# DRAFT DECISION
# TasNetworks distribution determination 2017–18 to 2018–19

## Attachment 16 – Alternative control services

September 2016

AUSTRALIAN ENERGY REGULATOR

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# Note

This attachment forms part of the AER's draft decision on TasNetworks' distribution determination for 2017–19. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Value of imputation credits

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 7 – Operating expenditure

Attachment 8 – Corporate income tax

Attachment 9 – Efficiency benefit sharing scheme

Attachment 10 – Capital expenditure sharing scheme

Attachment 11 – Service target performance incentive scheme

Attachment 12 – Demand management incentive scheme

Attachment 13 – Classification of services

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Attachment 16 – Alternative control services

Attachment 17 – Negotiated services framework and criteria

Attachment 18 – Connection policy

Attachment 19 – Tariff structure statement

# Contents

# Shortened forms

| Shortened form | Extended form |
|---|---|
| AEMC | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| augex | augmentation expenditure |
| capex | capital expenditure |
| CCP | Consumer Challenge Panel |
| CESS | capital expenditure sharing scheme |
| CPI | consumer price index |
| DRP | debt risk premium |
| DMIA | demand management innovation allowance |
| 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 |
| opex | operating expenditure |
| PPI | partial performance indicators |
| PTRM | post-tax revenue model |
| RAB | regulatory asset base |
| RBA | Reserve Bank of Australia |
| repex | replacement expenditure |

| Shortened form | Extended form |
|---|---|
| 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 |
| SLCAPM | Sharpe-Lintner capital asset pricing model |
| STPIS | service target performance incentive scheme |
| WACC | weighted average cost of capital |

# 16 Alternative control services

Alternative control services are services provided by distributors to specific customers. They do not form part of the annual revenue requirement approved by us for recovery through distribution use of system charges. Rather, distributors recover the costs of providing alternative control services through a selection of prices with most charged on a 'user pays' basis.

In this attachment, we set 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).

## 16.1 Ancillary network services

For the purposes of this draft decision, we refer to the service groups previously identified as 'fee based services' and 'quoted services' collectively as a single group called 'ancillary network services'.[1]

Ancillary network services share the common characteristic of being non-routine services provided to individual customers on an as requested basis.[2] The existing fee based services and quoted services groupings describe the basis on which service prices are determined.[3]

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. It is not possible to list prices for quoted services in this decision (any such list would only be for illustrative purposes).

### 16.1.1 Draft decision

We do not accept TasNetworks' proposal for ancillary network services. Specifically, we do not accept the following aspects of TasNetworks' cost build-up method to establish prices for fee based services:

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1 AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, p. 25.

2 AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, p. 41.

3 AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, p. 41.

- The implied administration labour rate underpinning the direct administration and supervision costs as it exceeds our administration maximum total labour rate. Therefore, we substitute in our administration maximum total labour rate.
- The application of premium service margins to non-scheduled, after hours or same day premium services as they have not been sufficiently justified. We remove these margins in our draft decision.
- Proposed task times to perform after hours services as they overstate the time needed to perform these services and are therefore inefficient. We substitute in the highest time taken for the particular service during business hours which we consider is efficient.

We also do not accept TasNetworks' proposal to charge its new design and construction services as fee based services. We consider these services are not homogenous and highly variable. We therefore consider they should be quoted services.

These adjustments have changed the ancillary network service prices proposed by TasNetworks. Our reasoning for these adjustments is detailed in sections 16.1.4.2, 16.1.4.3 and 16.1.4.4.

Appendix A contains our draft decision prices TasNetworks can charge for ancillary network services for the first year of the 2017–19 regulatory control period. Table 16.8 sets out the draft decision prices for fee based services and table 16.10 sets out the approved labour rates for quoted services. Table 16.9 sets out the quoted services.

## Form of control

Our draft decision is to apply price caps as the forms of control to ancillary network services. Figure 16.1 and figure 16.2 set out the control mechanism formulas for fee based and quoted services, respectively. They are consistent with our final framework and approach (final F&A).[4]

## Form of control—fee based services

Our draft decision applies a price cap form of control for fee based services. Under this form of control, we set a schedule of prices for 2017–18 (set out in table 16.8 in appendix A). For 2018–19, the prices for fee based services are determined by adjusting the previous year's prices by the formula in figure 16.1. The X factors in this formula adjust for annual labour price growth.

### Figure 16.1 Fee based ancillary network services formula

$$\bar{p}_t^i \geq p_t^i \qquad \text{i=1,...,n and t=2}$$

[4] AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, pp. 56–57.

$$\bar{p}_t^i = \bar{p}_{t-1}^i(1 + \Delta CPI_t)(1 - X_t^i)$$

Where:

$\bar{p}_t^i$ is the cap on the price of service i in year t

$p_t^i$ is the price of service i in year t

$\bar{p}_{t-1}^i$ is the cap on the price of service i in year t–1

$t$ is the regulatory year

$\Delta CPI_t$ is the annual percentage change in the ABS consumer price index (CPI) All Groups, Weighted Average of Eight Capital Cities[5] from the December quarter in year t–2 to the December quarter in year t–1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–2

minus one.

For example, for 2018–19, year t–2 is the December quarter 2016 and year t–1 is the December quarter 2017.

$X_t^i$ is the X factor for service i in year t. The X factor is zero for fee based services.

We note our final F&A erroneously stated the X factor in this formula would incorporate annual adjustments for updates to the trailing cost of debt.[6] However, we note these services do not incorporate a cost of capital and therefore the X factors will not be updated in this manner. Rather, consistent with the price caps applied to these services in other jurisdictions, the X factors will adjust for annual labour price growth. However, TasNetworks did not propose any labour price growth adjustments for fee based services. We have accepted that approach.

## Form of control—quoted services

[5] If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

[6] AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, p. 54.

Our draft decision applies a price cap formula to determine the cost build-up of services that are priced on a 'quoted' basis.[7] Figure 16.2 sets out the price cap formula and table 16.10 in appendix A sets out the draft decision 2017–18 labour rates for quoted services.

### Figure 16.2 Quoted services formula

$$Price = Labour + Contractor\ Services + Materials$$

Where:

$Labour$ consists of all labour costs directly incurred in the provision of the service which may include labour on-costs, fleet on-costs and overheads. Labour is escalated annually by $(1 + \Delta CPI_t)(1 - X_t^i)$ where:

$\Delta CPI_t$ is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities[8] from the December quarter in year t–2 to the December quarter in year t–1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–2

minus one.

For example, for 2018–19, year t–2 is the December quarter 2016 and year t–1 is the December quarter 2017.

$X_t^i$ is the X factor for service i in year t. The X factor is zero for quoted services.[9]

$Contractor\ Services$ reflect all costs associated with the use of external labour including overheads and any direct costs incurred. The contracted services charge applies the rates under existing contractual arrangements. Direct costs incurred are passed on to the customer.

$Materials$ reflect the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads.

## 16.1.2 TasNetworks' proposal

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7 AER, *Final framework and approach paper for TasNetworks Distribution—Regulatory control period commencing 1 July 2017*, July 2015, pp. 56–57.

8 If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

9 The X factors applied in this formula adjust for annual labour price growth.

TasNetworks used a cost build-up method to establish initial prices for fee based services in the first year of the 2017–19 regulatory control period.[10] TasNetworks' proposed fee based services include:

- energisation
- de-energisation
- re-energisation
- meter alteration
- meter testing
- basic connection
- supply abolishment—removal of meters and service connection
- renewable energy connection
- other miscellaneous services.[11]

It also proposed a range of quoted services, including:

- removal or relocation of assets at a customer's request
- services that are provided at a higher standard than the standard service, due to a customer's request
- provision of public lighting schemes
- provision of overhead and underground subdivisions for developers
- relocation of assets at a third party's request; and
- services that are provided through a non-standard process at a customer's request (for example, where more frequent meter reading is required).[12]

### 16.1.3 Assessment approach

Our assessment approach focusses on the key inputs used by TasNetworks' in its cost build-up of proposed prices for ancillary network services.

As noted by TasNetworks, labour costs are the major input in the cost build-up of prices for ancillary network services.[13] Therefore, our assessment focusses on comparing TasNetworks' proposed labour rates against our maximum total labour

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10 TasNetworks, *Alternative control services descriptions paper: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016, p. 19; TasNetworks, *TasNetworks (Ancillary service fees model)*, January 2016.

11 TasNetworks, *Tasmanian distribution regulatory proposal—Regulatory control period 1 July 2017 to 30 June 2019*, 29 January 2016, p. 146.

12 TasNetworks, *Tasmanian distribution regulatory proposal—Regulatory control period 1 July 2017 to 30 June 2019*, 29 January 2016, p. 147.

13 TasNetworks, *Alternative control services descriptions paper: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016, p. 19.

rates which we consider are efficient. Where TasNetworks' proposed labour rates exceed our maximum total labour rates we apply our maximum total labour rates to determine efficient prices. Section 16.1.4.1 discusses our maximum total labour rates.

We also assess the proposed times taken to perform the service as well as the escalators and allocators applied by TasNetworks as these are also material 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.

## 16.1.4 Reasons for draft decision

### 16.1.4.1 Maximum total labour rates

We accept all but one of TasNetworks' proposed labour rates as they do not exceed the maximum total labour rates which we consider are efficient. We do not accept TasNetworks' implied administration labour rate as it exceeds our administration maximum total labour rate. Our detailed reasons for not accepting the implied administration labour rate are set out in section 16.1.4.2.

As labour is the major input in determining prices for ancillary network services, we consider it prudent to use maximum total labour rates as an input to assess prices for ancillary network services. The maximum total labour rates—which we consider are efficient—act as 'ceilings' on the rates we consider a distributor should pay for various labour types. We consider the maximum total labour rates provide a distributor with a reasonable opportunity to recover at least its efficient costs. This will promote the efficient provision of electricity services and allow a return commensurate with the regulatory and commercial risks involved in the provision of these services.[14]

Where TasNetworks' labour rates are lower than our maximum total labour rates, we accept these lower rates as inputs for deriving ancillary network services prices. Where TasNetworks' labour rates are higher, we apply our maximum total labour rates to determine efficient ancillary network service prices.

To determine maximum total labour rates for our TasNetworks assessment, we rely on maximum total labour rates we developed for our assessment of ancillary network services in other jurisdictions.[15] We apply this approach because the scarcity of reliable Tasmanian specific raw labour rate data means we are unable undertake the same 'build-up' method we used for our assessment in other jurisdictions.

We consider our approach for TasNetworks is reasonable because the limited Tasmanian raw labour rates data that is available indicates it is within a reasonable range of comparable raw labour rates in the other jurisdictions—albeit at the lower end.

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[14] NEL, s. 7A and 16.

[15] AER, *Final decision: Ergon Energy determination 2015–16 to 2019–20*, October 2015, p. 16–13; AER, *Final decision: Essential Energy distribution determination 2015–16 to 2018–19*, October 2015, p. 16–15; AER, *Final decision: CitiPower distribution determination 2016 to 2020*, May 2016, p. 16–11.

Therefore, we consider it reasonable to deduce that our maximum total labour rates for other jurisdictions represent the upper boundary of benchmark efficient labour rates.

On this basis, we have used the highest (rather than, for example, the average) of our maximum total labour rates of the other jurisdictions for our TasNetworks assessment. We consider that using the highest rate of other jurisdictions will ensure TasNetworks is provided with a reasonable opportunity to recover at least its efficient costs.

To begin this assessment, we first assign each of TasNetworks' labour categories to one of five broader labour categories. We note that although distributors use different names and descriptions for different labour categories, we have found that the types of labour used to deliver ancillary network services broadly fell into one of five categories:

- administration
- technical services
- engineers
- field workers
- senior engineers.

The five categories were developed using job titles from Hays' energy specific salary guide.[16] We analysed 66 different job titles and used 36 of these to develop the labour categories. These 36 labour job titles involved tasks which clearly fell into either the 'administration', 'technical specialist', 'engineer', 'field worker', or 'senior engineer' labour categories as shown in table 16.1. We excluded job titles that were not relevant to electricity distributors such as 'wind farm engineer'.

### Table 16.1 Job titles AER used to develop maximum labour rates

| Labour category | Job title |
|---|---|
| Administration | Project secretary / Administrator |
| | Client liaison (residential) |
| | Data entry operator |
| | Records officer |
| | Administration assistant (12+ months experience) |
| | Project administration assistant (3+ years' experience) |
| | Project coordinator |
| Technical specialist | Technician |
| | Control room operator |

[16] Hays, *The 2014 Hays salary guide: salary & recruiting trends*, 2014.

| Labour category | Job title |
|---|---|
| | Control room manager |
| | E&I technician |
| | Protection technician |
| | Generator technician |
| | Operator / manager |
| | Site engineer |
| | Planner / scheduler |
| | OHS supervisor |
| | OHS manager |
| Engineer | Design engineer |
| | Project engineer (EPCM) |
| | Power systems engineer |
| | Protection engineer |
| | Transmission line design engineer |
| | Asset engineer (3 to 7 years) |
| | Project engineer |
| Field worker | Leading hand |
| | Electrician |
| | Mechanical fitter |
| | Line worker |
| | G&B linesworker |
| | Cable jointer |
| | Cable layer |
| Senior engineer | Senior design engineer |
| | Principal design engineer |
| | Senior project engineer (EPCM) |
| | Commissioning engineer |

Source: Marsden Jacob Associates' analysis.

The next step in our assessment is developing a Tasmanian maximum total labour rate for each labour category. As noted, we use the highest maximum total labour rate developed for the other jurisdictions.

In each jurisdiction—for each of the five labour categories—we assessed the following components and derived a maximum for each:

- a maximum raw labour rate
- a maximum on-cost rate
- a maximum overhead rate.[17]

The combination of these individual components formed our maximum total labour rates for each labour category. It was this maximum rate that was important in our deliberations. The components that make up that maximum were of less relevance and individually did not form the basis of our reasoning.

Our assignment of TasNetworks' proposed labour rates to our labour categories and comparing its labour rates to our Tasmanian maximum total labour rates, are set out in table 16.2. The table also includes the respective jurisdictional maximum total labour rates for transparency on how the Tasmanian maximums have been developed.

### Table 16.2 Comparison of TasNetworks' proposed labour rates and the AER maximum total labour rates ($2017–18)

| TasNetworks labour categories | TasNetworks labour rates (17-18) | AER labour categories | AER maximum Tasmanian labour rates | AER maximum Victorian labour rates | AER maximum New South Wales labour rates | AER maximum Queensland labour rates |
|---|---|---|---|---|---|---|
| Administration (implied) | 224.47 | Administration | 98.95 | 98.95 | 95.90 | 80.24 |
| Distribution operator | 69.65 | Technical specialist | 197.52 | 173.16 | 153.79 | 197.52 |
| Electrical inspector | 58.32 | | | | | |
| Field service co-ordinator | 72.38 | | | | | |
| Designer | 70.05 | Engineer | 191.17 | 185.52 | 191.17 | 185.19 |
| Project manager | 86.08 | | | | | |
| Distribution electrical technician | 62.25 | | | | | |
| Apprentice | 66.22 | Field worker | 173.16 | 173.16 | 144.08 | 135.79 |
| Cable joiner | 60.56 | | | | | |

[17] AER, *Final decision: Ergon Energy determination 2015–16 to 2019–20*, October 2015, p. 16–13; AER, *Final decision: Essential Energy distribution determination 2015–16 to 2018–19*, October 2015, p. 16–12 to 16–13; AER, *Final decision: CitiPower distribution determination 2016 to 2020*, May 2016, p. 16–11.

| | | | | | | |
|---|---|---|---|---|---|---|
| Customer connections–commercial metering | 63.09 | | | | | |
| Customer connections–service crew | 62.13 | | | | | |
| Distribution linesman | 56.35 | | | | | |
| Distribution linesman–live line | 63.38 | | | | | |
| Labourer–overhead | 48.42 | | | | | |
| Meter reader | 48.32 | | | | | |
| Electrical technician | 109.86[a] | | | | | |
| Pole tester | 50.22 | | | | | |
| N/A | | Senior engineer | 247.36 | 247.36 | 227.18 | 222.22 |

Source: TasNetworks, *Indicative pricing schedule: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016; TasNetworks, *TasNetworks (Ancillary service fees model)*, January 2016; AER analysis.

Note: AER maximum total labour rates were calculated in $2014–15 and escalated to $2017–18 using TasNetworks escalators to ensure the labour rates are compared on similar terms.

(a) Based on TasNetworks' proposed electrical technician labour rate (inclusive of on costs) of $70.85 plus working service delivery overhead hourly rate of $39.01.

As table 16.2 illustrates, apart from the implied administration labour rate, the TasNetworks 'proposed labour rates do not exceed our Tasmanian maximum total labour rates which we consider are efficient. We also note TasNetworks' proposed labour rates do not exceed the individual jurisdictional maximum total labour rates. Therefore we accept the proposed labour rates in TasNetworks' cost build-up method which are below our Tasmanian maximum total labour rates.

Our reasons for not accepting the implied administration labour rate is discussed in section 16.1.4.2.

### 16.1.4.2 Direct administration and supervision costs

We do not accept TasNetworks' direct administration and supervision costs in its cost build-up of proposed ancillary network services prices.

We consider the implied administration labour rate for the supervision and customer team costs exceeds our administration maximum total labour rate. Therefore, we substitute in our administration maximum total labour rate in TasNetworks' cost build-up model to determine efficient ancillary network services prices.

We also consider the premium service margins in the cost build-up for non-scheduled, after hours or same day premium services have not been sufficiently justified. Therefore, we have removed the premium service costs from TasNetworks' cost build-up model.

However, we acknowledge that ancillary network services undertaken after hours do incur additional costs due to penalty labour rates. Therefore, our draft decision applies an after-hours labour rate in TasNetworks' cost build-up model to determine the ancillary network services prices for after-hours services. The after-hours services are discussed in section 16.1.4.3.

Our detailed reasoning on the TasNetworks direct administration and supervision costs is set out below.

### *Implied administration labour rate*

TasNetworks used a top-down approach to calculate the supervision and customer team costs in its cost build-up of ancillary network service prices.[18] This approach allocates the total budget costs of the team to each service by the time spent dealing with the average of each service.[19]

We note TasNetworks' proposed supervision and customer team costs are an administrative function. Therefore, we are able to determine the efficiency of these costs by deriving an implied administration labour rate to compare against our administration maximum total labour rate.

As the supervision and customer team costs are underpinned by the time spent on each service, we derive an implied administration labour rate by dividing the allocated cost for each service by the respective time spent on each service. Our calculations show the implied administration labour rate to be $224.47 ($2017–18). The implied rate is significantly higher than the administration maximum total labour rate we consider to be efficient. Therefore, we do not accept the supervision and customer team costs in TasNetworks' cost build-up of ancillary network services prices.

Our draft decision substitutes our Tasmanian administration maximum total labour rate of $98.95 ($2017–18) (set out in table 16.2) into TasNetworks' cost build-up model. This then determines efficient ancillary network services prices.

### *Premium service margins*

TasNetworks' cost build-up for direct administration and supervision costs also applied premium service costs to ancillary network services performed outside normal scheduling. TasNetworks stated that:

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[18] TasNetworks, *TasNetworks (Ancillary service fees model)*, January 2016.

[19] TasNetworks, *AER information request: TasNetworks response to questions raised by the AER – IR008*, 10 May 2016, p. 8.

> Premium service costs represent the loss of efficiency and additional cost associated with performing services outside of normal scheduling. Such services require TasNetworks to alter work schedules and priorities which is represented in increased travel time and a premium service cost allocation. [20]

TasNetworks calculated the premium service costs by applying a percentage margin to the total direct costs for providing the service.[21] The types of premium services and their respective margins are:

- non-scheduled visits—25 per cent margin
- after hours—50 per cent margin
- same day premium—100 per cent margin.

Although we requested that TasNetworks provide a model with calculations to support its proposed premium service margins (its 'gross up task costs') it only provided anecdotal evidence.[22] That is, TasNetworks did not provide any substantive evidence to support the levels of the margins it applied.

Without substantive evidence it is difficult for us to determine whether TasNetworks proposed premium service margins are efficient. Particularly given that distributors in other jurisdictions do not apply such 'premium margins' for us to compare against.

We consider it would be inappropriate for us to accept the proposed premium service margins in our draft decision without sufficient justification given that the price impact can be significant for some services. Also, we are unable to substitute an alternative margin because we have no reliable benchmark. Therefore, we have removed the premium service costs from TasNetworks cost build-up model in our draft decision.

Should TasNetworks include the premium service margins in its revised proposal, we would expect TasNetworks provide substantive evidence to support their inclusion.

#### 16.1.4.3 After hours services

We do not accept TasNetworks' proposed task times to perform its after-hours ancillary network services. The proposed task times overstate the time needed to perform these services and is therefore not efficient. We have substituted in the highest time taken for the particular service during business hours which we consider is efficient.

We also apply a margin to TasNetworks' labour rate for after-hours services as we acknowledge these services incur higher labour costs. The after-hours margin is based on the maximum margin we consider to be efficient, as applied by other distributors.

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[20] TasNetworks, *TasNetworks' response to questions raised by the AER IR#008*, 24 May 2016.

[21] TasNetworks, *TasNetworks (Ancillary service fees model)*, January 2016.

[22] TasNetworks, *AER information request: TasNetworks response to questions raised by the AER – IR008*, 10 May 2016, pp. 8–9.

Our substitute time taken and after hours labour rate margin will provide TasNetworks with a reasonable opportunity to recover at least its efficient costs in the provision of its after-hours ancillary network services.

TasNetworks proposed task times of 240 minutes (combination of on-site and travel time) for all after hours fee based ancillary network services.[23] It noted the application of the 240 minutes reflects its policy that employees performing after hours tasks are paid a minimum of four hours.[24] It stated that due to the nature of after-hours and on-call work, 240 minutes represents an appropriate allocation of staff resources based on the assumption that only one service will be completed within that time.

We acknowledge that after hours services typically incur higher costs than services performed during standard 'business day' hours (business hours) primarily due to the higher labour costs incurred for after-hours services. However, it does not follow that after hours services have significantly increased task times which is another key input into the final price of the service.

The time taken on-site to perform a service should remain constant regardless of the time of day the service is performed. For example, a meter test performed at 10am (inside business day hours) should take the same amount of time if performed at 7pm (after hours) as the task is the same. We note this consideration is supported by the cost build-up of ancillary network services by other distributors which apply the same on-site task times regardless of the time the service in performed.

We acknowledge that travel time may be increased for after-hours services for some distributors, however, the increase is typically marginal in comparison to business hours travel time. In our recent assessment of the Victorian distributors' travel times for ancillary network services, all but AusNet Services applied the same travel time for services performed during business hours and after hours. While AusNet Services' travel times increased for after-hours services, this increase was minimal—between one and eight minutes compared to business hours travel times.

Based on this analysis, we consider TasNetworks' policy to apply a 240 minute task time to all after hours services is inefficient. 240 minutes is a significant increase in task time in comparison to times taken for the same services performed by TasNetworks during business hours. We consider the significant increase has not been sufficiently justified by TasNetworks and overstates the required time to perform these services based on our assessment of after-hours services for other distributors.

Therefore, we do not accept the proposed 240 minutes task time and have substituted in the highest time taken for the particular service during business hours which we consider is efficient.

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[23] TasNetworks, *TasNetworks (Ancillary service fees model)*, January 2016.

[24] TasNetworks, *AER information request: TasNetworks response to questions raised by the AER – IR008*, 10 May 2016, pp. 8–9.

However, we consider labour costs are increased for services undertaken after hours. We note TasNetworks applied the same labour rate to services undertaken both during business hours and after hours. Therefore, we have adjusted TasNetworks labour rates for after-hours services to account for these increased labour costs.

To make this adjustment we applied a benchmark percentage increase of 67 per cent to TasNetworks' business hours labour rates. The after-hours benchmark percentage increase was developed in our assessment of the Victorian distributors' proposed ancillary network services. [25]

In our Victorian analysis, we compared the respective increases from business hours labour rates to after-hours labour rates for distributors in Queensland, Victoria and New South Wales.[26] The analysis demonstrated that the percentage increase from business hour labour rates to after-hour labour rates ranged from between 18 per cent up to 67 per cent. To be conservative we applied an increase of 67 per cent to our maximum total labour rates to calculate after hour maximum total labour rates.

#### 16.1.4.4 New design and construction services

We do not accept TasNetworks' proposal to include its new design and construction ancillary network services as fee based services. We consider these services should be quoted services and have made them so in our draft decision.

In response to our request for more information on why these services were proposed as fee based services, TasNetworks' stated that:

> The costs associated with providing these services are reasonably homogenous and the additional administration costs of classifying these services as Network Ancillary Services (Quoted Services) generally outweighs the benefit to customers receiving these services.[27]

However, we note TasNetworks did not provide any substantive evidence to support its assertions that:

- these services are reasonably homogenous
- the costs of having these services as quoted generally outweighs the benefit to customers.

We note that distributors in other jurisdictions consider these services to be quoted services as they are not homogenous and highly variable.[28] As such, distributors

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25 AER, *Preliminary decision: United Energy distribution determination 2016 to 2020—Attachment 16—Alternative control services*, 29 October 2015, p. 16–13.

26 AER, *Preliminary decision: United Energy distribution determination 2016 to 2020—Attachment 16—Alternative control services*, 29 October 2015, p. 16–13.

27 TasNetworks, *AER information request: TasNetworks response to questions raised by the AER – IR008*, 10 May 2016, p. 7.

28 For example, see: CitiPower, *Regulatory proposal 2016–20*, 30 April 2015, pp. 291, 298,

develop the costs for these services on a case by case basis dependent on the specific customers' needs.

We agree with the approach applied by other distributors and consider unless TasNetworks can provide substantive evidence to demonstrate otherwise, these services should be quoted services.

## 16.2 Public lighting

### 16.2.1 Draft decision

We do not approve the proposed public lighting charges because we have determined a pre-tax real WACC of 3.59 per cent instead of the proposed pre-tax real WACC of 3.99 per cent

We accept all other aspects of TasNetworks' proposal.

#### 16.2.1.1 Form of control mechanism

We maintain our F&A 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 year's the previous year's prices are adjusted by CPI and an X factor. The control mechanism formula is set out below:

$$\bar{p}_t^i \geq p_t^i \qquad \text{i=1,...,n and t=1,…2}$$

$$\bar{p}_t^i = \bar{p}_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i)$$

Where:

$\bar{p}_t^i$ is the cap on the price of service i in year t

$p_t^i$ is the price of service i in year t. The initial value is to be decided in the determination.

$\bar{p}_{t-1}^i$ is the cap on the price of service i in year t

$t$ is the regulatory year

$\Delta CPI_t$ is the annual percentage change in the ABS consumer price index (CPI) All Groups, Weighted Average of Eight Capital Cities[29] from the December quarter in year t–2 to the December quarter in year t–1, calculated using the following method:

[29] If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–2

minus one.

For example, for 2018–19, year t–2 is the December quarter 2016 and year t–1 is the December quarter 2017.

$X_t^i$ are the values set out in the public lighting decision model.

### 16.2.2 TasNetworks' proposal

TasNetworks proposed the continuation of its current approach to public lighting using an annuity based public lighting model.[30]

### 16.2.3 Assessment approach

We assessed TasNetworks public lighting proposals by analysing the assumptions used in the build-up of proposed costs and benchmarking these costs and assumptions amongst distributors in the NEM and against independent data and information.

### 16.2.4 Reasons for draft decision

We have applied a WACC to public lighting consistent with that applied to standard control services.

A submission from Consumer Challenge Panel (CCP) member David Headberry stated that concern has been expressed about the derivation of public lighting charges and that TasNetworks should demonstrate that the rates for public lighting services are reflective of the actual costs involved in providing the services.

It suggests that 'perhaps the pricing for the services to provide public lighting should reflect the difficulty in providing the services (e.g. be broken down to into urban, regional city and rural categories).'[31]

The AER considers that the prices proposed by TasNetworks reflect the cost of providing the service and that the existing pricing approach is appropriate.

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[30] TasNetworks, *TasNetworks (Public Lighting model)*, January 2016.

[31] CCP (David Headberry), *Submission to the AER, Response to the proposal from Tasmania's electricity distribution network service provider (TasNetworks - TND) for a revenue reset for the 2017–19 regulatory period*, 4 May 2016, p. 48.

If the costs were further disaggregated by Tasmanian region, or urban compared to rural, it is not expected that this it would result in any significant change in prices. To attempt to break prices down further would increase TasNetworks administrative costs without providing any improvement in cost reflectivity to customers.

Approved public lighting charges are set out in Table 16.3.

### Table 16.3 Public Lighting Charges, draft decision ($ nominal)

| Light Type | 2017-18 (cents per light per day) |
|---|---|
| 32W Compact Fluorescent | 34.624 |
| 42W Compact Fluorescent | 34.647 |
| 42W Compact Fluorescent - Bottom Pole Entry | 34.647 |
| 2x24W Compact Fluorescent | 34.962 |
| 1x20W Fluorescent | 36.203 |
| 1x40W Fluorescent | 35.125 |
| 2x20W Fluorescent | 36.488 |
| 2x24W Fluorescent | 36.433 |
| T5 Fluorescent 2 x 24W | 36.488 |
| 20 Fluorescent 1X20FL | 36.203 |
| 2x40W Fluorescent | 35.428 |
| 3x40W Fluorescent | 44.438 |
| 4x20 Fluorescent | 37.055 |
| 4x40W Fluorescent | 45.837 |
| 100W Sodium Vapour | 43.647 |
| 150W Sodium Vapour | 45.800 |
| 250W Sodium Vapour | 46.843 |
| 250W Sodium Vapour - Flood Light | 50.656 |
| 400W Sodium Vapour | 47.678 |
| 400W Sodium Vapour - Flood Light | 50.192 |
| 70W Sodium Vapour | 34.497 |
| 100W Incandescent | 40.323 |
| 60W Incandescent | 31.616 |
| 18W LED | 32.766 |
| 25W LED | 32.766 |
| 18W LED Decorative - Bottom Pole Entry | 45.524 |

| | |
|---|---|
| 18W LED Decorative - Side Entry | 45.524 |
| 18W LED Decorative - Top Entry | 45.524 |
| 25W LED Decorative - Bottom Pole Entry | 45.524 |
| 25W LED Decorative - Side Entry | 45.524 |
| 25W LED Decorative - Top Entry | 45.524 |
| 30W LED | 32.766 |
| 88 LED Light | 32.766 |
| 100W Metal Halide | 43.790 |
| 150W Metal Halide | 46.347 |
| 250W Metal Halide | 47.125 |
| 400W Metal Halide | 52.207 |
| 70W Metal Halide | 33.403 |
| 250W Metal Halide - Flood Light | 52.280 |
| 400W Metal Halide - Flood Light | 52.207 |
| 125W Mercury Vapour | 43.436 |
| 250W Mercury Vapour | 43.879 |
| 400W Mercury Vapour | 45.883 |
| 50W Mercury Vapour | 32.295 |
| 80W Mercury Vapour Art decorative | 48.111 |
| 80W Mercury Vapour | 32.293 |

## 16.3 Metering

We are required to classify and impose a control mechanism on TasNetworks' type 5, 6 and 7 metering services for the 2017–19 regulatory control period.

In Tasmania, TasNetworks is the monopoly supplier of type 5–7 metering services. Type 5 metering is defined as a manually read interval meter whilst type 6 is a manually read accumulation meter. Type 7 metering services are unmetered connections with a predictable energy consumption pattern (for example, public lighting connections).

In our Framework and Approach Paper (F&A), we classified type 5–7 metering services as alternative control services. We stated that this 'classification reflects the limited prospect of competition in the supply of type 5–7 metering services to date and that their cost can be directly attributed to individual customers'.[32]

Our draft decision on type 5–7 metering services is made in the context of recently completed policy reform. On 26 November 2015, the Australian Energy Market Commission (AEMC) made a determination on competition in metering and related services.[33] The final rule resulted in amendments to the NER which are scheduled to take effect on 1 December 2017. That is, five months into TasNetworks' 2017–19 regulatory control period.

The AEMC's final rule introduces new arrangements that are designed to 'facilitate a market–led approach to the deployment of advanced meters'.[34] To achieve this, a number of reforms will take place. These include:

- the transfer of the role and responsibilities of the existing 'Responsible Person' to a new type of Registered Participant called a Metering Coordinator
- allowing any person to become a Metering Coordinator, subject to meeting the registration requirements
- permitting a large customer to appoint its own Metering Coordinator
- requiring a retailer to appoint the Metering Coordinator, except where a large customer has appointed its own Metering Coordinator.[35]

However, there is scope for these reforms to be deferred. The AEMC's final rule determination states that a Minister in a jurisdiction that does not currently have effective retail electricity competition, such as in Tasmania, may request a jurisdictional

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32 AER, *Framework and approach for TasNetworks distribution: For the regulatory control period commencing 1 July 2017*, July 2015, p. 24.

33 AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015,

34 AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015, p. i.

35 AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015, p. iii–iv.

derogation from specific aspects of the final rule for a limited period of time.[36] For this to occur, the Minister would have to consider that the specific circumstances in Tasmania mean that the costs of the final rule could exceed the benefits for a period of time.[37] The AEMC stated that any such jurisdictional derogation request would be considered through a separate rule change consultation process during 2016.[38]

Our draft decision is made on the basis that no such derogation request has been, or will be, made in relation to Tasmania. We have taken the view that the AEMC's final rule regarding competition in metering and related services will take effect on 1 December 2017. In particular, we considered the likelihood that customers may 'churn' to alternative metering service providers and the effect that this should have on the pricing structure that we approve. We also considered the effect that the opening up of competition in metering is likely to have on TasNetworks' expenditure requirement.

## 16.3.1 Draft decision

### 16.3.1.1 Structure of metering charges

Our draft decision is to maintain the alternative control services classification for type 5–7 metering services set out in our F&A.

We further maintain that the control mechanism for alternative control services will be caps on the prices of individual services. This control mechanism is set out in section 16.3.1.3.

**Scope of services**

Our draft decision accepts a charging structure for type 6 metering only.

In our F&A, we classified type 5, 6 and 7 metering services as alternative control services. TasNetworks, however, only provides type 6 metering services.[39] We have accordingly accepted a charging structure which excludes type 5 and 7 metering. By doing this, our draft decision reflects the scope of services TasNetworks provides to customers.

**Type 6 annual metering charges**

Our draft decision accepts TasNetworks' proposed charging structure.

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[36] AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015, p. 46.

[37] AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015, p. 46.

[38] AEMC, *Final rule determination: Expanding competition in metering and related services*, 26 November 2015, p. 46.

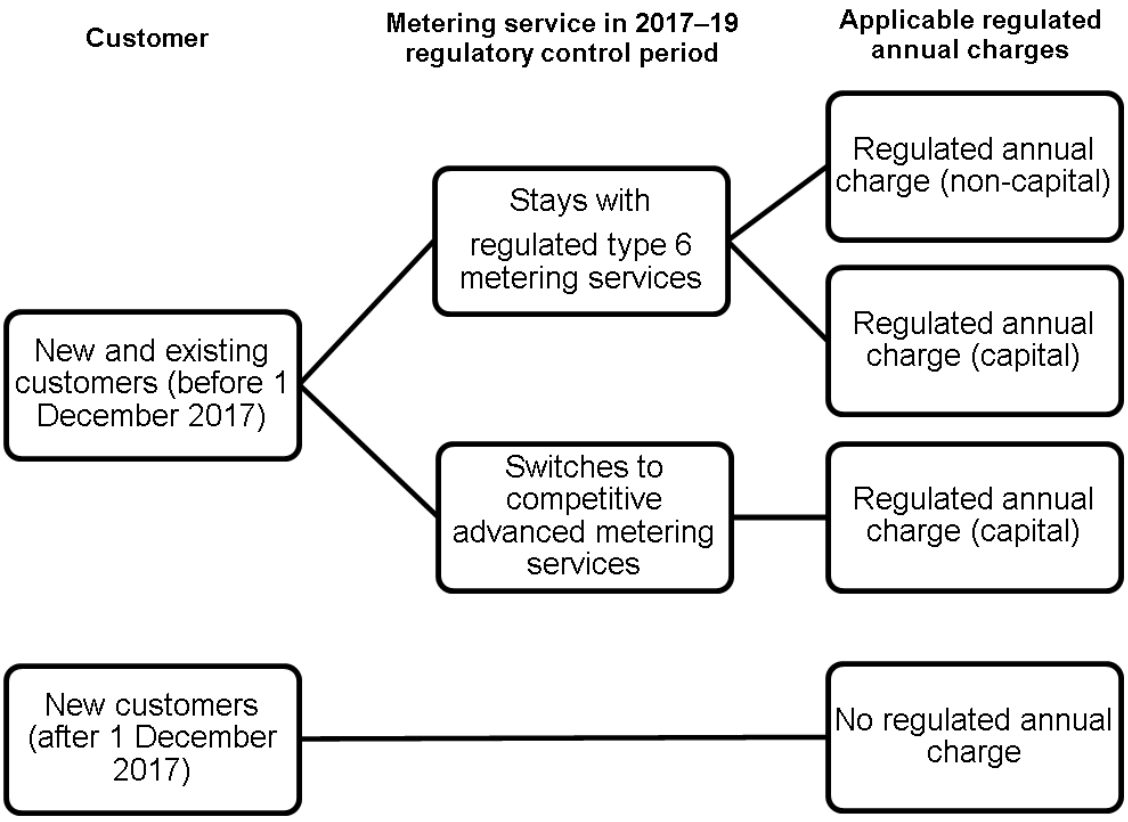
[39] TasNetworks, Response to AER information request #1, 29 February 2016, p. 7.

The charging structure proposed by TasNetworks is consistent with previous determinations we have made.[40] In accordance with this structure, metering charges are split 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.

Figure 16.3 depicts how the two components relate to different metering customers. It shows that if a customer takes up a type 6 metering service before 1 December 2017 they will pay both the capital and non–capital components of the regulated metering charge. If customers switch to a competitive advanced metering service provider, they will pay the capital component only. It is also shown that new metering customers from 1 December 2017 *onwards* will not pay a regulated annual metering charge as they will not be using a meter provided by TasNetworks. They will be required to obtain a meter from a competitive advanced metering service provider.

### Figure 16.3 Draft decision charging structure for type 6 metering




Source: AER analysis

[40] NSW/ACT distribution determinations, April 2015; QLD/SA distribution determinations, October 2015.

In accordance with this charging structure, customers that take up a metering service with TasNetworks before 1 December 2017 will continue to pay the capital component if they switch to an advanced metering provider. This is consistent with the regulated revenue regime we administer. Under this regime, TasNetworks has paid for the capital cost of meters upfront at the time of installation. Those capital costs have then been rolled into a regulatory asset base and recovered over time through levying charges on customers. This pre-existing cost recovery process will not be disrupted as switching customers will still be required to continue paying the capital component of metering charges. We consider this outcome to be consistent with the Revenue and Pricing Principles in the NEL since it provides TasNetworks with a reasonable opportunity to recover the capital costs it has already incurred.

The payment of the non–capital component, as shown in Figure 16.3 above, will discontinue when a customer switches to an advanced metering service. This is because the non–capital component predominately recovers the cost of performing manual meter readings. Such readings will not be performed for customers that switch to an advanced metering service–these will be remotely read and the service is being provided by a third party. The discontinuation of non–capital component means that TasNetworks' metering charges will be reflective of its actual costs. TasNetworks' proposed charging structure is consistent with this requirement.

Vector made a submission in support of the charging structure TasNetworks proposed, and which we have accepted in this draft decision. Vector submitted that TasNetworks' proposed structure should be approved because it is consistent with previous regulatory decisions. Its submission stated that Vector 'broadly support[s] the cost recovery approach developed by the AER which avoids exit fees, while allowing distributors… to recover the residual capital cost of their regulated investment legacy meters'.[41] Our draft decision, as with previous regulatory determinations, provides for a charging structure which achieves this outcome.

**Upfront capital charges**

Our draft decision charging structure does not include upfront capital charges.

In past regulatory determinations, we required the cost of electricity distributors providing new and upgraded meters to be recovered from customers via upfront payments. Our rationale was that upfront charges would provide transparent standalone prices which would help facilitate the transition to greater contestability in the provision of metering services.

We considered requiring TasNetworks to charge upfront capital charges. However given that TasNetworks will only be offering new or upgraded meters for five months of the 2017–19 regulatory control period, until contestability in metering commences on 1 December 2017, we consider any benefits from requiring this charging structure would be limited. The costs to TasNetworks with respect to updating its billing systems and

[41] Vector, Submission on TasNetworks 2017–19 regulatory proposal, 28 April 2016, p. 2.

dealing with customers about the change would also be significant when compared to the limited benefits.[42]

#### 16.3.1.2 Annual metering services charges

We accept TasNetworks building block approach as the basis for establishing annual metering charges and the proposed values:

- **Forecast capex**

  Our draft decision is to accept TasNetworks proposed $1.6 million in capex ($2016–17) for type 6 annual metering charges.

- **Forecast opex**

  We accept in this draft decision TasNetworks proposed $10.3 million in opex ($2016–17) for type 6 annual metering charges.

- **Opening metering asset base**

  Our draft decision is to accept the proposed opening metering asset base (MAB) value as at 1 July 2017 of $46.1 million ($nominal).

- **Depreciation**

  With respect to asset lives, we accept TasNetworks' proposal for 'digital meters' and 'mechanical meters' to be depreciated over 15 and 30 years, respectively. We consider these asset lives to be efficient because it coincides with the average technical life of TasNetworks' meters. The result is that the cost recovery of the assets will match the length of their expected usefulness to customers.

#### 16.3.1.3 Form of control mechanism

We maintain our F&A position to apply price caps for individual type 6 metering services as the form of control. This means a schedule of prices is set for the first year. For the following year's the previous year's prices are adjusted by CPI and an X factor. The control mechanism formula is set out below:

$$\bar{p}_t^i \geq p_t^i \qquad \text{i=1,...,n and t=1,…2}$$

$$\bar{p}_t^i = \bar{p}_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i)$$

Where:

$\bar{p}_t^i$ is the cap on the price of service i in year t

[42] TasNetworks, Response to information request #13, 12 July 2016, p. 7.

$p_t^i$ is the price of service i in year t. The initial value is to be decided in the determination.

$\bar{p}_{t-1}^i$ is the cap on the price of service i in year t

$t$ is the regulatory year

$\Delta CPI_t$ is the annual percentage change in the ABS consumer price index (CPI) All Groups, Weighted Average of Eight Capital Cities[43] from the December quarter in year t–2 to the December quarter in year t–1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t–2

minus one.

For example, for 2018–19, year t–2 is the December quarter 2016 and year t–1 is the December quarter 2017.

$X_t^i$ is the values set out in table 16.4.

### Table 16.4 X factor for annual metering charges

| | 2018–19 |
|---|---|
| X factor (non–capital component) | 0.0 |
| X factor (capital component) | 0.0 |

Source: AER analysis.

## 16.3.2 TasNetworks' proposal

### 16.3.2.1 Structure of metering charges

TasNetworks proposed a structure of metering charges for type 6 metering services that are consistent with our past determinations.

In its revenue proposal, TasNetworks stated that the 'introduction of the competitive framework for the provision of advanced meters exposes the distribution businesses to

[43] If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

the risk that the sunk capital costs of existing meters cannot be recovered'.[44] This is because if an 'existing meter is replaced with an advanced meter, the operational life of the present meter is unexpectedly cut short, resulting in the possibility of the meter's residual value being unrecovered'.[45]

To address the risk of 'stranded assets', TasNetworks proposed an annual metering charge for type 6 meters that is consistent with past regulatory decisions made by us in the NSW, ACT, Queensland and South Australian electricity distribution determinations. This charging structure involves splitting metering prices into 'capital' and 'non–capital' components, and is outlined in section 16.3.1.1 above.

#### 16.3.2.2 Annual metering charges

For each meter type, TasNetworks proposed a price cap for annual metering services. It built up the costs that constitute the annual metering service charges by applying a 'building block' approach. This involved forecasting the revenue requirement for each of the metering cost categories and then translating this into price caps. Table 16.5 shows the proposed metering building block requirement. Table 16.6 shows the proposed annual charges for metering services that recover the total proposed revenue. The assessment of these proposed charges is discussed in the next section.

**Table 16.5 TasNetworks' proposed metering building block requirement ($ nominal)**

| | 2017 | 2018 |
|---|---|---|
| Return on capital | 2.8 | 2.7 |
| Return of capital | 3.5 | 3.9 |
| Operating expenditure | 5.3 | 5.4 |
| Tax liability | 0.9 | 1.0 |
| Total unsmoothed revenue | 12.6 | 12.9 |
| X–factor (%) | 18.76 | 2.20 |
| Smoothed revenue requirement | 12.8 | 12.8 |

Source: TasNetworks, *Regulatory proposal, TN055 Metering model*, January 2016.

**Table 16.6 TasNetworks' proposed annual metering service charges ($ nominal)**

| | | 2017 | 2018 |
|---|---|---|---|
| Business LV – Single phase | Capital | 11.29 | 11.45 |
| | Non–capital | 11.12 | 11.14 |

[44] TasNetworks, *Regulatory proposal*, January 2016, p. 140.

[45] TasNetworks, *Regulatory proposal*, January 2016, p. 140.

| | | | |
|---|---|---|---|
| Business LV – Multi phase | Capital | 24.89 | 25.25 |
| | Non–capital | 24.52 | 24.57 |
| Business LV – CT meters | Capital | 32.88 | 33.36 |
| | Non–capital | 32.40 | 32.46 |
| Domestic LV – Single phase | Capital | 10.96 | 11.13 |
| | Non–capital | 10.80 | 10.83 |
| Domestic LV –Multi phase | Capital | 22.86 | 23.19 |
| | Non–capital | 22.52 | 22.57 |
| Domestic LV - CT meters | Capital | 29.09 | 29.52 |
| | Non–capital | 28.66 | 28.72 |
| Other meters | Capital | 22.85 | 23.18 |
| | Non–capital | 22.51 | 22.56 |

Source: TasNetworks, *Regulatory proposal, TN056 Metering post tax revenue model*, January 2016.

### 16.3.3 Assessment approach

For alternative control services, we have greater discretion under the NER in making our assessment compared to standard control services.[46] We have chosen to apply a streamlined version of a building block approach.

#### Forecast capex

Our assessment approach for TasNetworks' proposed capex for type 6 annual metering services involved us assessing the proposed:

- unit costs for metering hardware and labour
- volume of new connections, replacements, and customer driven alterations.

When undertaking this assessment, we took into account the introduction of metering contestability on 1 December 2017. From that date, TasNetworks will no longer be the 'Responsible Person' for type 6 meters.

#### Forecast opex

We considered TasNetworks' proposed metering opex using a top-down ‘base–step–trend’ approach. This is our preferred approach to assessing most opex categories.[47] In particular, we:

[46] For alternative control services, the control mechanism must have a basis stated in the distribution determination and may (but not need to) utilise elements of a building block determination (with or without modification), NER cl 6.2.6(b) and (c).

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

- used the 'revealed costs' approach as the starting point and removed any non–recurrent expenditure
- adjusted for any step changes if we were satisfied that a prudent and efficient service provider would require them
- trended forward the base opex (plus any step changes).

We also had regard to benchmarking when considering TasNetworks' proposed metering opex for type 6 meters.

### 16.3.4 Reasons for draft decision

#### 16.3.4.1 Annual metering charges

## Forecast capex

We accept TasNetworks' proposed $1.6 million ($2016–17) in capex.

Our draft decision accepts the hardware and labour unit costs that input into TasNetworks' proposal. The unit costs are based on contracts resulting from a competitive tender process.[48] We are satisfied that they reflect market prices for hardware and labour.

We accept TasNetworks' forecast volume of new connections, meter replacements, and customer driven alterations. In reaching this draft decision, we considered whether the volume forecasts reflect TasNetworks no longer being the 'Responsible Person' for type 6 metering from 1 December 2017. Table 16.7 shows TasNetworks' proposed volumes reflect that change in responsibility.

**Table 16.7 Draft decision on metering volume forecasts**

| | Annual average (2010–11 to 2014–15) | Proposed volume for 2017–19 period | Draft decision |
|---|---|---|---|
| New connections | 2 000 | 1 000 | 1 000 |
| Meter replacements | 5 000 | 0 | 0 |
| Customer driven alterations | 5 000 | 2 500 | 2 500 |
| Total | 12 000 | 3 500 | 3 500 |

Source: TasNetworks, *Regulatory proposal, TN055 Metering Model*, January 2016, 'Volume trending' tab.

As shown in Table 16.7 above, TasNetworks has only forecast approximately half its historical annual average of new connections and customer driven alterations. We consider a forecast based on half the historical annual average to be reasonable for

[48] TasNetworks, Response to information request #13, 12 July 2016.

two reasons. First, the use of historical volumes is reasonable for new connections and customer driven alternations because housing growth in Tasmania is forecast to be similar in 2017–19 as it has been in the past.[49] Second, a forecast based on half the historical average is appropriate given that TasNetworks will only have responsibility for new connections and customer driven alterations for five months in the 2017–19 regulatory control period. We have therefore approved the volumes.

TasNetworks' capex forecast does not include any meter replacements. We consider this to be an efficient response to the expansion of metering contestability. This is because it avoids a scenario where customers have an existing type 6 meter replaced with a new version of the same, increasingly obsolescent, technology. Instead, TasNetworks will not replace type 6 meters in the 2017–19 regulatory control period. This will allow for those meters to be replaced with more advanced metering when contestability is introduced.

## Forecast opex

We accept TasNetworks' proposed type 6 metering opex of $10.3 million ($2016–17) for the 2017–19 regulatory control period.

**Base**

The initial step in our assessment of TasNetworks' proposed operating expenditure was to consider its 'base' level of expenditure.

We looked at what TasNetworks' base should be from two different perspectives. These were TasNetworks' historical opex and its performance against benchmarking.

In assessing historical expenditure, we considered TasNetworks' base should be at least as efficient as its costs in previous years. We observed TasNetworks' historic opex over a five year period. Applying this approach, we observed a base expenditure of $26 per customer per year ($2016–17).

We further examined the proposed base by applying benchmarking. To do this we used a partial performance indicator which compared TasNetworks proposed opex per customer against other non–Victorian distribution businesses in the national electricity market (NEM).

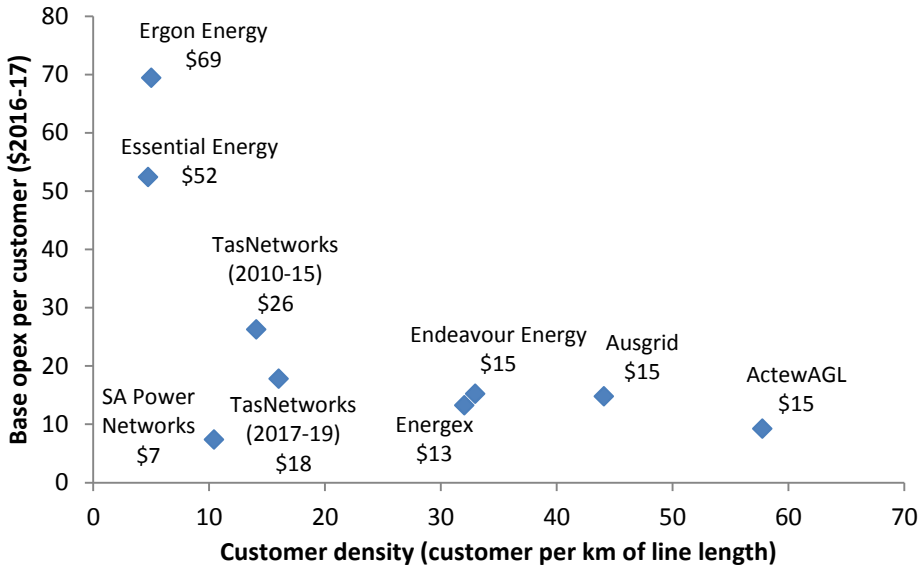
When comparing TasNetworks' proposed opex to its peers, we normalised our results by accounting for customer density. We calculated this as the number of customers a distribution business has per kilometre of line length. We took customer density into account because, all things equal, businesses with a low customer density are likely to require higher opex. For example, this could be because of longer travel times to

[49] HIA, HIA housing forecasts, February 2016, p. 1

service customers. This assessment approach is consistent with past regulatory determinations we have made.[50]

Figure 16.4 shows the results of our benchmarking. It compares TasNetworks' opex per customer with the other non–Victorian businesses in the NEM over the last five years from 2010–11 to 2014–15. In addition to comparing TasNetworks historical performance over that period, we also benchmarked its proposed 2017–19 opex per customer. We calculated TasNetworks' proposed opex to amount to $18 per customer per year ($2016–17).

### Figure 16.4 Benchmarking of annual metering opex per customer ($2016–17)




Source: AER analysis.

We considered whether we should apply an efficiency adjustment based on our benchmarking analysis. In support of making such an adjustment, we observe SA Power Networks spends $7 per customer per year ($2016–17). This is substantially less than TasNetworks, which has more customers per kilometre of line length. In general, we consider that this would offer reasonable grounds to make an efficiency adjustment. But in this instance we do not consider SA Power Networks to be a reasonable 'comparator' for TasNetworks. This is because SA Power Networks has materially more customers. SA Power Networks averaged 840 557 customers over the 2010–15 benchmarking period whereas TasNetworks averaged 276 018. We consider these higher customer numbers may provide efficiencies, through greater economies of scale, that TasNetworks may not be able to access.

[50] See the NSW 2014–19 distribution determinations and the QLD & SA 2015–20 regulatory determinations.

In the absence of any close  comparator, we do not consider there to be grounds to apply an efficiency adjustment. Further we find that TasNetworks' 2017–19 proposed opex is relatively efficient. This is apparent given that its proposal to spend $18 per customer per year ($2016–17) is not materially above that  of Endeavour Energy, Ausgrid, and ActewAGL. Those distribution businesses all have at least twice as many customers per kilometre of line length, but incur only $3 less per customer per year ($2016–17) than TasNetworks.

On balance, our benchmarking does not support grounds for an efficiency adjustment. Our draft decision is to accept TasNetworks' base opex for the 2017–19 regulatory control period.

**Step**

Our draft decision is to not apply any step changes to TasNetworks' base opex. We have not identified any step changes that should be applied and TasNetworks did not propose any.

**Trend**

We accept TasNetworks proposed opex for metering of $10.3 million ($2016–17).

In trending forward TasNetworks base over the 2017–19 period, we have not accounted for changes in productivity and real price growth. This is consistent with TasNetworks' proposal.

## Opening metering asset base

Our draft decision accepts TasNetworks' proposed opening MAB as of 1 July 2017 of $46.1 million ($ nominal).

TasNetworks rolled forward its MAB using our roll forward model. This involved taking the opening asset value from the last determination and adding actual capex from the report regulatory information notices for the years already completed. It then added forecast expenditure for the remaining years. We are satisfied with this process and therefore the opening MAB value is accepted.

# A Ancillary network services

## Table 16.8: Fee based ancillary network service prices for 2017–18, draft decision ($2017–18)

| Fee based service | Proposed price | AER draft decision |
|---|---|---|
| **Energisation, de-energisation, re-energisation and special reads** | | |
| Site visit – no appointment | 59.70 | 48.07 |
| Site visit – non-scheduled visit | 141.82 | 112.93 |
| Site visit – same day premium service | 265.66 | 156.16 |
| Site visit – after hours | 712.32 | 161.21 |
| Site visit – credit action or site issues | 138.28 | 126.66 |
| Site visit – credit action pillar box/pole top | 247.73 | 236.11 |
| Site visit – current transformer (CT) metering | 128.87 | 117.24 |
| Site visit – pillar box/pole top | 247.73 | 236.11 |
| Site visit – pillar box/pole top wasted visit | 147.88 | 136.25 |
| Transfer of retailer | 0.00 | 0.00 |
| **Meter alteration** | | |
| Tariff alteration – single phase | 139.68 | 128.06 |
| Tariff alteration – multi phase | 182.92 | 171.29 |
| Adjust time clock | 81.31 | 69.69 |
| Install pulse outputs | 128.87 | 117.25 |
| Remove meter – single phase | 139.68 | 128.06 |
| Remove meter – multi phase | 182.92 | 171.29 |
| Meter alteration – after hours visit | 712.32 | 237.23 |
| Meter alteration – wasted visit | 85.64 | 74.01 |
| **Meter test** | | |
| Meter test – single phase | 215.34 | 203.72 |
| Meter test – multi phase | 409.90 | 398.28 |
| Meter test – current transformer (CT) | 453.14 | 441.51 |
| Meter test – after hours | 712.32 | 617.34 |
| Meter test – wasted visit | 85.64 | 74.01 |
| **Supply abolishment** | | |
| Remove service and meters | 260.20 | 241.61 |

| | | |
|---|---|---|
| Supply abolishment – after hours | 1,493.88 | 329.52 |
| Supply abolishment – wasted visit | 169.42 | 150.83 |
| **Truck tee-up** | | |
| Tee-up/appointment | 146.00 | 134.38 |
| Tee-up/appointment – after hours | 1,481.41 | 324.02 |
| Tee-up/appointment – no truck – after hours | 712.32 | 161.21 |
| Tee-up/appointment – wasted visit | 95.92 | 84.29 |
| **Miscellaneous services** | | |
| Open turret | 137.64 | 123.69 |
| Data download | 275.38 | 261.43 |
| Alteration to unmetered supply | 212.77 | 198.82 |
| Meter relocation | 165.46 | 151.51 |
| Miscellaneous services | 125.12 | 111.17 |
| Miscellaneous services – after hours | 839.81 | 349.34 |
| Miscellaneous services – wasted visit | 100.07 | 86.12 |
| **Connection establishment charges** | | |
| Overhead service, single span – single phase | 550.59 | 522.69 |
| Overhead service, single span – multi phase | 776.71 | 748.81 |
| Underground service in turret/cabinet – single phase | 180.81 | 152.92 |
| Underground service in turret/cabinet – multi phase | 226.51 | 198.62 |
| Underground service with pole mounted fuse – single phase | 421.46 | 393.57 |
| Underground service with pole mounted fuse – multi phase | 529.18 | 501.29 |
| Basic connection – after hours | 1,548.62 | 677.11 |
| Connection establishment – wasted visit | 154.79 | 126.90 |
| **Renewable energy connection** | | |
| Modify existing connection for micro embedded generation – single phase | 171.27 | 148.03 |
| Modify existing connection for micro embedded generation – multi phase | 214.51 | 191.26 |
| Renewable energy connection – after hours | 1,378.86 | 494.69 |
| Renewable energy – wasted visit | 117.23 | 93.99 |
| **Temporary disconnection charges** | | |
| Disconnect/reconnect overhead service for facia repairs – single phase | 322.22 | 294.33 |
| Disconnect/connect overhead service for facia repairs – multi phase | 413.00 | 385.10 |
| Temporary disconnect/reconnect – after hours | 1,510.51 | 525.76 |

| | | |
|---|---|---|
| Temporary disconnect/reconnect – wasted visit | 186.05 | 158.16 |
| **Basic connection alteration** | | |
| Connection alteration – overhead single phase | 322.22 | 294.33 |
| Connection alteration – overhead multi phase | 413.00 | 385.10 |
| Connection of new consumer mains to an existing installation – underground single phase to turret or pole | 225.19 | 197.29 |
| Connection of new consumer mains to an existing installation – underground multi phase to turret or pole | 275.27 | 247.38 |
| Augment single phase overhead service to multi phase supply | 844.79 | 816.89 |
| Augment multi phase overhead service to single phase supply | 618.67 | 590.78 |
| Augment single phase overhead service to underground supply (turret) | 391.53 | 363.64 |
| Augment multi phase overhead service to underground supply (turret) | 482.31 | 454.41 |
| Augment single phase overhead service to underground supply (pole) | 489.55 | 461.65 |
| Augment multi phase overhead service to underground supply (pole) | 597.26 | 569.37 |
| Basic connection alteration – after hours | 1,510.51 | 746.17 |
| Basic connection – wasted visit | 174.70 | 146.81 |
| **New design and construction fees** | | |
| Standard application fee | 200.00 | Quoted service |
| Application fee – customer choice | 1,886.51 | Quoted service |
| **New design and construction fees (maximum service)** | | |
| Design cost | | |
| Design audit fee (small) | 1,382.41 | Quoted service |
| Design audit fee (large) | 1,844.82 | Quoted service |
| Design audit fee (major) | 2,944.89 | Quoted service |
| Construction cost | | |
| Construction audit fee (small) | 4,755.95 | Quoted service |
| Construction audit fee (large) | 5,944.93 | Quoted service |
| Construction audit fee (major) | 7,379.75 | Quoted service |
| **New design and construction fees (minimum service)** | | |
| Design cost | | |
| Design audit fee (small) | 441.62 | Quoted service |
| Design audit fee (large) | 670.22 | Quoted service |
| Design audit fee (major) | 943.26 | Quoted service |
| Construction cost | | |

| | | |
|---|---|---|
| Construction audit fee (small) | 951.19 | Quoted service |
| Construction audit fee (large) | 1,902.38 | Quoted service |
| Construction audit fee (major) | 2,951.90 | Quoted service |

Source: AER analysis; TasNetworks, *Indicative pricing schedule: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016.

## Table 16.9: TasNetworks' quoted services

| Quoted service group | Service name | Description |
|---|---|---|
| **New design and construction fees** | | |
| | Standard application fee | Administrative costs of application assessment |
| | Application fee – Customer choice | Connection assessment costs and preparation of specifications for a customer choice project |
| | Design cost – Design audit fee (small)– minimum service | Audit of a design incorporating low or high voltage elements |
| | Design cost – Design audit fee (large) – minimum service | Audit of a design incorporating high voltage and low voltage elements |
| | Design cost – Design audit fee (major) – minimum service | Audit of a design incorporating high voltage, low voltage and substation elements |
| | Design cost – Design audit fee (small)– maximum service | Audit of a design incorporating low or high voltage elements including a site visit |
| | Design cost – Design audit fee (large) – maximum service | Audit of a design incorporating high voltage and low voltage elements including a site visit |
| | Design cost – Design audit fee (major) – maximum service | Audit of a design incorporating high voltage, low voltage and substation elements including a site visit |
| | Construction cost – Construction audit fee (small) – minimum service | Audit of low or high voltage construction with 1-3 project audit gates |
| | Construction cost – Construction audit fee (large) – minimum service | Audit of high voltage and low voltage construction with 1-3 project audit gates |
| | Construction cost – Construction audit fee (major) – minimum service | Audit of high voltage, low voltage and substation construction with 1-3 project audit gates |
| | Construction cost – Construction audit fee (small) – maximum service | Audit of low or high voltage construction with 5-7 project audit gates |
| | Construction cost – Construction audit fee (large) – maximum service | Audit of high voltage and low voltage construction with 5-7 project audit gates |
| | Construction cost – Construction audit fee (major) – maximum service | Audit of high voltage, low voltage and substation construction with 5-7 project audit gates |
| **Non-standard services** | | |
| | | Removal or relocation of TasNetworks' assets at a customer's request (for example, the Tasmanian Government) request |

| | |
|---|---|
| | Services provided at a higher standard than the standard service, due to a customer's request |
| | Provision of public lighting schemes |
| | Provision of overhead and underground subdivisions for developers |
| | Design work for a new connection |
| | Relocation of assets at the request of a third party |
| | Services that are provided through a non-standard process at a customer's request (for example, more frequent meter reading) |

Source: AER analysis; TasNetworks, *Tasmanian distribution regulatory proposal—Regulatory control period 1 July 2017 to 30 June 2019*, 29 January 2016, p. 147; TasNetworks, *Indicative pricing schedule: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016.

## Table 16.10 Quoted service ancillary network services hourly labour rates for 2017–18, draft decision ($2017–18)

| Labour type | Proposed price | AER draft decision |
|---|---|---|
| Cable joiner | 60.56 | 60.56 |
| Customer connections – commercial metering | 63.09 | 63.09 |
| Customer connections – service crew | 62.13 | 62.13 |
| Designer | 70.05 | 70.05 |
| Distribution electrical technician | 62.25 | 62.25 |
| Distribution linesman | 56.35 | 56.35 |
| Distribution linesman – live line | 63.38 | 63.38 |
| Distribution operator | 69.65 | 69.65 |
| Electrical inspector | 58.32 | 58.32 |
| Field service co-ordinator | 72.38 | 72.38 |
| Labourer – overhead | 48.42 | 48.42 |
| Meter reader | 48.23 | 48.23 |
| Pole tester | 50.22 | 50.22 |
| Project manager | 86.06 | 86.06 |

Source: AER analysis; TasNetworks, *Indicative pricing schedule: Regulatory control period 1 July 2017 to 30 June 2019*, January 2016.

# B Metering

## Table 16.11 Draft decision metering charges (nominal, cents per day)

| | | 2017-18 | 2018-19 |
|---|---|---|---|
| Business LV – Single phase | Capital | 3.012 | 3.085 |
| | Non–capital | 2.972 | 3.045 |
| Business LV – Multi phase | Capital | 6.025 | 6.172 |
| | Non–capital | 5.947 | 6.092 |
| Business LV – CT meters | Capital | 7.790 | 7.981 |
| | Non–capital | 7.689 | 7.878 |
| Domestic LV – Single phase | Capital | 2.912 | 2.983 |
| | Non–capital | 2.874 | 2.944 |
| Domestic LV –Multi phase | Capital | 6.042 | 6.190 |
| | Non–capital | 5.964 | 6.110 |
| Domestic LV - CT meters | Capital | 7.477 | 7.660 |
| | Non–capital | 7.380 | 7.561 |
| Other meters | Capital | 5.317 | 5.447 |
| | Non–capital | 5.248 | 5.376 |

Source: AER analysis.

Note: Prices for 2018–19 are indicative only and will be adjusted for actual CPI during the AER's annual pricing approval processes.

## Table 16.12 Draft decision on X factors for metering charges (per cent)

| | 2018–19 |
|---|---|
| X factor (non–capital component) | 0.0 |
| X factor (capital component) | 0.0 |

Source: AER analysis.

## Table 16.13 Indicative annual metering charges ($ nominal)

| | 2016–17 | 2017–18 | 2018–19 |
|---|---|---|---|
| Business LV – Single phase | 28.46 | 21.84 | 22.38 |
| Business LV - Multiple phase | 56.94 | 43.69 | 44.77 |
| Business LV –CT meters | 73.63 | 56.50 | 57.88 |
| Domestic LV – Single | 27.52 | 21.12 | 21.63 |

| | | | |
|---|---|---|---|
| phase | | | |
| Domestic LV – Multiple phase | 57.10 | 43.82 | 44.89 |
| Domestic LV – CT meters | 70.67 | 54.23 | 55.56 |
| Other meters | 50.25 | 38.56 | 39.51 |

Source: AER analysis.

Note: The prices in Table 16.13 are indicative only. When setting metering charges, the AER will use the prices in Table 16.11 and the X factors in Table 16.12. The prices in Table 16.13 include both the capital and non–capital component.