



DRAFT DECISION

Energex Distribution Determination 2020 to 2025

Attachment 15 Alternative control services

October 2019

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Note

This attachment forms part of the AER's draft decision on the distribution determination that will apply to Energex 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

Attachment 13 – Control mechanisms

Attachment 14 – Pass through events

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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 Energex is allowed to charge customers for the provision alternative control services: ancillary network services, public lighting services and metering services.

Alternative control services are customer specific or customer requested services and so the full cost of the service is attributed to that 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 15.5 per cent of Energex's total regulated revenue.¹

15.1 Draft decision

Our draft decision is to reject Energex's proposed charges for ancillary network services² provided on a fee basis and not substitute any charges pending Energex's revised proposal. We recommend that Energex undertake a review of its proposed fees and modelling and consult with its stakeholders in preparing its revised proposal. Notwithstanding our draft decision to reject Energex's proposed charges for ancillary network services, we have assessed its proposed labour rates and service times. We accept some of Energex's proposed labour rates as efficient, but reject a number of other labour rates and substitute them with our own. Our draft decision on labour rates is listed in appendix A.

For public lighting services, our draft decision is to accept Energex's proposed LED rollout and Asset Management Plan, but reject Energex's proposed approach to capital and operating expenditure. We have replaced the WACC, labour escalators, and other related inputs consistent with our methodology for standard control services. Further, our draft public lighting decision addresses stakeholder submissions and Energex's response to some of those submissions.

For metering services, our draft decision is to accept Energex's building block approach and metering asset base, but reject Energex's proposed approach to capital 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:

¹ AER calculation based on Energex, *17.046 - Regulatory determination RIN template 2020-25 - January 2019*, 3.1 - Revenue.

² Ancillary network services include network ancillary services, auxiliary metering services and non-standard connection services.

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

15.2 Energex's proposal

Ancillary network services

To establish charges for ancillary network services Energex proposed a cost build-up approach with prices calculated on either a fee or quotation basis dependent on the nature of the service.³ Energex's regulatory proposal indicated that a 'capital allowance' would form part of this cost build-up, including as an additional component of the pricing formula for quoted services. In response to information requests, Energex clarified that the 'capital allowance' would not be included for quoted services, and should be considered as a type of overhead for fee-based services.⁴

Energex developed its prices using internal labour rates approved by the AER for the current regulatory period and escalated to 2020–21, contractor costs, overheads and materials for 2020–21, task time, crew size and labour type based on historical practice and internal assessments.⁵ Energex also proposed changing service fee descriptions to improve clarity and consistency with Ergon Energy.⁶ While Energex initially claimed confidentiality over its labour rates it later agreed that they could be made public.

Energex's original proposal and pricing model contained 205 service fees covering a range of fee permutations.⁷ Through our engagement process with Energex, it substantially revised its model through combining fees, removing fee permutations and correcting modelling errors. This resulted in the revised model submitted in late June containing 147 fees.⁸

Public lighting services

For public lighting services, Energex proposed:

- a target for its LED rollout of 47 per cent at the end of the 2020–25 regulatory control period⁹
- new tariffs to differentiate LED customers to those of conventional lighting¹⁰

³ Energex, *Regulatory proposal 2020-25*, January 2019, p. 129.

⁴ Energex, *Response to information request #014 - Ancillary network services*, 8 April 2019; Energex, *Response to information request #024 - further questions on fee permutations and modelling*, 10 May 2019.

⁵ Energex, *Regulatory proposal 2020-25*, January 2019, p. 129.

⁶ Energex, *Regulatory proposal 2020-25*, January 2019, p. 129.

⁷ Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JAN19 PUBLIC*.

⁸ Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC*.

⁹ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 11.

¹⁰ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 19.

- to split its asset base across conventional and LED lighting and use separate building block approaches for each¹¹
- capital expenditure trended forward based on growth rates of conventional/LED lighting¹²
- a base-step-trend approach to operating expenditure, with conventional and LED lighting apportioned based on their respective opening asset bases¹³
- a smoothed revenue resulting in price increases being limited to CPI for years 2 to 5 of the 2020–25 regulatory control period.¹⁴

Metering services

For metering services, Energex did not propose any capital expenditure during the 2020–25 regulatory control period for new meters, as it is no longer responsible for meter provision or installation. However, Energex proposed capital expenditure of \$8.06 million for non-network allocation of assets.¹⁵ Energex proposed a base-step-trend approach to operating expenditure, reflecting adjustments for productivity and cost allocation changes, as well as the metering 'churn' of customers switching to advanced type 1-4 meters.¹⁶ Energex proposed an immaterial reduction in prices in the first year of the 2020–25 regulatory control period, with price increases being limited to CPI for years 2 to 5.¹⁷

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 Part C of the NER.¹⁸ 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 Energex's proposed labour rates against maximum total labour rates, which we consider efficient.

¹¹ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 14.

¹² Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 15.

¹³ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, pp. 15-16.

¹⁴ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 18.

¹⁵ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 6.

¹⁶ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 7.

¹⁷ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 9.

¹⁸ NER, cl. 6.2.6(c).

Where Energex's 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 Energex's 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 Energex 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 Energex's 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 proposed metering prices we analyse the Post-tax Revenue Model (PTRM), studying historical data and benchmark costs against other NEM distributors. We specifically focus on the operating expenditure 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 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.

Energex advised that a comparison of prices from the 2015–20 regulatory control period to its proposal is difficult as many services that were previously priced on a quotation basis have shifted to a fee basis, there have been changes to service

categories/descriptions to align services with Ergon Energy, and there have been changes to Energex's cost allocation method.¹⁹ Appendix A includes a non-exhaustive list of ancillary network services we accept that Energex may 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 Energex's proposed labour forecasts.²⁰ Our proposed X-factors for this draft decision are set out in Appendix A.

Fee-based and quoted services

Our draft decision is to reject Energex's proposed charges for all ancillary network services provided on a fee basis. Energex indicated that it will change some of its underlying service assumptions and expects to submit lower proposed fees for some services as part of its revised proposal. Because Energex made significant changes to its fees through our assessment process, as well as correcting modelling errors, we recommend Energex undertake a review of its proposed fees and modelling. It should also engage with stakeholders in preparing its revised proposal. This is not to say that we consider all of Energex's proposed ancillary network service fees are inefficient. Rather, we consider that there will be greater benefit in Energex reviewing its ancillary network service proposal in aggregate rather than an ongoing iterative approach. For interested stakeholders, the fees rejected can be found in the model published with this decision.²¹

Energex has indicated its support for this approach and willingness to work with us in preparing its revised proposal.

In relation to labour rates used for services charged on both a fee and quotation basis, our draft decision is to:

¹⁹ Energex, *Response to information request #024 - further questions on fee permutations and modelling*, 20 May 2019.

²⁰ Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC*.

²¹ AER, *Draft Decision - EGX ERG 15.009 Fee-based and quoted services model - ACS - PUBLIC* - October 2019.

- accept Energex’s proposed labour rates for professional managerial; power worker (PW); technical service person; electrical system designer; supervisor; apprentice; system operator and tech/PW labour categories.²²
- Reject Energex’s proposed labour rates for its admin, para-professional and tech/PW/admin²³ labour categories and substitute the maximum labour rate recommended by our consultant.
- Accept Energex’s overtime labour rates as they fall within our consultant’s maximum recommended overtime mark-up of 175 per cent, except for labour categories where we have substituted our maximum labour rate. For these labour categories (admin, para-professional and tech/PW/admin), our draft decision is to substitute a labour rate of 175 per cent of our draft decision ordinary time labour rate.

Table 15.1 sets out our draft decision maximum labour rates (which include on-costs and overheads) that Energex should apply in calculating charges for ancillary network services. Appendix A contains our draft decision labour rates for overtime hours.

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

Energex labour category	Energex proposed implied ¹ total hourly rate (base plus on-costs plus overheads)	AER labour category ²	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) ³
Admin Employee	\$127.75	Admin	\$77.00
Professional Managerial	\$189.94	Project Manager	\$189.94
Power Worker	\$117.48	Field Worker	\$117.48
Technical Service Person	\$148.77	Technical Specialist	\$148.77
Electrical System Designer	\$139.44	Engineer	\$139.44
Supervisor	\$173.73	Project Manager	\$173.73
Para-Professional	\$163.87	Admin	\$77.00
Apprentice	\$95.77	Field Worker	\$95.77
System Operator	\$205.12	Senior Engineer	\$205.12

²² This labour category combines Energex's technical service person and power worker labour categories.

²³ This labour category combines Energex's technical service person, power worker and admin employee labour categories.

Energex labour category	Energex proposed implied ¹ total hourly rate (base plus on-costs plus overheads)	AER labour category ²	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) ³
Tech/PW ⁴	\$133.12	Tech/PW ⁴	\$133.12
Tech/PW/Admin ⁴	\$131.33	Tech/PW/Admin ⁴	\$114.42

Notes:

- 1: AER calculation based on Energex labour (including on-cost) figures and overhead rates contained in Energex's fee-based and quoted services model. Note that these figures are marginally different to those in the Marsden Jacob report which looked at \$2019–20.
- 2: Based on Marsden Jacob report. These labour categories are for comparison purposes only
- 3: Calculated by escalating Marsden Jacob's recommended maximum labour rates for 2019–20 by the AER's forecast inflation rate.
- 4: The labour rates for these labour categories are an average of the labour rates for the underlying labour categories. While the AER does not have a specific matching labour category we have taken a similar approach and applied the average of our draft decision labour rates for the relevant categories.

Source: AER calculations; Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC*.

We also note that under Schedule 8 of the *Electricity Regulation 2006 (Qld)*, some ancillary network services are price-capped, and these prices take precedence over our decision.²⁴

Security lighting services

Energex proposed charging security lighting on a quotation basis.²⁵ However, Energex later clarified that it proposed to charge security lighting installation costs on a quotation basis, but ongoing maintenance, operation and replacement of security lighting assets on a fee basis.²⁶ Energex submitted that it was not able to propose fees at this stage as it is reviewing its approach to security lighting against Ergon Energy's.²⁷ Energex advised that it intends to submit an updated security lighting model as part of its revised proposal, which will be similar to its 2015–20 model, updated for our draft decision.²⁸

Our draft decision is to accept charging for security lighting installation on a quotation basis, and charging for the ongoing costs on a fee basis in line with Energex's submission during our assessment process. However, our draft decision does not

²⁴ While there are only eight price-capped ancillary network services under the *Electricity Regulation 2006 (Qld)*, these flow through to the permutations of the ancillary network services Energex proposed.

²⁵ Energex, *15.005 - Alternative control services 2020-25*, January 2019, p. 26.

²⁶ Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

²⁷ Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

²⁸ Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

include any fees for security lighting services because we have not received Energex's revised proposal and security lighting model.

Fee permutations – Anytime hours

Energex's proposal included a number of fee permutations for the same service, based on the time of the service delivery being during business hours; anytime hours; and after hours. Energex also proposed charging the same fee for anytime hours and after hours services (which was a higher amount than the business hours fee). Through our assessment process, Energex reduced its usage of the anytime hours permutation and provided justification that its pricing approach was appropriate and cost reflective. Our draft decision is to accept Energex's proposed anytime hours fee permutations and proposed approach to 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
- 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 services.

By comparing the maximum benchmark labour rates to Energex's proposed labour rates and benchmark times taken to perform services, as developed by Marsden Jacob, we were able to assess Energex's 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 Worker¹	\$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.²⁹

We considered the objectives of our Cost Allocation Guideline.³⁰ 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

Energex submitted revised pricing models for ancillary network services to us in April³¹ and June³² 2019 to address modelling issues, update service assumptions and to respond to our information requests. Consequently, Energex's revised pricing model and charges significantly differ to those initially proposed.

Energex subsequently advised that the revised June 2019 model still contained modelling errors as it applied the incorrect overhead rate to materials and included time on site for call-out fees that should only include travel time.³³ It also advised that it is intending to change some service assumptions in its revised proposal, which may reduce fees for approximately 40 ancillary network services.³⁴

Origin Energy's submission called on us to scrutinise Energex's proposed fees for some services as they varied considerably from Energex's 2019–20 approved prices.³⁵ Origin Energy specifically referred to connection management services (de-energisation/re-energisation) and auxiliary metering services.³⁶ We analysed the fees

²⁹ Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 7.

³⁰ AER, *Cost Allocation Guideline (Distribution)*, 2008.

³¹ Energex, *Response to information request #014 - Ancillary network services*, 8 April 2019.

³² Energex, *Response to information request #040 - revised ancillary network services model*, 27 June 2019.

³³ AER staff discussion with Energex staff, 21 August 2019.

³⁴ Energex, *Response to information request #060 - ANS - significant price increases*, 21 August 2019. This was in response to Origin Energy's submission which highlighted proposed price rises compared to 2019–20 prices. See: Origin Energy, *Submission on Energex and Ergon Energy's Regulatory Proposal 2020-25*, 31 May 2019, pp. 3-4.

³⁵ Origin Energy, *Submission on Energex and Ergon Energy's Regulatory Proposal 2020-25*, 31 May 2019, p. 3.

³⁶ Origin Energy, *Submission on Energex and Ergon Energy's Regulatory Proposal 2020-25*, 31 May 2019, pp. 3-4.

for these services and sought further information from Energex.³⁷ In response, Energex provided justification for some proposed price rises, but also indicated that it intended to revise some of its underlying service assumptions in its revised proposal.³⁸

Given the continuing changes in Energex's modelling, we are not satisfied that we have sufficient information to assess the efficiency of Energex's proposed schedule of fees for its ancillary network services. Therefore, our draft decision is to reject all of Energex's proposed ancillary network service fees. Further, we will not be substituting our own price caps until we have correct models and underlying assumptions to test the efficiency of the proposed prices.

We consider that it would be prudent for Energex to revise its underlying service assumptions and its model to ensure that efficient prices are proposed. We are also cognisant that stakeholders have not had an opportunity to consider Energex's revised models provided during our assessment process. We encourage Energex to include a comparison between its revised proposal and 2019–20 approved fees where possible, including explanations for significant changes. To improve transparency, we have published Energex's pricing model provided to us in June 2019, and noted the modelling errors.

Proposed labour rates and service times

Notwithstanding our draft decision to reject Energex's proposed ancillary network service fees, we were still able to assess Energex's proposed labour rates and service times against our consultant's (Marsden Jacob) findings, which generally compared favourably.

In building up its fees for ancillary network services provided on a fee basis, Energex only used its technical service person labour category (both ordinary and overtime).³⁹ Marsden Jacob identified that in many cases other distributors used the 'field worker' labour category to deliver the services it benchmarked, and hence applied this labour category in undertaking its analysis.⁴⁰ As Energex's proposed total hourly labour rate for technical service person falls below Marsden Jacob's recommended maximum for both technical specialist, and field worker, we consider that it is efficient and have made no changes.

Energex proposed labour rates for other labour categories that it may use to build up charges for ancillary network services provided on a quotation basis. We consider Energex's proposed labour rates are efficient where they are below our consultant's recommended maximums and substitute our consultant's recommended maximums where Energex's proposed labour rates are higher. This results in us substituting our

³⁷ AER, *Information request #060 - ANS - significant price increases*, 9 August 2019.

³⁸ Energex, *Response to information request #060 - ANS - significant price increases*, 21 August 2019.

³⁹ Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC*.

⁴⁰ Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 8.

administration labour rate for Energex's admin and para-professional labour categories, and tech/PW/admin labour category.⁴¹

The substitution of our administration labour rate, based on our consultant's recommendations, results in a reduction of more than 50 per cent in Energex's labour rate for its para-professional labour category. Marsden Jacob previously considered a proposed para-legal labour category in its report on the NSW distributors, Evoenergy, TasNetworks and Power and Water Corporation.⁴² Marsden Jacob determined that as the Hays labour rates for the relevant labour categories fell below the maximum administration rate it was appropriate to apply the administration labour rate.⁴³ While we sought further information from Energex on when its para-professional labour rate would be applied, the response provided only indicated that this labour rate was included for completeness and transparency and that it might be applied in pricing some specific services provided on a quotation basis.⁴⁴ Energex may wish to make submissions in its revised proposal as to why we should consider its para-professional labour rate differently.

Our draft decision on all of Energex's proposed labour rates can be found in section 15.4.1.

Marsden Jacob also undertook benchmarking of the time taken for a number of common services between the distributors it considered and did not recommend making changes to any of Energex's proposed service times.⁴⁵ While Marsden Jacob undertook its benchmarking on Energex's models as at April 2019, we consider that it is still accurate as the June 2019 revisions mostly removed services or reduced labour times.

While Marsden Jacob did not benchmark Energex's call-out fees, it recommended that we further investigate fees described as 'wasted travel time only', which appear to include time on site. We agree that Energex's model appears to incorrectly include time on site and Energex subsequently advised that this is an error that it intends to correct in its revised proposal.⁴⁶ Similarly, Marsden Jacob suggested that we review call-out fees described as 'wasted travel time and wasted time at customer's premises'

⁴¹ Energex's tech/PW/admin labour category is an average of the three underlying labour rates. As we have substituted our admin labour rate we have therefore taken a similar approach and recalculated this labour rate using our draft decision labour rates.

⁴² Marsden Jacob Associates, *Review of alternative control services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 8.

⁴³ Marsden Jacob Associates, *Review of alternative control services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 8.

⁴⁴ Energex, *Response to information request #024 - further questions on fee permutations and modelling*, 10 May 2019.

⁴⁵ Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 14.

⁴⁶ Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC, services EGX_144 through EGX_147*; AER staff discussion with Energex staff, 21 August 2019.

as the time on site appeared significant.⁴⁷ In response to an information request Energex advised that it does not charge for time on site if crews spend less than 15 minutes trying to access the property. Energex also confirmed that it charges call-out fees as a stand-alone charge, rather than absorbing it in other service charges.⁴⁸ Based on this additional information, we are satisfied with the labour time allocated to these services.

Finally, in reviewing the contractor rates used by Energex, we note that Marsden Jacob's report shows that Energex's proposed special meter read fee (which relies on contractors), benchmarks favourably to other distributors.⁴⁹

We therefore accept Energex's proposed service times.

Security lighting services

This is the first regulatory control period that security lighting services will be treated as an alternative control service for Energex, having previously not been regulated.

While Energex initially proposed charging for security lighting services on a quotation basis, it clarified late in the draft decision process that only installation costs are to be charged on a quotation basis, and that ongoing costs of maintenance, operation and replacement should be charged on a fee basis. Energex advised that this difference in pricing was consistent with how it currently charged for the provision of security lighting services.⁵⁰

Energex submitted that charging installation costs on a quotation basis was appropriate as they tend to be customer specific and are difficult to standardise. We have previously approved standardised installation costs for security lighting for the NSW distributors on a fee basis.⁵¹ However, we accept that these installation costs may vary because of customer requirements and it is up to the customer as to whether they accept a quote or approach a competitor for an alternative solution. For the reasons above, we accept Energex's proposal to charge for installation of security lights on a quotation basis.

In response to an information request, Energex proposed that the ongoing costs of security lighting services be charged on a fee basis, as the scope of the work can be pre-defined.⁵² Energex submitted that this will minimise the impact on customers and provide price certainty. We accept Energex's proposal to charge ongoing security

⁴⁷ Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, p. 14.

⁴⁸ Energex, *Response to information request #014 - Ancillary network services*, 8 April 2019

⁴⁹ Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator*, June 2019, pp. 16-17.

⁵⁰ Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

⁵¹ For example, see AER, *Draft decision - Ausgrid distribution determination 2019-24 - Attachment 15 - Alternative control services*, pp. 15-19, 15-20.

⁵² Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

lighting services on a fee-basis to improve certainty for customers, which goes to tariffs being reasonably able to be understood by customers.⁵³ We also consider that it represents an appropriate trade-off between the administrative costs of having standardised prices rather than individually prepared quotes for each customer.⁵⁴

However, we are unable to make a draft decision on a schedule of fees for security lighting until we receive Energex's revised proposal with its security lighting model to consider its proposed cost build up. We currently have limited information on how Energex charges for security lighting services and the underlying cost drivers, and as a previously unregulated service, we had no role in regulating the fees. Energex also advised that it is not appropriate to use its public lighting costs as they do not reflect security lighting costs.⁵⁵

Fee permutations – Anytime hours

We raised concerns with Energex about the large volume of fee permutations proposed, with a particular focus on the proposed business hours; anytime; and after hours permutations for many services where the prices for anytime and after hours were identical. Specifically, we were concerned that it may lead to issues with accurately charging customers and that it may make it difficult for customers to understand all of the permutations.⁵⁶ We therefore sought clarification from Energex, who advised that:⁵⁷

- The “Business hours” fee permutations is applied to services completed on the next *scheduled* business day (note: the service may not necessarily be completed on the same or next business day, as it will depend on when a particular planned service is scheduled to be conducted)
- The “Anytime” permutation is applied to certain services which are raised after the 1pm cut off time but are required to be prioritised and conducted on the same business day, and
- The “After hours” permutation is applied to certain services which are required to be completed outside business hours (i.e. before 8am or after 5pm).

Energex submitted that this pricing was cost reflective, capturing the additional administration costs involved in rescheduling jobs and providing services outside of the standard timeframe. Energex also submitted that this pricing recognised that the service may need to be completed after business hours for it to occur on the same day.⁵⁸

Energex subsequently provided a revised model in late June 2019 which significantly reduced its use of anytime hours fee permutations. Energex advised that it limited its use to re-energisations (for urban and short rural feeders) and supply abolishment services (for urban feeders only). Energex considered this simplified its service offering

⁵³ NER, cl. 6.18.5(h).

⁵⁴ NER, cl. 6.18.5(f)(1).

⁵⁵ Energex, *Response to information request #059 - ANS - Security Lighting*, 13 August 2019.

⁵⁶ AER, *Information request #024 - Ancillary network services - further questions on fee permutations and modelling*, 3 May 2019.

⁵⁷ Energex, *Response to information request #024 - further questions on fee permutations and modelling*, 20 May 2019.

⁵⁸ Energex, *Response to information request #014 - Ancillary network services*, 8 April 2019.

and improved alignment with jurisdictional regulatory requirements. It considered that anytime hours permutations should be retained for these particular services given they are high volume and customers may require these services to be prioritised.⁵⁹ We note that the number of anytime hours fees therefore reduced from 55 in Energex's original proposal to 14.

We are satisfied with Energex's reduced use of the anytime hours fee permutations. We consider that pricing the anytime hour fee permutation at the same rate as the after hours permutation is reasonable in reflecting the costs of prioritising these types of services. We also understand that customers are able to choose that a service be expedited in this fashion. Therefore, our draft decision is to accept that the anytime hours fee permutation be charged at the same rate as an after-hours fee.

15.5 Public lighting

Public lighting services include the operation, maintenance, repair, replacement, alteration, relocation and provision of public lighting assets. Energex owns and operates over 325000 public lights servicing local government authorities (councils), Department of Transport and Main Roads and other Government entities.⁶⁰ This asset base includes 175000 public lighting assets 'gifted' to Energex by customers,⁶¹ of which Energex now owns, maintains, and operates the lighting asset. There are an additional 40000 public lighting units that are owned and operated by customers,⁶² of which Energex provides the electricity supply only.

15.5.1 Public lighting—Draft decision

Our draft decision is to:

- maintain public lighting as an alternative control service, consistent with our final F&A⁶³
- apply our draft decision labour escalators and rate of return consistent with standard control services⁶⁴
- accept Energex's proposed LED apportionment and rollout
- accept Energex's Asset Management Plan
- reject Energex's proposed capital expenditure
- reject Energex's proposed operating expenditure.

Our draft decision public lighting price caps are listed in appendix B.

⁵⁹ Energex, *Response to information request #040 - revised ancillary network services model*, 27 June 2019.

⁶⁰ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 11.

⁶¹ Energy Queensland, *Asset Management Plan - Public Lighting*, October 2018, p. 5.

⁶² Energy Queensland, *Asset Management Plan - Public Lighting*, October 2018, p. 5.

⁶³ AER, *Queensland 2020–25 - Final framework and approach for Energex and Ergon Energy*, July 2018, pp. 34-36.

⁶⁴ Attachment 3 - Rate of Return; Attachment 6 - Operating Expenditure.

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 Energex 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 prices for the 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).

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

LED rollout

We consider Energex's proposed approach to LED lighting to be satisfactory. This includes their rollout strategy, introduction of LED tariffs, and approach to pricing. However, we encourage Energex to provide stakeholders with further transparency around the LED transition. This includes the difference in cost build-ups for LED assets and operating expenditure to that of conventional lighting.

Energex proposed LED specific tariffs to reflect the cost efficiencies found in LED lighting compared to conventional lighting. To calculate these tariffs, Energex split its public lighting asset base according to current assets. Each asset base is then moved forward over the period with specific operating and capital expenditure forecasts, to reflect the costs for these different types of lighting. This allows for efficiencies to be found in operating expenditure relating to LED lighting, while recovering the depleting conventional lighting asset base from conventional lighting tariffs only. This creates an attractive price point for LED lighting that represents the lower cost of operating LED lighting, and incentivises customers to switch to LED.

In addition to the LED versions of current tariffs, Energex proposed a new NPL4 tariff to further incentivise the transition to LED lighting.⁶⁵ Where a customer funds the replacement of the luminaire and lamp to LED, they will move from the existing conventional NPL1 tariff to the NPL4 tariff. This proposal allows for customers to initiate a switch to LED without having to contribute the whole asset (NPL2) or wait for the end-of-life of the asset (NPL1). Customers who switch to this NPL4 tariff will be charged a tariff that is lower than the NPL1 tariff to reflect their contribution of the LED.

Energex provided prices for the NPL4 tariff in their proposal, however did not provide detail on how these were calculated. When requested, Energex provided the following calculation to explain its NPL4 tariffs:⁶⁶

⁶⁵ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 19.

⁶⁶ Energy Queensland, *Response to Energex Information Request #051*, August 2019, pp. 3-4.

NPL4 tariff=(90% of NPL2 LED rate)+(70% of capital charge of NPL1 Conventional rate)

The 90 per cent of the NPL2 LED rate removes the 10 per cent capital component allocated for refurbishment. While we accept the 70 per cent rate of capital allocation, we do not accept the use of the conventional lighting capital component as the basis. After corrections to Energex's public lighting model for capital expenditure, and overhead allocation adjustments, the capital components of conventional lighting and LED lighting differ significantly enough to cause the NPL4 tariff to be higher than the NPL1 LED tariff. This causes a disincentive in using the NPL4 tariff, as the NPL1 LED tariff is cheaper, and does not require any customer contribution. For these reasons, our draft decision is to apply the LED capital as a basis for the NPL4 calculation:

NPL4 tariff=(90% of NPL2 LED rate)⁶⁷+(70% of capital charge of NPL1 LED rate)

We consider that this approach properly incentivises customer contributions of LED lamps to assist in achieving Energex's LED rollout targets. This is also in line with the treatment of customers transitioning to LED on NPL1 and NPL2 tariffs, where they are charged for recovery of the LED asset base as opposed to the conventional lighting asset base after transition, while not incurring any exit fee.

Energex have set a target penetration for LED lighting of 47 per cent by the end of the 2020–25 period.⁶⁸ This reflects the strategies put forward in the asset management plan⁶⁹ that:

- All new and additional lights installed are to be LED
- 75 per cent⁷⁰ of mercury vapour lamps and luminaires are to be replaced with LED during the 2020–25 period⁷¹
- 20-25 per cent⁷² of life-expired/failed conventional lights are to be replaced, gradually increasing to 30-40 per cent by 2025.⁷³

The rollout of LED allows for both customer-led transition, as well as that led by Energex. Where a customer is transitioned to LED, there will be no exit fee charged as a total asset replacement does not occur, and the customer will retain their existing funding arrangement (i.e. NPL 1 or 2) on the lower LED rate.⁷⁴ We consider this rollout approach provides incentives for customers to change to LED lighting, while also

⁶⁷ This 90% reflects the operating expenditure component of the NPL2 rate, after removing the 10% refurbishment component.

⁶⁸ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 11.

⁶⁹ Energy Queensland, *Asset Management Plan - Public Lighting*, October 2018, pp. 15-16.

⁷⁰ Figure adjusted to reflect correct sum of years.

⁷¹ Year 1: 10%, year 2: 12.5%, year 3: 15%, year 4: 17.5%, year 5: 20%.

⁷² Modelled at 5% of portfolio.

⁷³ Conversions limited to where only lamp and luminaire can be replaced with very limited bracket and/or pole replacements to minimise costs.

⁷⁴ Energy Queensland, *Energex TSS Explanatory Notes 2020–25*, June 2019, p. 46.

ensuring no burden is placed on customers when Energex initiates a transition to LEDs.

Under the Minamata Convention, production of mercury vapour lamps will be banned from import, export, and manufacture in most countries from 2020. The Australian Government is considering ratifying the convention, and being bound by its requirements.⁷⁵ Energex has initiated steps to replace its stock of in-use mercury vapour lamps in recognition of these future restrictions. Energex intends to replace these mercury vapour lamps with LED at the above rates, noting there is currently no requirement to remove mercury vapour lamps from use.⁷⁶

Asset base allocation to NPL2

Energex proposed to smooth a 10 per cent refurbishment allocation of the public lighting asset base across both NPL1 and NPL2 tariffs.⁷⁷ This is to replace the previous approach where an asset replaced by Energex would trigger a re-assignment from NPL2 to NPL1 tariff.

We accept Energex's proposal to include this capex component in the NPL2 tariff. This removes the increased tariff charge of up to 318 per cent⁷⁸ where Energex is required to replace an asset, and allows for customers to retain the benefits of gifting assets past the life of the asset.

Operating expenditure

Energex used a base-step-trend method to forecast their operating expenditure for the 2020–25 period. We accept this approach, however we do not accept the level of overheads included in Energex's forecasts.

In creating a base level for operating expenditure for both conventional and LED lighting, Energex removed amounts related to one-off restructuring costs, as well as adjusting for significant changes in relation to the cost allocation method. These changes reduced overall operating expenditure by \$12.85m and reduced the base level operating expenditure by 42 per cent. We accept these adjustments to the base level operating expenditure.

Energex's proposal did not provide information regarding the overhead allocations for operating expenditure, however it provided further information when requested.⁷⁹ Energex advised that of the combined \$17.2m base year operating expenditure, \$7.4m represented overhead allocation. At the original base level operating expenditure of \$30m (combined, before adjustments), this represents an overhead allocation of 31.90

⁷⁵ <https://www.environment.gov.au/protection/publications/minamata-convention-mercury-and-lighting-fs>

⁷⁶ Energy Queensland, *Asset Management Plan - Public Lighting*, October 2018, p. 16.

⁷⁷ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 19.

⁷⁸ Calculated on NPL2 tariff net of the capex component, compared to the total NPL1 charge (where 100% of public lighting asset base is recovered on this tariff).

⁷⁹ Energy Queensland, *Response to Energex Information Request #051*, August 2019, p. 4.

per cent of direct costs. However after applying the above accepted adjustments, the overhead allocation represents 75.16 per cent of direct costs.

Our draft decision is to reject the proposed base level operating expenditure considering this level of overhead allocations. Our draft decision is to adjust the operating expenditure base level to reflect the previous 31.90 per cent overhead allocation rate. Specifically, we calculated the difference in the overhead amounts, allocated it to conventional and LED lights, escalated to 2019–20 dollars, and applied as an adjustment in the model. We invite Energex to provide a more detailed cost build-up approach to its operating expenditure as part of its revised proposal.

Energex also included adjustments to reflect the growth rate of assets. While natural logs have been used in the growth rate calculations for conventional lighting, the LED lighting growth rates used simple growth calculations. For consistency, we have updated the LED growth rates to the methodology used for conventional lighting.

Table 15.3 shows the movement in total operating expenditure between Energex's proposal and our draft decision.

Table 15.3 Operating Expenditure (\$2019–20)

Operating Expenditure	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Energex Proposal - Conventional	16.42	15.80	14.53	13.01	11.21	70.97
Energex Proposal - LED	0.72	1.25	2.08	3.16	4.39	11.61
AER Draft Decision - Conventional	12.22	11.76	10.78	9.62	8.26	52.64
AER Draft Decision - LED	0.42	0.63	0.91	1.29	1.71	4.97

Capital expenditure

Energex provided capital expenditure models to support its forecasts for the 2020–25 period. While we accept Energex's forecasted direct capital expenditure, we do not accept Energex's application of capitalised overheads on these forecasts. We also recommend Energex consider a cost build-up approach to its capital expenditure to better forecast the expenditure on LED lighting.

Energex escalated base year capitalised overheads by the overall rate of change in its operating expenditure model. This rate of change predominantly represents the change in public lighting asset quantities (for each conventional and LED light type in its respective models). This does not reflect the direct capital expenditure forecast, and results in capitalised overheads that are up to 173 per cent of the total direct capital expenditure for that year.

Our draft decision is to reject this application of capitalised overheads, and instead, adjust this allocation to reflect direct capital expenditure. Specifically, we adjusted the

model to reflect the same weightings in the base year of 2018–19, and applied these weightings to the forecasted direct capital expenditure for the regulatory control period. In doing this, we also reduced Energex's proposed capitalised overheads down from 45.56 per cent to 35 per cent, in line with our recent decision for TasNetworks.⁸⁰ This cap was based on the 25 per cent applied to Victorian distributors, with a 6 per cent allowance for expenditure which is not considered overheads in Victoria, and then a buffer to allow for the difficulty in benchmarking overheads. The resultant changes to gross capital expenditure are shown in Table 15.4.

Table 15.4 Capital Expenditure (\$2019–20)

Capital Expenditure (Total Gross)	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Energex Proposal - Conventional	9.75	9.76	9.44	9.14	7.89	45.98
Energex Proposal - LED	23.54	25.40	27.61	29.68	32.25	138.49
AER Draft Decision - Conventional	5.54	5.76	5.96	6.08	5.50	28.84
AER Draft Decision - LED	25.63	27.65	29.99	32.13	34.75	150.16

Note: Total gross capital expenditure is shown, which includes overheads and other asset classes, but does not reflect disposals and customer contributions.

Modelling

Energex's models supporting its proposal contained a number of errors, including:

- NPL4 minor tariffs
- Historical capital expenditure and customer contribution values
- Differing growth rate methodologies for conventional lighting and LED
- Values hard-coded over formulae in the AER's PTRM
- Omission of WACC for years 2 to 5 in pricing model
- Customer contributions' real values used instead of nominal values in pricing model⁸¹
- NPL1 tariff calculations - incorrect customer base.⁸²

Energex corrected these issues in updated models. This included the use of the latest PTRM released in April 2019. Further to these corrections, we have adjusted the models to reflect the AER's updated return-on-debt, labour escalators and other related inputs.

⁸⁰ AER, Final Decision - *TasNetworks Distribution Determination 2019–24 - Attachment 15*, April 2019, pp. 14-15.

⁸¹ These values had no impact on the pricing model for which they were included, and have subsequently been removed.

⁸² This issue caused an omission of \$13.5m of revenue each year.

Asset Management Plan

Our draft decision is to accept Energex's public lighting asset management plan.⁸³ We consider that it sufficiently addresses regulatory compliance, asset management, LED rollout and minimum service levels. We consider that the preventative maintenance activities of Energex are appropriate in relation to its inspection and bulk lamp replacement programs. To improve transparency, we recommend that Energex includes more detailed information around the failure rates of lighting assets.

Submissions

We consider Energex's public lighting proposal, supported by its asset management plan and public lighting strategy documents, provides an acceptable picture of its treatment of public lighting assets and LED rollout. However, we consider that the proposal lacks transparency and discussion around key components of public lighting expenditure, as well as including errors which caused confusion and contention amongst stakeholders.

While customer submissions suggested there were difficulties consulting with Energex and have criticised a number of aspects in Energex's proposal, the AER's Consumer Challenge Panel (CCP sub-panel 14) commented that Energex engaged with councils, and that the proposal reasonably reflects stakeholder needs.⁸⁴

The Council of the City of Gold Coast (CCGC) made a submission on Energex's proposal.⁸⁵ After consultation between CCGC and Energex, CCGC made a further submission to reflect what was discussed, and what issues remained after this discussion.⁸⁶ The key issues raised in the submission, together with our consideration of these issues are listed in Table 15.5. We have omitted some issues where they have otherwise been addressed in our draft decision.

Table 15.5 Council of the City of Gold Coast submission - key issues and AER considerations

CCGC Issue	Discussion
CCGC Issue - AER 1	Energex stated it owns and operates 325000 public lights, being the quantity of lights of both NPL1 and NPL2 tariffs, which includes those gifted to Energex by customers.
AER consideration	Those assets gifted to Energex are considered Energex 'owned', allowing them to operate and maintain these assets. While not technically incorrect, we have included mention of the quantity of these assets that have been gifted by customers.

⁸³ Energy Queensland, *Asset Management Plan - Public Lighting*, October 2018.

⁸⁴ Consumer Challenge Panel 14, *Submission on Energex's Regulatory Proposal 2020–25*, May 2019, p.21.

⁸⁵ Council of the City of Gold Coast, *Submission on Energex's Regulatory Proposal 2020–25 - Public lighting*, June 2019.

⁸⁶ Council of the City of Gold Coast, *Post Meeting Submission on Energex's Regulatory Proposal 2020–25 - Public lighting*, August 2019.

CCGC Issue	Discussion
CCGC Issue - AER 2	Energex stated a target of 47 per cent LED rollout by end of 2020.
AER consideration	Energex has confirmed this error, the target is 47 per cent by the end of 2025.
CCGC Issue - AER 3	CCGC does not consider asset costs attributed to Energex's shared assets (poles and wires) should be borne by the customer.
AER consideration	Energex is entitled to recover the costs of these assets. ⁸⁷ This recovery can be apportioned between standard control services and public lighting services, as alternative control services, in a way that reflects the shared usage. We support CCGC's recommendation that Energex provides more transparency around the cost breakdown of capital expenditure, demonstrating how much - if any - of the poles and wires costs are recovered through public lighting tariffs.
CCGC Issue - AER 4	CCGC suggested contestability be introduced for services and maintenance on all public lighting assets to remove Energex's monopoly over lighting services.
AER consideration	While the AER promotes contestability in markets, the powers to introduce contestability lie with the jurisdictional government, i.e. Queensland Government. We note that Energex does allow for customers to own and maintain their own assets on the NPL3 tariff, with Energex only providing the electricity supply.
CCGC Issue - AER 5	CCGC is concerned that Energex's monopolistic framework prevents alternative technology, and suggested that NPL2 assets are returned to customers to provide opportunities for customers to deliver alternative technology such as solar/battery solutions.
AER consideration	We welcome further discussion between Energex and CCGC regarding this, noting that alternative technologies could be best suited to the NPL3 tariff.
CCGC Issue - AER 6	CCGC has concerns around the impact of the building block approach, and how the LED rollout will impact the revenue Energex is allowed to recover.
AER consideration	Energex proposed separate models for conventional and LED lighting. This allows for appropriate costs to be recovered from the relevant customers. The conventional lighting asset base will continue to be recovered from conventional lighting customers until the asset base is depleted. At that point, all customers will be using LED lighting, or will be paying a lower charge, net of capital costs (to be addressed in a future regulatory determination). There is no need for Energex to revalue any assets, and the value capitalised at the beginning of the asset will remain. We recommend further discussion between Energex and CCGC to offer further transparency.
CCGC Issue - AER 7	CCGC disputed the value assumed by Energex to calculate the opening public lighting asset base.
AER consideration	Energex has used the AER's RFM to calculate the opening public lighting asset base value. Energex has confirmed errors in its capital expenditure and customer contributions, and have updated the RFM to reflect the amounts provided in its annual RINs. This is reflected in a new opening asset value.
CCGC Issue - AER 8	Energex's proposal is silent on the total value of the non-network assets and capitalised overhead costs included in capital expenditure, as well as the proportioned amount of each item.
AER consideration	Energex provided models for the capital expenditure for both conventional and LED lighting. These models show all components of the capital expenditure forecasts. Note our draft decision on capitalised overheads above.

⁸⁷ NER, cl. 6.5.1(a).

CCGC Issue	Discussion
CCGC Issue - AER 9	Energex's proposal is silent on its expectation of funding responsibility to achieve its target of 47 per cent LED penetration by 2025.
AER consideration	Energex provided details of its LED rollout strategy in its Public Lighting Asset Management Plan. This included removal of mercury vapour lamps and luminaires from use, replacement of failed/life-expired lights, and new lights. This document also mentions approaches to minimising costs. We recommend further discussion between Energex and CCGC to offer greater transparency, and recommend Energex addresses this further in its revised proposal, including clarity around who bears responsibility for the LED changeover. We note that LED tariffs are lower than conventional lighting, and that where a customer gifts the asset (or the LED only for NPL4), there should always remain a fiscal incentive due to decreased operating expenditure incurred with LED lighting.
CCGC Issue - AER 10	Energex has not provided information to customers on request regarding the makeup of the public lighting asset base.
AER consideration	Energex has advised that it has since provided an asset register to CCGC.
CCGC Issue - AER 11	Energex included a tax allowance in building block revenue requirements for all public lighting.
AER consideration	This tax allowance is in line with the building block approach used in our PTRM treatment of the asset base. ⁸⁸
CCGC Issue - AER 12	Energex's NPL4 LED Minor tariff (customer contributed LED lamp, Energex asset) is higher than NPL1 LED Minor tariff (Energex owned and operated).
AER consideration	See comments in LED Rollout section above regarding NPL4 tariff.
CCGC Issue - AER 13	Energex's LED tariffs do not incentivise funding from customers.
AER consideration	Corrections of errors in the model, AER adjustments to overhead applications, and corrected historical capital expenditure have changed Energex's tariffs. These tariffs now reflect up to 32 per cent of savings compared to conventional lighting.
CCGC Issue - AER 14	Prices for conventional NPL2 to LED NPL2 is inadequate to support customer funding.
AER consideration	There is no charge or exit fee for customers to transition to LED. Prices are lower than conventional, providing incentive to change, and providing long-term benefits.
CCGC Issue - AER 15	Energex is silent on conversion of LED NPL4 to alternative rate type at end of life.
AER consideration	We consider that NPL4 assets should be treated similarly at end of life as other tariffs, in that they shall remain on the NPL4 tariff. We recommend Energex includes more detailed information regarding the treatment of public lighting tariffs at the end of the asset's life in its revised proposal and supporting documents.
CCGC Issue - AER 16	Energex is silent on the process for customer funded assets at end of life.
AER consideration	Where customers contribute assets on the NPL2 (or NPL4) tariff, these assets are gifted to Energex and then maintained by Energex, and are therefore retained by Energex. Where Energex replaces the asset at end-of-life, the customer remains on the NPL2 tariff, where they are responsible for only a fraction of the capital expenditure involved. Where customers intend to use the asset past the end-of-life, or upgrade the asset in any way, we recommend the NPL3 tariff be used.

⁸⁸ NER, cl. 6.4.3(b4).

CCGC Issue	Discussion
CCGC Issue - AER 17	Energex is silent on deployment and costs of advanced technologies and data options.
AER consideration	Energex's base offering of LED lighting includes a 7 pin NEMA socket to facilitate future technology developments. Energex continue to participate in trials of LED advanced technology trials. Energex discussed improvement and innovation in both its public lighting strategy and asset management plan.
CCGC Issue - AER 18	Energex did not provide a full draft proposal as was advised, limiting the ability for customers and stakeholders to fully understand the issues related to public lighting.
AER consideration	While the AER recommends active consultation between DNSPs and respective customers and stakeholders, it appears that this has not occurred between Energex and a number of its public lighting customers, including CCGC. The AER recommends both parties work towards a more constructive consultation process. We note that Energex held 7 forums in 2018 dedicated to public lighting in regards to its 2020–25 Regulatory Proposal.
CCGC Issue - AER 18	Price increases - public lighting constitutes approximately 60% of most LGA's electricity spend.
AER consideration	The prices in Energex's proposal are decreasing from the 2019–20 year, as are the adjusted prices in our draft decision. For subsequent years, prices increase by inflation each year only.

Energex was requested to respond to CCGC's submission, noting that further direct engagement may help resolve a number of issues.⁸⁹ Energex advised that it met with CCGC to discuss their concerns with its regulatory proposal.⁹⁰ Energex advised that CCGC seeks lower tariffs, with greater differentials between conventional and LED lighting prices. Energex offered explanations of the building block approach used to establish revenue and tariffs, the disconnect between the value of the asset base and the specific asset profile, as well as depreciation and taxation calculations. Energex also provided CCGC with an asset register for assets in their area.

A Council wishing to remain anonymous provided a submission with questions regarding Energex's LED rollout.⁹¹ Some of these questions related to errors in Energex's models, while others Energex answered in a response to the submission, providing further clarification in regards to customer's involvement and expenditure on transitioning to LED. The information provided by Energex reflected the content of its asset management plan.

Price movements

As LED rollout programs occur, it is important to track price movements between regulatory control periods, as well as LED price incentives. The importance of this is heightened by the Energex-Ergon Energy merger, and the alignment of processes and

⁸⁹ AER, *Energex Information Request #046*, July 2019.

⁹⁰ Energy Queensland, *Response to Energex Information Request #046*, July 2019.

⁹¹ Anonymous Council, *Submission on Energex's Regulatory Proposal 2020–25*, May 2019.

tariff strategies between the two service providers. Price movements from 2019–20 to 2020–21 are shown in Table 15.6.

Table 15.6 Price Movements (\$ nominal \$/day)

				2019–20	2020–21	% change	LED incentive ⁹²
Energex Proposal	Conventional	NPL1	Major	0.866	0.618	-28.6%	
			Minor	0.398	0.375	-5.7%	
		NPL2	Major	0.301	0.317	5.2%	
			Minor	0.146	0.208	42.4%	
	LED	NPL1	Major	0.866	0.545	-37.1%	-11.9%
			Minor	0.398	0.328	-17.6%	-12.7%
		NPL2	Major	0.301	0.257	-14.7%	-18.9%
			Minor	0.146	0.168	15.0%	-19.2%
AER Draft Decision	Conventional	NPL1	Major	0.866	0.626	-27.7%	
			Minor	0.398	0.365	-8.3%	
		NPL2	Major	0.301	0.176	-41.7%	
			Minor	0.146	0.115	-21.4%	
	LED	NPL1	Major	0.866	0.423	-51.2%	-32.4%
			Minor	0.398	0.249	-37.3%	-31.6%
		NPL2	Major	0.301	0.140	-53.5%	-20.2%
			Minor	0.146	0.092	-36.7%	-19.5%
NPL4	Major		0.540		-0.84%		
	Minor		0.330		0.74%		

15.6 Metering services

Metering services include the maintenance, reading, data services, and the recovery of capital costs related to type 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

⁹² LED incentive is the difference between the respective conventional and LED rates. For NPL4, the incentive is in relation to the NPL1 LED lighting tariff, as it represents an NPL1 customer contributing an LED luminaire to an Energex owned asset.

consumption for the purposes of billing. Energex forecast a metering population of nearly 2 million meters at the beginning of the 2020–25 regulatory control period.⁹³

Since introduction of the Power of Choice reforms on 1 December 2017, Energex is no longer permitted to provide or install type 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 relating to meter reading, maintenance, and data services. These charges exclude the provision of type 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:

- apply our draft decision labour escalators and rate of return consistent with standard control services⁹⁴
- accept Energex's building block approach and metering asset base
- reject Energex's proposed capital expenditure
- reject Energex's proposed operating expenditure.

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 Energex 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.

Energex's type 7 metering services are an unmetered connection and are classified as standard control services, and therefore not dealt with under metering services.⁹⁵

⁹³ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 7.

⁹⁴ Attachment 3 - Rate of Return; Attachment 6 - Operating Expenditure.

⁹⁵ AER *Queensland 2020–25 - Final framework and approach for Energex and Ergon Energy*, July 2018, p. 31.

Structure of metering charges

Our draft decision is to approve Energex's proposed metering charging structure:⁹⁶

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

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 Energex is no longer responsible for providing or installing meters.

This structure is both reflective of the actual costs involved in the provision of metering services and, due to being consistent with current charges, easy to understand. This structure also allows Energex 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 Energex's metering costs should be recovered in a manner that allows for customers who have 'churned' to no longer be charged for Energex's forgone non-capital expenditure. However, Energex is still allowed to recover the capital costs of the replaced asset where appropriate.

Capital expenditure

Energex did not propose any direct capital expenditure in its regulatory proposal for the 2020–25 regulatory control period.⁹⁷ However, Energex proposed \$8.06m of non-network capital expenditure (not directly related to its metering assets) for the 2020–25 regulatory control period.⁹⁸

Our draft decision is to reject this proposed capital expenditure amount, and instead apply no capital expenditure for the 2020–25 regulatory control period. We consider that there should be no apportionment of non-network capital expenditure applied to metering services while there is no direct capital expenditure. We consider this will shorten the timeframe required to deplete the remaining metering asset base, and reduce the likelihood of any price spikes in later years.

Operating expenditure

Energex used a base-step-trend method to forecast its operating expenditure for the 2020–25 regulatory control period.⁹⁹ We accept this approach, however we do not accept the base level operating expenditure because of the level of overheads included in Energex's forecasts.

⁹⁶ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 10.

⁹⁷ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 6.

⁹⁸ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 6.

⁹⁹ Energy Queensland, *Energex Alternative Control Services 2020–25*, January 2019, p. 7.

In creating a base level for operating expenditure for metering, Energex removed amounts related to one-off restructuring costs, as well as adjusting for changes in relation to the cost allocation method. These changes reduced overall operating expenditure by \$2.27m and reduced the base level operating expenditure by 10.49 per cent. We accept these adjustments to the base level operating expenditure.

Energex's proposal did not provide information regarding the overhead allocations for operating expenditure, however it provided further information when requested.¹⁰⁰ Energex advised that of the \$19.59m base year operating expenditure, \$6.5m represented overhead allocation. At the original base level operating expenditure of \$21.62m (before adjustments), this represents an overhead allocation of 42.99 per cent of direct costs. However, after applying the above accepted adjustments, the overhead allocation represents 49.64 per cent of direct costs.

For the above reasons, our draft decision is to reject the proposed base level operating expenditure considering this level of overhead allocations. Our draft decision is to adjust the operating expenditure base level to 35 per cent overhead allocation as we consider that the previous 42.99 per cent overhead allocation rate is too high. This is in line with our recent decision for public lighting expenditure for TasNetworks,¹⁰¹ and also with our draft decisions for public lighting and metering expenditure for Ergon Energy. Specifically, for this draft decision we calculated the difference in the overhead amounts, escalated to 2019–20 dollars, and applied as an adjustment in the model.

Energex also included adjustments to reflect the metering 'churn' as customers have new type 1-4 meters installed. Energex provided a breakdown of the calculation of this metering churn upon request,¹⁰² which showed a churn rate different to the 3 per cent used in its models. We have updated the churn rate to 3.95 per cent in Energex's models, to reflect the calculations provided.

Table 15.7 shows the movement in total operating expenditure between Energex's proposal and our draft decision.

Table 15.7 Operating Expenditure (\$2019–20)

Operating Expenditure	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Energex Proposal	19.05	18.55	18.11	17.68	17.27	90.66
AER Draft Decision	16.99	16.46	15.95	15.47	15.02	79.89

Price movements

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

¹⁰⁰ Energy Queensland, *Response to Energex Information Request #052*, August 2019, p. 2.

¹⁰¹ AER, *Final Decision - TasNetworks Distribution Determination 2019–24 - Attachment 15*, April 2019, pp. 14-15.

¹⁰² Energy Queensland, *Response to Energex Information Request #052*, August 2019, p. 1.

asset base. The importance of this is heightened by the Energex-Ergon Energy merger, and the alignment of processes and tariff strategies between the two service providers. Price movements from 2019–20 to 2020–21 are shown in Table 15.8. While these price movements show changes 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.

Table 15.8 Price Movements (\$ nominal cents/day)

			2019–20	2020–21	% change	
Energex Proposal	Primary	Capital	7.362	6.587	-10.53%	
		Non-capital	2.400	3.358	39.91%	
	Load Control	Capital	2.209	1.976	-10.55%	
		Non-capital	0.720	1.007	39.91%	
	Solar PV	Capital	5.154	4.611	-10.54%	
		Non-capital	1.680	2.350	39.91%	
	AER Draft Decision	Primary	Capital	7.362	7.167	-2.64%
			Non-capital	2.400	3.101	29.20%
Load Control		Capital	2.209	2.071	-6.26%	
		Non-capital	0.720	0.920	27.82%	
Solar PV		Capital	5.154	5.180	0.51%	
		Non-capital	1.680	2.192	30.49%	

A Ancillary network services prices

Table 15.9 Non-exhaustive list of ancillary network services provided on a quotation basis, draft decision

Description of service
Connection services
Connection application and management services
Enhanced connection
Network ancillary services
Network safety services
Customer, retailer or third party requested appointments
Removal/rearrangement of network assets
Sale of approved materials or equipment
Network related property services
Security lights
Non-standard network data requests
Metering Services
Auxiliary metering services
Provision of services for approved unmetered supplies
Public lighting services
Auxiliary public lighting services

Source: Adapted from Energen, *Tariff structure statement 2020 - 2025*, June 2019, pp. 36-39.

Table 15.10 Quoted service hourly labour rates for 2020–21, draft decision (\$2020–21)

Energen labour category	AER labour category ²	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) - Ordinary time	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) - Over time
Admin Employee	Admin	\$77.00	\$134.75
Professional Managerial	Project Manager	\$189.94	\$250.54
Power Worker	Field Worker	\$117.48	\$163.33

Energex labour category	AER labour category ²	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) - Ordinary time	AER draft decision - maximum total hourly rate (base plus on-costs plus overheads) - Over time
Technical Service Person	Technical Specialist	\$148.77	\$208.34
Electrical System Designer	Engineer	\$139.44	\$189.06
Supervisor	Project Manager	\$173.73	\$231.61
Para-Professional	Admin	\$77.00	\$134.75
Apprentice	Field Worker	\$95.77	\$131.73
System Operator	Senior Engineer	\$205.12	\$288.49
Tech/PW ¹	Tech specialist/Field Worker ¹	\$133.12	\$185.84
Tech/PW/Admin ¹	Tech specialist/Field Worker/Admin ¹	\$114.42	\$168.81

Source: Energex and Ergon Energy, *EGX ERG 15.009 Fee-based and quoted services model - ACS JUNE19 PUBLIC*, AER calculations based on Marsden Jacob Associates, *Review of alternative control services: SA Power Networks, Ergon Energy and Energex – Advice to Australian Energy Regulator - Addendum*, August 2019.

1: The labour rates for these labour categories are an average of the labour rates for the underlying labour categories. While the AER does not have a specific matching labour category we have taken a similar approach and applied the average of our draft decision labour rates for the relevant categories.

2: Based on Marsden Jacob report. These labour categories are for comparison purposes only.

Table 15.11 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	-0.6285%	-0.5244%	-0.5770%	-0.4984%

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

Table 15.12 2020–21 prices (\$ nominal)

			\$/day	\$/year
Conventional	NPL1	Major	0.626	228.46
		Minor	0.365	133.16
	NPL2	Major	0.176	64.15
		Minor	0.115	41.87
LED	NPL1	Major	0.423	154.35
		Minor	0.249	91.02
	NPL2	Major	0.140	51.19
		Minor	0.092	33.71
	NPL4	Major	0.324	118.28
		Minor	0.193	70.46

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

C Metering Prices

Table 15.13 2020–21 prices (\$ nominal)

		cents/day	\$/year
Primary	Capital	7.167	26.16
	Non-capital	3.101	11.32
Load Control	Capital	2.071	7.56
	Non-capital	0.920	3.36
Solar PV	Capital	5.180	18.91
	Non-capital	2.192	8.00

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.