Regulatory Proposal 2019-2024*, 31 January 2018, p. 202.

33 TasNetworks, *AER Request 008 – Metering capex, accelerated depreciation, PRTM formula changes and asset disposals*, pp. 6–7.

34 Advanced meters installed to replace old or faulty meters; for connections on newly built properties; or if a customer requires electrical work (EWR) that results in a meter change. https://www.auroraenergy.com.au/your-home/metering accessed 11 July 2018.

35 TasNetworks, *AER Request 008 – Metering capex, accelerated depreciation, PRTM formula changes and asset disposals*, p. 7.

36 For example, we accepted AusNet Services' proposal for assets expected to be removed from service over the coming regulatory control period to be subject to accelerated depreciation and fully depreciated in that period. However, we did not accept AusNet Services' revised proposal for accelerated depreciation of assets associated with the Yallourn Power Station. AER - *AusNet Services Transmission 2017-22 - Attachment 5 - Regulatory depreciation* - April 2017, p. 9.

order and have an average 10 years of life left. The standard economic life of a mechanical meter is 30 years and electronic meter is 15 years. Therefore many meters are expected to continue to be viable beyond 2019–24 and well into the subsequent regulatory control period.

We have previously indicated that we would be open to applying accelerated depreciation if the proposition received wide stakeholder support. In that context TasNetworks undertook its own customer engagement regarding this issue.[37] We have also received submissions from stakeholders in response to TasNetworks' proposal. We do not believe this engagement or submissions has demonstrated customer support for accelerated depreciation:

- Aurora Energy considered the cost to be an unnecessary burden to consumers without a commensurate benefit[38]
- TasCOSS also stated that the cost had no clear benefit for consumers and expressed concern about increased short term costs[39]
- CCP13 stated it did not believe a strong case had been made for why the accelerated depreciation was in consumer interest and recommended against accepting it[40]
- TSBC expressed concern about price increases with some customers paying up to $24.85 per annum extra under accelerated depreciation and the possibility these could be small businesses.[41]

Having given weight to submissions, we consider TasNetworks has not justified its proposed accelerated depreciation. It is of course open to TasNetworks to submit additional information in support of accelerated depreciation with its revised proposal.

Electromagnetic Radiation

We received one submission from EMFacts Consultancy concerning the electromagnetic radiation of smart meters. However, due to metering contestability introduced on 1 December 2017 TasNetworks is no longer responsible for supplying meters nor for setting the specifications of those meters. Therefore we have not considered this in our review of TasNetworks' proposal.

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37 TasNetworks, *AER Information Request 008: TasNetworks response to questions raised by the AER*, 27 March 2018.

38 Aurora Energy, *Submission on TasNetworks' distribution and transmission determination 2019-24*, 18 May 2018, p. 5.

39 Tasmanian Council of Social Service, *Submission to AER Issues Paper - TasNetworks Distribution and Transmission Determination 2019-2024*, May 2018, p. 7.

40 Consumer Challenge Panel subpanel 13, *Issues paper - TasNetworks electricity network revenue proposal 2019-24*, 16 May 2018, p. 8.

41 Tasmanian Small Business Council, *TasNetworks Transmission Revenue & Distribution Regulatory Proposal, 2019-20 to 2023-24 submission*, 24 May 2018, p. 87.

Requests or concerns regarding new smart meters should be directed to the retailer concerned (Aurora).

Structure of Metering Charges

Our draft decision is to accept TasNetworks' proposed structure for metering charges. TasNetworks split metering charges into 'capital' and 'non–capital' components. These components then recover separate 'building block' costs:

- capital—metering asset base (MAB) recovery and tax
- non–capital—operating expenditure.

The above charging structure is consistent with the approved structure in the current regulatory control period and does not incorporate an upfront charge because TasNetworks is no longer responsible for installing meters.

This structure is both reflective of the actual costs involved in the provision of metering services and, due to being consistent with current charges, easy to understand.

Forecast Capex

TasNetworks did not propose any metering capex for the 2019–24 regulatory control period. We consider this appropriate as TasNetworks only classifies meters themselves as metering assets (by not including any non-network assets) and these assets will not require any capital expenditure going forward.

Regulatory Asset Base and Asset Lives

TasNetworks forecast forward its asset base using the AER's approved Roll Forward Model and used standard approved asset lives. We consider this to be consistent with best practice. For discussion around TasNetworks' Asset Lives, see the Accelerated Depreciation section.

Forecast Opex

Our draft decision is to revise TasNetworks' proposed opex by applying a lower overhead rate. We will apply a 61 per cent overhead rate in line with Marsden Jacob's recommendation. This gives an opex allowance of $27.5 million ($2018–19).

TasNetworks did not provide modelled metering opex using a 'base–step–trend' approach. This is our preferred approach to assessing most opex categories.[42]

TasNetworks did, however, provide us with a breakdown of its forecast opex costs on a year by year basis split into categories of work. This allowed us to compare these rates and how they have moved over time. TasNetworks' base metering rates for services are forecast to reduce in the 2019–24 regulatory control period, with the exception of

[42] AER, *Better regulation: Expenditure forecast assessment guideline for distribution*, November 2013, p. 32.

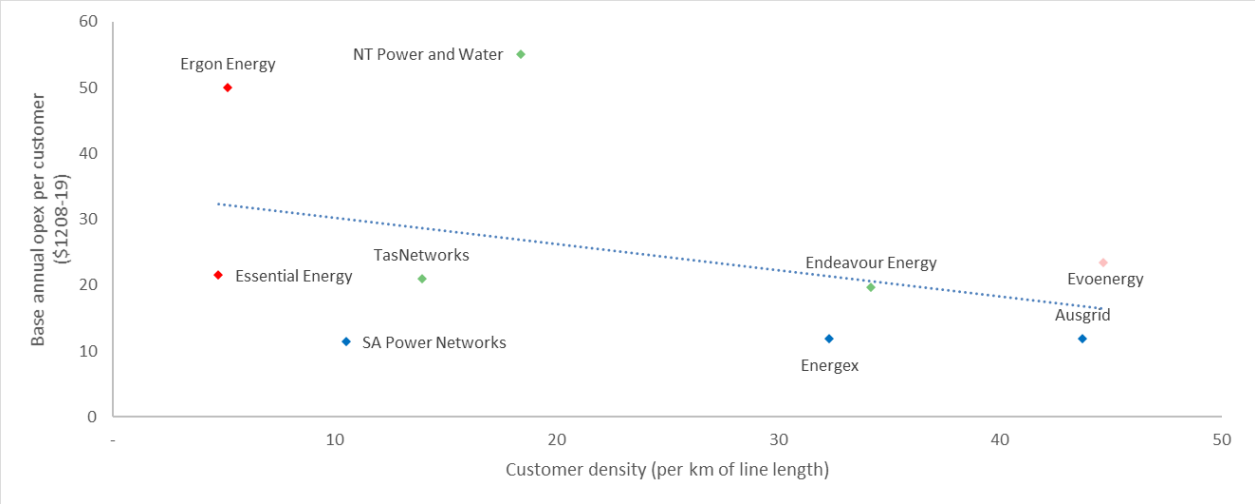
meter reading costs which are forecast to increase per meter read with reduced meter numbers. Overhead costs however have increased. On average, the overhead rate, even excluding shared service allocation is 86 per cent of the labour cost.

TasNetworks' proposed metering costs per annum have increased by 10 per cent in real terms. If we apply the Marsden Jacob overhead rate of 61 per cent, in line with our decision in ancillary network services, this reduction brings these costs more in line with the historical average.

We note that, while TasNetworks is forecasting a reduction in meter reading costs over the forthcoming period, these costs are being at least partially offset by increased testing frequency.

We undertook an indicative benchmarking exercise for TasNetworks' proposed metering opex. TasNetworks' opex per customer is within an acceptable level compared to the industry average based on its customer density.

Figure 15.2 TasNetworks historical metering opex per customer current regulatory control period compared to customer density



We are satisfied overall that TasNetworks' opex, with an overhead adjustment, is efficient.

A Ancillary network services prices

Table 15.5 Fee based ancillary network service prices for 2019–20, AER draft decision ($2019–20)

Fee based service	TasNetworks proposed price	AER draft decision
De-energisation, re-energisation, special reads and retail contract terminations		
Site visit - no appointment	$81.96	$43.17
Site visit - non-scheduled visit	$148.21	$120.99
Site visit - same day premium service	$264.37	$171.41
Site visit - after hours	$375.76	$301.67
Site visit - credit actions or site issues	$153.74	$134.30
Site visit – credit actions pillar box/pole top	$254.44	$239.82
Site visit – current transformer (CT) metering	$145.82	$119.91
Site visit – pillar box/pole top	$254.44	$239.82
Site visit - pillar box/pole top Wasted Visit	$162.74	$134.30
Meter test		
Meter test - single phase	$208.37	$208.37
Meter test - multi phase	$387.97	$387.97
Meter test – current transformer (CT)	$427.88	$427.88
Meter test - after hours	$810.19	$810.19
Meter test - wasted visit	$88.64	$74.05
Supply abolishment		
Remove service & meters	$254.44	$239.82
Supply abolishment - after hours	$653.14	$604.07
Supply abolishment - wasted visit	$171.08	$143.89
Tee-up		
Tee-up/Appointment	$150.39	$123.42
Tee-up/Appointment – after hours	$653.14	$647.55
Tee-up/Appointment – no truck – after hours	$375.76	$323.41

Tee-up/Appointment – wasted visit	$104.05	$74.05
Miscellaneous service		
Open turret	$133.05	$111.08
Data download	$260.50	$246.84
Alteration to unmetered supply	$202.57	$185.13
Meter Relocation	$158.49	$158.49
Tiger tails - standard single/multi phase	$562.35	$562.35
Tiger tails - scaffolding single phase	$882.49	$882.49
Tiger tails - scaffolding multi phase	$965.85	$965.85
Miscellaneous service	$121.46	$98.73
Miscellaneous service – after hours	$567.86	$505.15
Miscellaneous service – wasted visit	$98.29	$74.05
Administration	$49.66	$49.66
Statutory right - access prevented	$891.94	$891.94
Tariff change	$49.66	$38.57
Emergency maintenance contestable meters	$64.69	$44.43
Emergency maintenance contestable meters - after hours	$375.76	$323.41
Meter recovery and disposal	$93.55	$86.39
Connection establishment charges		
Creation of a NMI	$43.18	$30.86
Overhead service, single span - single phase	$550.27	$525.72
Overhead service, single span - multi phase	$773.32	$753.09
Underground service in turret/cabinet - single phase	$195.81	$149.26
Underground service in turret/cabinet - multi phase	$238.26	$200.97
Underground service with pole mounted fuse - single phase	$416.99	$402.98
Underground service with pole mounted fuse - multi phase	$517.83	$517.81
Basic connection – after hours	$979.57	$979.57
Connection establishment - wasted visit	$170.97	$123.42
Temporary Disconnection/Reconnection		

Disconnect/reconnect overhead service for facia repairs - single phase	$402.50	$394.94
Disconnect/reconnect overhead service for facia repairs - multi phase	$485.86	$485.86
Temporary disconnect/reconnect – retailer requested outage	$387.96	$345.57
Temporary disconnect/reconnect – after hours	$832.48	$832.48
Temporary disconnect/reconnect – wasted visit	$194.10	$148.10
Basic connection alteration		
Connection alteration – overhead single phase	$324.89	$296.20
Connection alteration – overhead multi phase	$408.25	$394.94
Connection of new consumer mains to an existing installation – underground single phase to turret	$237.02	$172.79
Connection of new consumer mains to an existing installation – underground single phase to pole	$366.57	$345.57
Connection of new consumer mains to an existing installation – underground multi phase to turret	$283.37	$222.15
Connection of new consumer mains to an existing installation – underground multi phase to pole	$449.93	$444.31
Augment single phase overhead service to multi phase supply	$835.84	$827.14
Augment multi phase overhead service to single phase supply	$612.79	$599.77
Augment single phase overhead service to underground supply (turret)	$388.68	$371.42
Augment multi phase overhead service to underground supply (turret)	$472.04	$470.15
Augment single phase overhead service to underground supply (pole)	$479.51	$477.03
Augment multi phase overhead service to underground supply (pole)	$580.35	$580.35
Basic connection alteration – after hours	$1,041.72	$1,041.72
Basic connection wasted visit	$189.43	$135.76

Source: TasNetworks, *TN-Quoted Services Labour Rates Model - PUBLIC*, January 2018; AER analysis

Table 15.6 TasNetworks' quoted services, AER draft decision

Quoted service name
Removal or relocation of TasNetworks' assets at the request of a customer (for example, the Tasmanian Government) or third party
Services that are provided at a higher standard than the standard service, due to a customer's

request for TasNetworks to do so
Provision of overhead and underground subdivision for developers
Services that are provided through a non-standard process at a customer's request (for example, more frequent meter reading)
Networks safety services
Customer vegetation defect works
Premises connection services and extension
Connection application services (other than those provided as ancillary services – fee based services)
Design work for a new connection
Access permits, oversight and facilitation
Notices of arrangement
Network related property services
Planned interruption – customer requested
Provision of training to third parties for network related access

Note: This is a non-exhaustive list sourced from TasNetworks, *TN-Alternative Control Services Descriptions Paper 2019–2024*, January 2018, p. 35.

Table 15.7 Quoted service ancillary network services hourly labour rates for 2019–20, draft decision ($2019–20)

TasNetworks' labour category	AER labour category[1]	AER draft decision - maximum hourly rate (base plus on-costs)	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads)[2]
Cable jointer	Field Worker	$59.62	$112.70
Customer connections - commercial metering	Field Worker	$74.07	$135.17
Customer connections - service crew	Field Worker	$65.72	$122.19
Designer	Engineer	$77.64	$120.73
Distribution electrical technician	Technical Specialist	$65.51	$101.87
Distribution linesman	Field Worker	$58.16	$110.43
Distribution linesman - live line	Field Worker	$65.86	$122.40
Distribution operator	Technical Specialist	$73.78	$114.72

Asset inspector	Technical Specialist	$56.55	$87.93
Field services co-ordinator	Technical Specialist	$70.66	$109.87
Labourer - overhead	Field Worker	$51.37	$99.87
Meter reader	Field Worker	$47.62	$94.05
Project Manager	Engineer	$87.24	$135.66
General Administration	Administration	$57.49	$89.40
Engineer	Engineer	$83.79	$130.29
Senior engineer	Senior Engineer	$96.46	$149.98

Source: TasNetworks, *TN-Quoted Services Labour Rates Model - PUBLIC*, January 2018; 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 15.8 AER draft 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	-0.2293	-0.3536	-0.4287	-0.4962

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 Metering service prices

Table 15.9 Metering X factors for 2019–24, AER draft decision

Period	2020–21	2021–22	2022–23	2023–24
Metering X factor	-1.53%	-1.53%	-1.53%	-1.53%

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

Table 15.10 Annual Metering Charges for 2019–20, AER draft decision

Metering charges (nominal, cents per day)		2019–20
Business LV – Single phase	Capital	3.508
	Non–capital	3.128
Business LV – Multi phase	Capital	7.163
	Non–capital	6.258
Business LV – CT meters	Capital	9.262
	Non–capital	8.092
Domestic LV – Single phase	Capital	3.461
	Non–capital	3.024
Domestic LV –Multi phase	Capital	7.183
	Non–capital	6.276
Domestic LV - CT meters	Capital	8.889
	Non–capital	7.767
Other meters	Capital	6.321
	Non–capital	5.523

C Public Lighting

Table 15.11 AER's draft 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	3.09%	3.09%	3.09%	3.09%

Table 15.12 The AER Draft decision on public lighting prices for the regulatory period 2020–24 ($Nominal)

Private Contract Lights	TasNetworks Proposed price	AER Draft Decision
32W Compact Fluorescent	20.53	19.61
42W Compact Fluorescent	20.53	19.61
42W Compact Fluorescent - Bottom Pole Entry	20.53	19.61
2x24W Compact Fluorescent	20.86	19.94
1x20W Fluorescent	20.51	19.59
1x40W Fluorescent	20.53	19.61
2x20W Fluorescent	20.80	19.88
2x24W Fluorescent	20.63	19.71
T5 Fluorescent 2 x 24W	20.80	19.88
20 Fluorescent 1X20FL	20.51	19.59
2x40W Fluorescent	20.84	19.92
3x40W Fluorescent	24.66	23.72
4x20 Fluorescent	21.40	20.47
4x40W Fluorescent	24.97	24.03
100W Sodium Vapour	24.78	23.84
150W Sodium Vapour	24.78	23.84
250W Sodium Vapour	24.91	23.97
250W Sodium Vapour - Flood Light	24.91	23.97
400W Sodium Vapour	24.96	24.01
400W Sodium Vapour - Flood Light	24.96	24.01
70W Sodium Vapour	20.75	19.83
100W Incandescent	23.84	22.90

60W Incandescent	20.34	19.42
18W LED	14.81	13.92
18W LED Decorative - Bottom Pole Entry	14.81	13.92
18W LED Decorative - Side Entry	14.81	13.92
18W LED Decorative - Top Entry	14.81	13.92
25W LED	14.81	13.92
25W LED Decorative - Bottom Pole Entry	14.81	13.92
25W LED Decorative - Side Entry	14.81	13.92
25W LED Decorative - Top Entry	14.81	13.92
30W LED	14.81	13.92
88 LED Light	14.81	13.92
100W Metal Halide	24.78	23.84
150W Metal Halide	24.93	23.98
250W Metal Halide	24.93	23.98
400W Metal Halide	25.63	24.69
70W Metal Halide	21.26	20.34
250W Metal Halide - Flood Light	24.93	23.98
400W Metal Halide - Flood Light	25.63	24.69
125W Mercury Vapour	23.87	22.93
250W Mercury Vapour	23.87	22.93
400W Mercury Vapour	24.02	23.09
150W Metal Halide	20.40	19.48
250W Metal Halide	20.37	19.45
400W Metal Halide	20.37	19.45
70W Metal Halide	14.97	14.08
250W Metal Halide - Flood Light	14.97	14.08
400W Metal Halide - Flood Light	15.77	14.87

Public Road Lights	TasNetworks Proposed price	AER Draft Decision
32W Compact Fluorescent	39.61	40.24
42W Compact Fluorescent	39.63	40.27
42W Compact Fluorescent - Bottom Pole Entry	39.63	40.27

2x24W Compact Fluorescent	40.26	40.88
1x20W Fluorescent	41.78	42.35
1x40W Fluorescent	40.65	41.25
2x20W Fluorescent	42.08	42.65
2x24W Fluorescent	42.01	42.58
T5 Fluorescent 2 x 24W	42.08	42.65
20 Fluorescent 1X20FL	41.78	42.35
2x40W Fluorescent	40.97	41.57
3x40W Fluorescent	48.01	48.50
4x20 Fluorescent	42.67	43.24
4x40W Fluorescent	49.47	49.94
100W Sodium Vapour	47.04	47.57
150W Sodium Vapour	49.56	50.01
250W Sodium Vapour	50.84	51.25
250W Sodium Vapour - Flood Light	54.76	55.06
400W Sodium Vapour	51.44	51.84
400W Sodium Vapour - Flood Light	54.02	54.36
70W Sodium Vapour	39.85	40.48
100W Incandescent	43.54	44.14
60W Incandescent	36.82	37.52
18W LED	37.97	38.52
18W LED Decorative - Bottom Pole Entry	37.97	51.96
18W LED Decorative - Side Entry	37.97	51.96
18W LED Decorative - Top Entry	37.97	51.96
25W LED	38.21	38.76
25W LED Decorative - Bottom Pole Entry	38.21	52.20
25W LED Decorative - Side Entry	38.21	52.20
25W LED Decorative - Top Entry	38.21	52.20
30W LED	38.21	38.76
88 LED Light	38.21	38.76
100W Metal Halide	47.19	47.71
150W Metal Halide	50.12	50.56
250W Metal Halide	51.13	51.53

400W Metal Halide	56.09	56.39
70W Metal Halide	38.84	39.51
250W Metal Halide - Flood Light	56.43	56.69
400W Metal Halide - Flood Light	56.09	56.39
125W Mercury Vapour	47.23	47.72
250W Mercury Vapour	47.69	48.17
400W Mercury Vapour	49.32	49.75
50W Mercury Vapour	37.32	38.01
80W Mercury Vapour Art decorative	54.61	54.85
80W Mercury Vapour	37.32	38.01
14W LED	36.01	36.62
New technology - Minor	36.01	36.62
New technology - Major	48.59	48.88