DRAFT DECISION

SA Power Networks Distribution Determination 2020 to 2025

Attachment 15 Alternative control services

October 2019

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on the distribution determination that will apply to SA Power Networks for the 2020–2025 regulatory control period. It should be read with all other parts of the draft decision.

The draft decision includes the following attachments:

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

Attachment 11 – Demand management incentive scheme

Attachment 12 – Classification of services

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Attachment 17 – Connection policy

Attachment 18 – Tariff structure statement

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Shortened forms

Shortened form	Extended form
ACS	alternative control services
AER	Australian Energy Regulator
CCP	Consumer Challenge Panel
CCP 14	Consumer Challenge Panel, sub-panel 14
CPI	consumer price index
Distributor	distribution network service provider
F&A	framework and approach
LED	Light Emitting Diode
NEL	national electricity law
NEM	national electricity market
NER or the rules	national electricity rules
Opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
RIN	regulatory information notice
SCS	standard control services
WACC	weighted average cost of capital

15 Alternative control services

This attachment sets out our draft decision on prices SA Power Networks is allowed to charge customers for the provision of alternative control services: ancillary network services, public lighting and metering services.

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

Revenue from alternative control services represents around 9 per cent of SA Power Networks' total regulated revenue.[1]

15.1 Draft decision

Our draft decision for ancillary network services[2] is to reject many of SA Power Networks' proposed charges because we do not consider the proposed labour rates or service times are efficient. Our substitute charges and labour rates for ancillary network services are listed in appendix A.

To shift to cost-reflective pricing SA Power Networks' proposed an average increase in its ancillary network service fees of 67 per cent[3] compared to its negotiated service prices.[4] Our draft decision reduces this average price increase to 56 per cent, excluding two services that we rejected, applying corrections to modelling errors and changes to labour rates and service times. Our draft decision therefore results in 19 of SA Power Networks' 41 ancillary network services increasing in price by more than 30 per cent. For these reasons, we recommend that SA Power Networks undertake further stakeholder consultation, including on whether a phased transition to cost reflectivity is more appropriate and how its approach balances the recovery of efficient costs against customer impacts. However, we cannot compel SA Power Networks to adopt a transitioned approach to recover the efficient costs we have approved in this draft decision.

For public lighting, our draft decision is to accept SA Power Networks' proposal, except for the proposed elevation charge and cable and column replacement rate

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1 AER calculation based on SAPN, *RIN 1 - Workbook 1 - Regulatory determination template 2020-25 - February 2019, 3.1 - Revenue*.

2 Ancillary network services includes network ancillary services, standard connection services as well as public lighting and metering services that are not otherwise captured in the public lighting and metering services groups.

3 This includes two services that increased by over 300 per cent. Excluding these two services results in an average increase of 51 per cent.

4 These calculations apply CPI to the 2018–19 service price.

assumptions. We have also replaced the WACC, labour escalators, and other related inputs consistent with our methodology for standard control services. Further, our draft public lighting decision is based on SA Power Networks' opening public lighting regulatory asset base (RAB), until the outcome of a current arbitration process is finalised.

For metering services, our draft decision is to accept SA Power Networks' building block approach, accelerated depreciation of its metering asset base, and approach to capital[5] and operating expenditure. We have replaced the WACC, labour escalators, and other related inputs consistent with our methodology for standard control services.

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

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

15.2 SA Power Networks' proposal

Ancillary network services

SA Power Networks proposed a larger group of ancillary network services to be regulated as alternative control services for the first time in the 2020–25 regulatory period. Most ancillary network services were previously unregulated distribution services or classified as negotiated distribution services. While SA Power Networks grouped these services as 'fee-based' and 'quoted services' in its proposal,[6] we refer to them as ancillary network services. This covers network ancillary services, connection services as well as metering and public lighting services that are not otherwise captured in the public lighting and metering services groups.

Adopting our final Framework and Approach (F&A), which reclassified a number of ancillary network services, SA Power Networks undertook a review of its services to consider which could be rationalised and whether they should be charged on a fee or quotation basis, and how to determine those charges.[7] To establish charges for services provided on a fee basis, SA Power Networks built up costs based on historical data to recover the full cost of each service.[8] This included applying labour, materials, contractors and operational vehicle costs, the associated overheads and on-costs, as well as the application of a margin.[9] The same cost build up methodology is applied for

5 SA Power Networks has not proposed any capital expenditure for the 2020–25 regulatory control period.

6 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 16.

7 SA Power Networks, *Response to information request #013 - ACS - queries in relation to ancillary network services - PUBLIC,* 28 March 2019.

8 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 17.

9 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, pp. 17-18.

services provided on a quotation basis. SA Power Networks' proposal noted that the negotiated charges for some of these services were not cost-reflective.[10]

During our assessment process SA Power Networks provided updates to its ancillary network services pricing model with revised prices to reflect a number of modelling corrections.

Public lighting

Public lighting services will be regulated under a price cap for the first time in the 2020–25 regulatory control period. SA Power Networks' proposal indicated customers would see an average increase of approximately 6 per cent in public lighting service charges from 1 July 2020.[11]

SA Power Networks provides public lighting services to 67 customers throughout South Australia, including local councils and the South Australian Department of Planning, Transport and Infrastructure (DPTI). Public lighting services are defined as the:

- operation, maintenance, repair and replacement of public lighting assets
- alteration and relocation of public lighting assets
- provision of new public lights.

SA Power Networks proposed five different public lighting packages for its customers:

- Street Light Use of System (SLUOS)
- Transferred infrastructure that was funded by customers and/or developers (TFI)
- Routine maintenance and responsibility for replacement of poles (PLC)
- Customer funded installation with SA Power Networks maintaining minor components like lamps (CLER)
- Energy only (EO).

Metering

SA Power Networks did not propose capital expenditure during the 2020–25 regulatory control period on new meters as it is no longer responsible for meter provision and installation.[12] Further, SA Power Networks proposed to accelerate the depreciation of its remaining metering asset base to be fully depreciated by the end of the 2020–25 regulatory control period.[13] If approved, this will result in an increase in depreciation of approximately $3.4 million over the forthcoming period.[14] SA Power Networks

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10 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 17.
11 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 21.
12 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 11.
13 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 12.
14 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 12.

proposed a significant reduction in prices in the first year of the 2020–25 regulatory control period, with following price increases being limited to CPI for years 2 to 5.[15]

15.3 Assessment approach

The price cap control mechanism that we apply to assess the efficient costs of 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 prescribed in the NER.[16] Full details of our draft decision on the form of control mechanism and control mechanism formulas is set out in attachment 13 of this draft decision.

Ancillary network services

Our assessment approach for ancillary network services involves 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 focusses on comparing SA Power Networks' proposed labour rates against maximum total labour rates, which we consider efficient.

Where SA Power Networks' proposed labour rates exceed our maximum efficient labour rates, we apply our maximum efficient labour rates to determine prices. We follow this assessment process for services provided on a fee or quotation basis, as SA Power Networks' proposed labour rates are the same for both sets of ancillary network services. Section 15.4.2 discusses our maximum total labour rates.

We also assess the proposed times taken to perform each ancillary network service as well as the escalators SA Power Networks applied, as these are also cost inputs which impact the final price for some services. Our assessment of these inputs is informed by benchmarking against inputs applied by other distributors and the recommendations of our consultant, Marsden Jacob Associates (Marsden Jacob).

Public lighting services

To determine prices for public lighting services we assess SA Power Networks' public lighting model, consider historical data and benchmark proposed costs against other NEM distributors and against independent data and information. Specifically, we assess proposed labour rates, luminaire failure rates, overheads and input assumptions used to derive proposed public lighting charges.

Metering services

To assess SA Power Networks' proposed metering prices we analyse the Post-tax Revenue Model (PTRM), historical data and benchmark costs against other NEM

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15 SA Power Networks, *14.2 - Metering Model and PTRM*, January 2019.

16 NER, cl. 6.2.6(c).

distributors. We specifically focus on the opex costs on a category basis and how these costs have trended over time.

We also have regard to stakeholder submissions on any aspect of alternative control services.

15.4 Ancillary network services

Ancillary network services share the common characteristic of being non-routine services provided to individual customers as requested. Ancillary network services, such as special meter reads, temporary supply at a customer's request or relocation of poles, are either charged on a fee or quotation basis, depending on the nature of the service.

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

Appendix A includes a non-exhaustive list of services we accept that SA Power Networks can charge on a quotation basis.

15.4.1 Ancillary network services—Draft decision

Form of control - Ancillary network services

Our draft decision is to maintain our final F&A position to apply price caps to ancillary network services as the form of control. Under a price cap form of control, we set a schedule of prices for the first year of the regulatory control period, 2020–21. For the subsequent years of the regulatory control period, the prices for ancillary network services charged on a fee basis are determined by adjusting the previous year's prices by the formula set out in attachment 13 - control mechanisms.

Consistent with our previous decisions, we have applied a labour escalator as the X-factor. We have substituted our labour escalator for SA Power Networks' proposed escalators. Our proposed X-factors for this draft decision are set out in in Table 15.9 in appendix A.

Fee-based and quoted services

Our draft decision in relation to SA Power Networks' proposal is to:

- Reject the proposed labour rates for the administrative officer; project manager; technical specialist; engineer and senior engineer labour categories and substitute the maximum labour rate recommended by our consultant.
- Reject the proposed charges for ancillary network services provided on a fee basis where they are impacted by our rejection of labour rates or service times and substitute our proposed charges, except for 'connection specification', where we do not substitute a charge.[17]
- Reject the disconnection and reconnection service fees being applied for the cancellation of these services and not substitute a fee.
- Accept the proposed charges for services on a fee basis where they are not impacted by our rejection of labour rates or service times.
- Accept the proposed labour rates for services provided on a fee or quotation basis for the field worker labour category.
- Accept the proposed overtime mark-up of 170 per cent,[18] but substitute our overtime labour rates for the administrative officer; project manager; technical specialist and senior engineer labour categories given our substitution of new ordinary time labour rates.

[17] NDS340 - Connections specification fee - $0-$100k proj and NDS341 - Connections specification fee - $101k-$200k proj.

[18] SA Power Networks proposed an overtime mark-up of 200 per cent but because it does not apply labour overheads to its proposed overtime labour rates this leads to an overtime rate of 170 per cent.

Table 15.1 sets out our draft decision maximum labour rates, (which include on-costs and overheads)[19] that SA Power Networks should apply in calculating charges for ancillary network services provided on a fee basis. As our draft decision includes a margin in the price cap formula for services charged on a quotation basis (see attachment 13 – control mechanisms), this table also presents adjusted labour rates for quoted services to avoid applying the margin twice. Appendix A contains our draft decision labour rates for overtime hours.

[19] For the purposes of our draft decision we consider SA Power Networks' proposed margin as an additional overhead.

Table 15.1 AER draft decision - hourly labour rates (incl. on-costs and overheads, $2020–21) – ordinary time

SA Power Networks / AER labour category	SA Power Networks proposed implied[1] total hourly rate (base plus on-costs plus overheads)	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads)[2]	AER draft decision adjusted labour rates for quoted services[3]
Administrative officer	$100.87	$87.06	$82.95
Project Manager	$175.26	$174.13	$165.91
Field Worker	$139.52	$139.52	$132.93
Technical Specialist	$181.07	$174.13	$165.91
Engineer	$169.14	$162.53	$154.86
Senior Engineer	$204.52	$185.74	$176.97

Source: AER Analysis; SA Power Networks, *Fixed fee and quoted services pricing model - Aug 2019 - Confidential*. (Note: while some parts of the model are confidential, the prices are not.)

Notes: 1: AER calculation incorporating SA Power Networks' proposed margin, and escalated to a $2020–21 basis. Note that these figures are marginally different to those in the Marsden Jacob report which looked at $2019–20.

2: Calculated by escalating Marsden Jacob's recommended maximum labour rates for 2019–20 from Table 15.2 by the AER's forecast inflation rate.

3: Calculated by reducing our draft decision on maximum total labour rates by the margin which is equal to our nominal vanilla WACC. This margin is then added as a separate component of the pricing formula.

Our draft decision reduces the proposed charges for some ancillary network services. However, it still approves price increases for a range of services compared to the 2015–20 charges, which were under a negotiated distribution services classification, and according to SA Power Networks, some service costs were being under-recovered.[20] SA Power Networks must be provided with a reasonable opportunity to recover its efficient costs for providing ancillary network services however, we do not consider that SA Power Networks' proposal conveyed the magnitude of the proposed price changes to allow adequate stakeholder consideration.[21] Further, we have not identified any evidence that SA Power Networks engaged with its customers on its proposed price increases.[22] We therefore recommend that SA Power Networks

[20] SA Power Networks, *Regulatory Proposal 2020–25 - attachment 14 - alternative control services*, January 2019, p. 17.

[21] SA Power Networks, *2020–25 regulatory proposal - overview*, January 2019, p. 41.

[22] We have reviewed SA Power Networks' Regulatory Proposal 2020–25, including its *Customer and stakeholder engagement report, attachment 14 - alternative control services and attachment 17 - tariff structure statement*, January 2019.

undertakes stakeholder consultation on the ancillary network services affected by significant price increases, including whether a phased transition to cost reflectivity is more appropriate to balance customer affordability impacts.[23] However, we cannot compel SA Power Networks to adopt a transitioned approach to recover the efficient costs we have approved in this draft decision.

Security Lighting Services

SA Power Networks proposed charging security lighting as a quoted service.[24] However, SA Power Networks later clarified that historically, security lighting services were charged based on published negotiated service fees for the provision of public lighting services, which were developed to recover a share of the public lighting regulated asset base (RAB). We have reclassified public lighting services as alternative control services, and security lighting services do not form part of the public lighting RAB. Therefore it is not appropriate for security lighting customers to be funding the public lighting RAB recovery.

SA Power Networks further advised that security lighting services need to be calculated as an independent annuity, with the annuity providing recovery for the flood light installation and ongoing maintenance costs on a fee basis. SA Power Networks informed us that it intends to develop and submit a new annuity model for security lighting services as part of its revised regulatory proposal.[25]

We consider that SA Power Networks' proposed approach to provide security lighting on a fee basis that removes cross-subsidies, is in the best interests of both public lighting and security lighting customers. For these reasons, our draft decision is to reject SA Power Networks' regulatory proposal to charge security lighting services on a quotation basis, and instead charge it on a fee basis. However, our draft decision does not include any fees for security lighting services because we have not received SA Power Networks' revised proposal with its annuity model to consider its proposed cost build up. For this reason, we recommend that interested stakeholders provide submissions on SA Power Networks' revised approach to security lighting pricing.

15.4.2 Ancillary network services—Reasons for draft decision

For ancillary network services we review the key inputs in determining the price for the service including:

- Underlying labour rates
- Time taken to perform the service

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[23] Consistent with its approach to transitioning small customers to a new tariff structure evenly over a 5 year period. See: SA Power Networks, *Regulatory Proposal 2020–25 - Customer and stakeholder engagement report*, January 2019, p. 29.

[24] SA Power Networks, *Regulatory Proposal 2020–25 - attachment 17 - tariff structure statement*, January 2019, p. 131.

[25] SA Power Networks, *Response to information request #054 - ACS - further ANS queries*, 20 June 2019.

- Any material and vehicle costs associated with providing the service
- Overheads.

In considering the above inputs, we had regard to maximum reasonable benchmark labour rates developed by our consultant, Marsden Jacob, which we consider are efficient. Marsden Jacob also undertook benchmarking of the time taken for the most common ancillary network services.

By comparing the maximum benchmark labour rates to SA Power Networks' proposed labour rates and benchmark times taken to perform services, as developed by Marsden Jacob, we were able to assess SA Power Networks' proposed charges for ancillary network services charged on a fee basis against a maximum efficient charge.

A summary of Marsden Jacob's report and recommendations is in Figure 15.1.

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 Energex, Ergon Energy and SA Power Networks' 2020–25 proposed ancillary network services, and to benchmark certain ancillary network services provided on a fee basis. This report is an extension of Marsden Jacob's September 2018 report for the AER that considered the NSW distributors, Evoenergy, TasNetworks and Power and Water Corporation. Marsden Jacob had regard to the methodology and service benchmarks in that report in undertaking this new report.[1]

Marsden Jacob observed that although distributors use different labour category names and descriptions, the types of labour used to deliver ancillary network services broadly falls into five categories – administration; technical services; engineers; field workers; and senior engineers.[2] For the purposes of this review, Marsden Jacob also added a 'project manager' category.[3]

Using these categories Marsden Jacob developed benchmark labour rates for each distributor based on *Hays 2018–19 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 distributor and separated them as:[4]

1. Raw labour – based on the Hays salary data with an escalator of 2.5 per cent applied to account for wage inflation and another escalator of 2.5 per cent applied to reflect Hays rates only shifting in $5000 increments.[5]
2. On-costs – to cover basic leave entitlements and standard on-costs including superannuation, workers compensation and payroll tax.[6]
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 identified this allocation was benchmarked within the overall overhead allowance.[7]

In aggregate, these elements are referred to as the 'total labour rate', which is expressed as an hourly rate.

Based on its review, Marsden Jacob recommended maximum reasonable benchmark labour rates. These were subsequently revised through an addendum to its report, which is discussed further below. Marsden Jacob recommended that we apply these maximum labour rates to arrive at a maximum price for any ancillary network services that it did not benchmark.[8]

The maximum hourly labour 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 determination for these distributors, Marsden Jacob recommended the AER consider reducing the maximum labour rates to reflect efficiency frontier benchmarks rather than the highest of the Hays rates for each labour category.[9] 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 recommended by Marsden Jacob (as revised) are efficient.

Consistent with its previous report, Marsden Jacob recommended that overtime rates be charged at no more than 1.75 times the total labour rate.[10]

Addendum to the Marsden Jacob report

Following consideration of the impact of the Hays 2019–20 report,[11] we engaged Marsden Jacob to provide revised recommended maximum labour rates. We also asked Marsden Jacob to analyse revised labour rates provided by SA Power Networks following identification of a modelling error. In the addendum, Marsden Jacob continued to apply a 2.5 per cent escalator to the raw labour rates to reflect that Hays rates tend to only increase in increments of $5000 and relevant labour rates have only shifted a little (or not at all), in recent surveys.[12]

Marsden Jacob's revised recommended maximum labour rates are shown in Table 15.2.

Table 15.2 Revised maximum total hourly rates (base plus on-costs plus overheads), $2019–20

	SA Power Networks	Ergon Energy/Energex
Administrative Officer	$84.98	$75.16
Project Manager	$169.97	$202.36
Field Worker[1]	$144.64	$176.10
Technical Specialist	$169.97	$190.79
Engineer	$158.64	$173.45
Senior Engineer	$181.30	$219.70

Source: Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator - Addendum*, August 2019, Table 6, p. 8.

Notes: 1 Field worker rate includes an allowance of $20 for a vehicle as an additional overhead.

References:

1. Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p 1, 4, 7. 14.
2. Ibid., pp. 2-3.
3. Ibid., p. 3.
4. Ibid., p. 3.
5. Ibid., p. 3.
6. Ibid., p. 3.
7. Ibid., p. 3.
8. Ibid., p. 10.
9. Ibid., p. 1.
10. Ibid., p. 10.
11. Available from www.hays.com.au/salary-guide/.
12. Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator - Addendum*, August 2019, p. 4.

Regulatory treatment of overheads and cost allocation

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

We considered 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 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 and quoted services

SA Power Networks used a cost build up approach to calculate charges for ancillary network services provided on a fee basis. This is done by multiplying the labour rates by the time taken to perform the service and travel time for each labour category, and adding materials, contractors and vehicle costs if needed. These calculations also include overheads and the application of a margin.[28]

Based on the Marsden Jacob recommendations, we consider that SA Power Networks' proposed labour rates for the administrative officer; project manager; technical specialist; engineer and senior engineer labour categories are higher than what we consider efficient. We have therefore substituted our approved labour rates in SA Power Networks' model to generate price caps that we consider are efficient.

Marsden Jacob recommended that overtime rates should be set at a maximum of 175 per cent of the standard rate.[29] While SA Power Networks' initial proposal did not include overtime rates, it later proposed a rate of 200 per cent based on the overtime rates in its Enterprise Agreement.[30] Further analysis showed that the overtime labour rates did not include labour overheads, which were included in ordinary labour rates.

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[26] Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 7.

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

[28] SA Power Networks, *Alternative Control Services 2020–25*, January 2019, pp. 17–19.

[29] Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 10.

[30] SA Power Networks, *Response to information request #071 - ANS - correction to models for inflation, quoted service labour rates*, 9 August 2019.

This means that the effective overtime rate is 170 per cent, which falls within Marsden Jacob's recommendation. We therefore accept the proposed overtime rate of 170 per cent. As we have substituted most of our ordinary time labour rates, we have set the relevant overtime labour rates relative to our draft decision ordinary time labour rates using the same methodology as SA Power Networks. Appendix A contains our draft decision labour rates for overtime hours.

Marsden Jacob also undertook benchmarking of the time taken for a number of common services. Marsden Jacob recommended that we exclude SA Power Networks' proposed two hours of administration time from the fee for "Temporary disconnection & reconnection - truck", as other distributors did not include a similar amount of time.[31] Marsden Jacob also recommended that we remove administration labour time for the other variations of this service. Based on these recommendations, we have excluded SA Power Networks' proposed administration labour time from the following service fees:

- NDS302 Temp disconnect & reconnect - truck attendance
- NDS330 Temp disconnect & reconnect - single person crew
- NDS430 Temp disconnect & reconnect retailer O/head - truck attendance
- NDS431 Temp disconnect & reconnect retailer - single person crew.

SA Power Networks' cost build up included a vehicle costs category which only included heavy fleet operating costs, as light fleet vehicle costs were allocated as part of business overheads.[32] Our analysis of SA Power Networks' model shows that these separate heavy vehicle costs are only included for services where the field worker labour category is used. Marsden Jacob's maximum recommended labour rates for the field worker labour category included an additional vehicle allowance of $20 based on its previous analysis.[33]

In accepting SA Power Networks' proposed field worker labour rate we considered whether we should take into account the separate vehicle costs category. As SA Power Networks' vehicle costs are for heavy fleet only, and its light vehicle costs are included in overheads (which were considered by Marsden Jacob), we consider that it is reasonable that heavy vehicle costs be added to the cost build up separately. This will allow SA Power Networks an opportunity to recover the efficient costs of providing these services. We have therefore not made any adjustment to this cost category.

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[31] Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 14.

[32] SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 17.

[33] Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 7.

Shift to cost-reflective pricing

SA Power Networks' proposal identified a few instances where its previous negotiated distribution service charges were not cost-reflective, and it therefore proposed increases to make them cost-reflective.[34] SA Power Networks' proposal also noted that:

> Proposed prices for 2020-25 are largely consistent with those currently charged.[35]

Our analysis showed that the average percentage increase in proposed prices was 67 per cent, with prices for two services increasing by over 300 per cent.[36] The average price increase was partially mitigated by decreases in the price of some (predominantly) metering services.

Origin Energy submitted that SA Power Networks' proposed charges for a range of ancillary network services were significantly above the negotiated service charges and that we should scrutinise these.[37] AGL's submission also made this point.[38] The price increases raised by Origin Energy and AGL included those related to disconnection (NDS403) and reconnection (NDS404) fees. Our analysis showed that there were modelling errors relating to the cost build up for these services. SA Power Networks corrected these errors and presented us with a new pricing model, with the prices of these services almost halved, coming into line with the 2018–19 prices.[39]

AGL also raised concerns with the proposed price increases for temporary disconnection and reconnection services (both requiring a line truck and single crew).[40] AGL encouraged SA Power Networks to engage with industry on these matters.[41] Given we have removed administration time from these services, the price increases have been reduced (from 91 per cent and 82 per cent respectively in SA Power Networks' proposal to 61 per cent and 11 per cent in our draft decision). However, we recommend SA Power Networks engage with stakeholders on these costs in developing its revised proposal.

In response to our information requests, SA Power Networks explained that customer impacts were a consideration in setting the 2015–20 negotiated prices for some ancillary network services, as customers had not been charged a discrete fee in

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34 SA Power Networks, *Alternative Control Services 2020–25*, January 2019, p. 17.

35 SA Power Networks, *2020–25 regulatory proposal - overview*, January 2019, p. 41.

36 After adjusting SA Power Networks' 2018–19 negotiated charges to be on a 2020–21 basis.

37 Origin Energy, *Submission on SA Power Networks regulatory proposal 2020–25,* 19 May 2019, p. 2.

38 AGL, *Submission on SA Power Networks' regulatory proposal 2020–25*, 26 June 2019, p. 5.

39 SA Power Networks, *Response to information request #013 - ACS - queries in relation to ancillary network services - PUBLIC,* 28 March 2019.

40 AGL, *Submission on SA Power Networks' regulatory proposal 2020–25*, 26 June 2019, p. 5.

41 AGL, *Submission on SA Power Networks' regulatory proposal 2020–25*, 26 June 2019, p. 5.

previous regulatory control periods.[42] SA Power Networks also had poor historical data on costs.[43] Therefore, many charges for these services when provided as negotiated distribution services were based on an arbitrary and top-down method which did not reflect efficient costs, and then escalated by CPI or other factors.[44] As discussed earlier, with our draft decision to shift ancillary network services to alternative control, SA Power Networks took a bottom up approach to its proposed charges for the 2020–25 regulatory period. SA Power Networks also referenced our F&A, where one of our reasons for determining a price cap control mechanism for alternative control services was that it supported the delivery of cost reflective prices.[45] We consider that moving toward a more discrete cost approach provides greater transparency and clarity for customers, and avoids potential over or under recovery of service costs.

While our draft decision on labour rates and service times has reduced the price increases, proposed prices are still higher than the corresponding negotiated charge for the 2015–20 regulatory control period (see Table 15.3). However, we consider our draft decision price caps provide SA Power Networks with a reasonable opportunity to recover its efficient costs of delivering ancillary network services.

In reaching our draft decision we considered the impact on customers.[46] These are price increases which will be borne by customers requesting ancillary network services. However, to approve price caps that are not cost-reflective would undermine the efficient use of services. For these reasons, our draft decision sets price caps that are cost-reflective. However we are concerned by customer impacts around affordability, and recommend that SA Power Networks consult with customers on the price impacts and whether smoothing or otherwise transitioning to cost reflective prices for ancillary network services would be in the interests of customers.

Table 15.3 Comparison of proposed 2020–25 fees to 2015–20 negotiated fees ($2020–21)

Fee code	Description	Negotiated fee[1]	SAPN proposed fee[2]	% increase (SAPN fee to negotiated fee)	AER Draft decision	% increase (AER draft decision to negotiated fee)
BCS110	Multiphase upgrade - existing pit/pillar (diagram 2)	$124	$565	357%	$554	348%
BCS106	Alt/upgrade/relocate to O/under or U/ground service or O/head service	$295	$1308	343%	$1314	345%

42 SA Power Networks, *Response to information request #013 - ACS - queries in relation to ancillary network services - PUBLIC,* 28 March 2019.

43 SA Power Networks, *Response to information request #013 - ACS - queries in relation to ancillary network services - PUBLIC,* 28 March 2019.

44 SA Power Networks, *Response to information request #013 - ACS - queries in relation to ancillary network services - PUBLIC,* 28 March 2019.

45 AER, *Final framework and approach - SA Power Networks 2020–25*, July 2018, p. 57.

46 NER, cl. 6.18.5(h).

Fee code	Description	Negotiated fee[1]	SAPN proposed fee[2]	% increase (SAPN fee to negotiated fee)	AER Draft decision	% increase (AER draft decision to negotiated fee)
BCS111	Additional service from existing asset - O/under or pit/pillar (diagram 1 or 2)	$457	$1325	190%	$1331	191%
BCS109	Multiphase upgrade - O/under or O/head (diagram 1 or 3)	$570	$1346	136%	$1353	137%
NDS379	Asset info request - Ground level T/fs (site visit to open and visually see equipment)	$148	$336	128%	$347	135%
NDS301	Permanent abolishment of LV service	$283	$651	130%	$643	127%
NDS371	Temporary line insulation (e.g. tiger tails)	$419	$861	106%	$857	105%
NDS377	Asset info request - <1hr	$91	$168	84%	$175	92%
NDS381	Network Access Management fee - <0.5 day planning req	$300	$521	74%	$522	74%
NDS429	Network Access Management request cancellation - <2 business days	$300	$521	74%	$522	74%
NDS430	Temp disconnect & reconnect retailer O/head - truck attendance	$566	$1084	92%	$913	61%
NDS302	Temp disconnect & reconnect - truck attendance	$566	$1081	91%	$909	61%
NDS419	Swing & sag calculations - up to and incl. 11kV	$1340	$2037	52%	$2090	56%
NDS428	Swing & sag calculations - >11kV	$1787	$2711	52%	$2786	56%
NDS364	Meter inspection fee - 1st meter	$38	$59	56%	$57	51%
NDS427	Embedded generation firm offer - >30kW-200kW	$2797	$3835	37%	$3937	41%
BCS145	Temp supply - Existing pit/pillar (diagram 2)	$342	$489	43%	$477	40%
NDS398	Site inspection to determine nature of connection service - <2hrs	$249	$336	35%	$347	39%
BCS141	Temp supply - O/head or O/Under on existing pole (diagram 3 or 3A)	$863	$1183	37%	$1187	37%
NDS346	Works re-inspection for compliance - After 3hrs normal time	$113	$134	19%	$140	24%
NDS345	Works re-inspection for compliance - Up to 3hrs normal time	$347	$402	16%	$420	21%
NDS330	Temp disconnect & reconnect - single person crew	$262	$476	82%	$291	11%
NDS431	Temp disconnect & reconnect retailer - single person crew	$262	$476	82%	$291	11%

Source: AER Analysis; SA Power Networks, *Fixed fee and quoted services pricing model - Aug 2019 - Confidential*. (Note: while some parts of the model are confidential, the prices are not.); SA Power Networks, *Fixed fee and quoted services pricing model - January 2019 - Public*.

Note: This table only includes services with fee increases greater than 10 percent. The table has been sorted based on the percentage increase in the price between our draft decision and the negotiated price.
1: SA Power Networks provided 2018–19 negotiated fees escalated by inflation.
2: Based on the prices in SAPN's model submitted with its original proposal in January 2019 and escalated to $2020–21.

Service cancellation fees

Origin Energy submitted that SA Power Networks' proposal to charge a cancelled services fee equal to the fee charged for completing the service was a penalty rather than recovery of a cost incurred.[47] Origin Energy noted that this was a continuation of SA Power Networks' approach from the 2015–20 regulatory control period and that it previously raised concerns with SA Power Networks.[48]

SA Power Networks advised that it renegotiated a services contract for metering.[49] As part of this renegotiation it introduced a dedicated cancellation charge for disconnection and reconnection service orders, prior to the work order being completed. SA Power Networks expects this cancellation charge to be around $11, and intends to include it in its revised proposal. We support this approach, and encourage Origin Energy to provide further feedback on whether this proposed fee addresses its concerns. For these reasons, our draft decision is to reject SA Power Networks' proposal to apply its proposed disconnection and reconnection service fees for the cancellation of these services.[50] We will reconsider the issue upon receipt of SA Power Networks' revised proposal.

While Origin Energy's submission focused on cancellation fees for metering and connection services, table 1 of its submission showed that the network access management cancellation fee was the same as the fee for providing the service.[51] However, we understand this cancellation fee (NDS 429) is applied if the network access permit is cancelled within 2 full business days of the confirmed date.[52] Given the price of this service only includes labour and that the work is likely to have already taken place so close to the access permit date, we accept that SA Power Networks would have incurred costs that it is entitled to recover. We therefore accept this cancellation fee being charged at the same rate as the service delivery fee as it relates to costs incurred, rather than a penalty.

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47 Origin Energy, *Submission on SA Power Networks regulatory proposal 2020–25, 19 May 2019*, p. 2.

48 Origin Energy, *Submission on SA Power Networks regulatory proposal 2020–25, 19 May 2019*, p. 2.

49 SA Power Networks, *Response to information request #054 - ACS further ANS queries,* 20 June 2019; AER staff discussion with SA Power Networks' staff, 29 August 2019.

50 NDS403 - Retailer fee - disconnection & reconnection - D/N at meter; NDS404 Retailer fee - disconnection & reconnection - R/C at meter; and NDS405 Retailer fee - disconnection & reconnection - R/C at meter after hours.

51 Origin Energy, *Submission on SA Power Networks regulatory proposal 2020–25, 19 May 2019*, p. 3.

52 SA Power Networks, *2020–25 regulatory proposal - attachment 17 - Tariff structure statement*, 31 January 2019, p. 126.

Rejection of connection specification fees

The Energy Project's submission raised concerns with a proposed increase in two fees for connection specification services compared to the previous negotiated service prices, with increases of 66 per cent and 79 per cent (proposed 2020–21 price compared to negotiated 2018–19 price).[53] The Energy Project submitted that SA Power Networks had not justified the increase nor provided evidence of stakeholder engagement.[54] The Energy Project also did not consider a margin could be applied to these specific connection fees for 'competitive neutrality' reasons given these are not competitively available services or responsive to customer needs.[55]

SA Power Networks advised that the previous negotiated price was not cost reflective and provided a detailed breakdown of the labour times of the proposed charge.[56] SA Power Networks also advised that it is continuing consultation with The Energy Project on a range of connection matters (including pricing), and had formed a Connections Working Group comprising key stakeholders.[57] Given the impact of proposed price increases on specific customers, we are not satisfied with the level of consultation undertaken by SA Power Networks in developing its initial proposal. We therefore consider it prudent to reject the proposed prices for these services at this time and await SA Power Networks' revised proposal. This revised proposal should address concerns raised by The Energy Project and other stakeholders in the Connections Working Group.

In relation to The Energy's Projects concerns over a margin, Figure 15.1 explains that our consultant included a margin for ancillary network services provide on a fee basis as part of the overhead, forming part of the total labour rate. For the field worker labour category where SA Power Networks' proposed total labour rate was below our consultant's maximum, we have implicitly accepted the margin. For labour categories where we have substituted our consultant's recommended maximum labour rate we have implicitly reduced the margin (administrative officer, project manager, technical specialist, engineer and senior engineer).

X-factor

SA Power Networks' proposal applied different indexation rates to its services based on the various cost components. In response to our information request, SA Power Networks recognised that this approach was not conducive to creating a single X-factor. Instead it proposed that we either:

- approve the 5-year prices in $June 2020, with indexation already applied, allowing the X-factor to be set to zero

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53 The Energy Project, *Submission on SA Power Networks regulatory proposal 2020–25,* 16 May 2019, p. 14.

54 The Energy Project, *Submission on SA Power Networks regulatory proposal 2020–25,* 16 May 2019, p. 14.

55 The Energy Project, *Submission on SA Power Networks regulatory proposal 2020–25,* 16 May 2019, p. 15.

56 SA Power Networks, *Response to information request #054 - ACS further ANS queries,* 20 June 2019.

57 SA Power Networks, *Response to information request #071 - ANS - correction to models for inflation, quoted service labour rates*, 9 August 2019.

- apply a weighted average X-factor based on SA Power Networks' model.[58]

The first option is not consistent with the control mechanism formula (see Figure 13.3 in attachment 13 - control mechanisms), as we set prices for the first year of the regulatory period and these are escalated annually.

While the second option is allowable, our practice is to use our labour escalator as the X-factor, as we consider that labour is the primary driver of ancillary network service costs. For this reason, we propose to continue with this approach and substitute our labour escalator as the X-factor.

Security lighting services

This is the first regulatory period that security lighting services will be classified as an alternative control service. SA Power Networks advised that security lighting was previously charged using the floodlight prices that applied to public lighting, however changes to the public lighting pricing model means these prices are no longer appropriate (given they include the public lighting asset base).[59] SA Power Networks therefore proposed charging security lighting services on a quotation basis. This approach will require SA Power Networks to generate a quote to all existing and new security lighting customers for the installation of new security lights and ongoing maintenance costs. It currently has around 1700 security lighting customers.[60]

SA Power Networks advised that the quoted service approach is administratively burdensome and that customers have concerns around pricing transparency.[61] Therefore, SA Power Networks intends to create a new security lighting model to provide these services on a fee basis as part of its revised regulatory proposal.[62] We consider that a fee based approach will provide greater customer certainty and price transparency, and is consistent with the approach to security lighting in New South Wales. Therefore, our draft decision is to reject SA Power Networks' proposal to charge security lighting services on a quotation basis, and instead charge these services on a fee basis.

However, we are unable to make a draft decision on a schedule of fees for security lighting services until we receive SA Power Networks' revised proposal with its annuity model to consider its proposed cost build up. We currently have limited information on its security lighting services and the underlying cost drivers as they were previously treated as negotiated distribution services. As such, we had no role in regulating the fees or collecting sufficient historical data through our RIN.

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58 SA Power Networks, *Response to information request #054 - ACS further ANS queries,* 20 June 2019.

59 SA Power Networks, *Response to information request #054 - ACS - further ANS queries*, 20 June 2019.

60 SA Power Networks, *Response to information request #054 - ACS - further ANS queries*, 20 June 2019; AER staff discussion with SA Power Networks' staff - 10 July 2019.

61 AER staff discussion with SA Power Networks staff - 10 July 2019.

62 SA Power Networks, *Response to information request #054 - ACS - further ANS queries*, 20 June 2019.

15.5 Public lighting

15.5.1 Public lighting—Draft decision

Our draft decision is to accept SA Power Networks' public lighting proposal except for the following elements, where we have:

- Applied an annuity term of 20 years for LED luminaires
- Applied a cleaning schedule of LED luminaires every 10 years in the 2020–25 regulatory control period
- Removed the regional premium for the installation of regional luminaries
- Applied a cable fault rate of 700 per annum
- Applied a column replacement rate of 60 per annum
- Removed the 'use of pole' or 'elevation' charge
- Applied WACC, inflation and escalation assumptions consistent with our draft decision for standard control services.

This will result in no increase in SA Power Networks current prices, with customers' bills expected to remain broadly flat across the 2020–25 regulatory control period. Our draft decision public lighting charges are listed in appendix B, noting that prices for 2021–22 onwards are illustrative only.

15.5.2 Public lighting—Reasons for draft decision

Form of control

We maintain our final F&A position to apply price caps to individual public lighting services as the form of control. This allows SA Power Networks to charge according to a schedule of prices, approved by the AER, in the first year of the regulatory control period, with these prices being escalated by CPI and an X-factor for subsequent years. The X-factor will be a nil value for the period. We consider this approach involves less complexity and provides stakeholders with consistency in the movement of charges from one regulatory year to the next (CPI).

The control mechanism formula is set out in Attachment 13 of this draft decision.

The public lighting prices vary slightly across the regulatory control period, which is inconsistent with a nil X-factor. We have shown five years' of prices for illustrative purposes only. SA Power Networks' revised proposal should propose X-factors or otherwise smooth its prices consistent with our control mechanism.

Elevation Charge

SA Power Networks proposed an $8 per Stobie pole elevation or 'use of pole' charge for all shared low voltage poles supporting public lighting luminaires on its network.[63] Elevation refers to a right of access for the use of SA Power Networks' assets for the purpose of elevating street lights. SA Power Networks submitted a consultant's report recommending a minimum charge of $8 per Stobie pole.[64] The report concluded that the charge for elevation is justified in the context of improved economic efficiency in the provision and use of street lighting services.

Ironbark Sustainability's report for the Local Government Association of South Australia[65] (collectively referred to as the LGA), argued that there is no economic justification for this charge and that it is not reflective of an actual expense incurred by SA Power Networks and should be removed from public lighting costs. The LGA stated that all costs associated with the street lighting system including capital expenditure, depreciation and maintenance are fully recouped by SA Power Networks from customers in other cost elements within the model.

We agree with the LGA and consider that the charge does not support actual costs incurred by SA Power Networks. SA Power Networks' customers are already levied a pole charge consistent with how other distributors charge their customers and we consider that this is sufficient for SA Power Networks to recover its efficient costs. We note that elevation charges for public lighting services are not applied by any distributors in the NEM. Therefore, our draft decision is to remove the $8 per Stobie pole elevation charge from SA Power Networks' public lighting proposal.

Column replacement, maintenance and cable faults

SA Power Networks proposed increased column replacement from 60 up to 73 columns per year, based on estimated failure rates.[66] The LGA submitted that column replacement should be based on actual failures and not on theoretical rates as proposed by SA Power Networks.[67]

We agree with the LGA's submission and suggested alternative approach of basing actual failure rates on the historic 5 year average. Therefore, our draft decision is to allow 60 column replacements per annum.

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63 SA Power Networks, *Regulatory Proposal 2020-25*, Attachment 14, January 2019, p. 33.

64 SA Power Networks' Proposal Attachment, *Incenta Economic Consulting, Economic Justification for public lighting elevation charge, Report for SA Power Networks*, October 2017.

65 LGA, *Submission to the SAPN Electricity Distribution Price Review Process for 2020/21 - 2024-25 - Public Lighting*, Ironbark Sustainability, May 2019, p. 25.

66 SA Power Networks, *Regulatory Proposal 2020-25*, Attachment 14, January 2019, p. 29.

67 LGA, *Submission to the SAPN Electricity Distribution Price Review Process for 2020/21 - 2024-25 - Public Lighting*, Ironbark Sustainability, May 2019, p. 24.

SA Power Networks[68] proposed increasing cable fault rectifications to 1000 per year based on a change in maintenance from reactively replacing cable when faults are reported to proactively replacing cable prior to asset failure.

The LGA submitted that cable faults should only be approved after evidence on failure rates is provided by SA Power Networks.[69] The LGA observed that actual cable faults range from between 400 to 1000 from year to year. We agree with the LGA's suggested approach to use a historical average to determine the appropriate rate of cable replacements.

Using this approach, our draft decision is to apply a rate of 700 cable fault rectifications per annum, which is the mid-point of the observed cable faults.

Materials prices

The LGA submitted that SA Power Networks' materials prices are high and that SA Power Networks should be able to secure cheaper material prices based on the proposed volumes. The LGA also submitted that SA Power Networks should be more transparent around its LED procurement processes so that competitive market prices are used in its public lighting model.[70]

We support SA Power Networks being transparent and limiting confidentiality on its public lighting models where possible. However, for our draft decision we consider that SA Power Networks' materials prices are within the range of efficient and prudent prices based on our assessment of SA Power Networks' proposal.

Stakeholder agreements

We understand that there is ongoing consultation between SA Power Networks[71] and its public lighting customers, including the LGA, since it submitted its proposal. As a result of these discussions, a number of agreements have been reached with public lighting customers.[72] Specifically, the parties have agreed to:

- a 20 year annuity asset life assumption instead of 17 years, as originally proposed by SA Power Networks. We have therefore adopted a 20 year annuity luminaire asset life assumption for our draft decision.
- abolish the 5 per cent regional installation premium originally proposed by SA Power Networks. In line with this agreement, we have removed the regional pricing installation premium of 5 per cent.

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68 SA Power Networks, *Regulatory Proposal 2020-25*, *Attachment 14.5, Public Lighting Asset Management Plan*, January 2019, p. 36.

69 LGA, *Submission to the SAPN Electricity Distribution Price Review Process for 2020/21 - 2024-25 - Public Lighting*, Ironbark Sustainability, May 2019, p. 23.

70 LGA, *Submission to the SAPN Electricity Distribution Price Review Process for 2020/21 - 2024-25 - Public Lighting*, Ironbark Sustainability, May 2019, p. 11.

71 SA Power Networks, *Response to information request #063,* 31 July 2019.

72 LGA, *Response to information request #063,* 31 July 2019.

- move from SA Power Networks' proposed 5 yearly LED cleaning cycle to a 10 year cleaning cycle, consistent with public lighting customers' preferences. We have therefore adopted a 10 year cleaning cycle for LEDs.

We understand that SA Power Networks is continuing to consult with public lighting customers in relation to providing LED cleaning where required and requested earlier than the 10 year period on a quotation basis. Contingent on how these negotiations proceed, we are open to SA Power Networks proposing LED cleaning requested outside of the standard cycle as a quoted service in its revised proposal.

Public lighting arbitration

We are in the process of finalising an arbitration between SA Power Networks and public lighting customers in relation to the RAB and other pricing issues for the 2010–15 regulatory control period.[73] We will adopt the relevant outcomes of the final arbitration determination in our final regulatory decision to be published on 30 April 2020. In the meantime, for this draft decision we have adopted SA Power Networks' opening RAB.

15.6 Metering services

Metering services include the maintenance, reading, data services, and the recovery of capital costs related to type 5 and 6 meters installed prior to 1 December 2017. Metering assets are used to measure electrical energy flows at a point in the network to record consumption for the purposes of billing. SA Power Networks forecast a metering population of 900000 meters at the beginning of the 2020–25 regulatory control period.[74]

Since introduction of the Power of Choice reforms on 1 December 2017, SA Power Networks is no longer permitted to provide or install type 5 and 6 meters. Customers are now able to source new meters from the contestable market. New minimum standards for meters mean that only advanced or 'smart' meters (generally a type 4 meter for residential customers), with remote communications capability may now be installed.

We are responsible for setting charges for meter reading, maintenance, and data services. These charges exclude the provision of type 5 and 6 meters, so do not include up front capital charges for new meters.

15.6.1 Metering services—Draft decision

Our draft decision is to:

[73] Public lighting was classified as a negotiated service in the 2010–15 regulatory control period.

[74] SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 10.

- apply our draft decision labour escalators and rate of return consistent with standard control services[75]
- accept SA Power Networks' building block approach and metering asset base
- accept SA Power Networks' proposed capital expenditure
- accept SA Power Networks' accelerated depreciation of its metering asset base
- accept SA Power Networks' proposed operating expenditure,
- accept SA Power Networks' simplification of metering charges.

Our draft decision metering charges are listed in appendix C.

15.6.2 Metering services—Reasons for draft decision

Form of control

We maintain our final F&A position to apply price caps to individual metering services as the form of control. This allows SA Power Networks to charge according to a schedule of price caps, approved by the AER, in the first year of the regulatory control period, with these prices being escalated by CPI and an X-factor for subsequent years. The prices for the 2020–25 regulatory control period have been smoothed, and the X-factor will be a nil value for the period.

We consider this approach involves less complexity and provides stakeholders with consistency in the movement of charges from one regulatory year to the next (CPI). This control mechanism formula is set out in Attachment 13 of this draft decision.

SA Power Networks' type 7 metering services are an unmetered connection and are classified as standard control services, and therefore not dealt with under metering services.[76]

Structure of metering charges

Our draft decision is to approve SA Power Networks' proposed metering charging structure:[77]

- This is an annual charge comprising two components:
    - capital—metering asset base (MAB) recovery and tax allowance
    - non-capital—operating expenditure.

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[75] Attachment 3 - Rate of Return; Attachment 6 - Operating Expenditure.

[76] AER, *Final framework and approach - SA Power Networks - Regulatory control period commencing 1 July 2020*, July 2018, p. 31.

[77] SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 11.

This structure is consistent with the approved structure in the current regulatory period, with the exception that an upfront charge for meter installation no longer applies as SA Power Networks is no longer responsible for installing meters.

This structure is reflective of the actual costs involved in the provision of metering services and, due to being consistent with current charges, easy to understand. This structure also allows SA Power Networks to apply non-capital costs only to those customers who should be charged for them. As customers adopt smart meters, services and service costs related to the meter are borne by the retailer, and are therefore charged by the retailer. Therefore, SA Power Networks' metering costs should be recovered in a manner that allows for customers who have 'churned' to no longer be charged for SA Power Networks' forgone non-capital expenditure. However, SA Power Networks is still allowed to recover the capital costs of the replaced asset where appropriate.

Metering asset base

SA Power Networks did not propose any capital expenditure in its regulatory proposal for the 2020–25 regulatory control period.[78] Our draft decision is to accept SA Power Networks' approach to capital expenditure.

SA Power Networks proposed to apply accelerated depreciation to its metering asset base.[79] Using the AER's roll-forward model to calculate the opening metering asset base value results in an estimated remaining life of 5.49 months for legacy metering assets.[80] We consider the accelerated depreciation of this half year to have an immaterial impact on prices, and would result in a lower administrative burden in the 2025–30 regulatory period. Our draft decision is to accept SA Power Networks' proposed accelerated depreciation.

Operating expenditure

SA Power Networks used a base-step-trend method to forecast its operating expenditure for the 2020–25 regulatory control period.[81] Our draft decision is to accept SA Power Networks' approach to operating expenditure.

SA Power Networks calculated an average operating expenditure per customer over the 2015–16, 2016–17, and 2017–18 regulatory years.[82] This average operating expenditure was multiplied by the average customers of the same three-year period to provide a base operating expenditure amount. SA Power Networks has not proposed any step changes to this base level operating expenditure. Adjustments have been made to consider labour and productivity rates for each year of the regulatory control period to produce final capital expenditure amounts. SA Power Networks also included

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78 SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 11.
79 SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 12.
80 SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 11.
81 SA Power Networks, *Alternative Control Services 2020–25,* January 2019, p. 12.
82 SA Power Networks, *Alternative Control Services 2020–25,* January 2019, pp. 12-13.

adjustments of around 6 per cent to reflect the metering 'churn' as customers install new type 1-4 meters.

We expressed concerns to SA Power Networks regarding the absence of 2018–19 estimates in its calculations of the operating expenditure base amount.[83] We consider the 2018–19 operating expenditure would provide a better base in light of the Power of Choice reforms and resultant metering churn. SA Power Networks advised it will incorporate any material changes resulting from updated 2018–19 actual figures in its revised proposal.[84]

Our draft decision is to accept SA Power Networks' proposed operating expenditure, adjusted for updated inflation and labour escalators consistent with standard control services.[85] Table 15.4 shows the movement in total operating expenditure between SA Power Networks' proposal and our draft decision.

Table 15.4 Operating Expenditure ($2019–20)

Operating Expenditure	2020–21	2021–22	2022–23	2023–24	2024–25	Total
SA Power Networks' Proposal	8.83	8.62	8.41	8.17	7.90	41.93
AER Draft Decision	8.78	8.51	8.22	7.94	7.64	41.09

Price movements

SA Power Networks proposed the simplification of its metering tariffs by removing the differentiation between meter types, and treating all of SA Power Networks' owned or serviced meters as 'legacy metering services'. This allows a simpler administrative treatment of these meters, while maintaining an overall price decrease on all existing metering tariffs.

It is important to track price movements between regulatory control periods, to ensure there are no unnecessary price increases, especially in light of the depleting metering asset base. Price movements from 2019–20 to 2020–21 are shown in Table 15.5. While these price movements show differing movements between the capital and non-capital components, the overall movement for each tariff is less than forecast inflation, and therefore is decreasing in the first year of the 2020–25 regulatory control period.

[83] AER, *SA Power Networks Information Request #070*, August 2019.

[84] SA Power Networks, *Response to SA Power Networks Information Request #070*, August 2019, p3.

[85] SA Power Networks, *Regulatory Proposal 2020-25*, *Attachment 3 - Rate of Return; Attachment 6 - Operating Expenditure*, January 2019.

Table 15.5 Price Movements ($ nominal cents/day)

			2019–20	2020–21	% change
SA Power Networks' Proposal	Type 1-4	Capital	94.401	2.742	-97.10%
		Non-capital	45.656	3.674	-91.95%
	Type 5-6 CT[86]	Capital	51.385	2.742	-94.66%
		Non-capital	24.851	3.674	-85.21%
	Type 5-6 WC[87]	Capital	6.274	2.742	-56.29%
		Non-capital	3.035	3.674	21.05%
AER Draft Decision	Type 1-4	Capital	94.401	2.535	-97.31%
		Non-capital	45.656	3.849	-91.57%
	Type 5-6 CT	Capital	51.385	2.535	-95.07%
		Non-capital	24.851	3.849	-84.51%
	Type 5-6 WC	Capital	6.274	2.535	-59.60%
		Non-capital	3.035	3.849	26.80%

[86] Current Transformer (CT).

[87] Whole Current (WC).

A Ancillary network services prices

Table 15.6 Fee based ancillary network service prices for 2020–21, AER draft decision ($2020–21)

Fee code	Description	SA Power Networks' proposed fee[1]	AER draft decision fee
BCS106	Alt/upgrade/relocate to O/under or U/ground service or O/head service	$1341.19	$1313.88
BCS109	Multiphase upgrade - O/under or O/head (diagram 1 or 3)	$1380.18	$1352.87
BCS110	Multiphase upgrade - existing pit/pillar (diagram 2)	$581.50	$554.18
BCS111	Additional service from existing asset - O/under or pit/pillar (diagram 1 or 2)	$1358.33	$1331.01
BCS141	Temp supply - O/head or O/Under on existing pole (diagram 3 or 3A)	$1214.04	$1186.73
BCS145	Temp supply - Existing pit/pillar (diagram 2)	$504.09	$476.77
NDS301	Permanent abolishment of LV service	$669.87	$642.55
NDS302	Temp disconnect & reconnect - truck attendance	$1109.32	$909.37
NDS330	Temp disconnect & reconnect - single person crew	$491.00	$291.05
NDS340	Connections specification fee - $0-$100k proj	$3505.22	Rejected
NDS341	Connections specification fee - $101k-$200k proj	$6134.13	Rejected
NDS345	Works re-inspection for compliance - Up to 3hrs normal time	$419.58	$419.58
NDS346	Works re-inspection for compliance - After 3hrs normal time	$139.86	$139.86
NDS347	Works re-inspection for compliance - Out of hours	$139.86	$139.86
NDS356	Meter test - 1ph	$130.03	$126.75
NDS357	Meter test - Additional 1ph meter	$-	$-
NDS358	Meter test - 3ph	$130.03	$126.75
NDS359	Meter test - Additional 3ph meter	$-	$-
NDS360	PV installation enquiry - 1ph	$130.03	$126.75
NDS362	PV installation enquiry - 3ph	$130.03	$126.75
NDS364	Meter inspection fee - 1st meter	$60.10	$56.82
NDS365	Meter inspection fee - Addition meter	$-	$-
NDS366	Excess kVAr Incentive	$52.48	$52.48
NDS371	Temporary line insulation (e.g. tiger tails)	$884.70	$857.39
NDS373	Location of U/ground mains - Provision of plans from office	$139.86	$139.86

Fee code	Description	SA Power Networks' proposed fee[1]	AER draft decision fee
NDS377	Asset info request - <1hr	$174.82	$174.82
NDS379	Asset info request - Ground level T/fs (site visit to open and visually see equipment)	$350.74	$347.46
NDS381	Network Access Management fee - <0.5 day planning req	$543.05	$522.29
NDS386	Special meter reader visit - Normal hours	$13.11	$13.11
NDS387	Special meter reader visit - Out of hours	$91.78	$91.78
NDS388	Special meter reader visit - Request cancellation	$12.02	$12.02
NDS389	Meter read - Subsequent attempt	$13.11	$13.11
NDS398	Site inspection to determine nature of connection service - <2hrs	$350.74	$347.46
NDS401	Priority or out of hour appointment - <3hrs	$212.08	$212.08
NDS403	Retailer fee - disconnection & reconnection - D/N at meter	$41.52	$41.52
NDS404	Retailer fee - disconnection & reconnection - R/C at meter	$41.52	$41.52
NDS405	Retailer fee - disconnection & reconnection - R/C at meter after hours	$91.78	$91.78
NDS419	Swing & sag calculations - up to and incl. 11kV	$2125.20	$2090.24
NDS427	Embedded generation firm offer - >30kW-200kW	$4000.19	$3936.82
NDS428	Swing & sag calculations - >11kV	$2827.78	$2786.26
NDS429	Network Access Management request cancellation - <2 business days	$543.05	$522.29
NDS430	Temp disconnect & reconnect retailer O/head - truck attendance	$1112.53	$912.58
NDS431	Temp disconnect & reconnect retailer - single person crew	$491.00	$291.05

Source: AER Analysis; SA Power Networks, *Fixed fee and quoted services pricing model - Aug 2019 - Confidential*. (Note: while some parts of the model are confidential, the prices are not).

Note: While SA Power Networks' August model included a fee for "NDS406 Retailer fee - disconnection & reconnection cancellation", based on the associated information we understand that this was still indicative only and would be formally proposed in SA Power Networks' revised proposal. We have therefore not included this fee.

A full description of these services can be found in SA Power Networks' proposed tariff structure statement.

1 Based on SA Power Networks' August 2019 model, escalated to $2020–21.

Table 15.7 Non-exhaustive list of ancillary network services provided on a quotation basis, draft decision

Description of service
Access permits, oversight and facilitation
Sale of approved materials or equipment
Notices of arrangement and completion notices
Network safety services (e.g. high load escorts)
Planned interruption – customer requested*
Attendance at a customer's premises to perform a statutory right where access is prevented
Inspection and auditing services
Provision of training to third parties for network related access
Authorisation and approval of third party service providers' design, work and materials
Customer initiated or triggered network asset relocations / re-arrangements
Customer requested provision of electricity network or consumption data*
Third party funded network alterations or other improvements
Auxiliary metering services (type 5 – 7 metering installations)
Meter recovery and disposal – type 5 and 6 (legacy meters)
Third party requested outage for the purposes of replacing a meter
Emergency supply restoration of metering equipment not owned by SA Power Networks (constable metering)*
Standard and negotiated connection services (premises connections, excluding extensions and augmentations);
Connection application and management services (e.g., connection point alterations, temporary supply, technical / engineering studies, specification fees, specification re-compliance, works / design compliance / network infrastructure connection re-appointments, and pole top disconnections / reconnections);
Enhanced connection services (large embedded generators (>200kW))
Some public lighting services

Source: SA Power Networks, *Regulatory Proposal 2020-25 - attachment 17 - tariff structure statement*, January 2019, p. 131.

Note: Security lights have been removed from this table as per our draft decision.

* Description of service revised to align with attachment 12 - classification of services.

Table 15.8 AER hourly labour rates for 2020–21, draft decision ($2020–21) - ordinary and over time

SA Power Networks / AER labour category	ORDINARY TIME AER draft decision - maximum total hourly rate (base plus on-costs plus overheads)	ORDINARY TIME AER draft decision labour rates for quoted services[1]	OVERTIME AER draft decision - maximum total hourly rate (base plus on-costs plus overheads)	OVERTIME AER draft decision labour rates for quoted services[1]
Administrative officer	$87.06	$82.95	$148.00	$141.02
Project Manager	$174.13	$165.91	$296.02	$282.05
Field Worker	$139.52	$132.93	$237.18	$225.98
Technical Specialist	$174.13	$165.91	$296.02	$282.05
Engineer	$162.53	$154.86	$276.29	$263.25
Senior Engineer	$185.74	$176.97	$315.75	$300.85

Source: AER Analysis; SA Power Networks, *Fixed fee and quoted services pricing model - Aug 2019 - Confidential*. (Note: while some parts of the model are confidential, the prices are not.)

Note: 1. Calculated by reducing our draft decision on maximum total labour rates by the margin which is equal to our nominal vanilla WACC. This margin is then added as a separate component of the pricing formula.

Table 15.9 AER draft decision on X-factors for each year of the 2020–25 regulatory control period for ancillary network services (per cent)

	2021–22	2022–23	2023–24	2024–25
X-factor	-0.3736%	-0.3420%	-0.4528%	-0.4411%

Source: AER analysis

Note: We do not apply an X-factor for 2020–21 because we set the 2020–21 ancillary network service prices in this determination.

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

B Public lighting prices

Our draft decision sets prices for 2020–21 only. Future years are illustrative only.

Table 15.10 Draft Decision Public Lighting Prices (June $2020)

Energy Only Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
All Light Types	3.02	3.03	3.04	3.06	3.07

CLER Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
cf-42	64.43	64.58	64.72	64.90	65.08
F14X2	64.43	64.58	64.72	64.90	65.08
F2X8	64.43	64.58	64.72	64.90	65.08
F42	64.43	64.58	64.72	64.90	65.08
cf-42 PT	65.66	65.81	65.95	66.14	66.32
F32	65.66	65.81	65.95	66.14	66.32
PT F42	65.66	65.81	65.95	66.14	66.32
F-40	43.55	43.65	43.75	43.87	43.99
F11X2	43.55	43.65	43.75	43.87	43.99
F20	43.55	43.65	43.75	43.87	43.99
F20X2	43.55	43.65	43.75	43.87	43.99
F2X20	43.55	43.65	43.75	43.87	43.99
F2X40	43.55	43.65	43.75	43.87	43.99
F40	43.55	43.65	43.75	43.87	43.99
F40X2	43.55	43.65	43.75	43.87	43.99
F40X3	43.55	43.65	43.75	43.87	43.99
F40X4	43.55	43.65	43.75	43.87	43.99
F4X40	43.55	43.65	43.75	43.87	43.99
F8X2	43.55	43.65	43.75	43.87	43.99
I100	43.55	43.65	43.75	43.87	43.99
MV-80	38.74	38.84	38.92	39.03	39.14
M50	38.74	38.84	38.92	39.03	39.14
M70	38.74	38.84	38.92	39.03	39.14

CLER Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M80	38.74	38.84	38.92	39.03	39.14
MV-80 PT	45.38	45.48	45.58	45.71	45.84
PT M50	45.38	45.48	45.58	45.71	45.84
PT M80	45.38	45.48	45.58	45.71	45.84
S-HP50	61.85	61.99	62.12	62.30	62.47
S50	61.85	61.99	62.12	62.30	62.47
S-LP18	28.02	28.09	28.15	28.23	28.31
L18	28.02	28.09	28.15	28.23	28.31
L26	28.02	28.09	28.15	28.23	28.31
PT L18	28.02	28.09	28.15	28.23	28.31
S-HP Other	46.08	46.18	46.28	46.41	46.54
MH100	46.08	46.18	46.28	46.41	46.54
MH125	46.08	46.18	46.28	46.41	46.54
MH150	46.08	46.18	46.28	46.41	46.54
MH250	46.08	46.18	46.28	46.41	46.54
MH400	46.08	46.18	46.28	46.41	46.54
MH50	46.08	46.18	46.28	46.41	46.54
MH70	46.08	46.18	46.28	46.41	46.54
PT MH100	46.08	46.18	46.28	46.41	46.54
PT S70	46.08	46.18	46.28	46.41	46.54
S70	46.08	46.18	46.28	46.41	46.54
S-HP50 PT	50.57	50.69	50.80	50.94	51.08
PT S50	50.57	50.69	50.80	50.94	51.08
MV-80+	24.99	25.05	25.10	25.18	25.25
M100	24.99	25.05	25.10	25.18	25.25
M125	24.99	25.05	25.10	25.18	25.25

CLER Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M125X3	24.99	25.05	25.10	25.18	25.25
M250	24.99	25.05	25.10	25.18	25.25
M400	24.99	25.05	25.10	25.18	25.25
M400X2	24.99	25.05	25.10	25.18	25.25
PT M125	24.99	25.05	25.10	25.18	25.25
S-HP100	49.10	49.21	49.32	49.46	49.60
PT S100	49.10	49.21	49.32	49.46	49.60
S100	49.10	49.21	49.32	49.46	49.60
S-HP150	41.78	41.88	41.97	42.09	42.21
PT S150	41.78	41.88	41.97	42.09	42.21
S150	41.78	41.88	41.97	42.09	42.21
S-HP250	47.98	48.10	48.20	48.34	48.47
S250	47.98	48.10	48.20	48.34	48.47
S400	47.98	48.10	48.20	48.34	48.47
S-LP90	57.87	58.00	58.12	58.29	58.45
L135	57.87	58.00	58.12	58.29	58.45
L55	57.87	58.00	58.12	58.29	58.45
L90	57.87	58.00	58.12	58.29	58.45
S-HP360f	27.77	27.84	27.90	27.98	28.06
I1000 F	27.77	27.84	27.90	27.98	28.06
I150 F	27.77	27.84	27.90	27.98	28.06
I1500 F	27.77	27.84	27.90	27.98	28.06
I500 F	27.77	27.84	27.90	27.98	28.06
I750 F	27.77	27.84	27.90	27.98	28.06
M1000 F	27.77	27.84	27.90	27.98	28.06
M250 F	27.77	27.84	27.90	27.98	28.06
M400 F	27.77	27.84	27.90	27.98	28.06

CLER Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M400 F COST	27.77	27.84	27.90	27.98	28.06
M400 F SACON	27.77	27.84	27.90	27.98	28.06
M750 F	27.77	27.84	27.90	27.98	28.06
M80 F	27.77	27.84	27.90	27.98	28.06
S360 F	27.77	27.84	27.90	27.98	28.06
S400 F	27.77	27.84	27.90	27.98	28.06
LED17	12.11	12.15	12.17	12.35	12.38
LED29	12.25	12.28	12.31	12.49	12.52
LED22	12.64	12.67	12.70	12.89	12.93
LED46	12.14	12.17	12.20	12.38	12.41
LED43	12.14	12.17	12.20	12.38	12.41
PT LED17	17.36	17.40	17.44	17.78	17.83
PT LED34	17.36	17.40	17.44	17.78	17.83
LED34	12.14	12.17	12.20	12.38	12.41
LED18	12.14	12.17	12.20	12.38	12.41
LED35	15.55	15.59	15.62	15.90	15.95
LED39	12.14	12.17	12.20	12.38	12.41
LED26	12.14	12.17	12.20	12.38	12.41
LED20	15.55	15.59	15.62	15.90	15.95
LED28	15.55	15.59	15.62	15.90	15.95
LED17_R	12.11	12.15	12.17	12.35	12.38
LED23	15.91	15.95	15.98	16.27	16.32
LED200	14.12	14.16	14.19	14.42	14.47
LED105	17.51	17.55	17.59	17.93	17.98
LED198	17.51	17.55	17.59	17.93	17.98
LED88	14.12	14.16	14.19	14.42	14.47
LED70	14.12	14.16	14.19	14.42	14.47
LED150	13.48	13.51	13.54	13.76	13.80
LED90	14.12	14.16	14.19	14.42	14.47
LED72	14.12	14.16	14.19	14.42	14.47

CLER Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED117	15.55	15.59	15.62	15.90	15.95
LED158	15.55	15.59	15.62	15.90	15.95
LED298	17.51	17.55	17.59	17.93	17.98
LED178	14.12	14.16	14.19	14.42	14.47
LED175	14.48	14.52	14.55	14.79	14.84
LED79	15.55	15.59	15.62	15.90	15.95
LED80	13.48	13.51	13.54	13.76	13.80
LED150_R	13.48	13.51	13.54	13.76	13.80
LED80_R	13.48	13.51	13.54	13.76	13.80
LED60	13.30	13.33	13.36	13.57	13.61
LED155	17.30	17.34	17.38	17.72	17.77
LED81	17.30	17.34	17.38	17.72	17.77
LED101	17.30	17.34	17.38	17.72	17.77

PLC Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
cf-42 PT	101.81	102.34	102.68	105.06	105.56
F32	101.81	102.34	102.68	105.06	105.56
PT F42	101.81	102.34	102.68	105.06	105.56
LED17	44.28	44.69	44.91	45.36	45.71
LED29	44.40	44.81	45.03	45.50	45.84
LED22	44.77	45.18	45.41	45.88	46.23
LED46	44.30	44.71	44.93	45.39	45.74
LED43	44.30	44.71	44.93	45.39	45.74
PT LED17	49.21	49.64	49.87	50.48	50.84
PT LED34	49.21	49.64	49.87	50.48	50.84
LED34	44.30	44.71	44.93	45.39	45.74
LED18	44.30	44.71	44.93	45.39	45.74
LED35	47.51	47.93	48.16	48.71	49.07
LED39	44.30	44.71	44.93	45.39	45.74
LED26	44.30	44.71	44.93	45.39	45.74
LED20	47.51	47.93	48.16	48.71	49.07

PLC Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED28	47.51	47.93	48.16	48.71	49.07
LED17_R	44.28	44.69	44.91	45.36	45.71
LED23	47.85	48.27	48.49	49.06	49.42
LED200	46.17	46.58	46.80	47.32	47.67
LED105	49.36	49.78	50.01	50.62	50.99
LED198	49.36	49.78	50.01	50.62	50.99
LED88	46.17	46.58	46.80	47.32	47.67
LED70	46.17	46.58	46.80	47.32	47.67
LED150	45.56	45.97	46.20	46.69	47.05
LED90	46.17	46.58	46.80	47.32	47.67
LED72	46.17	46.58	46.80	47.32	47.67
LED117	47.51	47.93	48.16	48.71	49.07
LED158	47.51	47.93	48.16	48.71	49.07
LED298	49.36	49.78	50.01	50.62	50.99
LED178	46.17	46.58	46.80	47.32	47.67
LED175	46.50	46.92	47.14	47.67	48.02
LED79	47.51	47.93	48.16	48.71	49.07
LED80	45.56	45.97	46.20	46.69	47.05
LED150_R	45.56	45.97	46.20	46.69	47.05
LED80_R	45.56	45.97	46.20	46.69	47.05
LED60	45.39	45.80	46.03	46.52	46.87
LED155	49.16	49.58	49.81	50.42	50.78
LED81	49.16	49.58	49.81	50.42	50.78
LED101	49.16	49.58	49.81	50.42	50.78

TFI Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
cf-42 PT	123.84	124.43	124.81	127.25	127.81
F32	123.84	124.43	124.81	127.25	127.81
PT F42	123.84	124.43	124.81	127.25	127.81
LED17	58.04	58.48	58.73	59.22	59.61

TFI Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED29	58.90	59.35	59.60	60.10	60.49
LED22	61.41	61.86	62.12	62.64	63.03
LED46	58.22	58.66	58.91	59.41	59.79
LED43	58.22	58.66	58.91	59.41	59.79
PT LED17	91.54	92.06	92.37	93.10	93.58
PT LED34	91.54	92.06	92.37	93.10	93.58
LED34	58.22	58.66	58.91	59.41	59.79
LED18	58.22	58.66	58.91	59.41	59.79
LED35	79.99	80.48	80.78	81.42	81.87
LED39	58.22	58.66	58.91	59.41	59.79
LED26	58.22	58.66	58.91	59.41	59.79
LED20	79.99	80.48	80.78	81.42	81.87
LED28	79.99	80.48	80.78	81.42	81.87
LED17_R	58.04	58.48	58.73	59.22	59.61
LED23	82.27	82.77	83.07	83.73	84.18
LED200	73.66	74.13	74.41	75.01	75.43
LED105	95.29	95.82	96.14	96.89	97.37
LED198	95.29	95.82	96.14	96.89	97.37
LED88	73.66	74.13	74.41	75.01	75.43
LED70	73.66	74.13	74.41	75.01	75.43
LED150	69.55	70.02	70.29	70.85	71.27
LED90	73.66	74.13	74.41	75.01	75.43
LED72	73.66	74.13	74.41	75.01	75.43
LED117	82.79	83.28	83.58	84.24	84.69
LED158	82.79	83.28	83.58	84.24	84.69
LED298	95.29	95.82	96.14	96.89	97.37
LED178	73.66	74.13	74.41	75.01	75.43
LED175	75.94	76.42	76.71	77.31	77.75
LED79	82.79	83.28	83.58	84.24	84.69
LED80	69.55	70.02	70.29	70.85	71.27
LED150_R	69.55	70.02	70.29	70.85	71.27

TFI Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED80_R	69.55	70.02	70.29	70.85	71.27
LED60	68.41	68.87	69.14	69.70	70.11
LED155	93.97	94.49	94.81	95.55	96.03
LED81	93.97	94.49	94.81	95.55	96.03
LED101	93.97	94.49	94.81	95.55	96.03

SLUOS Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
cf-42	85.67	86.17	86.47	87.90	88.36
F14X2	85.67	86.17	86.47	87.90	88.36
F2X8	85.67	86.17	86.47	87.90	88.36
F42	85.67	86.17	86.47	87.90	88.36
cf-42 PT	117.43	118.00	118.36	120.79	121.33
F32	117.43	118.00	118.36	120.79	121.33
PT F42	117.43	118.00	118.36	120.79	121.33
F-40	89.11	89.62	89.93	91.20	91.66
F11X2	89.11	89.62	89.93	91.20	91.66
F20	89.11	89.62	89.93	91.20	91.66
F20X2	89.11	89.62	89.93	91.20	91.66
F2X20	89.11	89.62	89.93	91.20	91.66
F2X40	89.11	89.62	89.93	91.20	91.66
F40	89.11	89.62	89.93	91.20	91.66
F40X2	89.11	89.62	89.93	91.20	91.66
F40X3	89.11	89.62	89.93	91.20	91.66
F40X4	89.11	89.62	89.93	91.20	91.66
F4X40	89.11	89.62	89.93	91.20	91.66
F8X2	89.11	89.62	89.93	91.20	91.66
I100	89.11	89.62	89.93	91.20	91.66
MV-80	65.35	65.81	66.07	66.89	67.30
M50	65.35	65.81	66.07	66.89	67.30

SLUOS Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M70	65.35	65.81	66.07	66.89	67.30
M80	65.35	65.81	66.07	66.89	67.30
MV-80 PT	61.23	61.68	61.93	62.63	63.02
PT M50	61.23	61.68	61.93	62.63	63.02
PT M80	61.23	61.68	61.93	62.63	63.02
S-HP50	80.40	80.89	81.19	82.23	82.67
S50	80.40	80.89	81.19	82.23	82.67
S-LP18	73.20	73.67	73.95	75.43	75.85
L18	73.20	73.67	73.95	75.43	75.85
L26	73.20	73.67	73.95	75.43	75.85
PT L18	73.20	73.67	73.95	75.43	75.85
S-HP Other	86.44	86.95	87.25	88.48	88.94
MH100	86.44	86.95	87.25	88.48	88.94
MH125	86.44	86.95	87.25	88.48	88.94
MH150	86.44	86.95	87.25	88.48	88.94
MH250	86.44	86.95	87.25	88.48	88.94
MH400	86.44	86.95	87.25	88.48	88.94
MH50	86.44	86.95	87.25	88.48	88.94
MH70	86.44	86.95	87.25	88.48	88.94
PT MH100	86.44	86.95	87.25	88.48	88.94
PT S70	86.44	86.95	87.25	88.48	88.94
S70	86.44	86.95	87.25	88.48	88.94
S-HP50 PT	79.58	80.07	80.36	81.40	81.84
PT S50	79.58	80.07	80.36	81.40	81.84
MV-80+	63.01	63.46	63.72	64.88	65.28
M100	63.01	63.46	63.72	64.88	65.28

SLUOS Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M125	63.01	63.46	63.72	64.88	65.28
M125X3	63.01	63.46	63.72	64.88	65.28
M250	63.01	63.46	63.72	64.88	65.28
M400	63.01	63.46	63.72	64.88	65.28
M400X2	63.01	63.46	63.72	64.88	65.28
PT M125	63.01	63.46	63.72	64.88	65.28
S-HP100	64.20	64.66	64.92	66.12	66.52
PT S100	64.20	64.66	64.92	66.12	66.52
S100	64.20	64.66	64.92	66.12	66.52
S-HP150	66.12	66.58	66.84	68.11	68.51
PT S150	66.12	66.58	66.84	68.11	68.51
S150	66.12	66.58	66.84	68.11	68.51
S-HP250	77.11	77.59	77.87	79.48	79.91
S250	77.11	77.59	77.87	79.48	79.91
S400	77.11	77.59	77.87	79.48	79.91
S-LP90	82.78	83.28	83.57	85.36	85.81
L135	82.78	83.28	83.57	85.36	85.81
L55	82.78	83.28	83.57	85.36	85.81
L90	82.78	83.28	83.57	85.36	85.81
S-HP360f	52.15	52.58	52.81	53.64	54.01
I1000 F	52.15	52.58	52.81	53.64	54.01
I150 F	52.15	52.58	52.81	53.64	54.01
I1500 F	52.15	52.58	52.81	53.64	54.01
I500 F	52.15	52.58	52.81	53.64	54.01
I750 F	52.15	52.58	52.81	53.64	54.01
M1000 F	52.15	52.58	52.81	53.64	54.01
M250 F	52.15	52.58	52.81	53.64	54.01

SLUOS Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
M400 F	52.15	52.58	52.81	53.64	54.01
M400 F COST	52.15	52.58	52.81	53.64	54.01
M400 F SACON	52.15	52.58	52.81	53.64	54.01
M750 F	52.15	52.58	52.81	53.64	54.01
M80 F	52.15	52.58	52.81	53.64	54.01
S360 F	52.15	52.58	52.81	53.64	54.01
S400 F	52.15	52.58	52.81	53.64	54.01

SAPN Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED17	72.90	73.38	73.66	74.19	74.62
LED29	74.75	75.23	75.51	76.06	76.49
LED22	80.09	80.58	80.87	81.44	81.89
LED46	73.29	73.77	74.05	74.58	75.01
LED43	73.29	73.77	74.05	74.58	75.01
PT LED17	144.20	144.83	145.26	146.13	146.75
PT LED34	144.20	144.83	145.26	146.13	146.75
LED34	73.29	73.77	74.05	74.58	75.01
LED18	73.29	73.77	74.05	74.58	75.01
LED35	119.62	120.20	120.58	121.33	121.88
LED39	73.29	73.77	74.05	74.58	75.01
LED26	73.29	73.77	74.05	74.58	75.01
LED20	119.62	120.20	120.58	121.33	121.88
LED28	119.62	120.20	120.58	121.33	121.88
LED17_R	72.90	73.38	73.66	74.19	74.62
LED23	124.48	125.07	125.46	126.24	126.80
LED200	104.74	105.28	105.63	106.31	106.82
LED105	150.78	151.43	151.87	152.77	153.40
LED198	150.78	151.43	151.87	152.77	153.40
LED88	104.74	105.28	105.63	106.31	106.82

SAPN Tariff	2020–21	2021–22	2022–23	2023–24	2024–25
LED70	104.74	105.28	105.63	106.31	106.82
LED150	96.00	96.52	96.85	97.49	97.97
LED90	104.74	105.28	105.63	106.31	106.82
LED72	104.74	105.28	105.63	106.31	106.82
LED117	124.17	124.76	125.14	125.91	126.47
LED158	124.17	124.76	125.14	125.91	126.47
LED298	150.78	151.43	151.87	152.77	153.40
LED178	104.74	105.28	105.63	106.31	106.82
LED175	109.60	110.15	110.51	111.21	111.73
LED79	124.17	124.76	125.14	125.91	126.47
LED80	96.00	96.52	96.85	97.49	97.97
LED150_R	96.00	96.52	96.85	97.49	97.97
LED80_R	96.00	96.52	96.85	97.49	97.97
LED60	93.57	94.09	94.41	95.04	95.52
LED155	147.97	148.61	149.04	149.92	150.55
LED81	147.97	148.61	149.04	149.92	150.55
LED101	147.97	148.61	149.04	149.92	150.55

C Metering Prices

Table 15.11 2020-21 Prices ($ nominal)

		cents/day	$/year
Legacy metering services	Capital	2.535	9.25
	Non-capital	3.849	14.05

Note: The X-factors for metering services for the remaining years of the period are 0 per cent, and prices are only escalated for inflation.