



Review of Alternative Control Services: SA Power Networks, Ergon Energy and Energex Addendum

Advice to Australian Energy Regulator

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A Marsden Jacob Report

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About Us

Established in 1996, Marsden Jacob Associates has grown to be Australia's leading dedicated natural resource economics, policy and strategy advisory. We employ talented economists and policy advisors who specialise in solving practical, real world problems relating to water, energy, environment, natural resources, agriculture, earth resources, public policy and transport. We work with a wide range of cross-disciplinary partner firms to deliver best project outcomes for our clients.

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1. Review of Alternative Control Services

This addendum provides revised labour rates for the independent study by Marsden Jacob Associates of input costs for Alternative Control Services for SA Power Networks, Ergon Energy and Energex.

Marsden Jacob Associates (Marsden Jacob) was engaged by the Australian Energy Regulator (AER) to undertake input cost assessment services in relation to regulatory determinations for:

- SA Power Networks (SA PN);
- Ergon Energy (Ergon); and
- Energex (Energex).

The assessments considered the reasonableness of forecast cost inputs that generate prices for Alternative Control Services (ACS) for these distribution network businesses in relation to their respective regulatory proposals for the 2020–25 regulatory control period. The report for this analysis has been separately provided.

AER sought updates to the labour rates reflecting changes to SA PN's underlying service charge model and from recently released updated salary data by Hays Ltd.¹ The terms of reference for this assignment are provided in Appendix 1.

The addendum provides updated benchmark labour costs across all three Distributed Network Service Providers (DNSPs).

1.1 Approach

In providing this addendum, we have solely considered:

- proposed labour rates;

Marsden Jacob has not undertaken further analysis of:

- material costs; or
- time taken to perform fixed fee and quoted services.

As such, there are no changes provided for service charges. More detailed explanation of the overall approach is provided in the earlier report. The approach for labour rates is replicated for convenience.

1.2 Base year

In reviewing ACS, Marsden Jacob examined the charges or equivalent charges for 2019/20, the year prior to the regulatory period. The revised figures provided by Hays relate to the same year. Consequently, these have not been escalated for inflation.

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¹ Hays (2019) *FY 2019/20 salary guide: insights from the experts; Australia and New Zealand salary and recruitment trends*

In comparing the revised labour rates, we note that SA PN has adjusted its model and incorporated an inflation adjustment to generate 2019/20 estimates.

1.3 Labour rates

All DNSPs provided underlying labour rates. The overall labour rate reflects the base cost of salaries plus on-costs and attribution of overheads. The extent of detail varied across each DNSP:

- **SA PN** provided labour costs inclusive of on-costs. Specific overhead rates were applied to internal labour and materials. In addition, all components (materials, internal labour, external services and vehicles) were allocated business overheads and a global margin.
- **Ergon Energy** and **Energex** provided raw labour rates, separate on-costs for labour and materials, separate business overheads for non-network and network components and global allocation of "corporate costs, revenue on Non-network capital costs, MTC & Call Centre costs".²

A full translation of the DNSP categories to the six Marsden Jacob categories is provided in Appendix 2.

Using these categories, Marsden Jacob developed benchmark labour rates based on Hays 2019/20 *Energy* sector and *Office Support* salary data, against which the reasonableness of proposed labour rates could be assessed. These annual salary figures are provided in Appendix 3.

In assessing the reasonableness of labour rates, Marsden Jacob has 'normalised' the rates provided by each business, i.e. decomposed the rates into comparable subcomponents.

The 'normalised' rates are shown in 2019/20 dollars and are separated into '*raw*' labour rates (presented in section 1.3.1), *on-costs* (section 1.3.2) and *overheads* (section 1.3.3). As noted above, not all DNSPs provide sufficient information to compare all of these elements. Together the elements add to the *total or 'all-in' labour rate* (section 1.3.4), which may be applied to calculate cost reflective prices for ACS when a 'bottom-up' approach to pricing is utilised.

Marsden Jacob have defined the scope of each cost element as:

- '*Raw*' labour costs are the most basic hourly labour rates. The value excludes all on-costs and overheads. This rate excludes basic leave allowances such as sick leave, annual leave, and public holidays and is calculated based on a 40-hour week.
- *On-costs* include:
 - Basic leave allowances (sick leave, annual leave, public holidays);
 - Superannuation;
 - Workers Compensation;
 - Payroll tax;
 - Annual leave loading; and
 - Long service leave loading.

²

In addition, in their public proposals, Ergon Energy and Energex state that prices will comprise a labour component, a contractor component, a material component and a capital allowance. The capital allowance comprises part of the overheads additional cost. The description in the public document omits reference to allocation of corporate overheads.

- *Overheads* are all additional costs included in the total labour rates proposed by distribution business.

‘Implied overhead rates’ have been calculated by Marsden Jacob as a ratio of the total labour rates compared with the base labour rates (including on-costs). We have adopted this method rather than using the more disaggregated overhead rates proposed by businesses to ensure that the total overhead rates are directly comparable. This method avoids the need to compare sub-categories of overhead charges, which have been inconsistently defined between the businesses.

1.3.1 Raw labour rates

Marsden Jacob has proposed a maximum rate for each labour category based on consideration of the rates applied across the businesses and a comparison against the Hays benchmark salary rates (Table 1).

As there are very few relevant rates provided for non-metropolitan areas in Queensland and SA,³ we have applied the “metropolitan” figures the purposes of this analysis.⁴

Table 1: Hays annual salary rates (\$'000) ex-super, 2019/20

		Adelaide	Brisbane
Administration	Low	60	55
	High	75	65
Technical specialist	Low	110	125
	High	150	165
Engineer	Low	95	110
	High	140	150
Field worker	Low	85	95
	High	110	135
Senior Engineer	Low	140	150
	High	160	190
Project manager	Low	120	130
	High	150	175

Source: Hays 2019

Consistent with the approach in the previous review, we have taken the maximum figure for each group to represent the highest ‘reasonable’ rate. As the Hays rates are for 2019/20, we have not adjusted these for wage inflation. However, consistent with previous analysis, we have provided an (approximate mid-point) allowance of 2.5% to reflect the fact that Hays rates tend to only increase in increments of \$5,000 and a number of those used in ACS are little changed, if at all, in recent surveys.

³ In SA, only figures for Adelaide are provided. For Queensland, Hays provides a number of Office Support categories for non-metropolitan areas, but the difference with the metropolitan figures is minor and it is arguable that most of the Office Support work is undertaken from administration centres.

⁴ In the case of Queensland, the metropolitan figures include Brisbane, Gold Coast and Sunshine Coast. SA includes just Adelaide.

The annual figures are converted to an hourly equivalent “raw” rate dividing by 52 (weeks) and 40 (hours per week). Table 2 provides a summary of the 2019/20 maximum rates for each jurisdiction.

Table 2: Maximum hourly rates – ‘raw’ labour rates, adjusted for increments

	Adelaide	Brisbane
Administration	\$36.96	\$32.03
Technical Specialist	\$73.92	\$81.31
Engineer	\$68.99	\$73.92
Field Worker	\$54.21	\$66.53
Senior Engineer	\$78.85	\$93.63
Project Manager	\$73.92	\$86.24

1.3.2 On-costs

Two types of on-costs have been added to the ‘raw’ labour rates to benchmark the total on-cost rates proposed by the distribution businesses:

- *Basic leave entitlements* including annual leave, sick leave and public holidays - the leave entitlements, once added to the raw labour rate, establish the wage rate per hour actually worked by an employee; and
- *Standard on-costs* such as superannuation, workers compensation, payroll tax, annual leave loading, and long service leave.

Table 3 provides Marsden Jacob’s recommendations in relation to total on-costs. Basic leave entitlements have been estimated on the basis of 44 weeks of actual work per year (52 weeks minus 4 weeks of annual leave, 2 weeks of sick leave and 2 weeks of public holidays).

The estimates for standard on-costs have been developed with reference to:

- the maximum superannuation level included in the Enterprise Bargaining Agreements for each DNSP;
- an estimate of workers compensation premiums;
- standard payroll tax rates for each jurisdiction;
- annual leave loading of 17.5% loading on 4 weeks annual leave (industry standard), which equates to 1.35% of total salary; and
- a conservative long service leave allowance based on three months leave for every 10 years of service, equating to 2.5% per year.

Table 3: Labour on-costs

Description	SA PN	Ergon	Energex
Basic leave entitlements			
Standard leave (annual leave, sick leave, public holidays)	Rate of 18.18% assumed for all businesses		
Standard on-costs			
Superannuation ⁵	10.25%	12.50%	12.50%
Workers Compensation	0.54%	0.74%	0.74%
Payroll tax	4.95%	4.75%	4.75%
Annual leave loading	1.35%	1.35%	1.35%
Long Service leave allowance	2.50%	2.50%	2.50%
Total leave and on-costs (note percentages are compounded)			
Marsden Jacob proposed leave and on-cost allowances ⁶	42.82%	45.75%	45.75%

Marsden Jacob recommendations:

Marsden Jacob recommends that the maximum on-cost applied for ancillary network services should be the rates shown in Table 3 based on a ‘bottom up’ estimate of each of the factors that are included in the on-cost.

1.3.3 Overheads

The overheads applied by each of the distribution businesses varied substantially both in definition and in magnitude between businesses.

In previous reviews, Marsden Jacob calculated an ‘implied overhead rate’ for each of the businesses by taking the ratio between the total labour rate proposed by distribution businesses (including all on-costs and overheads) and the standard labour rate (including on-costs but not overheads). This approach provided a simple method of calculating directly comparable total overhead rates. For this review we have concentrated only on the total (‘all-in’) rate, inclusive of a maximum benchmark overhead rate, to avoid the need for assumptions regarding the breakdown of on-costs and overheads.

The DNSPs provided a breakdown of overhead rates (Table 4).

⁵ For Ergon and Energex, the EBA stipulates a range of 9.5%-12.5% based on the level of employee contributions. In this case, we have applied the maximum rate.

⁶ By comparison, Ergon and Energy have used labour on-costs of 43.5% and 41.7% respectively. SA PN did not provide separate on-costs. While the Queensland rates are close to those developed by Marsden Jacob, it is unlikely the rates are comparable. The DNSP on-costs are unlikely to include leave allowances, but may include other allowances. We note, for example, that Ergon and Energex also add on-costs to materials, which suggests a different interpretation of on-costs. As noted later, because of the potential difference in definitions, we only benchmark against the total or “all-in” labour rate.

Table 4: DNSP proposed overhead rates

SA PN		Ergon		Energex	
Labour	17.65%	Non-network	49.71%	Non-network	47.94%
Business	25.60%	Network	23.16%	Network	21.17%
Margin*	6.0%	Corporate**	14.97%	Corporate**	9.14%
TOTAL	56.6%	TOTAL	111.98%	TOTAL	95.64%

* Note that SA PN include a margin in the last stage of their price calculations but do not refer to it as an overhead in their pricing models. It is included here because we consider margins within the overall overhead allowance - see our recommendation below.

** Corporate costs, revenue on Non-network capital costs, Market Transaction Centre and Call Centre costs

Marsden Jacob recommendations:

Overheads include a wide range of costs, including anything other than the direct labour cost of providing a service, including (but not limited to) supervisory and management costs, customer service and billing, communications and information technology, fleet costs, and corporate costs such as finance and planning.

We have also accepted the inclusion of an explicit profit margin. Where these are explicitly identified, however, this allocation is to be recovered – and therefore benchmarked – **within the overall overhead allowance**.

Very little information is publicly available to benchmark the DNSPs proposed overhead rates with other industries, because this level of breakdown does not need to be provided in statutory financial reports. Self-published information and industry information published for specific purposes is often not suitable as a benchmark because of inconsistent and/or unclear definitions.

In our experience reviewing commercially confidential information in other capital intensive industries such as water and gas, overhead rates for non-retail businesses in the order of 45-65% are not unreasonable. In retail businesses, the rates can be as high as 100% of (purely) direct costs due to the higher level of customer engagement.

Based on the benchmarking we have previously conducted for other Australian DNSPs, we recommend a maximum overhead rate of 61% across all labour categories, plus a \$20 per hour vehicle allowance for Field Workers.

Importantly, we note that the methodology for allocating overheads is provided in the AER's Cost Allocation Method. Therefore, while our benchmarking considers the overheads for ACS services in isolation, capping the overhead rate may have unintended consequences for the broader Cost Allocation Method. On this basis, this recommendation should be considered preliminary until confirmed by the AER.

1.3.4 Maximum hourly rates, DNSPs with general overheads

It is possible to compare the 'all-in' hourly rate provided by the DNSPs against Marsden Jacob's built-up benchmark rate, i.e. the Hays base rate plus standard on-costs plus the benchmark overhead rate. Based on the aggregate of these elements, the maximum total (all-in) rates recommended by Marsden Jacob are shown in Table 6.

As noted above, Ergon Energy and Energex have used different labour classifications. We have used our benchmark classifications to determine if the service rates are

appropriate. For individual labour costs, the table below shows the allocation of Ergon Energy/Energex labour classifications mapped to Marsden Jacob's classifications. Note that consistent with previous analyses, the rate for para-professionals is set at the Admin rate.

Table 5 provides a translation of the classifications used by Ergon Energy and Energex to a notionally equivalent Marsden Jacob classification. The translation should not be taken to imply that we have always applied the same (translated) labour category as the DNSP when benchmarking individual services. In particular, Ergon Energy and Energex have used the rate associated with Technical Service Person for most of the services examined in this report. In many cases, other DNSPs have used the equivalent of Field Workers for those services, and hence we have applied the lower Field Worker rate in the benchmarking of those services instead.

Table 5: Classification of Ergon Energy / Energex labour rates

Ergon / Energex classification	Marsden Jacob classification
Admin Employee	Admin
Professional Managerial	Project Manager
Power Worker	Field Worker
Technical Service Person	Technical Specialist
Electrical System Designer	Engineer
Supervisor	Project Manager
Para-Professional	Admin
Apprentice	Field Worker
System Operator	Senior Engineer

Table 6: Maximum estimated total hourly rates (base plus on-costs plus overheads), \$ 2019/20

	SA PN	Ergon Energy / Energex
Administrative Officer	\$84.98	\$75.16
Project Manager	\$169.97	\$202.36
Field Worker	\$144.64	\$176.10
Technical Specialist	\$169.97	\$190.79
Engineer	\$158.64	\$173.45
Senior Engineer	\$181.30	\$219.70

Note that the Field Worker rate includes an allowance for a vehicle as an additional overhead.

Table 7 and Table 8 summarise the all-in labour rates (including all overheads) proposed by each of the distribution businesses by category. Labour rates that are higher than our proposed maximum have been identified in **red**, with our recommended rate shown in black beneath.

Note that the rates shown in Table 7 and Table 8 have been constructed by Marsden Jacob and are not explicitly shown by the DNSPs. In particular, the rates provided by the DNSPs do not typically include (all) overheads. A comparable rate can be

obtained by dividing the rates in Table 7 and Table 8 by one plus the DNSP's proposed overhead rate (Table 4).

Table 7: SA PN proposed total hourly rate (base plus on-costs plus overheads), \$ 2019/20*

	SA PN
Administrative Officer	\$97.49 \$84.98
Project Manager	\$169.37
Field Worker	\$134.84
Technical Specialist	\$174.99 \$169.97
Engineer	\$163.46 \$158.64
Senior Engineer	\$197.65 \$181.30

* Recommended rates shown in black.

Table 8: Ergon Energy and Energex proposed total hourly rate (base plus on-costs plus overheads), \$ 2019/20*

	Ergon Energy	Energex
Admin Employee	\$131.73 \$75.16	\$128.15 \$75.16
Professional Managerial	\$206.36 \$202.36	\$190.53
Power Worker	\$143.08	\$117.84
Technical Service Person	\$174.70	\$149.23
Electrical System Designer	\$162.08	\$139.87
Supervisor	\$193.44	\$174.27
Para-Professional	\$189.22 \$75.16	\$164.37 \$75.16
Apprentice	\$106.85	\$96.07
System Operator	\$231.83 \$219.70	\$205.75

* Recommended rates shown in black.

Marsden Jacob recommendations:

Marsden Jacob recommends that the DNSP's total hourly rate for Administration be reduced to \$84.98 per hour for SA PN and to \$75.16 per hour for Ergon Energy and Energex. This applies to both the Administration and Para-Professional categories.

For SA PN, Marsden Jacob recommends that the rate for Technical specialists be reduced to \$169.97, for Engineers be reduced to \$158.64 per hour and for Senior Engineers to \$181.30 per hour.

For Ergon Energy, Marsden Jacob recommends that the rate for Professional Managerial be reduced to \$202.36 per hour and the rate for System Operator be reduced to \$219.70 per hour.

For any services not benchmarked in this report, the AER may choose to multiply the rates in Table 7 for SA PN and in Table 8 for Ergon Energy and Energex by the time taken to provide that service to arrive at a maximum price.

1.3.5 Overtime rates

This analysis has focussed on normal time rates. The DNSPs also provide after hours services which are based on an overtime rate. All above on-costs and overheads would still apply to these rates. We consider that without specific evidence on the split of after hours work, that the average overtime rate would lie between the main categories of time and a half and double time.

In the Electricity supply sector, *Average weekly total hours paid for* (38.6 hours) exceeded *Average ordinary time hours paid for* (36.8 hours) by less than 2 hours in 2016.⁷ As this is less than the minimum daily time typically required before double time applies, it is likely that most overtime incurs time and half.

For the purposes of this analysis, a simple average suggests the average overtime rate would not exceed 1.75 times the standard rate. This mark-up is applied for overtime hours in the service analysis.

⁷

Employee earnings and hours, Australia, May 2016 (ABS Cat No 6306.0)

Appendix 1 Scope of engagement

Broadly the requirement of the services is to:

- provide input cost assessment services in relation to regulatory determinations for SA Power Networks (SA), Energex (Qld) and Ergon Energy (Qld).

Specifically, the AER will require the consultant to:

- assist AER staff to evaluate the reasonableness of forecast cost inputs that generate revenues/prices for alternative control services, focusing on proposed labour costs
- provide written report on findings.

Appendix 2 DNSP labour categories

Table 9: DNSP and Marsden Jacob labour categories

Marsden Jacob	SA PN	Ergon	Energex
Admin	Administrative officer	Admin employee, Para-professional	Admin employee, Para-professional
Technical specialist	Technical specialist	Technical service person	Technical service person
Engineer	Engineer	Electrical system designer	Electrical system designer
Field worker	Field worker	Power worker, Apprentice	Power worker, Apprentice
Senior engineer	Senior engineer	System operator	System operator
Project manager	Project manager	Supervisor, Professional managerial	Supervisor, Professional managerial

Note that Ergon Energy and Energex provided rates for nine labour types (and two combined categories)

- Admin Employee
- Professional Managerial
- Power Worker
- Technical Service Person
- Electrical System Designer
- Supervisor
- Para-Professional
- Apprentice
- System Operator

Combined

- Tech/PW
- Tech/PW/Admin

Appendix 3 Summary of Hays labour rates

Table 10 shows the job descriptions included against each labour category from the Hays 2019 report. The table also shows the rates used. For a number of Office support categories, Hays provides both metropolitan and rest of State figures. For the purposes of this analysis, we have only used the metropolitan figures.

Following the table, we provide an example of how these translate into the overhead included rates.

Table 10: Hays categories included in analysis

Benchmark inclusion	Category	Title	Low/High	Brisbane	Adelaide
ENERGY SECTOR					
Engineer	T&DG	Design engineer	Low	85	80
Engineer	T&DG	Design engineer	High	110	110
Senior engineer	T&DG	Senior design engineer	Low	110	100
Senior engineer	T&DG	Senior design engineer	High	150	140
Senior engineer	T&DG	Principal design engineer	Low	150	140
Senior engineer	T&DG	Principal design engineer	High	185	160
Engineer	T&DG	Project engineer (EPCM)	Low	95	80
Engineer	T&DG	Project engineer (EPCM)	High	145	120
Senior engineer	T&DG	Senior project engineer (EPCM)	Low	145	130
Senior engineer	T&DG	Senior project engineer (EPCM)	High	190	150
Engineer	T&DG	Power systems engineer	Low	90	90
Engineer	T&DG	Power systems engineer	High	120	120
Engineer	T&DG	Protection engineer	Low	110	85
Engineer	T&DG	Protection engineer	High	150	125
Engineer	T&DG	Transmission line design engineer	Low	90	95
Engineer	T&DG	Transmission line design engineer	High	150	140
Project manager	T&DG	Project manager	Low	130	120

Benchmark inclusion	Category	Title	Low/High	Brisbane	Adelaide
Project manager	T&DG	Project manager	High	165	150
Technical specialist	REN	Technician	Low	75	70
Technical specialist	REN	Technician	High	100	90
Technical specialist	O&M	Control room operator	Low	80	80
Technical specialist	O&M	Control room operator	High	105	110
Technical specialist	O&M	Control room manager	Low	100	100
Technical specialist	O&M	Control room manager	High	130	125
Engineer	O&M	Asset engineer (3-7 years)	Low	85	95
Engineer	O&M	Asset engineer (3-7 years)	High	125	120
Field worker	O&M	Leading hand	Low	90	80
Field worker	O&M	Leading hand	High	125	100
Field worker	O&M	Electrician	Low	85	80
Field worker	O&M	Electrician	High	115	100
Field worker	O&M	Mechanical fitter	Low	75	70
Field worker	O&M	Mechanical fitter	High	110	95
Technical specialist	O&M	E&I technician	Low	90	80
Technical specialist	O&M	E&I technician	High	150	100
Field worker	O&M	Line worker	Low	80	70
Field worker	O&M	Line worker	High	110	100
Field worker	O&M	G&B linesworker	Low	95	85
Field worker	O&M	G&B linesworker	High	135	110
Technical specialist	O&M	Protection technician	Low	125	110
Technical specialist	O&M	Protection technician	High	165	150
Technical specialist	O&M	Generator technician	Low	90	85

Benchmark inclusion	Category	Title	Low/High	Brisbane	Adelaide
Technical specialist	O&M	Generator technician	High	140	130
Field worker	O&M	Cable jointer	Low	90	85
Field worker	O&M	Cable jointer	High	115	110
Field worker	O&M	Cable layer	Low	90	85
Field worker	O&M	Cable layer	High	110	110
Project manager	PRO DEL	Project manager	Low	125	120
Project manager	PRO DEL	Project manager	High	175	140
Engineer	PRO DEL	Project engineer (EPCM)	Low	95	85
Engineer	PRO DEL	Project engineer (EPCM)	High	135	130
Technical specialist	PRO DEL	Site engineer	Low	80	75
Technical specialist	PRO DEL	Site engineer	High	120	100
Senior engineer	PRO DEL	Commissioning engineer	Low	125	120
Senior engineer	PRO DEL	Commissioning engineer	High	165	150
Technical specialist	PRO SERV	Planner / scheduler	Low	75	110
Technical specialist	PRO SERV	Planner / scheduler	High	125	135
Technical specialist	PRO SERV	OHS supervisor	Low	95	90
Technical specialist	PRO SERV	OHS supervisor	High	125	110
OFFICE SUPPORT					
Admin	ADMIN	Administration assistant (12+ years)	Low	45	45
Admin	ADMIN	Administration assistant (12+ years)	High	55	55
Admin	ADMIN	Project admin assistant (3+ years)	Low	55	50
Admin	ADMIN	Project admin assistant (3+ years)	High	65	70
Admin	ADMIN	Project coordinator	Low	55	60
Admin	ADMIN	Project coordinator	High	65	75

Benchmark inclusion	Category	Title	Low/High	Brisbane	Adelaide
Admin	ADMIN SP	Data entry operator	Low	40	45
Admin	ADMIN SP	Data entry operator	High	50	55
Admin	ADMIN SP	Records officer	Low	45	45
Admin	ADMIN SP	Records officer	High	50	55
Admin	P&C Support	Client liaison (residential)	Low	50	55
Admin	P&C Support	Client liaison (residential)	High	60	60

Categories:

T&DG;	Transmission and Distribution/Generation
REN	Renewable
O&M	Operations and Maintenance
PRO DEL	Project delivery
PRO SERVICES	Project Services
ADMIN	Administration
ADMIN SP	Administration Specialists
P&C Support	Property and Construction Support