

Deloitte Access Economics

Queensland Distribution
Network Service Providers -
Opex Performance Analysis

Australian Energy Regulator

Final Report

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Glossary

AER	Australian Energy Regulator
ASL	Average Staffing Level - the number of full-time equivalent employees undertaking standard control services work receiving salary or wages (Paid FTE) over the entire year
Ausgrid	Ausgrid, formerly EnergyAustralia
BAU	Business-as-usual
BEP	Business Efficiency Program
BICoE	Business Intelligence Centre of Excellence
CA RIN	Category Analysis Regulatory Information Notice Templates
Capex	Capital Expenditure
CEO	Chief Executive Officer
CIO	Chief Information Officer
DNSP	Distribution Network Service Provider
EBA	Enterprise Bargaining Agreement
EEP	Effectiveness and Efficiency Program
EEUCA	Ergon Energy Union Collective Agreement 2011
Endeavour	Endeavour Energy, formerly Integral Energy
Energex	Energex Limited
Ergon	Ergon Energy
Essential	Essential Energy, formerly Country Energy
EUCA	Energex Union Collective Agreement 2011
FTE	Full Time Equivalent
FY	Financial Year
GBR	Gross to Base Salary Ratio
ICT	Information and Communications Technology
IDC	Inter-Departmental Committee
IPART	Independent Pricing and Regulatory Tribunal, NSW
IRP	Independent Review Panel
MOU	Memorandum of Understanding
MPFP	Multilateral Partial Factor Productivity
MTFP	Multilateral Total Factor Productivity
NEM	National Electricity Market
NER	National Electricity Rules
NNSW	Networks NSW, the overarching owner, operator and manager of Ausgrid, Essential and Endeavour
NPV	Net Present Value
Opex	Operating Expenditure
OCIO	Office of Chief Information Officer

PoW	Program of Works
RAB	Regulatory Asset Base
RIN	Regulatory Information Notice
SCS	Standard Control Services

Executive Summary

The Australian Energy Regulator (AER) has engaged Deloitte Access Economics Pty Ltd (Deloitte) to conduct an analysis of the Queensland distribution network service providers' (DNSPs) operating costs over the 2010-15 regulatory period. We understand this analysis will inform the AER's assessment of the DNSPs' 2015-20 operating expenditure (opex) forecasts for the purpose of making its regulatory determinations for Energex and Ergon.

Specifically, we were asked to answer the following three questions:

1. What are the key factors driving the gap in opex performance (demonstrated by the benchmarking results) for Energex and Ergon Energy in comparison to their peers in 2012-13 and 2013-14?
2. To what extent have Energex and Ergon Energy fully implemented any of the recommendations from the independent review?
3. Are there reasons for Energex's opex productivity deteriorating between 2011-12 and 2012-13 other than inefficiency?

In our analysis to answer the questions above, we have tried to identify whether there are areas of inefficiency in the Queensland DNSPs' 2010-15 opex which might explain the gap in opex productivity suggested by the AER's benchmarking results. In doing so, we have applied a definition of 'inefficiency' which is consistent with similar definitions set out in the AER's November 2013 Expenditure Forecast Assessment Guideline Explanatory Statement, specifically '*Efficient expenditure results in the lowest cost to consumers over the long term.*'¹

1. Background to the review

The Queensland electricity networks have recently been the subject of two State Government-led reviews over the 2010-15 regulatory period, focused on reducing network costs.

The 2011 Electricity Network Capital Program Review (the ENCAP review) recommended reductions in the stringency of reliability criteria in order to improve the cost effectiveness of network capex.

In May 2012, the Queensland Government set up an interdepartmental committee (IDC) to examine electricity sector reform. The IDC commissioned an Independent Review Panel (IRP) to investigate the potential for reforms within Energex and Ergon Energy (Ergon) to reduce network costs. The IRP was tasked with developing options to improve the efficiency of capital and operating expenditure and deliver savings in corporate and overhead costs, including Information and Communication Technology (ICT) costs. In its May 2013 report, the IRP reported that the DNSPs could together save \$1.4 billion in indirect (overhead) costs over the 2015-20 regulatory control period, through reforms articulated in a series of 45 recommendations.

As well as recommending changes to planning and reliability standards which would result in reductions in capital expenditure (capex), the IRP made recommendations on ways to reduce the DNSPs' overheads and operating expenditure. It recommended that the DNSPs continue to improve through the efficiency programs which had already commenced and reduce spending on

¹ AER, *Expenditure Forecast Assessment Guidelines – Explanatory Statement*, November 2013, p. 43.

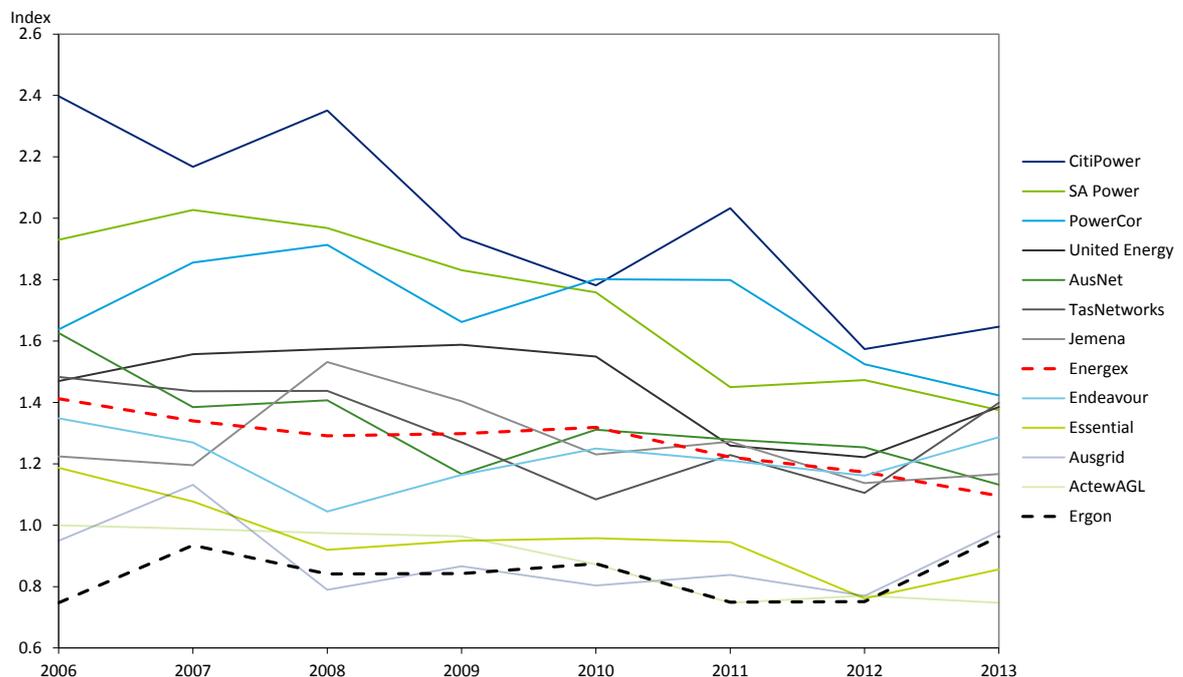
contractors. It also made a number of recommendations specific to the arrangements between Energex and Ergon and their wholly owned joint venture, ICT service provider, SPARQ Solutions (SPARQ). The IRP recommended changes to place competitive pressure on SPARQ, including reducing the ‘touch points’ between the organisations, market testing SPARQ’s services and investigating a local service agent delivery model for Ergon’s regional depots.²

Benchmarking

The AER has undertaken Opex Multilateral Partial Factor Productivity (MPFP) benchmarking analysis covering the period 2006-13 (see Chart i) which shows that there is a gap in opex efficiency between Energex and Ergon and the most efficient DNSPs in the National Electricity Market. The AER’s use of benchmarking and the adopted methodology is currently the subject of debate in the electricity sector. We note that there is some disagreement regarding the benchmarking methodology. However, in our view, the scale of the efficiency difference shown between the Queensland DNSPs and the most efficient (‘frontier’) businesses during the 2009-13 period is material enough to raise questions about Energex’s and Ergon’s opex efficiency, regardless of the technical debate.

The AER’s MPFP benchmarking results are reproduced in Chart i. We note that the MPFP benchmarking results implicitly account for customer density, energy density and demand density.³

Chart i: AER’s Opex MPFP results



Source: Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs: Report prepared for Australian Energy Regulator*, 17 November 2014, Denis Lawrence, Tim Coelli and John Kain. Note that we have changed the colours of Energex and Ergon in this version of the graph. Note: This graph is generally in financial years, 2006 is 2005-06, etc., however, the Victorian DNSPs report on the basis of calendar years.

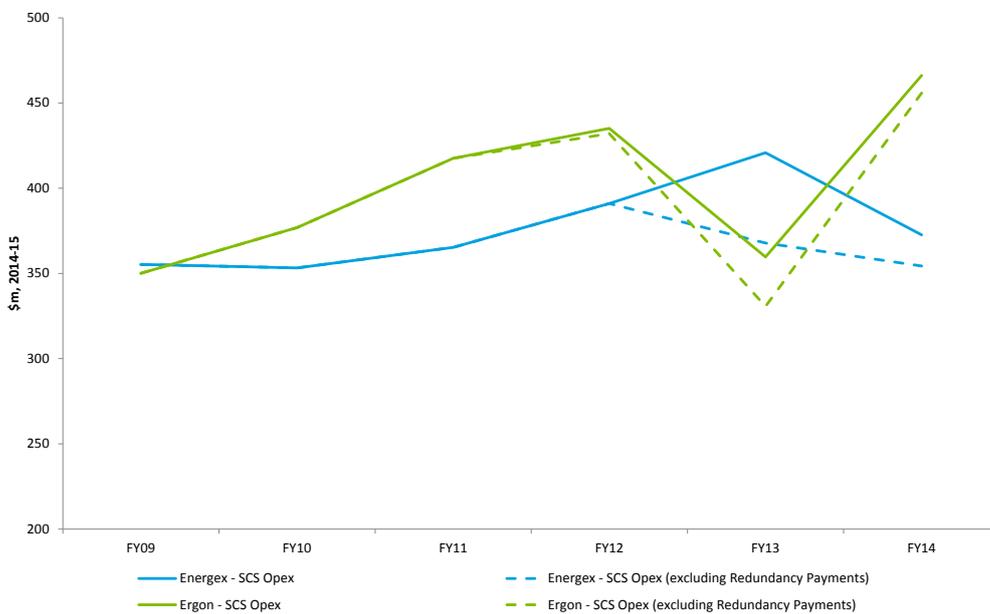
² Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. v.

³ AER, *Electricity Distribution Network Service Providers - Annual Benchmarking Report*, November 2014, p. 29.

Cost reductions achieved

Since 2012, Energex and Ergon have made significant progress to address the recommendations of the Government reviews through various efficiency programs and reforms to their businesses, including large reductions in the size of their workforces. These initiatives have also reduced other recurrent operating costs, although the impact of workforce and other cost reductions have been masked to some extent by redundancy payments, as shown in Chart ii. We note that the redundancy payments, while treated as opex, are not all associated with reductions in opex, as many people who departed Energex and Ergon were associated with the capital program of works, which was reduced following the ENCAP review in 2011.

Chart ii: Total Standard Control Services (SCS) Opex – with and without redundancy payments (\$m, 2014-15)



Source: Energex and Ergon economic benchmarking RINs; Energex, Response to AER Information Request ENX 006, Question 12; Ergon Energy, *Regulatory Proposal – Supporting Documentation: Forecast Expenditure Summary*, p. 14.

However, other information provided by the DNSPs suggests that the majority of the efficiencies Energex and Ergon have realised since 2012 are not reflected in their 2012-13 operating expenditure (which is, for the purposes of the AER’s review, the ‘base year’).

Energex and Ergon have also identified that further cost reductions can be made, and we note that a number of IRP recommendations are yet to be addressed.

Given the IRP’s and earlier ENCAP findings, the conclusions from the AER’s benchmarking, and the extent of cost reductions achieved by the DNSPs since 2012, we consider it reasonable to conclude that Ergon and Energex’s opex prior to and in 2012-13 was higher than necessary to achieve efficient operations.

1. Key factors driving the opex efficiency gap

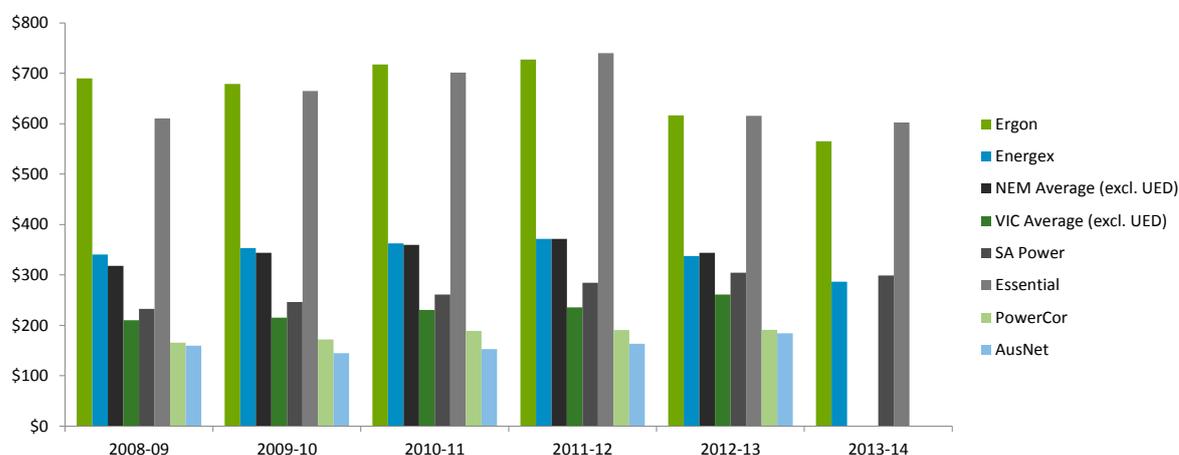
Labour costs

Given that Ergon’s and, to some extent, Energex’s opex in 2012 was high compared to their peers, and that the majority of their operating costs are labour-related, we consider it reasonable to surmise that a material source of this gap is higher labour costs. Labour costs are a function of three key factors: the cost per employee; the number of employees; and the extent to which activities are undertaken in-house rather than contracted out.

In relation to cost per employee, data collected by the AER in Regulatory Information Notices (RINs) suggest that hourly wages paid by Ergon and Energex per employee are not higher than their peers. This implies that the number of employees and/or lower levels of contracting explain the higher overall costs.

Chart iii shows that Ergon’s total labour costs per customer are for most years the highest of all NEM DNSPs, second only to Essential Energy in 2011-12 and 2013-14. This partly reflects the rural nature of its network, but we note that rural DNSPs on the efficiency frontier (i.e. most efficient DNSPs: Powercor, SA Power Networks and AusNet Services) have significantly lower labour costs per customer despite also having a very low customer density. Energex’s costs are around the NEM average.

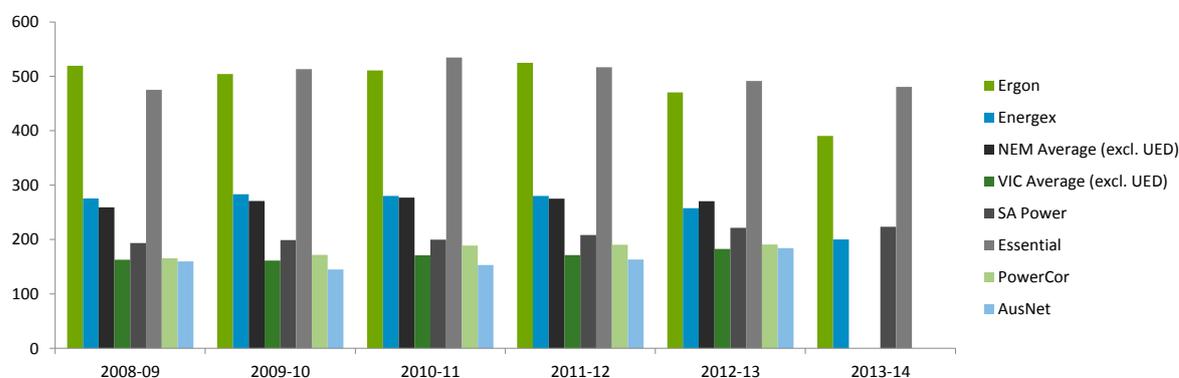
Chart iii: Total Labour costs (excluding Energex’s and Ergon’s redundancy costs) per customer (\$, 2014-15)



Source: DNSP RINs, table 2.11.1. Note: This graph is in financial years, but the Victorian DNSPs report on the basis of calendar years. Note that the Victorian DNSPs have not yet reported their 2014 data. This chart shows total labour costs for Energex and Ergon after subtracting their reported redundancy costs in 2011-12 to 2013-14. It implicitly assumes that no other DNSPs have incurred costs for redundancies, which we know in practice is incorrect, but it allows us to analyse the impact of redundancy costs on Energex and Ergon’s overall opex.

Chart iv suggests that the source of Ergon’s relatively high labour costs is its number of employees, or Average Staffing Level. It also highlights that Energex’s labour force was larger than its peers over 2009-13, although falling in 2012-13 and further in 2013-14 with the reductions in the Energex workforce.

Chart iv: Average Staffing Level per 100,000 customers



Source: DNSP RINs, table 2.11.1. Note: This graph is in financial years, but the Victorian DNSPs report on the basis of calendar years. Note that the Victorian DNSPs have not yet reported their 2014 data.

Although Ergon serves a regional/rural customer base, it is unlikely that both businesses’ higher number of employees can be explained by factors such as customer density. In fact, this is confirmed by the AER’s benchmarking, which takes into account customer density. The inference is therefore that Ergon’s and Energex’s workforces are less productive than their peers. There are a number of possible reasons for this, including workforce culture, management and operational decisions. Another factor is the restrictions included in Enterprise Bargaining Agreements (EBAs), as well as the relatively high percentage of employees subject to those EBAs.

More than 75% of Energex and Ergon employees are employed under EBAs, which is significantly more than the Victorian DNSPs. This amplifies the effect of the EBA inflexibilities described in the next sections, relative to the Victorian DNSPs.

Workforce scheduling

The IRP argued that ‘the lack of a single, well-structured system for scheduling depot activities is contributing to under-utilisation of labour within the DNSPs.’⁴ It recommended that Energex and Ergon implement an effective scheduling tool to improve efficiency and productivity of the workforce. It also made recommendations to improve the flexibility of the workforce and enhance workforce planning.

Energex has taken steps to improve its workforce scheduling processes and systems but the changes that have occurred to date were made after the 2012-13 base year.

Similarly, Ergon developed and deployed a ‘Scheduler Viewer’ tool in late 2013, and made a number of changes to improve the flexibility of its workforce start/finish shift times. However, Ergon has only identified limited efficiencies from these changes to date, and all changes were implemented after the 2012-13 base year.

The number of workers needed to undertake tasks is in some cases determined by negotiations with unions, [REDACTED]. Ergon Energy’s *Single Person Operation Guidelines* and Queensland industry procedures require switching activities to be undertaken by a switching operator and switching assistant, whereas in

⁴ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 60.

other states these tasks can be carried out by a single person. Ergon's EBA requires 'mutual agreement' with unions for the introduction of new tasks to the Single Person Operation Guidelines. [REDACTED]

These changes are expected to result in some efficiency gains, which should be realised over the 2015-20 regulatory period from reduced idle time and improved overall labour productivity.

Workforce flexibility

The flexibility to adjust a workforce quickly to meet organisational and project needs is important for delivering operational work and large projects efficiently. Outsourcing is one tool to achieve this flexibility.

A number of EBA clauses restrict workforce flexibility, including:

- Restrictions on involuntary redundancy – the approximately 20 per cent reductions in Energex and Ergon's workforces since 2012 have largely occurred in corporate and back office employees who are unlikely to be employed under EBAs. Involuntary redundancy restrictions in EBAs impede management's ability to reduce the operational workforce further [REDACTED]
[REDACTED] We note that restrictions on involuntary redundancy are not a feature of EBAs for all DNSPs, but primarily affect government-owned Queensland and NSW DNSPs as well as CitiPower and Powercor in Victoria. As noted above, the higher proportion of employees on EBAs in the Queensland DNSPs amplifies the effect of the restriction on workforce flexibility, relative to the Victorian DNSPs.
- Restrictions on when contractors can be employed for core work – the Queensland DNSPs' EBAs require consultation with unions before certain work can be outsourced, [REDACTED]
[REDACTED] Consultation requirements are common among DNSP EBAs, suggesting that the existence of these requirements alone does not drive the differences in outsourcing and workforce flexibility outcomes, rather how the requirements operate in practice.
- Requirements for parity wages and conditions – the Queensland DNSPs' EBAs also contain provisions requiring that external contractors be employed under conditions that are equivalent to their own workforce. [REDACTED]
[REDACTED] Again, we note that contractor wages parity requirements are not uncommon in the industry, but that the impact of these requirements appears to be amplified in Queensland where there is a higher proportion of employees covered by the EBAs.
- Restrictions on contractor switching - the Queensland DNSPs' EBAs state that they must 'restrict authorisation and access for external service providers' to certain tasks, including high

⁵ Energex, Response to AER Information Request ENX 013, Question 8.

⁶ Note that the overall impact on vegetation contracts was estimated by a vegetation contractor as 19 per cent, as some of the vegetation costs include non-labour costs. Energex, Response to AER Information Request ENX 006, Question 10; Energex, Response to AER Information Request ENX 013, Question 4.

voltage switching and isolation services, cable identification and Spiking (for Energex), serving as Switching Operator Assistants, performing an Auto Reclose Block and acting as Access Permit Recipients (for Ergon).⁷ These requirements increase the non-productive time of contractors, who must wait for an employee to attend a site at the beginning and conclusion of works. A reduction in non-productive time would reduce the overall costs of contractors and would also allow the DNSPs' employees to perform other work. [REDACTED]

[REDACTED]

- Requirements for minimum apprentice numbers - Energex highlighted that its current EBA requires it to maintain an average of 280 technical stream ('blue collar') apprentices over the period of the agreement [REDACTED].⁹ An identical requirement is also present in Ergon's EBA. We note that 280 apprentices represent around 9 per cent of Energex's and 8 per cent of Ergon's total workforce. [REDACTED]

[REDACTED]

[REDACTED] Our review has identified that minimum apprentice quotas are uncommon in DNSP EBAs.

Overall, it appears that the Queensland DNSPs' EBA provisions, while not preventing outsourcing, may impose limits on their ability to engage contractors quickly and efficiently. It is likely that these constraints, along with the high proportion of workforces employed on EBAs, have together delivered significantly less outsourcing of opex activities in recent years than the Victorian DNSPs. In addition, the constraints on involuntary redundancy are a material source of inefficiency – the Queensland DNSPs have a limited ability to reduce the size of their operational workforces quickly, which is likely to result in stranded labour during periods of reduced work programs. While similar restrictions on involuntary redundancy are common among DNSP EBAs, the impacts are amplified in the Queensland DNSPs' due to their significantly higher proportion of EBA staff.

These constraints on workforce flexibility are likely to have delivered higher than efficient base year opex. Any changes to these requirements during the 2015-20 regulatory period will likely improve the Queensland DNSPs' opex efficiency.

Overtime

The IRP noted that Queensland DNSPs' expenditure on overtime featured some employees on very high Gross to Base Salary Ratios (GBRs), which it considered was 'likely to result in lower levels of

⁷ Ergon Energy Union Collective Agreement 2011, cl. 14.3; Energex Union Collective Agreement 2011, cl. 11.3.

⁸ File note of meeting with Ergon Energy, 22 January 2015.

⁹ Energex, Response to AER Information Request ENX 006, Question 8.

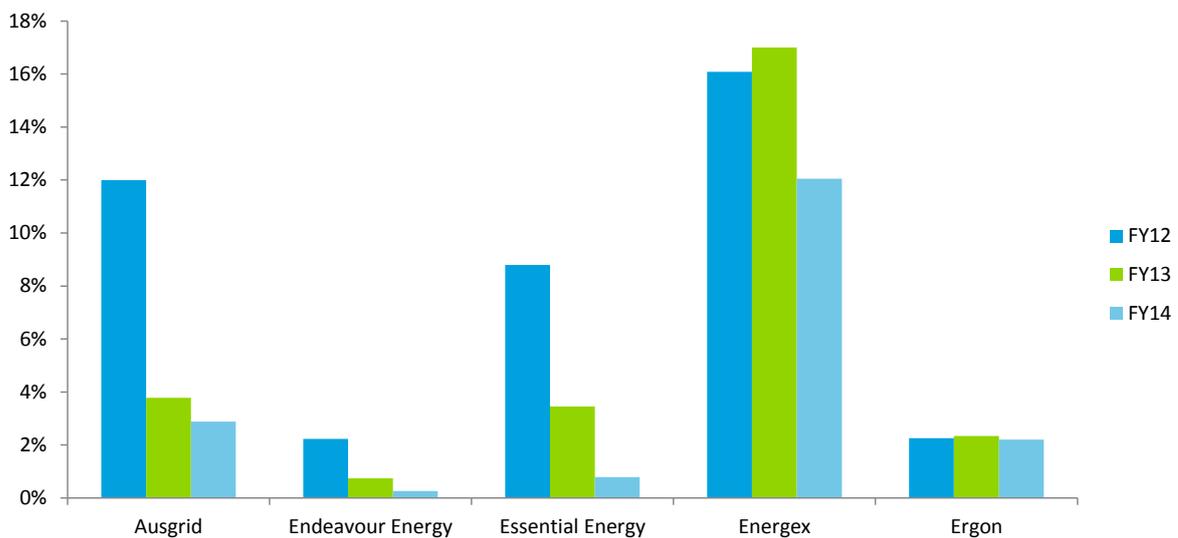
¹⁰ Energex, Response to AER Information Request ENX 006, Question 8.

productivity.¹¹ GBR is a measure of the number of employees receiving more than 50 per cent of their base salary in overtime.

Both DNSPs reported that they have made progress in reducing overtime expenditure. As a result of measures that Ergon has put in place to address overtime costs, bookable overtime hours fell from 668,261 hours in 2011-12 to 533,127 hours in 2012-13.¹²

However, for Energex, the reductions are largely associated with lower overtime from capex and storm responses.¹³ In the base year, Energex’s overtime costs increased by 24 per cent, from \$17.5m in 2011-12 to \$21.7 million in 2012-13. Also, Energex compares poorly to both the NSW DNSPs and Ergon on the proportion of employees on GBRs higher than 1.5 (i.e. the proportion of employees earning more than 50 per cent of base salary in overtime, respectively), as shown in Chart v.¹⁴

Chart v: Comparison of DNSPs’ proportion of employees with GBR > 1.5



Source: NSW Auditor General, New South Wales Auditor-General’s Report - Financial Audit, Volume Four 2013 Focusing on Electricity, November 2013; Energex, Response to information request AER EGX, Question 3; Ergon Energy, Response to AER Information Request 021, document: IRP243c_EE_Overtime_Base_Pay_REVISSED_29Jan15.xls.

SPARQ costs

As noted above, the IRP made a number of observations and recommendations specifically targeted at the DNSPs’ ICT costs, which are incurred via charges paid to SPARQ Solutions Pty Ltd (SPARQ), a joint venture company owned by the two DNSPs. SPARQ’s fees are fully accounted for in the DNSPs’ opex.

¹¹ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 62.

¹² Ergon Energy, Response to AER Information Request 021, document: IRP243c_EE_Overtime_Base_Pay_REVISSED_29Jan15.xls

¹³ Energex, Response to information request AER ENX 006, Question 10.

¹⁴ The IRP and the NSW Auditor General have both referred to a GBR of 1.5 as a threshold indicator, above which productivity concerns arise.

The most important IRP recommendations were associated with the need to place competitive pressure on SPARQ, through market-testing the services it provides to Energex and Ergon, as well as the need to change the relationship between the DNSPs and SPARQ to better reflect its role as a service provider to the DNSPs, by reducing the 'touch points' between the businesses.¹⁵ The IRP recommended that Energex and Ergon test alternative service delivery models for ICT services by issuing market tenders for capital projects and relevant operational ICT services. It considered that 'despite one of SPARQ's foundation objectives being capital expenditure savings from the joint delivery of projects ... there has been very limited delivery of joint projects to date' and that 'services currently provided by SPARQ may be delivered more efficiently by external providers.'¹⁶

While there have been some changes implemented since the IRP's final report, including the development of an ICT Panel which SPARQ manages, reforms to date do not fully reflect the IRP recommendations and have not yet significantly increased competitive pressures on SPARQ. [REDACTED]

[REDACTED]

We have found that the DNSPs' ICT costs have increased significantly over the 2010-15 period, particularly in the base year, due to large increases in SPARQ operational costs and asset management/service fees.

Overall, it is apparent to us that ICT costs are a material source of inefficiency within Energex's and Ergon's opex, and although some changes have been implemented following the IRP's final report, these are not reflected in the 2012-13 base year (the ICT Panel was established in 2014, and we estimate that so far only [REDACTED] per cent of SPARQ's costs which were passed through to Energex and Ergon in 2013-14 have been market-tested). There appear to be material savings to be made from further reforms to the relationship between the DNSPs and SPARQ, and improvements to the DNSPs' ICT systems, processes and use of the market.

Regional Depots and the Local Service Agent Model

The IRP recommended that Ergon investigate a Local Service Agent (LSA) model for its regional depots, similar to that implemented by Powercor in the 1990s.

Following privatisation in 1997, Powercor replaced some of its smaller depots with privately owned LSAs in order to improve the productivity of its regional operations. The LSA model is generally considered to be successful, and although it is difficult to quantify the impacts since 1997, the LSA model appears to have significantly increased the operational efficiency of Powercor's regional network areas.

Ergon has not carried out a detailed analysis of the potential for an LSA model [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

¹⁵ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, pp 53-55.

■ [REDACTED]

We agree with the analysis of potential benefits summarised in Ergon's concept paper, and consider efficiencies could be realised should an LSA model be implemented. Implementation of an LSA model would require removal of the EBA restrictions around contractor switching.

Level of outsourcing

As discussed above, some provisions in Energex's and Ergon's EBAs impede their ability to engage and use contractors. With the exception of the constraints on contractor switching, which appears to be unique to Queensland DNSPs, all DNSP EBAs nationally contain various limitations on the use of outsourcing, although the nature and extent of constraints vary. However, in practice, the level of outsourcing carried out by Energex and Ergon over the 2010-15 regulatory period (between 30 and 40 per cent of labour opex) is materially lower compared to the Victorian DNSPs (between 50 and 90 per cent of opex, including related party outsourcing).

Overall, it appears that the Queensland DNSPs' EBA provisions, while not preventing outsourcing, may have imposed limits on their ability to engage contractors quickly and efficiently. It is likely that these constraints, along with the high proportion of their workforces employed on EBAs, have together delivered lower levels of outsourced opex over the period 2009-14.

2. Overall progress on IRP recommendations

Energex has made significant progress in addressing the IRP recommendations. Of the 11 IRP recommendations relevant to Energex, it has fully implemented eight.

Ergon has also made progress in addressing the IRP recommendations. Of the 17 IRP recommendations relevant to Ergon, it has implemented nine, while progress on a further four recommendations is unclear. Another four recommendations have not yet been implemented.

Implementation of the recommendations resulted in cost reductions in 2013-14, for example, in addition to the savings associated with the continuation of the DNSPs' efficiency programs, the DNSPs have made reductions in spending on consultancies and overtime, with further savings expected in 2014-15. Completion of implementation of recommendations not yet fully implemented will likely result in further savings.

3. Energex's declining opex productivity in 2012-13 and 2013-14

Although the AER's benchmarking shows Energex as more productive than Ergon, its productivity declined significantly in 2012-13 and 2013-14 (the final two years of the benchmarking period).

Much of the fall in productivity in these years appears to be explained by significant increases in ICT capex (in SPARQ's Asset Management Fee, which is reflected in Energex's opex), redundancy costs associated with reducing its workforce by 461 FTEs,¹⁷ and one-off opex associated with both addressing a manufacturing defect in its service lines and the aftermath of Tropical Cyclone Oswald.

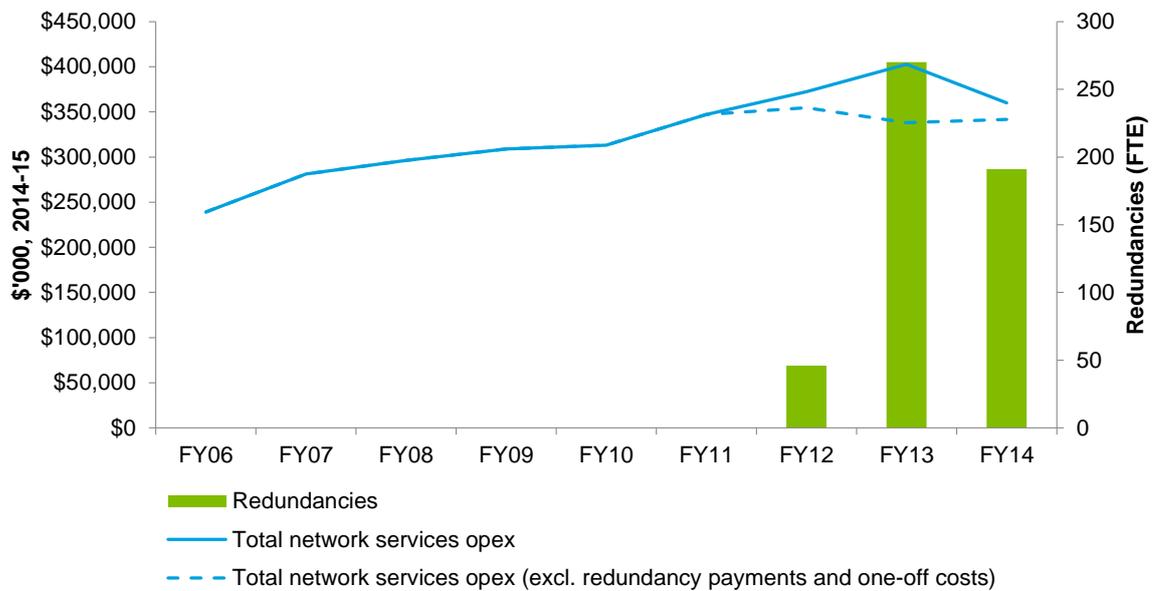
¹⁷ Ergon Energy, Response to AER Information Request 024, document: *Ergon Energy Operations - Local Service Agent Concept Paper*, p. 1.

¹⁸ Energex, Response to AER Information Request ENX 013, Question 1.

■ [REDACTED]

The estimated impact of cost increases associated with redundancies and one-off costs on Energex’s overall opex in 2011-12 to 2013-14 is presented in Chart vi.

Chart vi: Energex Opex – accounting for redundancies and one-off costs.



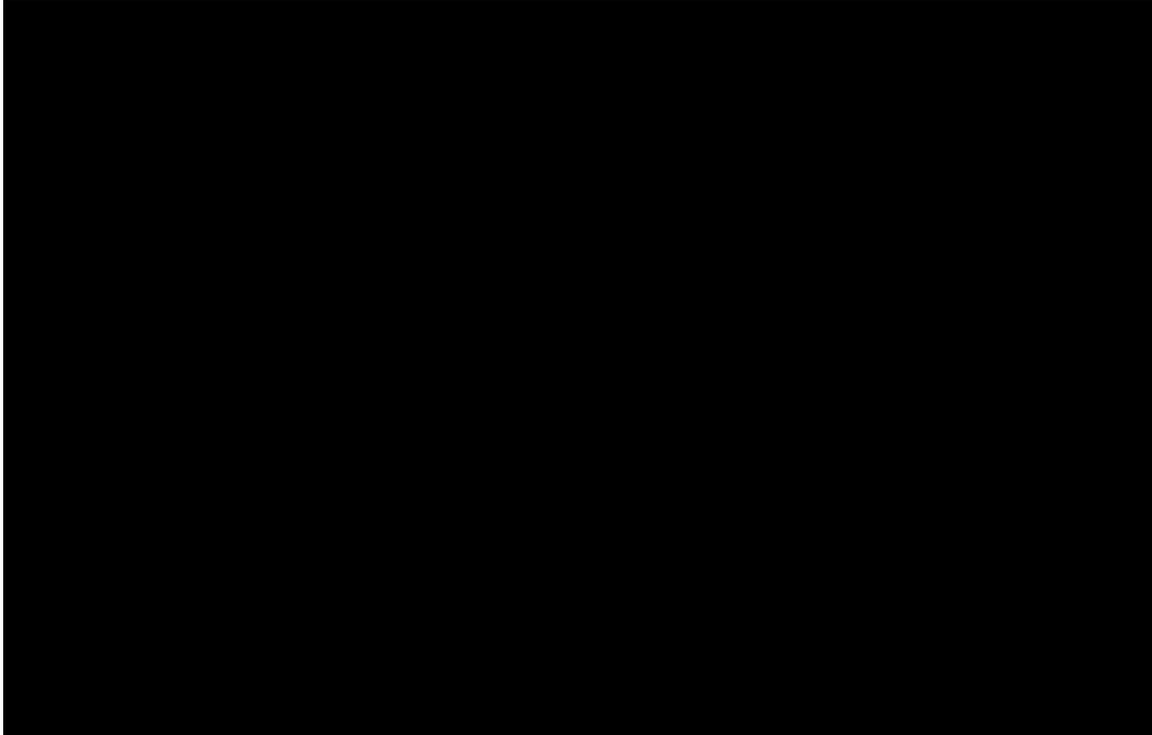
Source: Energex economic benchmarking RIN; Energex, Response to information request AER Energex 002, received 19 December 2014; Energex, Response to AER Information Request ENX 006, Question 12.

4. Conclusions

The IRP report and the AER’s benchmarking highlight historical inefficiency in Energex’s and Ergon’s operating costs. While significant efficiency gains have been achieved since the IRP’s recommendations were finalised (particularly reflected in FTE reductions) as a result of Energex’s Business Efficiency Program (BEP) and Ergon’s Effectiveness and Efficiency Program (EEP) and implementation of the IRP’s recommendations, much of these benefits were realised after the 2012-13 base year.

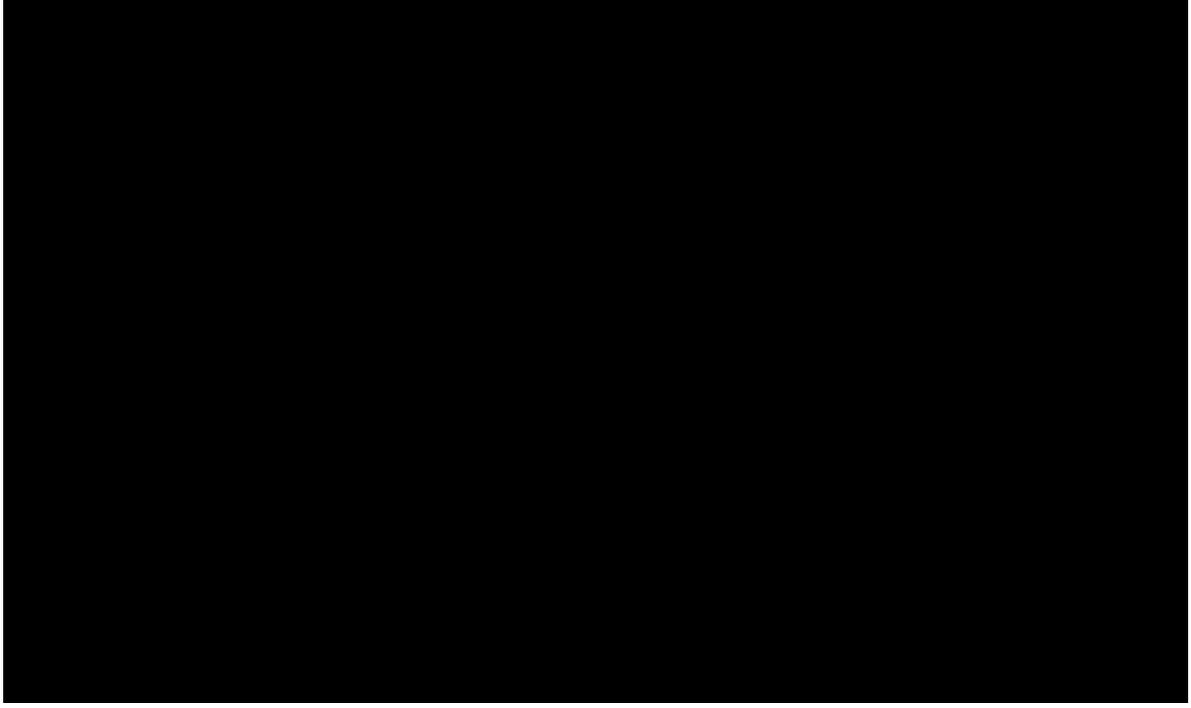
In addition to savings made in 2013-14, both businesses are expecting to make further efficiency gains in the 2015-20 regulatory period, particularly through further reducing their staffing levels. The following figures illustrate the materiality of opex savings made by Energex and Ergon after 2012-13 and which are therefore not incorporated into base year opex. They also highlight the expected savings that Energex has incorporated into its opex forecast. The information provided to us by Ergon did not enable a clear analysis of the impact of its base year and forecast efficiency adjustments on Standard Control Services (SCS) opex over 2015-20.

Chart vii: Energex Efficiency Improvements (\$m, 2014-15)



[Redacted]
[Redacted]
[Redacted]
[Redacted]

Chart viii: Ergon Efficiency Improvements (\$m, 2014-15)

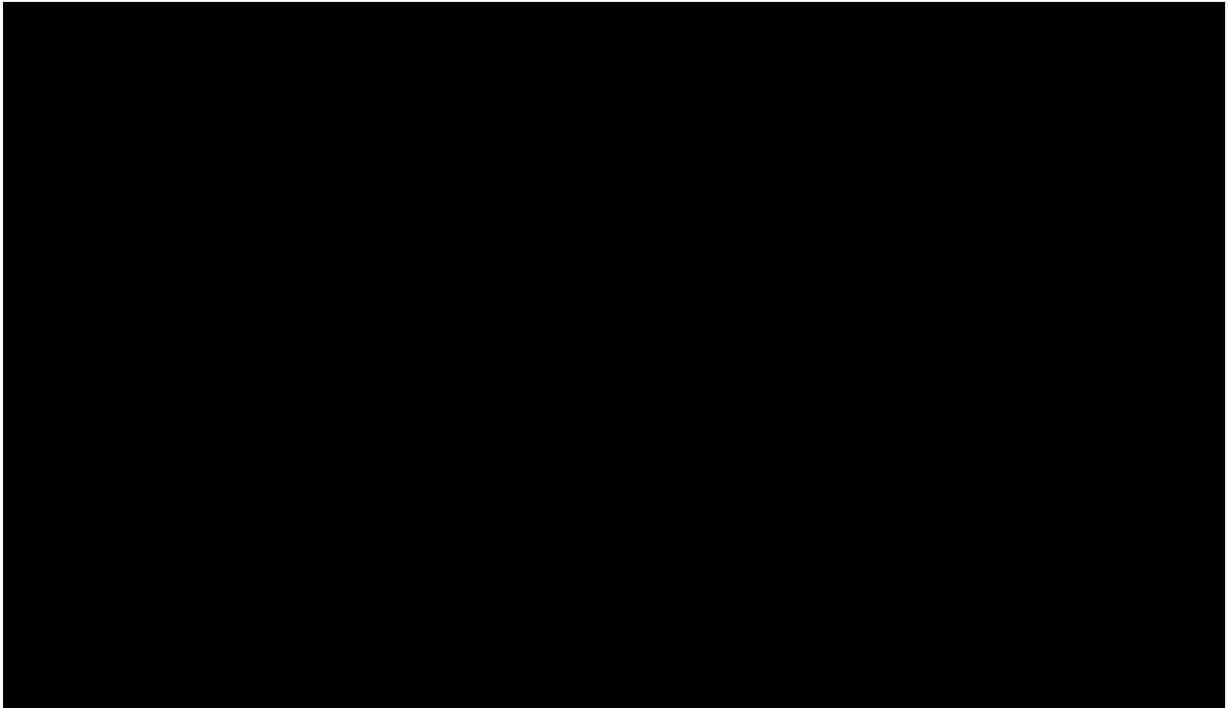


The following charts present information on Energex and Ergon's FTE workforce reductions, with associated savings either reflected in or after the base year.

Chart ix: Energex FTE reductions



Chart x: Ergon FTE reductions



While it has been difficult to form an accurate impression of the total value of opex efficiencies reflected in the base year, separate from those that are expected to be realised after the base year, the FTE figures illustrate that both DNSPs have reduced their workforces since 2012-13. They also highlight the efficiencies which have not been quantified or commenced by the DNSPs but that could be expected to contribute to efficiencies during the 2015-20 regulatory period.

The key factor driving the opex efficiency gap, particularly for Ergon, appears to be its large labour force relative to its network size, which implies relatively low productivity. Reasons for this lower productivity include provisions in the EBA including requirements for contractor switching and restrictions around the tasks that contractors can undertake. The limited number of Single Person Tasks that Ergon is able to implement also contributes to its relatively large workforce. However, other factors such as workforce culture (including use of overtime in the case of Energex), management and operational decisions are also likely to contribute.

Other potential sources of inefficiency include those areas identified by the IRP but not yet actioned by the DNSPs, including workforce flexibility and scheduling improvements, and for Ergon, making changes to the operational structure of its regional depots.

ICT costs also appear to be a source of higher costs. SPARQ's fees for Energex and Ergon have increased significantly over the last regulatory control period, with particular increases in the capex fees (Asset Management/usage fees) and operational costs for SPARQ. The descriptions of SPARQ's capex investments and operational costs incurred over the regulatory period suggest there are some areas of material inefficiency associated with maintaining bespoke, customised and out-of-date (legacy) systems. The IRP's concerns about SPARQ's governance arrangements do not yet appear to have been addressed by the panel arrangements established by the DNSPs and SPARQ,

representing only a small proportion of SPARQ's total program of works, although we note the arrangements were implemented quite recently.

1 Introduction

This section outlines our scope of work and approach to the review.

1.1 Project objectives

The AER has engaged Deloitte Access Economics Pty Ltd (Deloitte) to review aspects of the Queensland DNSPs' operating costs over the 2010-15 regulatory period. This analysis will inform the AER's assessment of the DNSPs' 2015-20 opex forecasts for the purpose of making its regulatory determinations for Energex and Ergon. We note that as opex forecasts were developed using a 'base-step-trend revealed cost' methodology, the AER's assessment will review the extent to which actual opex in the base (historic) year is efficient.

Specifically, we were asked to answer the following three questions:

1. What are the key factors driving the gap in opex performance (demonstrated by the benchmarking results) for Energex and Ergon Energy in comparison to their peers in 2012-13 and 2013-14?
2. To what extent have Energex and Ergon Energy fully implemented any of the recommendations from the independent review?
3. Are there reasons for Energex's opex productivity deteriorating between 2011-12 and 2012-13 other than inefficiency?

In our analysis to answer the questions above, we have tried to identify whether there are areas of inefficiency in the Queensland DNSPs' 2010-15 opex which might explain the gap in opex productivity suggested by the AER's benchmarking results. In doing so, we have applied a definition of 'inefficiency' which is consistent with similar definitions set out in the AER's November 2013 Expenditure Forecast Assessment Guideline Explanatory Statement, specifically '*Efficient expenditure results in the lowest cost to consumers over the long term.*'¹⁹

1.2 Approach

Our review has involved four key steps:

1. Reviewing materials submitted by the DNSPs as part of their regulatory proposals to the AER;
2. Submitting questions and document requests to the DNSPs and reviewing their responses;
3. A video conference with key staff in the DNSPs relating to the information requests and responses; and

¹⁹ AER, *Expenditure Forecast Assessment Guidelines – Explanatory Statement*, November 2013, p. 43.

4. Drawing together the above, in addition to publicly available information, to respond to the questions posed above.

1.3 Confidentiality

While this report is, in part, based on public information it also contains a range of information which has been provided to the AER by the DNSPs on a confidential basis. Besides containing commercially sensitive information, the public release of this information could materially harm the interests of the DNSPs in EBA negotiations. We therefore emphasise that the un-redacted version of our report is prepared solely for the use of the AER and must not be distributed beyond the AER and the Queensland DNSPs. It is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity.

2 Background – opex productivity and labour costs

This section provides some background to the questions the AER has asked us to answer. It shows that the Queensland DNSPs have low opex productivity, which is associated with them having the largest workforces of their peers, and therefore higher labour costs.

2.1 Opex productivity of the Queensland DNSPs

Following changes to the National Electricity Rules in 2012, in 2014 the AER commenced collecting consistent data from all DNSPs to enable economic benchmarking, including total and partial factor productivity analysis. This data was provided by the NSW DNSPs in Regulatory Information Notice (RIN) templates as part of their regulatory proposals and separately provided by DNSPs in other states.

The AER's benchmarking analysis covering the period 2006-13 shows that while Energex performs around the middle of the peer DNSP group, Ergon appears less efficient. The analysis also shows that both Energex and Ergon have significantly higher labour costs and larger workforces than DNSPs in other states.

The AER's use of benchmarking and the adopted methodology is currently the subject of debate in the electricity sector. We note that there is some disagreement regarding the benchmarking methodology, however, in our view, the scale of the efficiency difference shown between the Queensland DNSPs and the most efficient 'frontier' businesses during the 2006-13 period is material enough to raise questions about Energex's and Ergon's opex efficiency, regardless of the technical debate.

Multilateral total factor productivity

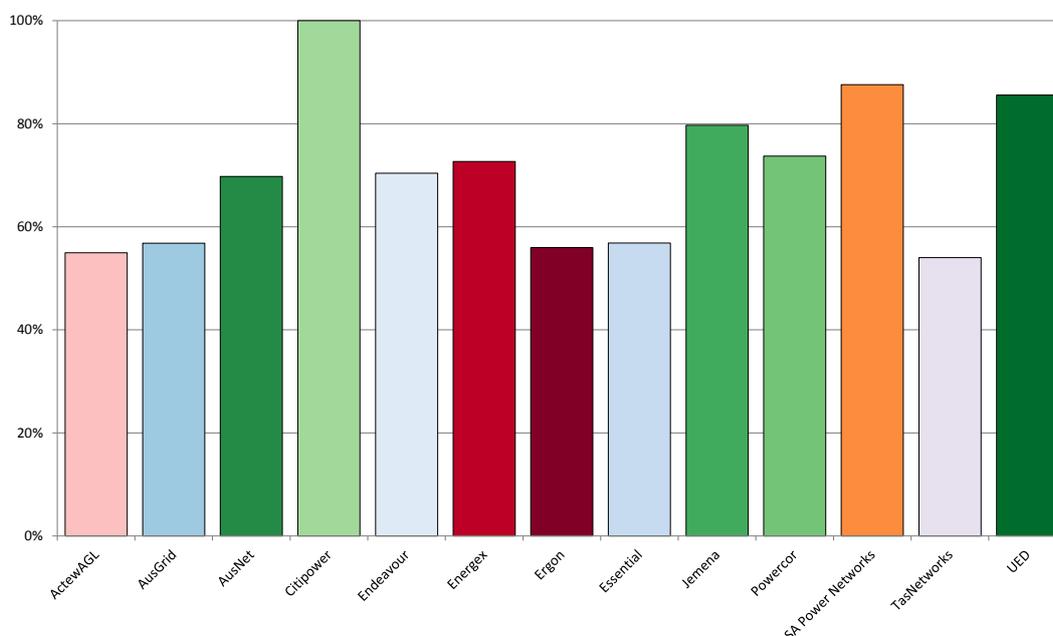
The figure below compares multilateral total factor productivity (MTFP) for all DNSPs using the AER's preferred TFP model discussed in the AER's DNSP benchmarking report.²⁰

As the AER has noted, the MTFP results indicate that with the exception of AusNet Services, Victorian (green bars in Chart 2.1 below) and South Australian (orange) DNSPs are the most productive. Ergon and two of the NSW (blues) and ACT (pink) DNSPs appear to be amongst

²⁰ Economic Insights Pty Ltd, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, November 2014, Denis Lawrence, Tim Coelli and John Kain.

the least efficient. Energex appears to be in line with Victorian DNSPs Powercor and AusNet Services, and Endeavour.

Chart 2.1 MTFP Performance (average 2006–2013)



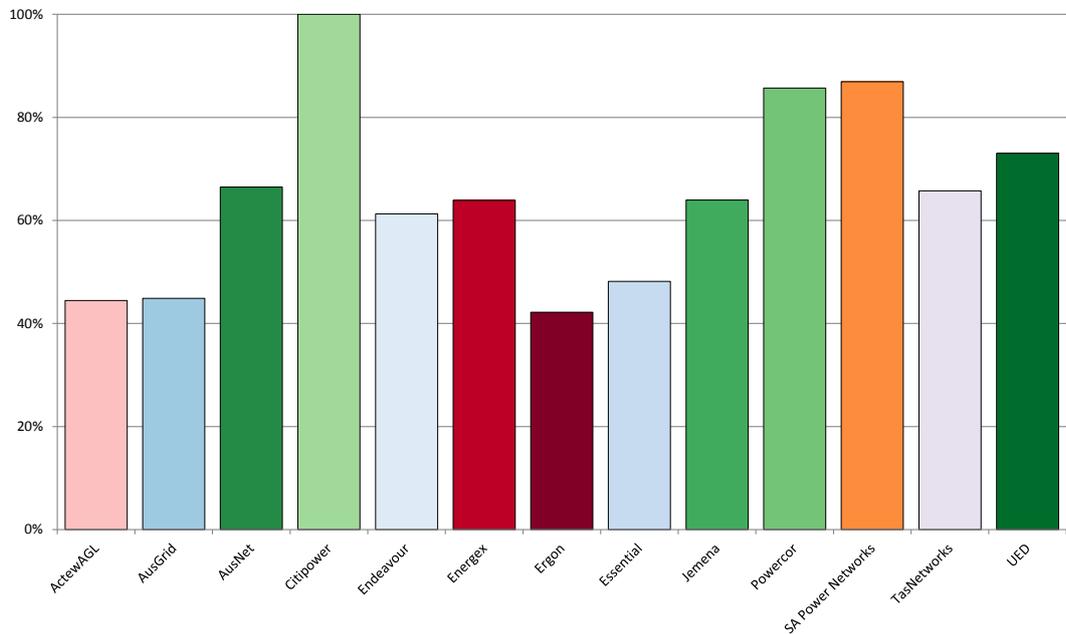
Source: Economic Insights Pty Ltd, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, November 2014, Denis Lawrence, Tim Coelli and John Kain.

Multilateral partial factor productivity of opex

The figure below presents the multilateral partial factor productivity (MPFP) of opex for all DNSPs. This chart differs from the MTFP results presented above in that it only examines the productivity of opex.

Chart 2.2 demonstrates there are significant gaps in opex efficiency between Ergon and the Victorian service providers. These gaps exist despite the AER’s modelling accounting for differences in operating environment including customer density, the ratio of overhead and underground lines and the different delineation between transmission and distribution networks across jurisdictions. Energex, on the other hand, is indexed as having mid-range performance in opex efficiency as measured by MPFP.

Chart 2.2 Opex MPFP performance (average 2006–13)

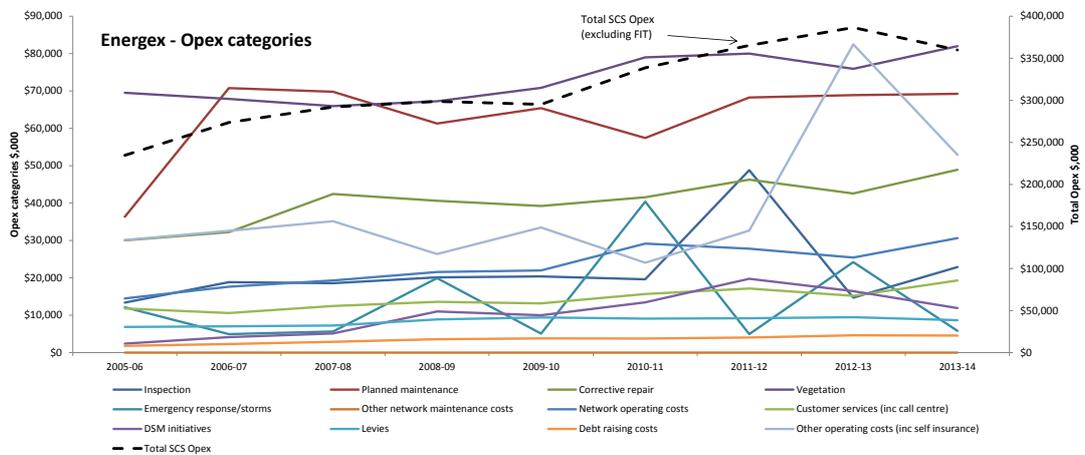


Source: Economic Insights Pty Ltd, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, November 2014, Denis Lawrence, Tim Coelli and John Kain.

Historical opex trends

Chart 2.3 presents data taken from Energex’s reset RIN on Standard Control Services (SCS) opex, excluding Feed-in Tariff payments. It highlights that Energex’s total opex increased significantly to a peak in 2012-13, before declining in 2013-14. Redundancy payments and the 2011 Brisbane floods impacted a number of categories over 2009-10 to 2013-14, Chapter 5 discusses the opex drivers in more detail.

Chart 2.3 Energex Standard Control Services Opex by Category (\$'000, 2014-15)



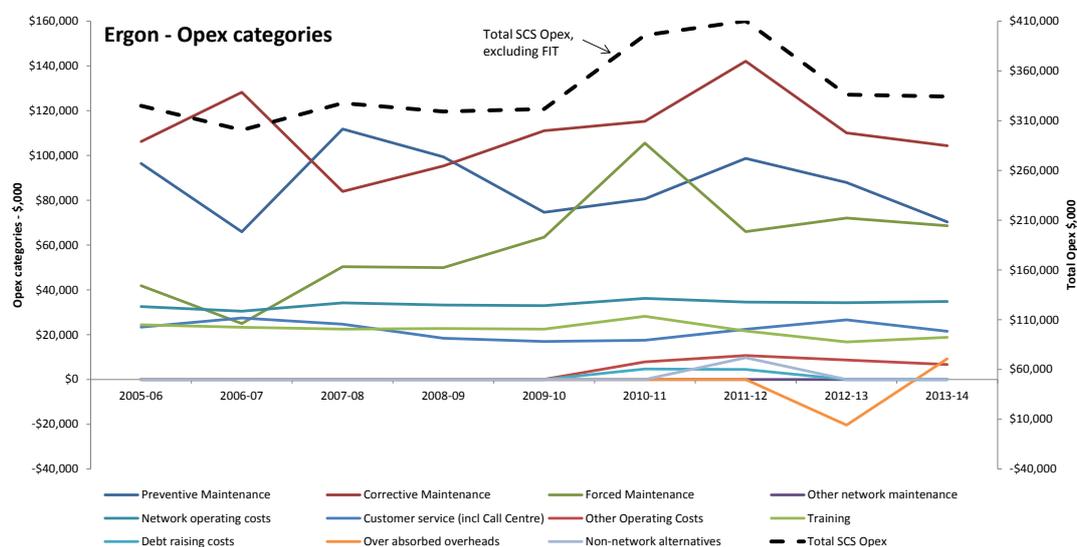
Source: Energex reset RIN, table 3.2.1.

Chart 2.4 presents Ergon’s equivalent opex data, taken from its reset RIN, highlighting that Ergon’s opex peaked in 2011-12, before declining in 2012-13. In 2013-14, opex increased again.

Ergon provided some information on the drivers of spikes in a number of opex categories, noting that:

- A backlog of vegetation management work in 2011-12 led to a spike in Corrective Maintenance expenditure;
- Cyclone Yasi which occurred in January 2011 resulted in deferral of line inspections in that year (and a peak in 2011-12), as well as a peak in forced maintenance; and
- Increases in customer service costs in 2012-13 were associated with an increase in solar installations.²¹

Chart 2.4 Ergon Standard Control Services Opex by category (\$'000, 2014-15)



Source: Ergon reset RIN, table 3.2.1.

2.2 Recent reviews of the Queensland energy market

The Queensland electricity networks have recently been the subject of two State Government-led reviews over the 2010-15 regulatory period, focused on reducing network costs.

ENCAP Review

In 2004, the Queensland Government tasked an independent panel with producing a report on the security standards of the state’s electricity distribution networks. The report led to an upgrading of security standards (N-1 standard) across various network assets. This led to substantial increases in capex and opex costs for the DNSPs which coincided with a marked

²¹ Ergon, Response to AER information request 024, question 2.

decrease in the growth of peak electricity demand, prompting the Queensland Government to conduct a further review of the capital program. The Queensland Government engaged an expert panel in 2011 to review the operations of Ergon and Energex in what was termed the Electricity Network Capital Program Review (the ENCAP review). The terms of reference of the review were to examine:

- The delivery of the electricity networks; and
- The appropriateness of any changes proposed by DNSPs to provide a more efficient and cost effective electricity network without significant changes in security and reliability of the network.

Energex and Ergon both contributed to the review making detailed submissions and responding to additional data requests.²² [REDACTED]

[REDACTED] The primary recommendation of the ENCAP review was that less strict criteria associated with the security of supply for zone substations and distribution feeder maximum load levels were appropriate.

Independent Review Panel on Network Costs

In May 2012, the Queensland Government set up an interdepartmental committee (IDC) to examine electricity sector reform in response to rising costs in the electricity sector. The IDC commissioned an independent panel of experts, the Independent Review Panel (IRP), to investigate areas of inefficiencies in the Queensland Network Service Providers (NSPs). The IRP was tasked with developing options to:

- Improve the efficiency of capital and operating expenditure; and
- Deliver savings in corporate and overhead costs including ICT costs.

The IRP's review concluded with a report in May 2013 and found that through a series of reforms, Energex and Ergon could together achieve an estimated \$1.4 billion reduction in operational costs over the 2015-20 regulatory control period. These reforms were articulated through 45 recommendations, including recommendations 11-28 which focused on overhead expenses and operational efficiencies. In addition to these overheads and operational efficiency reforms, the IRP also recommended that Energex, Ergon and Powerlink either be structurally combined into a single entity, or transferred under the umbrella of a holding company similar to Networks NSW.²⁴

The recommendations put forward by the IRP were for the most part, accepted by the Queensland Government; however, recommendations relating to structural reforms were accepted in principle only.²⁵

²² Independent panel for the Electricity Network Capital Program Review 2011, *Detailed report of the independent panel*, 2011.

²³ Ergon, file note of meeting on 22 January 2015.

²⁴ Energex, Response to AER Information Request 013, document: *Quantifying the benefits of BEP*, January 2015

²⁵ Queensland Government response to the Interdepartmental Committee on Electricity Sector Reform 2013

Efficiency programs implemented by Energex and Ergon

In response to the IRP and the ENCAP reviews, both Energex and Ergon undertook a series of efficiency programs aimed at addressing recommendations and criticisms presented in the ENCAP review, and pre-emptively addressing issues that were investigated as part of the IRP report. Both DNSPs engaged consultants to help identify specific initiatives to reduce costs.

Energex's efficiency program, the Business Efficiency Program (BEP) was rolled out in successive phases over 2011-12, 2012-13 and 2013-14. The initial phase of the BEP was rolled out in 2011-12. It coincided with the commencement of the IRP review into network costs and identified potential cost efficiency savings of approximately \$124 million per annum. The second phase of the BEP started in 2012-13 following the release of the IRP report and identified further opportunities to increase Energex's operational efficiency.

Ergon's Efficiency and Effectiveness Program (EEP) was initiated in 2010-11 and with a primary focus of reducing overheads throughout the business. Ergon has since continued with the implementation of two waves of the EEP throughout 2011-12, 2012-13 and 2013-14 achieving cost efficiencies in excess of \$114 million (including capex savings) in 2012-13.²⁶

2.3 Base-Step-Trend Model and opex forecasts

The preferred approach used by the AER to determine the majority of opex categories is known as a 'base-step-trend' methodology, which uses the revealed actual opex in a base year as the starting point before adjusting it for one-off, non-recurrent expenditures and growth trends.

This assumes that there are appropriate incentives for efficient operating expenditure in that base year, however, if there is reason to believe that the base year expenditure is not efficient (or if the efficiency incentives were not applied), the AER examines the base year expenditure in more detail, to remove inefficiencies.²⁷

Our analysis of Energex's and Ergon's expenditures over the 2010-15 regulatory control period will inform the AER's assessment of the base year opex. Both Energex and Ergon have proposed 2012-13 as the base year for their opex forecasts.

2.3.1 Energex

In deriving its base year expenditure, Energex has made a number of adjustments to its actual opex in 2012-13. These include both increases and decreases to account for anomalies that occurred in that year (including adjustments made to account for new or

²⁶ Ergon, Attachment to response to AER Information Request ERG 006, Question 4, document: *1401-13 Efficiency and Effectiveness Program Update*, January 2013.

²⁷ AER, *Better Regulation – Explanatory Statement – Expenditure Forecast Assessment Guideline*, November 2013, p. 11.

different categories of expenditure, network scale growth, redundancy payments, alignment with ten year averages and expected efficiencies).²⁸ The overall adjustments result in a reduction on the actual base year opex from \$426 million to \$356 million.²⁹ In developing its opex forecast for 2015-20, Energex has then applied a number of efficiency adjustments to its base opex to account for its ongoing efficiency programs. Energex has also adjusted upwards the proportion of total overhead costs it applies to opex for Standard Control Services (SCS), to reflect the fact that its forecast capex program is lower than in the 2010-15 regulatory period and therefore attracts fewer overheads overall.³⁰

Energex reported that in addition to the cumulative annual efficiencies that it expects to have achieved by the end of the 2010-15 regulatory control period (\$34.9M), it is forecasting an additional \$21.5M of annual efficiencies will be realised by the end of the 2015-20 regulatory control period. In total, Energex expects to deliver \$257.2M of opex efficiency gains over the 2015-20 period, presented in Table 2.1 below. These efficiencies are expected to stem from its BEP, discussed in more detail in section 3.2. Chart 2.5 is a summary of Energex's actual, estimated and forecast opex efficiency savings taken from the AER's Issues Paper.³¹

Table 2.1: Forecast reduction in Energex's Costs (\$m, 2014-15)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Network Overheads	-15.1	-6.0	-3.0	-5.0	-2.9	-0.7	-0.7
Corporate Overheads	-11.3	-2.6	-2.8	-3.3	-2.7	-0.6	-0.6
Total Cumulative	-26.4	-34.9	-40.7	-48.9	-54.5	-55.8	-57.2

Source: Energex, Regulatory Proposal Appendix 8 – Application of the Base-Step-Trend (BST) Model, October 2014, p. 64.

We note that overheads are allocated to opex and capex based on Energex's Cost Allocation Methodology.

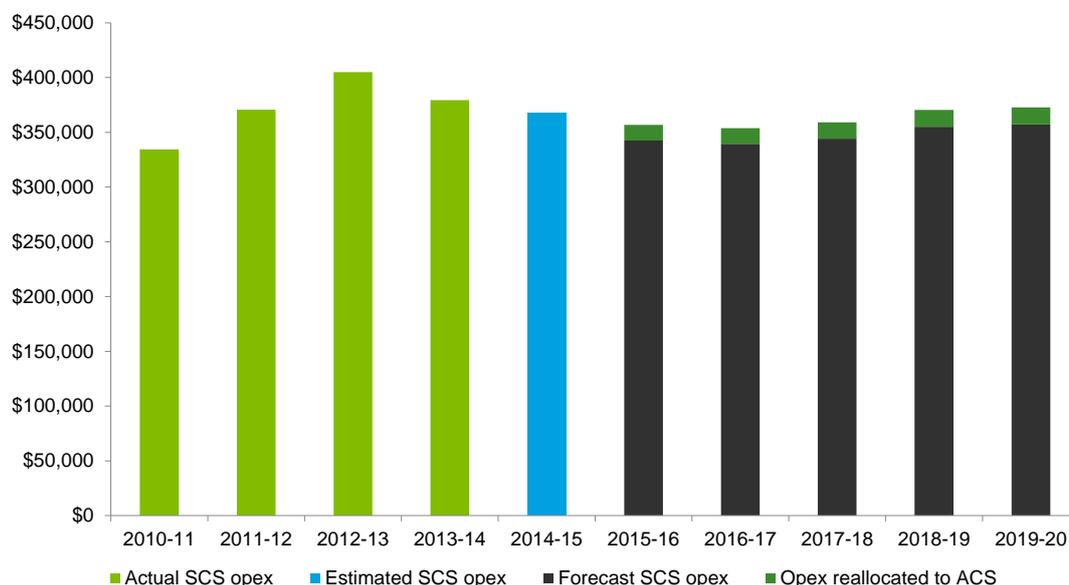
²⁸ Energex, *Regulatory Proposal Appendix 8 – Application of the Base-Step-Trend (BST) Model*, October 2014.

²⁹ Energex, *Regulatory Proposal Appendix 8 – Application of the Base-Step-Trend (BST) Model*, October 2014, p. 9-11. AER Analysis.

³⁰ Energex, Response to AER Information Request EGX 017.

³¹ AER, *Issues paper -Qld electricity distribution regulatory proposals - 2015–16 to 2019–20*, December 2014, p. 22.

Chart 2.5: Energex – Actual, Estimated and Forecast Opex (\$'000, 2014-15)



2.3.2 Ergon

Ergon has applied a similar base-step-trend methodology in developing its forecast for the majority of opex categories, adjusting 2012-13 actual opex to account for non-recurrent costs, historical averages of expenditure categories to remove impact of one-off increases in expenditure categories, and expected efficiencies. The overall adjustments result in a reduction from actual opex of \$346.3M to an ‘adjusted base year’ expenditure of \$317.2M in 2012-13.³²

Whereas Energex has applied an ongoing efficiency adjustment to its forecast Network and Corporate Overheads, Ergon has instead applied a one-off, 15 per cent efficiency adjustment to its actual 2012-13 total overheads of \$98.8M (real 2012-13).³³ In addition to this, Ergon has applied a broad based 1 per cent productivity adjustment going forward.³⁴ The reduced forecast of overheads is allocated to both Standard Control and Alternative Control Services (ACS), and reflects the expected savings from Ergon’s ongoing efficiency programs. Similar to Energex, Ergon has increased the proportion of its total overheads allocated to opex over the forecast period, reflecting its reduced capital program. This allocation change means that the 15 per cent efficiency adjustment to total overheads, when allocated to SCS actually reflects a 5 per cent reduction being \$4.29 million.³⁵

³² Ergon Energy, *Regulatory Proposal – Appendix A: Operating Expenditure Forecasts for Standard Control Services*, October 2014, p. 82.

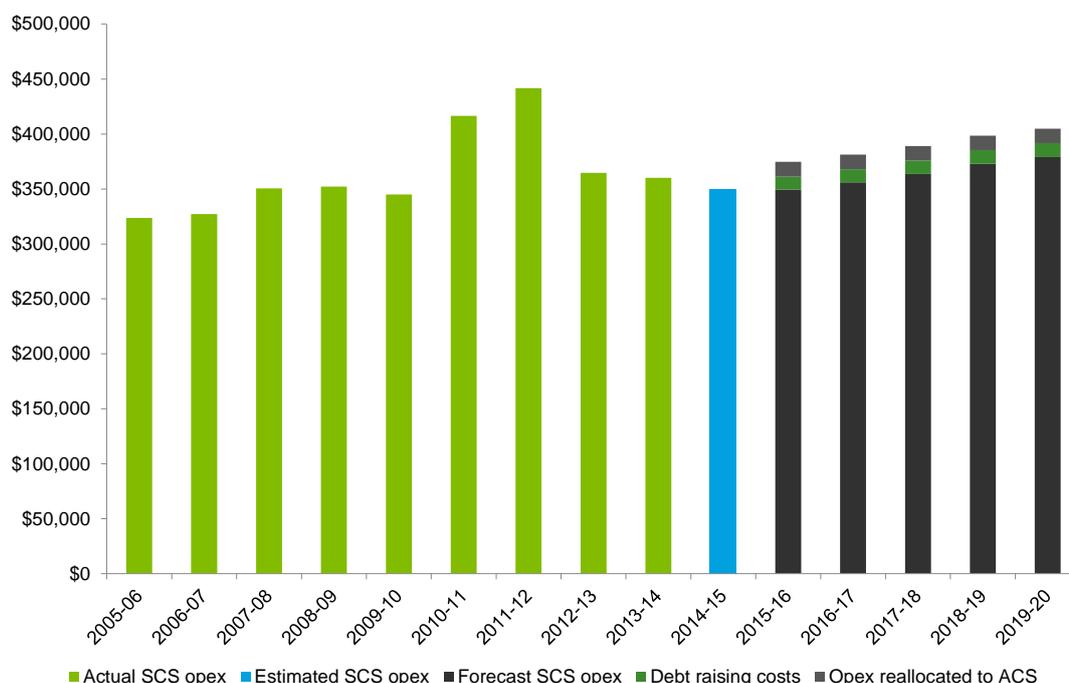
³³ *Ibid*, p. 76.

³⁴ *Ibid*, p. 77.

³⁵ Ergon Energy, *Regulatory Proposal*, October 2014, p. 82.

Chart 2.6 is a summary of Ergon’s actual, estimated and forecast opex taken from the AER’s Issues Paper on the Queensland DNSPs’ regulatory proposals.³⁶ Ergon’s expenditure was above the AER benchmark in each year of the current regulatory period.

Chart 2.6 Ergon – Actual, Estimated and Forecast Opex (\$’000, 2014-15)



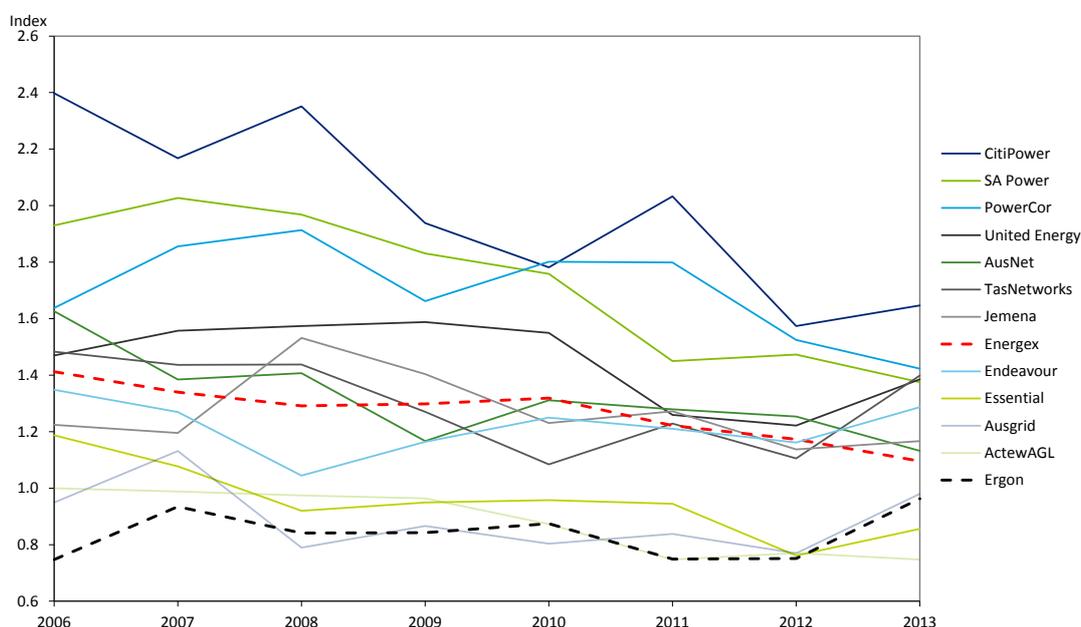
2.4 Articulating the gap – opex and labour cost comparisons

2.4.1 Overall drivers of inefficiency

The opex MPFP results presented in section 3.1 above show the DNSPs’ average productivity over 2006-13, suggesting that while Ergon has one of the lowest opex productivity scores among the group, Energex is among the DNSPs with mid-range opex efficiency. However, the average results mask a general decline in opex productivity among most DNSPs over the period, which is demonstrated in Chart 2.7.

³⁶ AER, *Issues paper - Qld electricity distribution regulatory proposals - 2015–16 to 2019–20*, December 2014, p. 22.

Chart 2.7: Opex MPFP results – Economic Insights



Source: Economic Insights paper for NSW DNSPs. Note that we have changed the colours of Energex and Ergon in this version of the graph. Note: This graph is in financial years, 2006 is 2005-06, etc. The Victorian DNSPs report on the basis of calendar years.

The decline in Energex’s opex productivity occurs because its opex has been growing at a faster rate than its outputs (being energy, ratcheted maximum demand, customer numbers, circuit KMs and minutes off supply). In fact, Energex’s rate of opex growth over the 2006-13 period is among the highest of all the DNSPs, having increased by 101 per cent over the period. The growth in Energex’s opex has been particularly significant in recent years, growing by 18 per cent in 2010-11, and then 11 per cent and 8 per cent in 2011-12 and 2012-13 respectively.

For Ergon, opex increased by 26 per cent over the 2006-13 period, with a 16 per cent decline in opex in 2012-13 improving its productivity result. This late decline offset a large (27 per cent) increase in Ergon’s opex in 2010-11. We note that although not shown in Chart 2.7, Ergon’s opex actually increased in 2013-14.

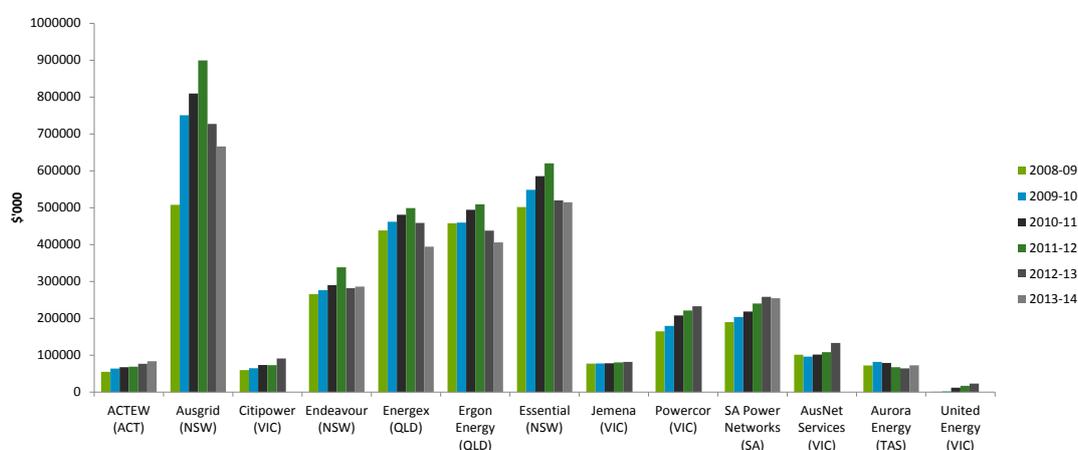
Energex and Ergon incurred significant redundancy costs in the 2012-13 base year, of \$51 million and \$28 million respectively. These amounts are included in the benchmarking results.

As labour costs make up the majority of DNSPs’ opex, the following sections present information on the relative levels of labour costs among the DNSPs, to enable some comparisons for Energex and Ergon. Because the Queensland DNSPs incurred material costs associated with reducing the size of their labour forces over 2011-14, we have excluded the reported redundancy payments in our comparisons with their peer DNSPs.

Labour costs

The chart below presents labour costs and growth in labour costs across the DNSPs in the NEM. Chart 2.8 shows that, even after excluding their redundancy costs incurred over 2011-14, Energex and Ergon had the third and fourth highest labour costs of their peer group in the base year (2012-13). We note that the redundancy payments, while treated as opex, are not all associated with reductions in opex, as many people who departed Energex and Ergon were associated with the capital program of works, which was reduced following the ENCAP review in 2011.

Chart 2.8: DNSP total labour costs (excluding Energex and Ergon redundancy costs), 2009-14 (\$'000, 2014-15)



Source: DNSP RINs, table 2.11.1. Note that the Victorian DNSPs report on a calendar year basis and have not yet reported their 2014 costs. This chart shows total labour costs for Energex and Ergon after subtracting their reported redundancy costs in 2011-12 to 2013-14. It implicitly assumes that no other DNSPs have incurred costs for redundancies, which we know in practice is incorrect, however it allows us to analyse the impact of redundancy costs on Energex and Ergon’s overall opex.

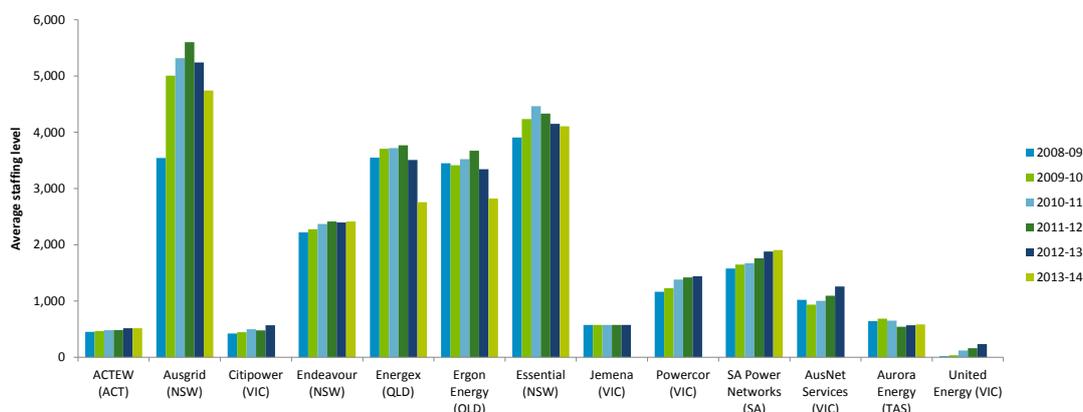
Labour costs generally increased between 2008-09 and 2012-13, however they fell for some businesses in 2012-13, including Energex and Ergon. For Energex, there was a steep decline in labour costs in 2013-14, when a large number of redundancies occurred. Although together with other businesses Energex’s and Ergon’s labour costs increased over 2008-09 to 2011-12, by 2013-14 the Queensland DNSPs had reduced their labour costs to a level close to their total 2008-09 costs.

Average staffing levels

A significant driver of the labour costs described above is the size of the workforce for each DNSP. The chart below presents the average staffing levels (ASL) for all DNSPs using data from their Category Analysis Regulatory Information Notices (CA RINs). The ASL is defined as the number of full-time equivalent employees undertaking standard control services work receiving salary or wages (Paid FTE) over the entire year.³⁷

³⁷ AER, Regulatory Information Notice Under Division 4 Of Part 3 Of The National Electricity Law - Issued By The Australian Energy Regulator, p. 44.

Chart 2.9 Average Staffing Level by DNSP, 2008-09 to 2013-14



Source: DNSP RINs, table 2.11.1 Note that the Victorian DNSPs report on a calendar year basis and have not yet reported their 2014 data.

Based on this data, most DNSPs increased their staffing levels annually between 2008-09 until about 2011-12, although some (including the NSW and Queensland DNSPs) reduced their staff in 2012-13.

Energex and Ergon have among the largest workforces and therefore total labour costs among all the DNSPs in the NEM. The differences in workforce size amongst DNSPs will reflect, among other things, differences in business characteristics (including customer numbers, customer density, terrain, etc.). However, noting that opex is predominantly constituted of labour, the opex productivity results presented in Chart 2.7, which already account for some differences in network characteristics, will to a large extent reflect the DNSPs' relative labour productivity.

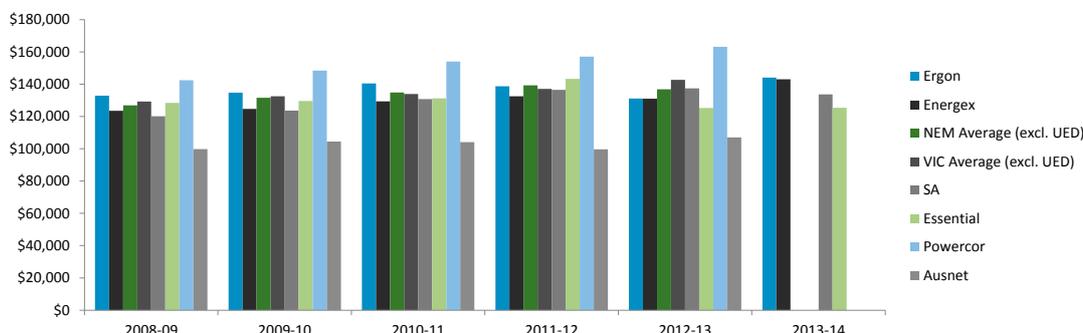
The following section presents some high level analysis of labour costs per ASL and per customer for Energex and Ergon.

The following charts compare labour costs per ASL, total labour costs per customer and total staffing level per 100,000 customers among the Queensland DNSPs, the NEM average (excluding UED³⁸), the Victorian average and the rural DNSPs. Because Energex and Ergon incurred significant redundancy costs in the 2011-14 period, we have removed redundancy costs from their total labour costs. We note that this implicitly assumes that no other DNSPs incurred redundancy costs over the period, which we know to be incorrect, however it allows us to identify the impact of the redundancy costs on Energex and Ergon's opex.

The figures demonstrate that Energex's and Ergon's high labour costs are likely to be associated with the Queensland DNSPs' having more employees than most of their peers, rather than higher base wages. As a result of this, our discussion in this paper focuses on the former.

³⁸ United Energy has been excluded as it outsources the vast majority of all operational work and as a result is not comparable when looking at the Queensland DNSPs' operational model and costs in terms of number of internal employees.

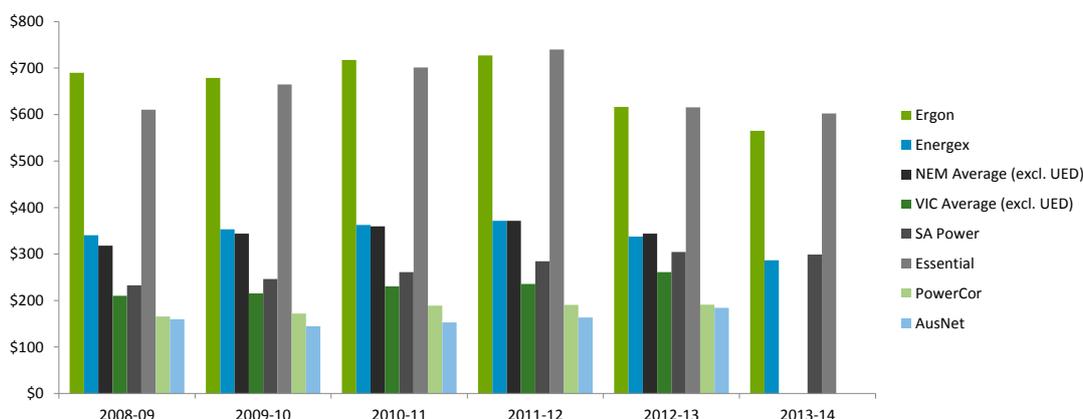
Chart 2.10 Total Labour costs (excluding Energex’s and Ergon’s redundancy costs) per Average Staffing Level, 2009-14 (\$, 2014-15)



Source: DNSP RINs, table 2.11.1 Note that the Victorian DNSPs report on a calendar year basis and have not yet reported their 2014 data. This chart shows total labour costs for Energex and Ergon after subtracting their reported redundancy costs in 2011-12 to 2013-14. It implicitly assumes that no other DNSPs have incurred costs for redundancies, which we know in practice is incorrect, however it allows us to analyse the impact of redundancy costs on Energex and Ergon’s overall opex.

Chart 2.10 shows that while Energex had relatively low costs per employee over 2009-12, Ergon’s costs per employee were at the higher range of their peers over that period. Increases in their labour costs per employee are affected by the reductions in average staffing level (by decreasing the number of staff across which the labour cost base is spread). As redundancy costs incurred by Energex and Ergon over 2011-14 have been removed from this analysis, the sharp increase in Energex and Ergon’s costs per ASL in 2014 is associated with other factors. We note that the timing of staff leaving the organisation and redundancy payments may be affecting the data in 2013 and 2014, such that the reduction in ASLs is greater than the reduction in costs (after redundancies) for a short period.

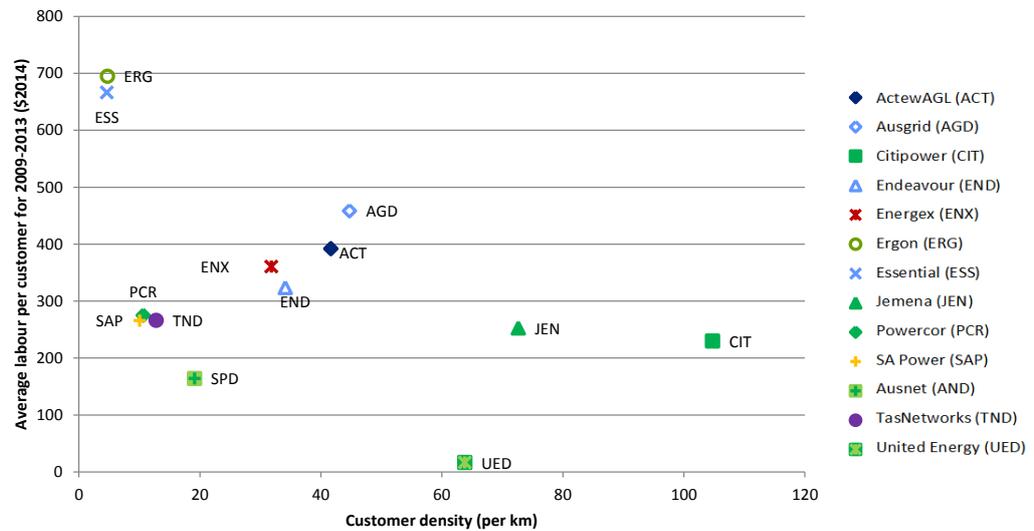
Chart 2.11 Total Labour costs (excluding Energex’s and Ergon’s redundancy costs) per customer (\$, 2014-15)



Source: DNSP RINs, table 2.11.1. Note that the Victorian DNSPs report on a calendar year basis and have not yet reported their 2014 data. This chart shows total labour costs for Energex and Ergon after subtracting their reported redundancy costs in 2011-12 to 2013-14. It implicitly assumes that no other DNSPs have incurred costs for redundancies, which we know in practice is incorrect, however it allows us to analyse the impact of redundancy costs on Energex and Ergon’s overall opex.

Chart 2.11 presents total labour costs per customer, which as noted above, is heavily influenced by network density and the urban/rural characteristics of each business. Accordingly, the highest labour costs per customer occur within the rural businesses (Ergon, Essential Energy and Powercor). Chart 2.12 presents average labour costs per customer on the vertical axis and customer density (customers per kilometre of line) on the horizontal axis, showing that Ergon and Essential have a customer density similar to Powercor and SA Power Networks but significantly higher costs per customer.

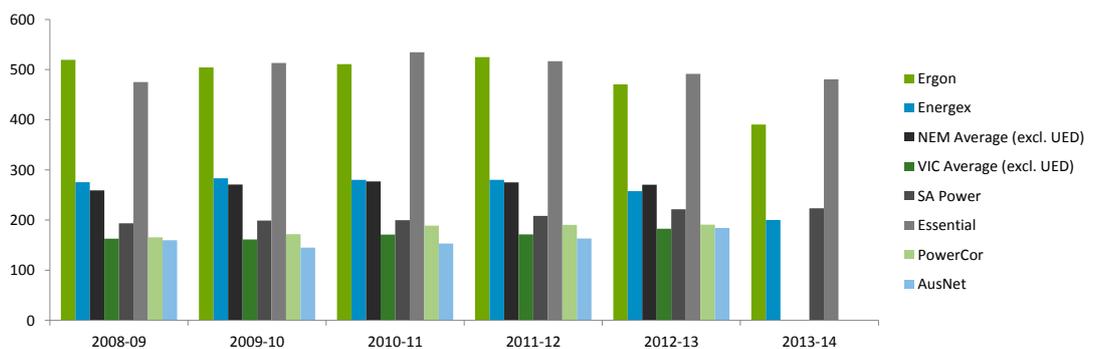
Chart 2.12 Labour per customer average for 2009-13 against customer density (\$2014)



Source: CA RIN

This analysis shows that Ergon’s labour costs are significantly above other rural businesses except for Essential, while Energex’s labour costs per customer were formerly below the average of all NEM DNSPs, but have increased in 2013 to be approximately in line with the average. Ergon’s labour costs per customer have fallen by 22 per cent over 2012-14, excluding redundancy payments. Victorian DNSPs have consistently had the lowest labour costs per customer since 2009.

Chart 2.13 Average Staffing Level per 100,000 customers



Source: DNSP RINs, table 2.11.1. Note that the Victorian DNSPs have not yet reported their 2013-14 data.

Chart 2.13 presents data on ASL per customer and clearly demonstrates the reduction in staff since 2012 at Energex and Ergon. Ergon's staffing levels in 2014, though lower than Essential, are still much higher than other comparable rural DNSPs. Energex's staffing levels are now approaching the average of the NEM DNSPs.

Conclusion

The AER's economic benchmarking shows that Energex and Ergon have low opex productivity when compared to their peers. This low productivity result occurs because their opex per unit of output is higher than their peers. Ergon's productivity is particularly poor, noting that the benchmarking allows for network characteristics such as customer density. Energex performs around the middle of the peer group, however, is still significantly below the most efficient, 'frontier' businesses and its productivity has worsened over the period 2009-10 to 2012-13.

Opex is predominately made up of labour costs,³⁹ and Energex and Ergon have among the largest workforces of their peers. It appears that on a per employee basis, Energex and Ergon do not have high costs. However, on a per customer basis, Energex and Ergon have significantly more labour, and hence higher labour costs. Ergon has a very low customer density, however even when compared to other rural DNSPs, its labour force appears large.

³⁹ Energex, Response to information request AER Energex 002.

3 Key factors driving the opex efficiency gap

This section addresses the question of what are the key factors driving the gap in opex performance demonstrated by the AER's benchmarking results. It does so by:

- Outlining areas of inefficiency that Energex and Ergon have identified as part of their ongoing efficiency programs*
- Considering the impact of the EBAs on workforce flexibility and some of the recommendations made by the IRP*
- Considering the impact of SPARQ costs on opex efficiency, noting the IRP's observations and recommendations*
- Analysing the Local Service Agent model in Powercor's network and considering the potential for efficiency gains in Ergon's network.*

We conclude that the key factors driving the opex efficiency gap for Energex and Ergon are largely associated with them having more employees than the Victorian and South Australian DNSPs, and high ICT costs. Ergon has significantly more employees than comparable rural DNSPs, with the exception of Essential Energy. Ergon's regional depots have been highlighted as an area that could offer significant efficiency gains

Restrictive EBA provisions, particularly around the use of contractors and outsourcing are also likely to have contributed to the high numbers of employees in both organisations.

The sustained reduction in FTEs stemming from efficiency programs which both Energex and Ergon commenced in 2011 and 2012, respectively, have gone a long way to addressing the high number of employees, however both businesses are expecting to further reduce their employee numbers over the next regulatory period, which should reduce the opex efficiency gap. It should be noted that many of these reductions occur after 2012-13 suggesting that in the base year the Queensland DNSPs had more employees than necessary.

3.1 Drivers of labour costs

Labour costs are a function of three key factors being the cost per employee, the number of employees, and the extent to which activities are undertaken in-house rather than contracted out (see Table 3.1).

Table 3.1 Determinants of direct labour costs

Factor	Determinants include
Number of employees	<ul style="list-style-type: none"> • Number of hours of paid work by each employee. The greater the number of hours worked the fewer the number of employees required. The number of hours of paid work by each employee will depend on such things as: <ul style="list-style-type: none"> • Length of a standard working week • Number of hours of leave undertaken (e.g. sick leave, holiday, long service leave) • Time spent training • Time lost to disputes • Requirements to pay for a minimum number of hours • Mandatory breaks between work. • Productivity of each employee. The greater the number of productive tasks undertaken in an hour, the fewer the number of employees required. This will be influenced by: <ul style="list-style-type: none"> • Skills and training of the employee • The amount of 'dead time' e.g. waiting for other tasks to be completed or commuting between tasks • Employee engagement, co/operation and collaboration • Scheduling and rostering decisions • Workforce culture. • The level of contracting out. A greater level of contracting means fewer direct employees. Where businesses are artificially restricted in their use of contractors more internal employees will be used. Contracting will also be influenced by general workforce policy, specialist skills requirements, the availability of contractors and their relative cost • This also relates to flexibility. The flexibility to quickly and effectively adjust the workforce to meet organisational and project needs is important for delivering operational work and large projects efficiently.
Payment to each employee	<ul style="list-style-type: none"> • Base hourly wage • Superannuation payments • Overtime rates • Allowances and penalty rates • Redundancy payments.

Source: Deloitte analysis.

Issues driving inefficiency

As discussed in section 2.4, the high labour costs that drive inefficiency in Ergon and Energex are likely due to a high number of employees rather than unit labour costs. The following sections consider several of the factors which determine the number of employees and relate these factors back to the IRP, where applicable. These factors include:

- Efficiency programs, which primarily relate to streamlining FTEs and reducing overheads
- Workforce scheduling
- Flexibility
- Workforce culture.

The following sections also consider other factors raised by the IRP not necessarily relating to the number of staff that may be driving inefficiency in opex:

- Overtime
- ICT costs, particularly SPARQ costs
- Regional depots, in light of the LSA model.

3.2 Ongoing efficiency programs

As outlined in section 2.2, Energex and Ergon have implemented a series of efficiency reform programs, predominantly focused on responding to recommendations raised in the 2012-13 IRP review. In particular, recommendation 11 said the Boards of the DNSPs should continue implementing their efficiency programs.⁴⁰

3.2.1 IRP review

In its May 2013 report, the IRP concluded that the DNSPs could together save \$1.4 billion in indirect (overhead) costs over the 2015-20 regulatory control period, through reforms articulated in a series of 45 recommendations.

As well as recommending changes to planning and reliability standards which would result in reductions in capital expenditure (capex), the IRP found areas of significant inefficiency in the DNSPs' overheads, particularly when compared with privatised businesses in other states.⁴¹ It recommended that the DNSPs continue to improve through the efficiency programs which had already commenced and reduce spending on contractors. It also made a number of recommendations specific to the arrangements between Energex and Ergon and their wholly owned joint venture, ICT service provider, SPARQ Solutions (SPARQ), which we discuss in section 3.7.

Since 2012, Energex and Ergon have sought to address the IRP recommendations through various efficiency programs and reforms to their businesses, including reductions in the size of their workforces. However, there are still a number of recommendations which have not

⁴⁰ Independent Review Panel on Network Costs, Electricity Network Costs Review, 2013.

⁴¹ Ibid, p. v.

yet been addressed. Mapping of benefits realised as part of the efficiency programs against the IRP recommendations would provide useful insight into which areas of Energex's and Ergon's operations further efficiency gains could be made. However, the businesses have pointed out that their efficiency programs have evolved over time as different perspectives and findings came to light and as such the realised benefits are not necessarily the same and cannot be directly compared to the benefits that were expected at the initiation of the programs.

We note that, along with savings yet to be realised, the majority of the efficiencies Energex and Ergon have realised since 2012 are not reflected in the opex base year, 2012-13.

The following subsections outline the two DNSPs' efficiency programs.

3.2.2 Energex – Business Efficiency Program

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

⁴² Energex, Response to AER Information Request 006, Question 4, document: *Sizing the Opportunity*, September 2012

⁴³ Ibid.

⁴⁴ [REDACTED]

Reduction in FTE numbers

In both phases of the BEP, Energex has put a significant focus on reducing staffing levels. Between 2011-12 and December 2014, Energex achieved a reduction of 808 FTE from a peak of 3877 FTE in July 2011; this represents a reduction of 20.8 per cent of FTEs. Of these 808 FTE, 556 were reduced through a voluntary redundancy program and the remainder were reduced through natural attrition.⁴⁸ Additionally, Energex has reported that there are still plans to reduce workforce size to 2800, suggesting that the current workforce has not yet reached efficient levels.

Table 3.5: FTE reductions through BEP

	2011-12	2012-13	2013-14	2014-15*
Total FTEs at end of FY	3,804	3,433	3,141	3,069
Redundancies	46	270	191	49
Other (i.e. natural attrition)	27	101	101	23
Total reduction in FY	73	371	292	72

Source: Energex, Response to AER Information Request ENX 013, Question 1; Energex, Response to AER Information Request ENX 006, Question 12. *Up until December 2014.

Conclusion – implications for base year opex and forecasts

Energex's BEP commenced in 2011-12, prior to the 2012-13 opex base year, and efficiency gains stemming from the original PwC recommendations are continuing to be realised. From the information we have reviewed, it is apparent that while a proportion of the efficiency gains were realised in 2012-13, large cost reductions were again achieved in 2013-14 and future savings are also forecast.⁴⁹

The information provided makes it difficult to determine whether Energex has, or will, actually exceed the savings targets set by the IRP and PwC. Many of the benefits have been reported as being realised over two years (2012-13 and 2013-14), and as such it is difficult to tell what proportion of benefits have been realised in 2012-13 as opposed to 2013-14.

However, it is clear that much of the efficiency gains achieved under the BEP are not reflected in Energex's base year opex, demonstrating that base year opex was not efficient.

3.2.3 Ergon – Effectiveness and Efficiency Program

Progress of Ergon's Efficiency Programs

In October 2011, Ergon embarked upon an efficiency program which aimed to constrain increases in electricity prices to below CPI.⁵⁰ The Effectiveness and Efficiency Program (EEP),

⁴⁸ Energex, Response to AER Information Request ENX 013, Question 1.

⁴⁹ Energex, Response to AER Information Request 013, document: *Quantifying the benefits of BEP*, January 2015

⁵⁰ Ergon Energy, *Regulatory Proposal – Supporting Documentation: Our Journey to the Best Possible Price* (October 2014), p. 8.

was initiated in the wake of the ENCAP review and the importance of the program was increased when the IRP commenced its review of network costs in May 2012.

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

⁵¹ Ergon, Attachment to response to Ergon 006 Question 4: Ergon Energy *Efficiency and Effectiveness Program (EEP) Update* – Paper No: 1401-13, 31 January 2014.

⁵² Ibid.

⁵³ Ibid.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

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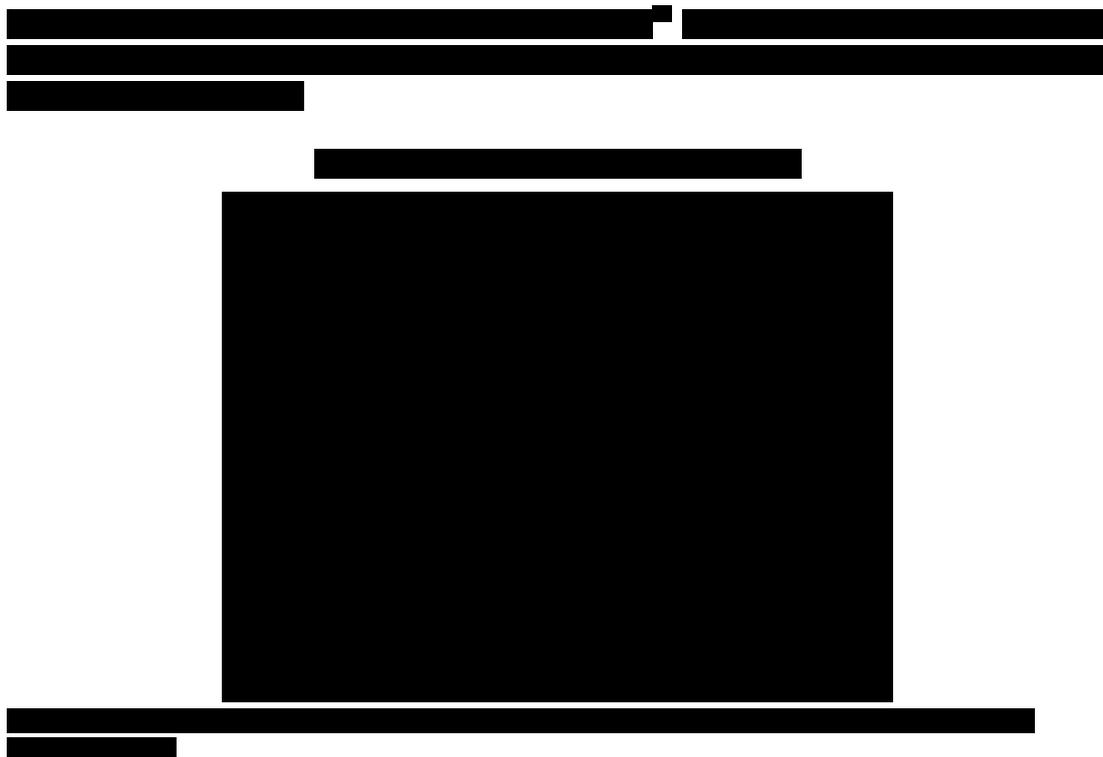
[Redacted]

⁵⁵ Ibid.

⁵⁶ Ergon, Attachment to response to Ergon 006 Question 4 –1309-03 *Efficiency and Effectiveness Program Report*, September 2013.

⁵⁷ Ibid, p. 2.

⁵⁸ Ergon, Attachment to response to Ergon 006 Question 4 – Ergon Energy Efficiency and Effectiveness Programme – Wave 2 – Paper 1308-03, 2 October 2013, p. 12.



Conclusion – implications for base year opex and forecasts

Ergon's EEP commenced in early 2011-12, prior to the 2012-13 opex base year, and efficiency gains from EEP 2 are reported to be ongoing. From the information we have reviewed, it is apparent that while substantial efficiency gains were realised in 2012-13 (██████████), additional cost reductions were also achieved in 2013-14 (██████████). These additional savings would not be reflected in the opex base year.

As we have noted for Energex, these reductions in costs, which have occurred without significant adverse outcomes in performance and service levels, suggest that Ergon's base year opex was not efficient.

3.3 Workforce scheduling

In organisations with thousands of employees, effective and efficient workforce scheduling is a critical requirement to ensure a productive field workforce. The minimisation of idle time is a function of effective workforce scheduling practices, which are supported by appropriate systems and tools.

The IRP noted that the Queensland DNSPs had previously not had appropriate tools or processes in place to give sufficient oversight of work carried out. The IRP considered that this has contributed to under-utilisation of labour, and poor management of external labour resources.⁶⁰ The IRP also commented that Energex's and Ergon's systems for

⁵⁹ Ergon, file note of meeting 22 January 2015.

⁶⁰ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, pp. 59-60, 64.

measuring labour efficiency were not appropriately capturing outputs in a way that would generate information for monitoring and reporting productivity.⁶¹ The IRP also recommended that:

- NSPs should fully utilise internal resources before work is contracted out.
- DNSPs should improve workforce flexibility to match start/finish times with work requirements.

In addition to a lack of appropriate tools and processes, Energex and Ergon have highlighted some specific provisions within their EBAs which are restricting their ability to efficiently schedule work and ensure efficient use of labour.



Energex

Energex has undertaken a capability, system and process review for scheduling which has led to improved scheduling practices, enabling it to deliver a 10 per cent improvement on the labour component of unit rates targeted for the 2014-15 financial year.⁶²

There is ongoing work by Energex to develop a clear understanding of operational needs and the scope that would be required for an effective scheduling tool. Despite Energex having identified a 10 per cent improvement in the labour component of unit rates, Energex has not explained how this improvement will be achieved and where it is reflected in its forecast costs.⁶³

In response to the IRP comments on measuring labour productivity, Energex has implemented a number of output based efficiency metrics to ensure it maintains visibility of the performance of staff and an ongoing focus on program efficiency and product efficiency unit rate.⁶⁴ Energex has not articulated whether there are any material opex efficiency gains driven by the implementation of these metrics, and does not appear to have included any forecast efficiency gains stemming from these changes in its opex forecast. Energex has made some changes in response to the IRP's recommendations on utilisation of internal resources, including reviewing the Energex resource plan/strategy against the future program of works, conducting a review of the Span of Hours for BAU work and has engaged a fatigue expert to consult on its fatigue management policies. However, it does not appear that there has been any specific action taken that has resulted in cost efficiencies.⁶⁵

⁶¹ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, pp. 60.

⁶² Energex, Response to AER Information Request ENX 006, Question 1.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

Ergon

[REDACTED]

Ergon also reported that in order to improve oversight of workforce scheduling, it developed and deployed a 'Scheduler Viewer' tool [REDACTED]

[REDACTED]

[REDACTED] Ergon indicated that the direct benefits realised from the schedule viewer to date are the reduction of one FTE, associated with reduced oversight of schedule development. [REDACTED]

[REDACTED]

[REDACTED].⁶⁸ We note that estimating the impact of improved workforce scheduling on overall FTE requirements is likely to be challenging, and that it might take some time for Ergon to realise and measure the benefits of reduced idle time and more efficient scheduling. We would expect benefits stemming from these changes to be realised over the 2015-20 regulatory period.

To improve its labour productivity measurement, Ergon has implemented a number of depot level performance measures which have been implemented in two phases: September 2013 and February 2014. It is unclear as to whether there has been efficiency gains realised as a result of the implementation of these performance measures, however improvements to output measure performance reporting could be expected to improve the workforce productivity over the 2015-20 regulatory period.

Ergon has focused on a range of measures to improve works planning, resourcing and delivery. These measures include:

- Improved use of technology for estimation, planning and scheduling of work (including the FFA and Schedule Viewer)
- Improved works reporting and analysis
- Improved discipline in works planning change control
- Restructuring of internal resources to enable end-to-end planning of Transmission Capital works, thereby increasing efficiency
- Improved engagement of unions
- The combined use of internal resources with external contractors
- Reduction in the number of base load contractors
- Market testing of capital works job packages

⁶⁶ Ergon, Response to information request AER ERG 0024, Question 3.

⁶⁷ Ibid.

⁶⁸ Ergon, Response to information request AER ERG 006, Question 1; Ergon, Ergon, file note of meeting 22 January 2015

- Improvements to work folders.⁶⁹

Again however there does not appear to be any quantification of the cost savings as a result of these changes.

Similarly, in relation to improvements to workforce flexibility with start/finish times, Ergon indicated that it has pursued a range of initiatives to improve work scheduling as part of the EEP, and has identified efficiency gains in shift work arrangements in its Operations Control Centre and shift allocations in Toowoomba, Townsville and Cairns depots, however was not able to quantify the savings specifically associated with flexible start/finish times.⁷⁰

EBA restrictions impacting scheduling

There are a number of restrictive provisions which contribute to labour inefficiency contained in the DNSPs' EBAs. The following sections discuss the impact of the EBAs based on coverage, before discussing some of the restrictive provisions.

Proportion of staff on EBAs

Most DNSPs in the NEM employ the majority of their workforce under EBAs, as highlighted in the table below. We collected data from the Department of Employment in relation to the number of employees that signed onto EBAs at the commencement of the current agreements. This data indicates that while there is variation among DNSPs in terms of the proportion of their workforce on EBAs; the privatised Victorian DNSPs typically employ significantly less on EBAs relative to the other publicly owned DNSPs. SA Power Networks, a privately owned business which employs more than 95 per cent of its workforce on an EBA, is an exception to this rule.

Table 3.7: Percentage of workforce under EBAs by DNSPs

	Less than 50 per cent	Between 50 per cent and 75 per cent	More than 75 per cent
Actew AGL (ACT)			✓
Aurora (TAS)			✓
Ausgrid (NSW)			✓
CitiPower (VIC)	✓		
Endeavour (NSW)			✓
Energex (QLD)			✓
Ergon Energy (QLD)			✓
Essential (NSW)			✓

⁶⁹ Ibid.

⁷⁰ Ergon, Response to information request AER ERG 0024, Question 3 (d).

Jemena (VIC)		✓
Powercor (VIC)	✓	
Ausnet Services (VIC)	✓	
SA Power Networks (SA)		✓

Source: CA RINs, table 2.11.1, and DNSP EBAs.

Note: The percentages above were calculated based on RIN data on average staffing levels and the number of employees covered in the latest DNSP EBAs, which do not necessarily correspond with the time periods in the RIN data.

Not all the NEM DNSPs' EBAs disclose information regarding all working conditions. However, we have been able to compare some of the conditions of the Queensland DNSPs against the others and found that while there are some clauses which are likely to impose greater per employee costs on Energex and Ergon than their peers, there are others which offset these higher cost provisions, reflecting the protracted wages negotiation processes that underpin the agreements.

However, Energex and Ergon have highlighted a number of clauses which have resulted in reduced workforce flexibility.

[REDACTED]

Ergon highlighted in its regulatory proposal that it is currently negotiating with various parties 'seeking a simplified and flexible enterprise agreement that positions it to deliver on the corporate strategy, including improved value to our customers.'⁷²

Some of the more material impacts appear to be unique to the Queensland DNSPs.

Energex – Rostering consultation requirements

[REDACTED]

[REDACTED]

⁷¹ Energex, Response to AER Information Request ENX 013, Question 8.

⁷² Ergon Energy, *Regulatory Proposal – Supporting Documentation: Our Journey to the Best Possible Price* (October 2014), p. 13.

⁷³ Energex, Response to AER Information Request ENX 006, Question 8.

[REDACTED]

Ergon - Single person tasks

In response to our questions, Ergon provided some information around the impact of restrictions on the number of staff required to undertake switching on its network.⁷⁵ Under the EBA, Ergon Energy's Single Person Operation Guidelines and Queensland industry procedures, switching activities are required to be undertaken by a switching operator and switching assistant, however in other states these tasks can be carried out by a single person. Under the EBA, Ergon's Single Person Operation Guidelines require 'mutual agreement' with unions for the introduction of new tasks.

[REDACTED]

[REDACTED]

Conclusion – workforce scheduling

Workforce scheduling and output performance measurement, which are closely linked to labour productivity, have been identified as areas in need of improvement within Energex and Ergon, as reflected by the IRP's comments and the DNSPs' own comments on their restrictive EBA provisions. While some progress has been made to improve the tools, processes and reporting practices, these changes were largely implemented after the 2012-13 base year.

3.4 Workforce flexibility

A capable organisation is made up of employees with appropriate skills working in the right place at the right time. A wide range of capabilities are required in an electricity network business, from engineers, field and line workers to back office IT staff. The flexibility to

⁷⁴ Ibid.

⁷⁵ Ergon, Response to AER Information Request 024, question 3.

⁷⁶ Ergon, Response to AER Information Request 024, question 3.

⁷⁷ Ergon, Response to AER Questions 024(3), questions 4,5.

quickly and effectively adjust the workforce to meet organisational and project needs is important for delivering operational work and large projects efficiently. Outsourcing is one tool to achieve this flexibility. The ability to adjust staff levels is important to enable a business to efficiently respond to a changing external environment.

The focus of this section is on the extent to which Energex and Ergon are able to adjust their workforces to flexibly respond to changing demands.

Based on information provided to us and discussions with the businesses, EBAs appear to have limited the Queensland DNSPs' workforce flexibility, and possibly to a greater extent than some DNSPs in Victoria and South Australia. The key provisions in the EBAs that impact flexibility are those related to redundancies, outsourcing, and apprentice numbers, discussed in turn below.

Restrictions on involuntary redundancy

The ability to downsize a workforce is an important element of workforce flexibility. Restrictions on downsizing can result in inefficiency due to underutilised or unproductive employees. Redundancy, both voluntary and involuntary, is an important mechanism to reduce a workforce.

Energex's EBA requires that there are no forced retrenchments, but that if an employee is offered 'reasonable retraining and redeployment to a suitable alternative position', which doesn't require significantly more travel; they must accept this offer or face retrenchment.⁷⁸ Ergon's EBA has requirements to the same effect.⁷⁹

[REDACTED]

For Energex, as of the end of December 2014, it had 808 fewer staff than in July 2011, of which the largest reductions were from Apprentices (reduced intake) or Professional/Managerial and Administrative staff.⁸² [REDACTED]

[REDACTED] We understand that many of the staff who have left the business were not employed under Enterprise Bargaining Agreements (EBAs). [REDACTED]

⁷⁸ Energex Union Collective Agreement 2011, cl. 4.3.

⁷⁹ Ergon Energy Union Collective Agreement 2011, cl. 1.10.

⁸⁰ Energex, Response to AER Information Request ENX 006, Question 10.

⁸¹ Ergon, Response to AER Information Request Ergon 006, Question 8.

⁸² Energex, Response to AER Information Request ENX 013, Question 1.

⁸³ Energex, Response to AER Information Request ENX 013, Question 5, document: PwC BEP progress – strategic review (May 2013), Final draft report, p. 12.

[REDACTED] Future reductions are likely to be constrained by these restrictive EBA clauses unless they are removed.

We note that restrictions on involuntary retrenchment are not unique and appear in EBAs for the NSW DNSPs as well as CitiPower and Powercor. However, in Table 3.7 above we have drawn attention to the fact that the Queensland DNSPs have a high proportion of their workforces (more than 75%) employed under EBAs. This means that the effect of EBA inflexibilities, such as barriers to involuntary redundancies, are amplified relative to other DNSPs, such as the Victorian DNSPs (where less than 50% of the workforce are employed under EBAs). This poses a significant challenge for workforce management and undoubtedly influences the areas targeted for redundancies in recent years, as Energex and Ergon have suggested.

Restrictions on outsourcing

Energex and Ergon have indicated [REDACTED] a number of clauses within their EBAs that restrict the use of contractors, including restrictions on the types of work that contractors can perform.⁸⁵

- Constraints on when contractors can be used for 'core work' (i.e. construction, operation and routine maintenance work of assets, non-specialist), being circumstances where the work volume or type of work is beyond the capacity of the internal resources or staff, where the security and tenure of additional staff required to meet peak workloads cannot be guaranteed, or where it is 'in the public interest.' Public Interest includes issues of cost effectiveness.⁸⁶
- For core work, contractor working conditions must be equivalent to those of internal employees, including safety, worker's compensation, training and wages. In particular, 'where employees of contractors perform (core work), they shall be entitled to rates of pay and allowances which in aggregate shall be no less favourable than those that apply to the same or similar classifications of employees under the Agreement.'⁸⁷ [REDACTED]

[REDACTED]

⁸⁴ Ergon, file note of meeting 22 January 2015.

⁸⁵ Ergon, Response to AER Information Request Ergon 006, Question 8; Energex, Response to AER Information Request ENX 006, Question 10.

⁸⁶ Energex Union Collective Agreement 2011, cl. 13.11.2.

⁸⁷ Energex Union Collective Agreement 2011, cl. 13.11.4.

⁸⁸ [REDACTED]

⁸⁹ Energex, Response to AER Information Request ENX 013, Question 4.

- Requirements for notification of unions prior to the use of contractors for core work, including the provision of information to the unions. While information must be provided and discussions must not be unreasonably refused, there is no requirement for the unions to endorse the hiring of contractors.⁹⁰

Ergon's EBA contains similar provisions around the circumstances when contractors can be engaged for core work, equivalence conditions and notification of unions prior to contracting out.⁹¹

While we note these provisions are likely to increase opex overall, [REDACTED] in and of themselves, they are unlikely to be the source of material differences in opex efficiency between Energex and Ergon and other DNSPs:

- Many DNSP EBAs contain requirements around contractors undertaking 'core work' and requirements to consult with unions before contracting out. Indeed, some of the most restrictive provisions on outsourcing appear to be in CitiPower and Powercor's EBAs which require union agreement to outsourcing, yet they manage to operate efficiently within these provisions (see Table 3.8 for example of Victorian DNSPs outsourcing levels).
- Contractor-employee wage parity requirements also feature in the EBAs of CitiPower, Powercor and SA Power Networks. However, the impact of these requirements on overall opex depends on the relative levels of employee wages and allowances in each EBA. Based on the analysis above on costs per employee across the DNSPs, we consider it is unlikely that high wages are driving the higher labour costs among Energex and Ergon.

We note that, while there are restrictive provisions in all DNSP EBAs, it is apparent that some businesses are able to outsource more than others, working within similar constraints. This suggests that DNSP management and workforce culture, as well as the proportion of employees employed under EBAs, have some effect on the way that EBA provisions are applied in practice.

Contractor switching constraints

One constraint on contractor work that appears to be unique to the Queensland DNSPs is the limitations on particular tasks associated with switching and isolation of certain network assets. Energex's and Ergon's EBAs state that the DNSPs must 'restrict authorisation and access for external service providers' for:

- High Voltage Switching and Isolation of all Single Wire Earth Return (SWER) transformers for the sole purpose of the repair, maintenance and replacement of the SWER earthing grid (and for Ergon, transformers in remote areas greater than 150kms from an Ergon depot)
- For Energex, Cable Identification and Spiking on non-complex systems
- Acting as Switching Operator Assistants for external service providers work, for all High Voltage access and isolation procedures as required

⁹⁰ Energex Union Collective Agreement 2011, cl. 13.11.3.

⁹¹ Ergon Energy Union Collective Agreement 2011, Schedule 8.

- Performing an Auto Reclose Block (making a Pole Mounted Recloser Non-Auto) for external service providers work
- For Ergon, Acting as Access Permit Recipients.⁹²

[REDACTED]

[REDACTED] The requirement increases the non-productive time of contractors, who are required to wait for an Energex employee to attend a site at the beginning and conclusion of works. A reduction in non-productive time would reduce the overall costs of contractors. If the requirement was removed, it would also enable Energex employees to perform other work.

[REDACTED]

[REDACTED]

Ergon provided some documentation [REDACTED], which discussed the implications of the switching requirement on costs.⁹⁴ [REDACTED]

[REDACTED]

[REDACTED]

⁹² Ergon Energy Union Collective Agreement 2011, cl. 14.3; Energex Union Collective Agreement 2011, cl. 11.3.

⁹³ Ergon Energy, Response to AER Information Request 024, document: *Ergon Energy Operations - Local Service Agent Concept Paper*, p. 3.

⁹⁴ Ergon Energy, Response to AER Questions 0024, question 3.

⁹⁵ Ibid.

⁹⁶ Based on estimates of Preferred Contractor Panel 72.



Ergon’s quantification of the benefits of enabling contractor switching do not incorporate any efficiencies that might be associated with increased outsourcing which could result from a removal of this requirement. As such, in the absence of further information we consider the estimates of the impact of the restrictions on contractor switching on Ergon’s network are conservative, particularly given comments made by Ergon on the materiality of this restriction, which were made during discussions with us and the AER.⁹⁸

Level of outsourcing

With the exception of the constraints on contractor switching which is unique to Queensland DNSPs, all DNSP EBAs contain various limitations on the use of outsourcing similar to those described above, although the nature and extent of constraints vary. However, in practice, the level of outsourcing carried out by Energex and Ergon over the 2010-15 regulatory period is lower than that which was forecast by the Victorian DNSPs.

The proportion of opex (sum of operating and maintenance expenditure, O&M) outsourcing which was forecast by the Victorian DNSPs for their 2011-15 regulatory period is summarised the table below. We have separately reported the proportion of outsourced O&M to non-Related Party contractors, for clarity.

Table 3.8: Victorian DNSPs - Forecast average proportion of O&M outsourcing – 2011-15 RIN data

	Total O&M outsourcing	O&M outsourcing to non-Related Party Contractors
CitiPower	92 per cent	41 per cent
Powercor	83 per cent	40 per cent
AusNet Services	51 per cent	40 per cent
United Energy	63 per cent	43 per cent

Source: Victorian DNSPs’ Electricity Distribution RIN Regulatory templates for Regulatory Control Period 2011 to 2015, tab 2.2 table 4; tab 2.3 table 6; tab 2.1 table 9.

Energex and Ergon provided some information on the overall proportions of opex outsourced over the 2009-14 regulatory period.⁹⁹ The information provided by Ergon included overhead opex as a non-labour cost, however we understand that the majority of its overhead expenses are associated with labour. Accordingly, in estimating the total proportion of labour opex that is outsourced by Ergon, we have incorporated overhead expenses and applied a sensitivity of 75 per cent. The results suggest that Ergon outsourced between 33 per cent and 26 per cent of its labour opex, while Energex outsourced 39 per cent in total and 32 per cent to non-related parties. The information provided is summarised below.

⁹⁷ Ergon, Response to AER Questions 024(3), question 3.

⁹⁸ File note of meeting with Ergon Energy, 22 January 2015.

⁹⁹ Energex, Response to information request AER Energex 002, received 19 December 2014; Ergon, response to AER information request 021.

Table 3.9: Overall proportion of opex outsourcing 2012-13 (\$m 2014-15, proportions)

2012-13	Total Labour Opex	Total Outsourced Labour Opex	Labour opex outsourced to related parties	Proportion of labour opex - total	Proportion of labour opex outsourced - Non-related parties
Energex	\$418	\$162	\$28	39 per cent	32 per cent
Ergon - Assuming overheads are 100 per cent labour	\$305	\$101	\$ -	33 per cent	33 per cent
Ergon - Assuming overheads are 75 per cent labour	\$282	\$101	\$ -	36 per cent	36 per cent

Source: Energex, Response to information request AER Energex 002, received 19 December 2014; Ergon, response to AER information request 021.

From this analysis, it is apparent that Energex and Ergon outsourced less labour opex than the Victorian DNSPs had forecast for their 2011-15 regulatory period, even after accounting for the Victorian DNSPs outsourcing proportionally more to their related parties.

While outsourcing is clearly not the only strategy to improve workforce efficiency, and is not appropriate in all circumstances, it is instructive to consider the efficiency gains which Victorian DNSPs have attributed to outsourcing since privatisation:

- *Jemena: 17% saving - 'By 2010, JEN will have achieved operating efficiencies totalling \$54.4 million or 16.9 per cent of the ESC's opex allowance' and 'The outsourced contracts provide JAM with the flexibility to increase and decrease its requirements based on its work program. They also provide JEN access to a larger and more flexible workforce than it could prudently maintain on a standalone basis.'*¹⁰⁰
- *Powercor: 21% saving - KPMG found that, if Powercor Australia had delivered its nominated services for the year ended 31 December 2008 on a standalone basis, its efficient cost of service delivery would have been \$16.930 million (21 percent)(\$2008) more than the costs it actually incurred for these services (excluding related party margins).*¹⁰¹
- *CitiPower: 45% saving. KPMG found that if CitiPower had delivered its nominated services for the year ended 31 December 2008 on a standalone basis, its efficient cost of service delivery would have been \$19.049 million (45 per cent)(\$2008) more than the costs exclusive of margins it actually incurred for these services.*¹⁰²

¹⁰⁰ Jemena, Regulatory Proposal, 2009, p. 52, p. 121 (Note that JEN is *Jemena*, JAM is *Jemena Asset Management*)

¹⁰¹ Powercor Regulatory Proposal, 2009, p. 365

¹⁰² CitiPower Regulatory Proposal, 2009, p. 77

In our view, these type of savings go some way towards explaining the productivity gap between the Victorian and Queensland DNSPs suggested by the AER's benchmarking, our analysis and other reports.

Although we acknowledge that DNSPs may have an incentive to enter into a related party contract in order for shareholders to earn additional profit margins, evidence of the efficiencies made by the Victorian DNSPs suggests that the overall costs are still lower than in house services due to economies of scale and scope. In addition, where there has been an arms-length competitive tender process to engage the related party contractor, its costs are likely to reflect competitive market costs. We note that the efficiency gains that have been reported by the Victorian DNSPs, outlined above, suggest that outsourcing to a related party still yields efficiencies over and above in house provision of service.

We acknowledge that outsourcing will not be appropriate in all circumstances. However, we consider that the optimum level is likely to be higher than that reported by Energex and Ergon in 2012-13.

Requirements for apprentice intake

Energex highlighted that its current EBA requires it to maintain an average of 280 technical stream ('blue collar') apprentices over the period of the agreement (which commenced in 2011 and is currently being renegotiated).¹⁰³ As at 31 December 2014, Energex had 190 apprentices, which reflects a significant reduction from 414 apprentices in July 2011.¹⁰⁴

[REDACTED]

We note that Ergon has an identical requirement to maintain an average of 280 technical stream apprentice numbers over the term of its EBA, [REDACTED]

[REDACTED] We note that 280 apprentices represents around 9 per cent of Energex's and 8 per cent of Ergon's total workforce.

Our review of DNSP EBAs has identified that stated apprentice quotas are rare, however we consider that there may be other requirements for DNSPs to engage particular numbers of apprentices, for example, through State government agreements or programs.

Conclusion – Workforce flexibility

Overall, it appears that the Queensland DNSPs' EBA provisions, while not preventing outsourcing, may have imposed limits on their ability to engage contractors quickly and efficiently. It is likely that these constraints, along with the high proportion of their workforces employed on EBAs have together resulted in an overall lower proportion of opex activities being outsourced over 2009-14.

¹⁰³ Energex, Response to AER Information Request ENX 006, Question 8.

¹⁰⁴ Energex, Response to AER Information Request ENX 013, Question 1.

¹⁰⁵ Energex, Response to AER Information Request ENX 006, Question 8.

¹⁰⁶ Ergon, file note of meeting on 22 January 2015.

We note that constraints on outsourcing are undesirable from an efficiency perspective and more broadly from a competition perspective, as recently highlighted in The Australian Government's Competition Policy Review:

*The panel favours competition over restrictions and believes that businesses should generally be free to supply and acquire goods and services, including contract labour if they choose.*¹⁰⁷

The constraints on involuntary redundancy are another material source of inefficiency – the Queensland DNSPs are restricted from reducing the size of their workforces, which is likely to result in stranded labour during periods of lower work programs.

Overall, the continuing constraints on workforce flexibility are likely to result in higher costs in the base year opex. Any changes to these requirements during the 2015-20 regulatory period will improve their opex efficiency.

3.5 Workforce culture

Employee engagement is a key driver of labour productivity and is primarily reflected in discretionary effort and reduced absenteeism. Engagement depends in part on an organisation's culture. A sound culture will drive down costs, improve the quality of service to customers, achieve positive safety outcomes and lead to continuous improvement and innovation.

The IRP identified issues of culture in its review commenting that the culture of the organisation was 'biased toward expanding the network infrastructure and enlarging the capital base'.¹⁰⁸ This cultural issue was also identified by the IDC in its May 2013 report which noted it was 'particularly concerned about...noticeable cultural disregard for costs within the distribution network businesses.'¹⁰⁹

[REDACTED]

It is important to make a distinction here between workforce culture and management culture of an organisation. The culture of management is important in that it guides how decisions are made in organisations, whereas culture of the workforce is important because it can affect directly the efficiency of work undertaken. The IRP and IDC's comments relate specifically to organisational decisions that the Queensland DNSPs have taken, indicating

¹⁰⁷ Commonwealth of Australia, 2014. 'Competition Policy Review – Draft Report – September 2014', p. 246

¹⁰⁸ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. v.

¹⁰⁹ Interdepartmental Committee on Electricity Sector Reform, *Report to government*, May 2013, p. 49.

¹¹⁰ Energex, file note of meeting on 16 January 2015.

¹¹¹ Ergon, response to information request 006, question 7.

that they are in fact referring to management culture. The IRP and EDC’s comments have suggested that the management’s ‘cultural disregard for costs’ is driving inefficiency across both Energex and Ergon. However, the comments made by Energex suggest that workforce cultural issues, linked to the EBA entitlements discussed above, are also likely to have an impact on opex efficiency.

3.6 Overtime

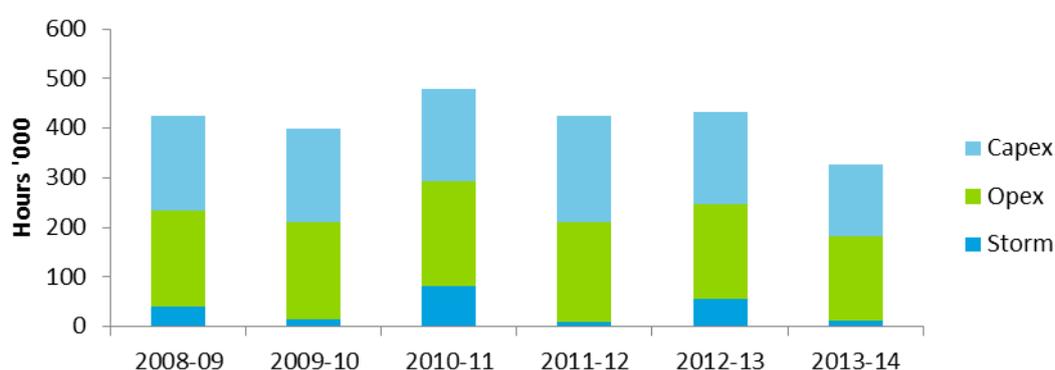
During the IRP’s review of the Queensland DNSPs, it was identified that across Energex, Ergon and Powerlink, 647 employees earned in excess of 1.5 times their base pay and 27 employees earned twice their base pay in 2011-12.¹¹² The IRP commented that ‘such high ratios are likely to result in lower levels of productivity’, and recommended that the NSPs ‘take urgent action to reduce overtime to benchmark levels and review gross pay to base ratios for all employees.’¹¹³

Energex

Energex reported to have taken some action to reduce overtime; however, it continues to have relatively high overtime expenses and a large proportion of employees with a high gross to base salary ratio (GBR).¹¹⁴ An average GBR of 1.5 or lower is considered a benchmark by other DNSPs.¹¹⁵

Energex has introduced an overtime policy and has deployed an overtime management tool for key operational managers. These actions have had some effect as Energex’s overtime expenses decreased from \$21.7 million in 2012-13 to \$16.7 million in 2013-14, which is reflected in the overall decline in overtime in Chart 3.1.

Chart 3.1 Energex’s overtime hours, by category



¹¹² The IRP and the NSW Auditor General have both referred to a GBR of 1.5 as a threshold indicator, above which productivity concerns arise.

¹¹³ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 56.

¹¹⁴ The gross to base ratio measures the proportion of the base salary that an employee earns in overtime and other associated benefits. An example of this is where an employee earns \$100,000 in base pay and in one year earns \$50,000 in overtime pay, this employee would have a gross to base ratio of 1.5.

¹¹⁵ NSW Auditor General, *New South Wales Auditor-General’s Report - Financial Audit, Volume Four 2013 Focusing on Electricity*, November 2013, p. 30.

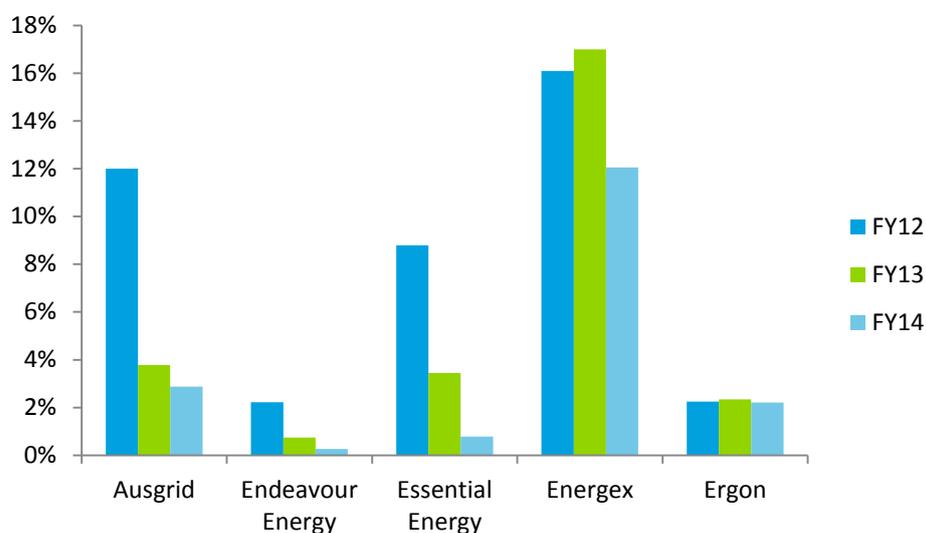
Source: Energex, Response to information request AER ENX 006, Question 10.

However we note that this reduction has predominately resulted in lower capex and storm related overtime, which reduced by 78 per cent and 22 per cent, respectively, while opex overtime reduced by only 11 per cent in 2013-14. It is unclear as to whether this decrease reflects a structural change to reduce opex and hence will be sustained. We also note that while there has been a decrease in overtime from 2012-13 to 2013-14, Energex's overtime expenses increased by 24 per cent from \$17.5m in 2011-12 to \$21.7 million in 2012-13, which is the opex base year.

Examining the proportion of Energex's employees with a high GBR offers some further insight into the progress that Energex has made against this recommendation. Energex benchmarks higher than both the NSW DNSPs and Ergon on the proportion of employees on GBRs higher than 1.5 (i.e. the proportion of employees earning more than 50 per cent of base salary in overtime, respectively), as shown in Chart 3.2.

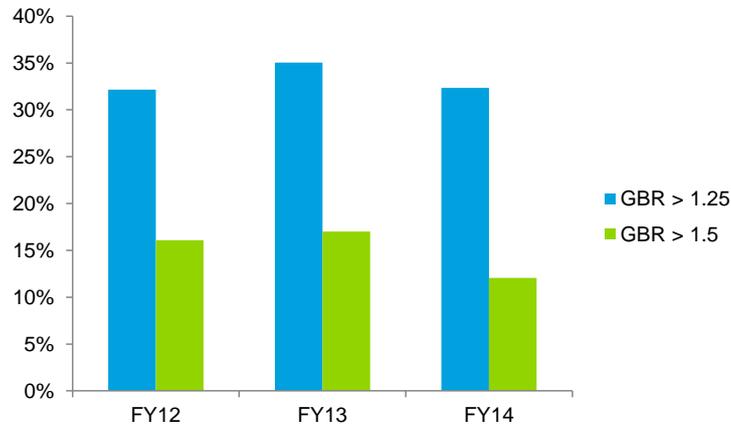
The decreases in the NSW DNSPs' employees GBRs in 2013 and 2014 gives some indication as to scope for improvements in the management of overtime. We note that in 2013-14, 32 per cent of Energex's employees earned more than 25 per cent of their base salary again in overtime, as shown in Chart 3.3.

Chart 3.2 Comparison of DNSPs' proportion of employees with GBR > 1.5



Source: NSW Auditor General, New South Wales Auditor-General's Report - Financial Audit, Volume Four 2013 Focusing on Electricity, November 2013; Energex, Response to information request AER EGX, Question 3; Ergon, Response to information request AER ERG 006, Question 3.

Chart 3.3 Energex – Gross to Base Salary Ratio (GBR) proportions

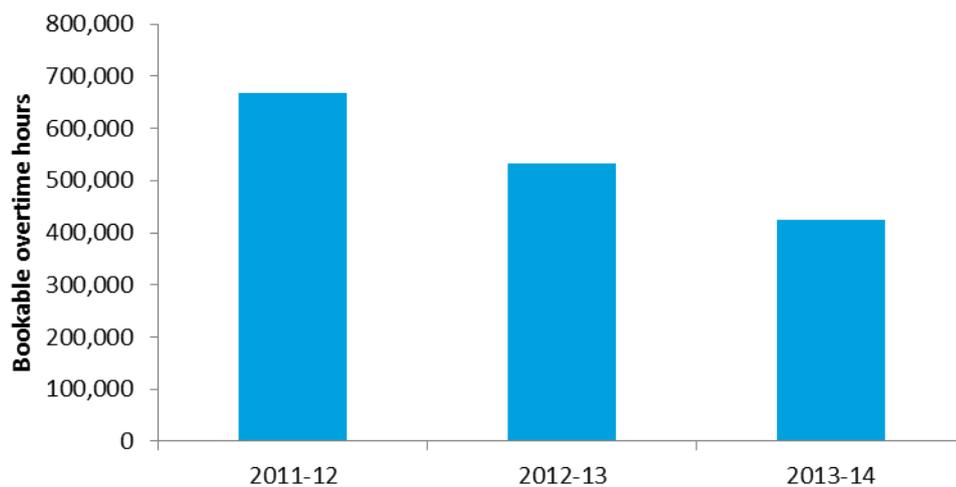


Source: Energex, Response to information request AER EGX, Question 3.

Ergon

Ergon has had a strong focus on reducing the level of overtime in response to the IRP recommendation 24, particularly in 2012-13. Practices such as the routine monitoring of overtime reports, and identification and investigation of cases where overtime appears excessive have assisted in reducing the number of overtime hours that are booked by Ergon field and near-field staff.¹¹⁶ As a result of measures that Ergon has put in place, bookable overtime hours reduced from 668,261 hours in 2011-12 to 533,127 hours in 2012-13, as reflected in Chart 3.4.¹¹⁷ Bookable overtime excludes fixed overtime loadings (4 hours per week) which are applied to the remuneration of around 200 (mostly non-field) Ergon staff.

Chart 3.4 Ergon - Total overtime hours



Source: Ergon, Response to information request AER ERG 006, Question 3.

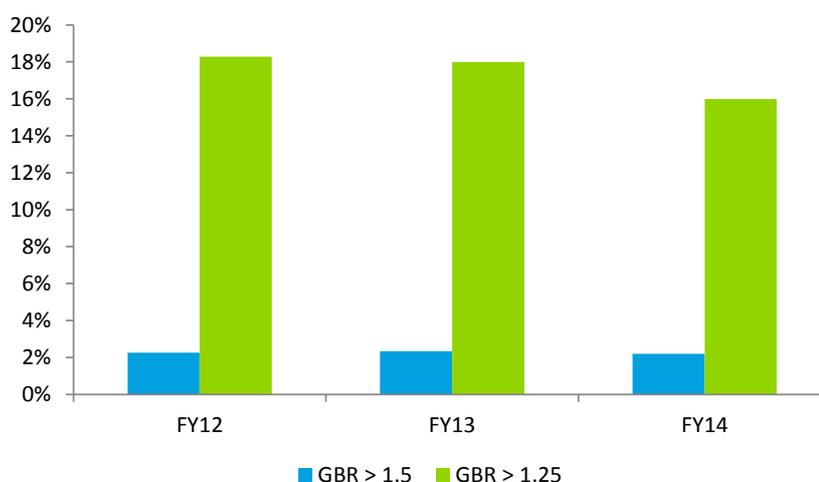
¹¹⁶ Ergon, Response to information request AER ERG 006, Questions 1, 2 and 3.

¹¹⁷ Ibid.

Chart 3.5 shows a gradual decrease of the proportion of employees with a GBR greater than 1.25, but limited change among the proportion of employees with a GBR greater than 1.5 over 2012-14.

We note that the number of Ergon employees on a GBR greater than 1.5 is already much lower than Energex and other DNSPs and likely represents a ‘natural’ level of employees earning a higher amount of overtime as a result of business needs.

Chart 3.5 Ergon – Gross to base salary ratio proportions



Source: Ergon, Response to information request AER ERG 006, Question 3.

Conclusion – overtime

Overtime expenditure has been a noted problem in both the Queensland and NSW DNSPs in recent years – with various reports on the issues. The IRP linked excessive overtime to lower levels of labour productivity.

While Ergon has made some progress in addressing overtime, which are reflected in its base year opex (20 per cent reduction in bookable overtime hours), Energex’s overtime levels remain very high, even in comparison to the NSW DNSPs. In particular, the proportion of Energex employees with a GBR above 1.5 (which is considered to be the benchmark level by the NSW Audit Office and the IRP), remains very high. Energex has reduced its overtime expenditure, but these reductions occurred after the 2012-13 base year.

3.7 SPARQ costs

Energex’s and Ergon’s ICT services are provided by SPARQ Solutions Pty Ltd (SPARQ), which is a joint venture company owned by the two DNSPs. SPARQ was created in 2004 with the intention of providing an ICT shared service to Energex and Ergon. Its objectives included sharing ICT skills, creating scale economies, and reducing costs.

The services provided by SPARQ can be broadly categorised as services that operate the ICT environment, and project services to acquire and upgrade ICT systems. The creation of

SPARQ also included a role of the Chief Information Officer for both Energex and Ergon. Therefore not only was SPARQ responsible for operating ICT for the DNSPs, it was also responsible for setting the strategy for ICT and providing input into investment decisions.¹¹⁸

3.7.1 IRP Recommendations on SPARQ

The IRP found that problems with planning and governance could be reducing the efficiency of ICT service provision to the Queensland DNSPs and that 'services currently provided by SPARQ may be delivered more efficiently by external service providers.'¹¹⁹ The IRP also considered there were potentially significant savings to be made in ICT capex, partly through joint delivery of projects but also through reassessing capex priorities.

In light of this, the IRP made a series of recommendations aimed at increasing the competitive pressure on SPARQ and enabling it to operate more as a service provider than an internal arm of the DNSPs:

- The role of the office of the Chief Information Officer be returned to each of the DNSPs, and SPARQ focus on its role as a service provider to the DNSPs. (Recommendation 12)
- Each of the DNSPs reassess ICT capex spend priorities and focus on core business requirements. (Recommendation 13)
- Further efficiencies should be achieved through streamlining testing of software, developing a common set of automated financial and management reports, and reviewing existing system contract to reduce user license costs. (Recommendation 14)
- Alternative service delivery models for ICT services currently delivered by SPARQ to be market tested by the DNSPs, by the DNSPs issuing tenders for the delivery of capital projects and operational ICT services (Recommendation 15)
- Implement an integrated operating model that consolidates Planning and Partnering positions within DNSPs to minimise the number of touch points between SPARQ and the DNSPs. (Recommendation 16)¹²⁰

ICT benchmarking

In order to understand the ICT costs incurred by Energex and Ergon in the context of their peers costs, we have examined a number of benchmarks, including RIN data and benchmarks commissioned by the DNSPs.

RIN data IT cost benchmarking

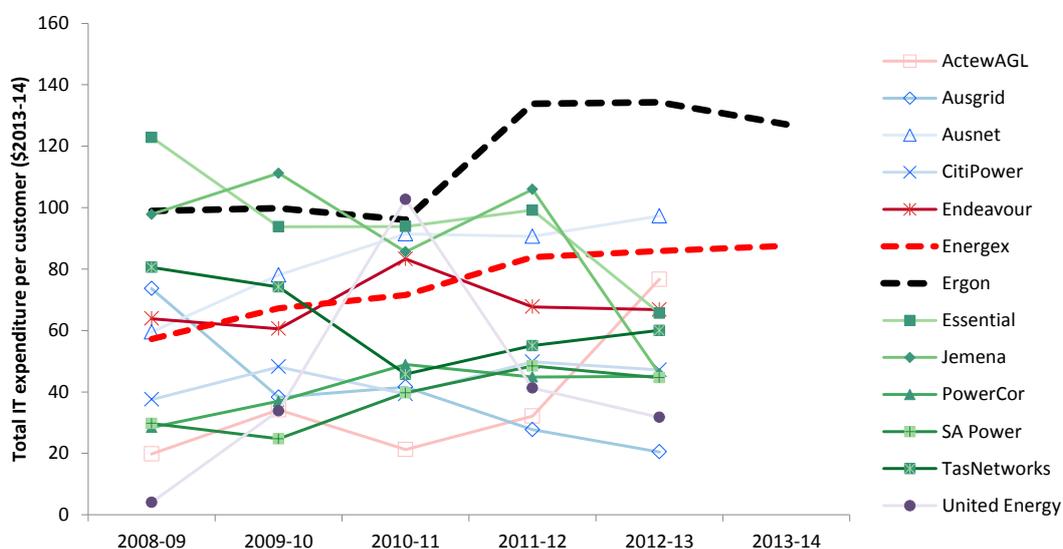
Analysis of RIN data highlights that in the base year (2012-13), Ergon and Energex incurred the highest and third highest ICT costs per customer in the NEM. Energex and Ergon have significantly greater ICT costs than their peers on a per customer basis.

¹¹⁸ The specific governance arrangements regarding ICT investment have not been sighted or reviewed.

¹¹⁹ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 54.

¹²⁰ Ibid.

Chart 3.6 RIN Data – Total ICT expenditure per customer (\$2014-15)



Source: DNSP RINs – Economic benchmarking and reset RINs. Note: This graph is in financial years, but the Victorian DNSPs report on the basis of calendar years. Note that the Victorian DNSPs have not yet reported their 2014 data.

KPMG benchmarking for Energex

Energex engaged KPMG to prepare a report benchmarking their ICT expenditure against eight other DNSPs in 2014.¹²¹ A wide range of benchmarks were included in the study, including ICT costs as a proportion of revenues, total asset value, per staff member, etc. In general, for the cost related indicators, the benchmarking presented Energex as at or below the mean benchmark cost, with the exception of the following:

- ICT capex as a proportion of corporate capex (mean 4.48 per cent, Energex 6.91 per cent)
- ICT asset value as a proportion of total corporate asset value (mean 1.37 per cent, Energex 1.65 per cent)
- Total ICT staff as a proportion of corporate staff (mean 5.94 per cent, Energex 7.43 per cent)
- Ratio of client devices to total organisational staff (mean 1.27, Energex 1.42).

Despite the KPMG benchmarking data indicating that Energex are lower than the benchmark mean for ICT for the majority of the selected metrics, drawing conclusions from the relative measures (ICT opex as a per cent of corporate revenues, ICT opex as a per cent of annual operating expenditure) must take into account what the corporate revenue and annual operating expenditures are. ICT expenditure is not largely consumption based or highly variable,¹²² and does not necessarily increase or decrease linearly with the size of an

¹²¹ Energex, Response to information request AER 006, Question 16, attachment: KPMG, 2013 Utilities ICT Benchmarking – Final Report, Energex, 14 March 2014.

¹²² This is changing with the increased adoption of cloud services where pricing is based on usage and consumption.

organisation. In our view, these may not be effective measures of the efficiency of ICT opex on their own.

Further, ICT benchmarking measures which use staff numbers as a normalisation will advantage businesses with relatively high staff numbers.

ITNewcom Benchmarking for SPARQ

In 2013, SPARQ engaged IT specialists ITNewcom to conduct some detailed benchmarking of its costs, focusing particularly on the labour component of SPARQ's costs. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

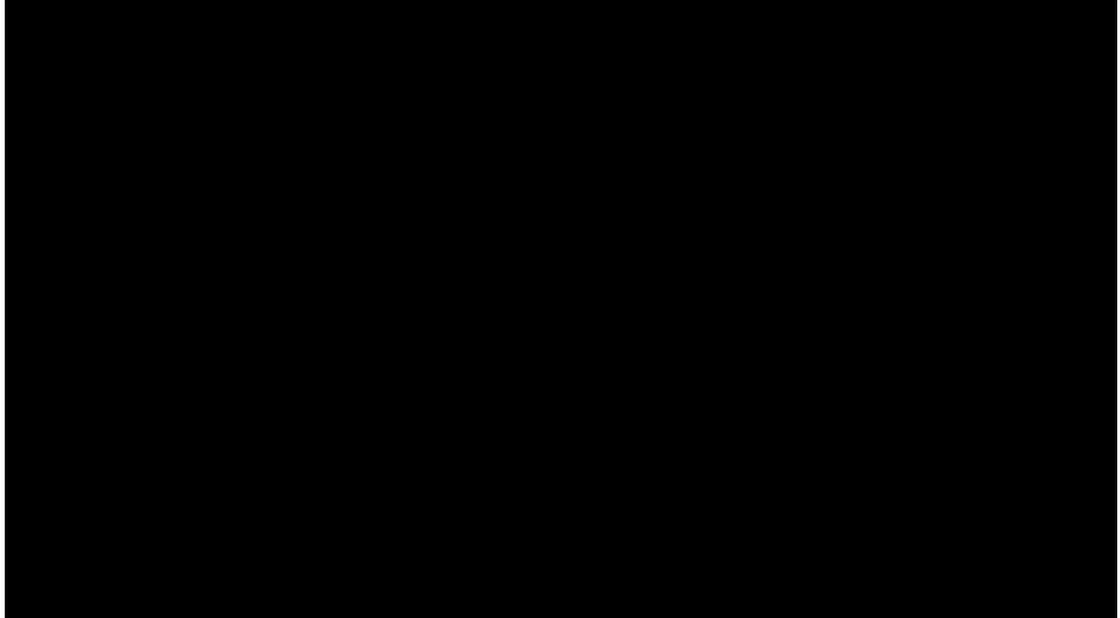
[REDACTED]

¹²³ [REDACTED]

¹²⁴ [REDACTED]

¹²⁵ Ergon, Response to AER – SPARQ Follow up Response to AER 006, Question 1c).

Chart 3.7 ITNewcom Benchmarking for SPARQ – Cost of Candidate Sourcing Options – total forecast costs.



[Redacted text]

[Redacted] This suggests that domestic market testing of the ICT application development could yield improvements.

The ITNewcom benchmarking results and recommendations highlight again the importance of changing the governance arrangements around SPARQ to enable more market testing of its services, as was also recommended by the IRP.

Market testing and reducing the ‘touch points’ between the DNSPs and SPARQ

While the DNSPs and SPARQ have taken some action in response to the IRP’s recommendations on market testing, the action taken does not appear to have fully addressed the IRP’s concerns.

[Redacted text]

This concept is similar in principle to arrangements elsewhere in a number of utilities, where ICT shared services were provided by an ICT service provider under similar arrangements and with similar objectives as SPARQ. Box 1 outlines our experiences and views in relation to shared ICT services organisations.

¹²⁶ ITNewcom, SPARQ Solutions - IT Sourcing Strategy - Financial Assessment, 11 February 2013 – Final (provided in response to Ergon Energy AER Information Request 024). P. 17.

Box 1: Shared ICT services experiences

Recent history has highlighted the challenges with operating a cost effective ICT shared services organisation.

While the concept and objectives of shared services, including the potential for scale economies and access to broader skills and capabilities makes sense, successful implementation is often difficult because individual agendas tend to emerge and detract from shared objectives. The incentive arrangements underpinning the agreements between ICT service providers and their clients are critical to successful outcomes.

In one case, an exclusive agreement between utilities and a shared ICT services provider incorporated limited incentive for the ICT service provider to act competitively. There was a high degree of certainty in the future workload and revenue for the ICT service provider. Although we understand that the ICT service provider did outsource some work to the market, there were still many functions performed by the ICT service provider in the procurement, contract management, project management, and strategic planning of ICT projects, as well as other areas, which added to the overhead and cost of delivering ICT services, with limited value.

The ICT service provider initially assumed much of the ICT strategic planning and operational responsibilities. However over time each utility increased their internal ICT capability with a focus on strategic planning capability to improve the alignment between the business and ICT. This change was a response to the challenges in working with the ICT service provider. Today, ICT capability in the utilities has matured in-house, and as a result is more closely aligned with the business.

Given the way in which this ICT service provider was established, the characteristics of the agreement and the governance between the organisations, there appeared to be little to no incentive for the service provider to improve its service delivery and quality of work. It was lacking a customer-service mindset and culture, and this resulted in little improvement to outcomes for the utilities.

We note that there are examples of other ICT shared services organisations that have been successful in the utilities and other industries (e.g. financial services). In our experience, where the arrangements incorporate market testing, particularly for commodity-type ICT services such as infrastructure and application management, this allows the ICT service provider to focus on higher-value add activities where sound knowledge of the client's business is required.

Box 1 highlights that unless effective incentives to reduce costs and improve the quality and outcomes of ICT services exist, the objectives of efficiency and improved capability will be difficult to achieve.

We have not undertaken a detailed review of SPARQ's operations, however the IRP made a number of recommendations regarding the governance and operation of SPARQ, listed above, and in particular, commentary suggests that the IRP held significant concerns about the lack of competitive pressure applied to SPARQ's services, which is associated with the number of 'touch points' between the DNSPs and SPARQ. The DNSP OCIO positions were named as a particular point of influence in the relationship, and the IRP recommended these be brought back inside the DNSPs.

Panel arrangement

The IRP recommended that Energex and Ergon test alternative service delivery models for ICT services by issuing market tenders for capital projects and relevant operational ICT services. It considered that 'despite one of SPARQ's foundation objectives being capital

expenditure savings from the joint delivery of projects...there has been very limited delivery of joint projects to date' and that 'services currently provided by SPARQ may be delivered more efficiently by external providers.'¹²⁷

Energex and Ergon, together with SPARQ, have interpreted the IRP's recommendations on market testing as requiring SPARQ to develop a panel of providers, to provide services to SPARQ in areas where SPARQ is less cost effective, rather than the DNSPs issuing market tenders to place competitive pressure on SPARQ itself. The Panel of Outsourced Project Delivery Partners consists of Accenture, Cap Gemini, HCL, Wipro and SMS. Energex indicated that these panel providers are expected to deliver lower cost arrangements through leveraging 'both onshore and offshore delivery capability.'¹²⁸

Though this new model of service delivery potentially offers benefits, this action is arguably inconsistent with the IRP recommendation that the DNSPs place pressure on SPARQ through directly outsourcing. These panel arrangements established by SPARQ and the DNSPs are associated with capital works projects, not operational services, and therefore do not actually market-test SPARQ's service provision, as recommended by the IRP.

Although Energex, Ergon and SPARQ have taken action to improve SPARQ's cost efficiency through outsourcing some components of SPARQ's work to the panel, there has been limited progress by the DNSPs in market testing the provision of ICT services with external providers. While Energex indicated the panel arrangements would be in place at the end of 2014, Ergon's response suggested that the panel was formed in February 2014, and referred to ten pieces of work with a value of \$3 million having been outsourced to the Panel by September 2014.¹²⁹ This was later clarified by Ergon, who suggested that by 31 December 2014, \$7.9 million of ICT works had been outsourced to the new panel.¹³⁰ We estimate that \$7.9 million reflects approximately 4 per cent of SPARQ's costs which were passed through to Energex and Ergon in 2013-14.

Ergon pointed out that 28 per cent of projects utilised panel engagements, which represents 32 per cent of the 2014 ICT works program value for regulated services. In our view, this proportional figure does not accurately reflect the impact of the panel arrangement on SPARQ's operations, as the value of projects outsourced to the panel highlight that only very small components of each project have been outsourced.

Office of the CIO

In responding to questions regarding the Office of the CIO (OCIO), Energex explained that although the OCIO was still located within SPARQ, it had 'further improved the engagement model with new Planning and Partnering roles and a CIO forum/IT reference group within Energex.'¹³¹

[REDACTED]

¹²⁷ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 54.

¹²⁸ Energex, Response to AER Information Request 006, Question 1.

¹²⁹ Ergon, Response to AER Information Request 006, Question 1.

¹³⁰ Ergon, Response to AER Information Request 024, Question 1.

¹³¹ Energex, Response to information request AER ENX 006, Question 1.14b.

However, it is not clear that shifting the OCIO functions back inside the DNSPs and therefore enabling SPARQ to operate as a service provider would require the establishment of a holding company. Further, the IRP placed the onus on the DNSPs to implement this recommendation.

We have not reviewed Energex's new engagement model but we note that the objective of the IRP's recommendation to 'implement an integrated operating model that consolidates the Planning and Partnering positions within DNSPs' (Recommendation 16) was to 'minimise the number of touch points between SPARQ and the DNSPs'.¹³³ By retaining the OCIO positions inside SPARQ, Energex and Ergon would appear to be reducing the opportunity to improve the incentives for SPARQ to operate as an efficient service provider.

Streamlining and connecting SPARQ and DNSP processes

Energex has made some progress in implementing recommendations 13 and 14,¹³⁴ including the roll-out of an automatic testing tool to streamline the software testing process and conducting a review of ICT capex spend resulting in a delayed major systems upgrade for the ERP software platform.¹³⁵ There may be scope for additional reforms in response to these two recommendations, specifically with regards to recommendation 14 (automated software testing).

In addition to automated software testing, recommendation 14 also suggests that DNSPs could reduce the number of user licenses and implement a common set of automated financial reports. It also should be noted in regards to recommendation 13 that the IRP recognised:

*It would take several years for the benefit of this to flow through the Asset Service Fee due to the size of the existing asset base and the life over which ICT assets are depreciated. Further, capital expenditure would have to be permanently reduced, not simply deferred to later years.*¹³⁶

Ergon reported that SPARQ has adopted and implemented the Hewlett Packard Quality Suite of testing tools, as recommended by the IRP, however, has not provided clear evidence of any progress in the other two sub-recommendations around financial and management reporting and user licence costs. In communication provided by Ergon to the AER,¹³⁷ Ergon noted that a common set of financial reports are contingent upon the formation of a holding company for Energex and Ergon, which, as noted above, has not been actioned by the Queensland Government.

¹³² Ergon, file note of meeting on 22 January 2015.

¹³³ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 55.

¹³⁴ Recommendation 13 suggests that Energex reassess its ICT capex spend, Energex has done this and as a result delayed the upgrade of some major systems. Recommendation 14 suggests that SPARQ adopts the use of automatic testing tools, automated financial and management reports and that SPARQ reviews existing user-license costs.

¹³⁵ Energex, *Regulatory Proposal*, October 2014 -Appendix 37 – ICT Services Expenditure, October 2014.

¹³⁶ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 54.

¹³⁷ Ergon, Response to information request AER ERG 006, Questions 1, 2 and 3.

Reassess ICT capex

Ergon reported that following the IRP report and reviews of ICT capex priorities, there were major changes in the ICT program of works leading to a 52 per cent underspend on the AER determination in the current regulatory control period for Asset Services Fees.¹³⁸ For Energex, limited changes were made to the Program of Work in response to the IRP's recommendation.¹³⁹

It is important to note that IRP recommendation 14 relates to the reduction in capital expenditure on ICT and not just project deferral. However, Ergon attributes most of the underspend to the deferral of several large ICT projects including the Distribution Management System, Work Force Automation, Market Systems, ERP Upgrade, Network Planning and Forecasting, and other ICT infrastructure.¹⁴⁰

3.7.2 Increases in SPARQ fees charged to Energex and Ergon

We have briefly reviewed the source of cost increases which have flowed through to the SPARQ fees reflected in Energex's and Ergon's opex.

SPARQ fee structure

SPARQ charges a fee to Energex and Ergon which they then reflect as opex in the regulatory building blocks, comprised of the following components:

- Operational support – a fee for the provision of end-user services (e.g. helpdesk), application, infrastructure and telecommunications support. This fee is driven by the following costs incurred by SPARQ to provide these services:
 - Internal and external labour
 - Recurrent license and maintenance costs payable to external vendors
 - SPARQ Solutions property costs
 - Travel costs
 - Training costs
 - Other overheads (e.g. HR services, contract management).
- Telecommunications pass-through – the cost of voice (e.g. mobile and fixed line) and data (e.g. wide area network (WAN)) services as charged by telecommunications carriers and data providers engaged by SPARQ. This is a pass-through cost with no margin added by SPARQ.
- Non-capital project costs - expenditure incurred by SPARQ in delivering the ICT Program of Work that are not capital in nature. Such costs include costs to develop business cases, undertake feasibility studies, and prototype-proof of concept systems, reconfiguration of existing assets that do not alter core code or infrastructure,

¹³⁸ Ergon Energy, *Regulatory Proposal – Supporting Documentation: ICT Expenditure Forecast Summary* (October 2014).

¹³⁹ Energex, *Regulatory Proposal Appendix 32: ICT Strategic Plan* (October 2014), 20.

¹⁴⁰ Ibid.

decommissioning and disposal of obsolete assets, and some aspects of change management.¹⁴¹

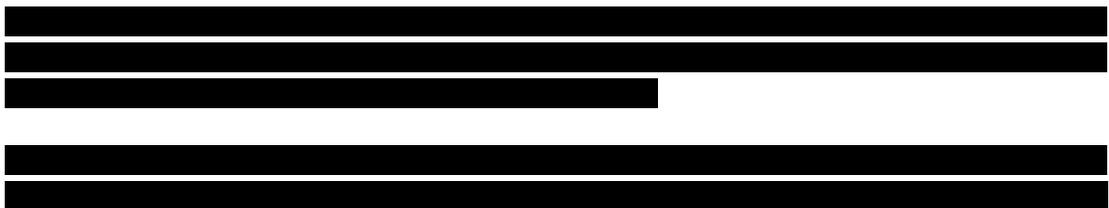
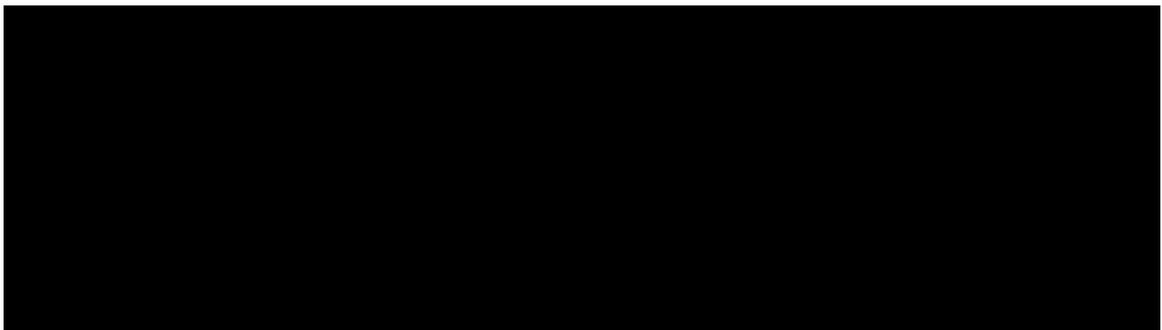
- Asset service fees – as SPARQ delivers the majority of Energex’s and Ergon’s portfolios of projects, expenditure on ICT projects is incurred directly by SPARQ. SPARQ capitalises the majority of project expenditure and holds ICT assets¹⁴² on its balance sheet. SPARQ then charges an asset management fee to Ergon and Energex which is recognised as opex by both DNSPs. The asset management fee comprises depreciation and amortisation charges from the capitalised assets, as well as finance charges.

A summary of actual opex for Ergon for the 2010-2015 regulatory period is provided in Table 3.10.

Table 3.10: Ergon - SPARQ Fees 2009-10 to 2013-14 (\$,000 2014-15)



Table 3.11: Energex - SPARQ Fees 2011-12 to 2013-14 (\$,000 2014-15)



¹⁴¹ Energex, *Regulatory Proposal Appendix 32: ICT Strategic Plan* (October 2014), Appendix B

¹⁴² Excluding end-user devices such as laptops, desktop PCs and mobile phones.

[REDACTED]

We note that ICT costs are a material component of the DNSPs' overall opex, representing 33 per cent and 25 per cent of total SCS opex in the base year for Energex and Ergon, respectively.

Depreciation charges

[REDACTED]

[REDACTED]

ICT Capex over 2010-15

Major ICT capex projects carried out by SPARQ during the 2010-15 regulatory period are described below. While we have not reviewed these projects in any detail, we have made some observations regarding the program.

- Customer and Market systems – during the current regulatory period an upgrade of the Contact Centre Telephony system and the implementation of a Service Interactions portal were completed. The Service Interactions portal supports some NECF requirements.¹⁴⁵
- Network Facilities Management¹⁴⁶ (NFM) system and Geographical Information System (GIS) – the technical platform for these systems was upgraded in 2011. While technical upgrades are necessary, ongoing investment in upgrading a platform for an out-of-date system, or one that is nearing end of life, is not prudent. Energex's ICT Strategic Plan for 2016-2020 notes that a replacement of these systems is planned.¹⁴⁷

¹⁴³ Ergon, *Regulatory Proposal*, October 2014 - Attachment 07.07.04 – *Infrastructure Asset Renewal Guidelines*, December 2013.

¹⁴⁴ *Ibid*, p. 2.

¹⁴⁵ Energex, *Regulatory Proposal*, October 2014 - Appendix 32: ICT Strategic Plan.

¹⁴⁶ Described as a suite of systems including the distribution planning application (NETPLAN), and a bespoke substation forecasting application (SIFT).

¹⁴⁷ Energex, *Regulatory Proposal*, October 2014 - Appendix 32: ICT Strategic Plan.

- Distribution Management System (DMS) – during the current regulatory period this project was commenced by Ergon and then deferred due to complexity and business impact. Energex implemented a new DMS in conjunction with an Outage Management System (OMS). These systems are critical to operating the network and therefore require investment to maintain and keep up to date.¹⁴⁸
- Enterprise Resource Planning (ERP) – Energex and Ergon embarked on a joint project to upgrade Ellipse v5. During the earlier stages of the project (e.g. feasibility, requirements, design) challenges with upgrading this system were recognised. Minor enhancements were deployed to address immediate and higher priority system issues and change requests. The ERP upgrade program has now been revised to include a more strategic review of ERP options.¹⁴⁹
- Enterprise Asset Management (EAM) – this project was deferred pending greater certainty on the direction of ERP.¹⁵⁰ Given the challenges of the Ellipse upgrade described above this appears a prudent decision.
- Business Analytics – in the current regulatory period Energex invested in a core Business Analytics platform to consolidate reporting and the provision of management and regulatory information.¹⁵¹ The ability to utilise data and gain information and insights from it has become increasingly important in recent years and will continue to do so. However to help ensure that long term investments are sound, Ergon and Energex need to ensure that there is a clearly defined strategy and architecture to support their analytics capability across the organisation.

In addition to the SPARQ fees, Energex and Ergon also maintain a non-system ICT capex program.

Energex reported that its ICT capex for end-user devices (Energex ICT capex, additional to SPARQ fees) is now forecast to be \$13.82M for the 2010-15 regulatory period, which is 3.43 per cent less than the capital allowed for in the AER's determination.¹⁵² This expenditure is primarily for the provision of end-user computing devices such as desktop and laptop PCs, as well as mobile computing devices.

Ergon did not provide a revised forecast of its own (non-SPARQ) ICT capex program over the current regulatory period, although we note that the AER's final determination on Ergon's 2010-15 non-system ICT capex rejected \$14 million over the period relating to a number of categories of ICT expenditure.¹⁵³

ICT Opex over 2010-15

ICT opex is driven by the cost of maintaining ICT systems and the provision of ICT services required to support end-users. ICT opex is also driven by consumption based charges such

¹⁴⁸ Ibid.

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

¹⁵¹ Ibid.

¹⁵² Ibid, p. 2.

¹⁵³ AER, Final decision - Queensland distribution determination 2010–11 to 2014–15, May 2010, p. 134.

as voice and data costs. The use of relatively current systems, standard architectures and software applications, and use of the market for IT services are generally acceptable ways in which ICT opex can be reduced, maintained and managed efficiently.

The increase in SPARQ's operational support costs over the five year period is significant. Review of the data provided by Ergon¹⁵⁴ suggests that the increase is caused by the provision of services such as helpdesk and IT support, rather than license and maintenance fees. Based on the information reviewed it is not clear why helpdesk and IT support costs (which are driven by labour costs) have increased significantly. Typically increases in such costs occur due to inefficient processes and management systems. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] These types of services are 'commodity IT services' which can be delivered relatively efficiently by the market.

Energex's and Ergon's ICT systems landscapes consist of several out-of-date and bespoke applications. Some package applications (e.g. non-bespoke) such as Ellipse for ERP are also customised and supplemented by satellite systems. The number of physical servers in the ICT systems landscape also appears to be high, and this may in part be due to the server infrastructure requirements of out-of-date and bespoke systems.

ICT systems landscapes that have the characteristics described above tend to be inefficient, more costly and higher-risk. They are inefficient because there are often multiple sources of the same data, and duplication or gaps in terms of systems capabilities. Such landscapes often have poorly integrated systems which can result in end-users spending time reconciling data from different systems in spreadsheets or entering data multiple times into various systems.

The IRP considered that 'incongruent ICT strategic planning' between Energex and Ergon had led to independent decisions being made with very limited collaboration to reduce costs.¹⁵⁶ Customised and out-of-date systems are also typically more expensive to support. Software vendors will usually charge a premium to continue supporting these systems because the scale economies for the vendor to continue supporting the few customers on such systems decline over time. Bespoke systems are higher-risk than package software because the skills and knowledge required to support and maintain the systems often reside with one to two employees. As these skills become scarcer over time the costs to support the systems can increase. Such landscapes also provide an inadequate platform for the implementation of new IT capabilities that may include characteristics such as better automation of tasks and better management of and access to data and information.

¹⁵⁴ Ergon, Response to AER Information Request Ergon 006, Question 17-18 – document: Ergon Q17-18.xlsx

¹⁵⁵ SPARQ Solutions, Response to AER Information Request Ergon 45 – SPARQ.

¹⁵⁶ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 54.

3.7.3 Conclusions – SPARQ costs

While there have been some changes implemented since the IRP's final report, including the development of an ICT Panel which SPARQ manages, the reforms made do not reflect the IRP recommendations on planning and governance of ICT and are therefore unlikely to increase competitive pressure and improve the operational efficiency of SPARQ as intended.

There have been large increases in the DNSPs' ICT costs over the 2010-15 regulatory period, largely associated with capital programs which have very short asset lives (3-5 years). As a result, the Asset Management/Service fees have increased substantially. This has occurred despite a reassessment of ICT capex need in response to the IRP's recommendations, and Ergon spending only half of its forecast ICT capex over the 2010-15 regulatory period.

The increase in SPARQ's operational support costs over the five year period is also concerning. Review of data provided by Ergon¹⁵⁷ suggests that the increase is caused by the provision of services such as helpdesk and IT support (SPARQ labour costs), rather than license and maintenance fees.

Overall, it is apparent that ICT costs are a material source of inefficiency within Energex's and Ergon's opex, and although some changes have been implemented following the IRP's final report, these are not reflected in the 2012-13 base year (the panel was set up in 2014, and we estimate that so far only 4 per cent of SPARQ's costs which were passed through to Energex and Ergon in 2013-14 have been market tested). There are material savings to be made from further reforms to the relationship between the DNSPs and SPARQ, and improvements to the DNSPs' ICT systems, processes and use of the market.

3.8 Ergon's Regional Depots

Unlike Energex which has always existed as one entity, Ergon was founded in 1999 after the amalgamation of a number of smaller electricity DNSPs.¹⁵⁸ This has resulted in Ergon facing a number of legacy issues including a high number of service depots.

Over the years, effort has been made to consolidate Ergon's legacy property assets and the depot network, however, in our view there is likely to be scope for additional consolidation under a local service agent model.

The IRP highlighted that private sector participation in Ergon's regional depots could yield efficiency and innovation, and increase the autonomy of Ergon's staff in those areas. In light of this, the IRP recommended that Ergon investigate a Local Service Agent model of delivering some services in regional network areas. In response to AER questions about the IRP's recommendation that Ergon investigate a Local Service Agent model for its regional depots, Ergon indicated it 'has no present intention action this recommendation.'

Ergon stated that this decision 'is with Government and therefore no formal consultation or development can take place until this decision is made.'¹⁵⁹ We note that Recommendation

¹⁵⁷ Ergon, Response to AER Information Request Ergon 006, Question 17-18 – document: Ergon Q17-18.xlsx

¹⁵⁸ Ergon, file note of meeting with Ergon on 22 January 2015.

23 places an onus on Ergon to investigate the LSA model, rather than the Queensland Government. [REDACTED]

[REDACTED]

[REDACTED]

3.8.1 Powercor’s experience with Local Service Agent model

During our review, we conducted research into the operation of the Local Service Agent model in Victoria, drawing on the experience of parties who are familiar with the model and were involved in the establishment of the model.

Prior to the introduction of the LSA model, Powercor owned depots in regional centres, major towns and a number of smaller communities in Western Victoria, which locations and staffing arrangements it had inherited from the pre-privatisation era, when networks were owned by the State Electricity Commission of Victoria. Small depots were staffed around an eight person minimum roster, with a minimum of two staff members rostered on at any one time. Some depots faced periodic shortages of staff, during which resources were drawn from neighbouring towns as required to meet peak workload or to support availability rosters.

The driver for change was a need for increased cost efficiency following privatisation. Powercor conducted analysis of the workload of smaller depots close to major towns and identified a number of areas where depots could be closed altogether without adverse outcomes, and sought to implement outsourcing in some areas where a presence was still required. In the majority of the smaller regional areas, depot staff carried out metering and servicing, customer connections/reconnections and responded to faults, with very little augmentation or growth related projects. Powercor also recognised that a number of core tasks could be carried out utilising single person work practices or supported by a second person with fewer qualifications, rather than two technicians. Response times were a major consideration, with one hour’s drive considered a reasonable maximum for most depots to respond to faults.

After identifying four test sites for the LSA model (being found small towns in regional Victoria), Powercor publicly advertised for expressions of interest and also directly approached the existing depot staff and local electricians, seeking expressions of interest from them for taking over the depot’s workload on a contract basis. After a formal selection process, the Powercor depots at the four test sites were closed, with those existing workers not involved in the LSA offered redundancies or relocation packages to other Powercor depots in major centres.

¹⁵⁹ Ergon, Response to AER Information Request Ergon 006, Question 1.

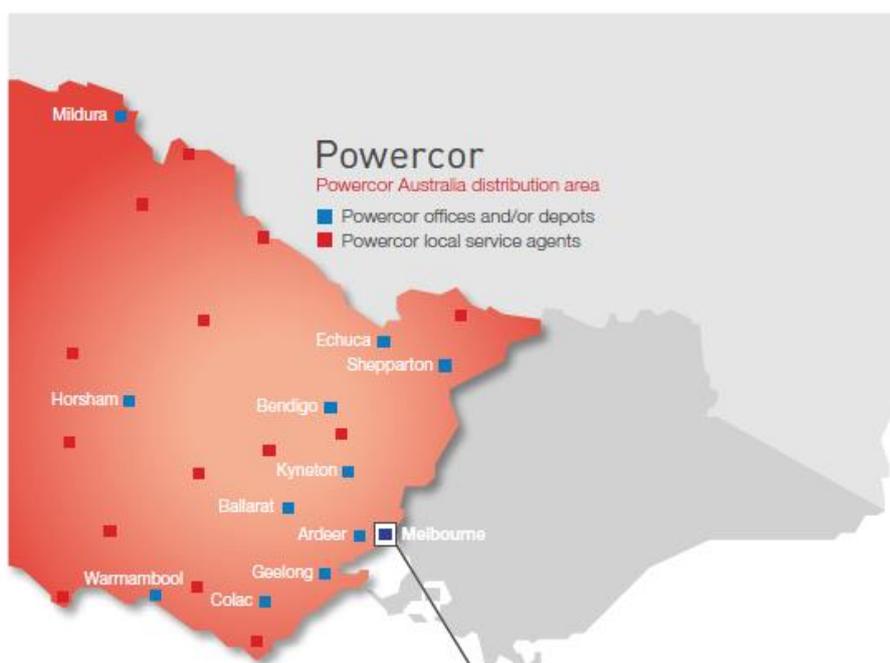
¹⁶⁰ Ergon, file note of meeting 22 January 2015.

Powercor supported the early LSAs by providing business and financial management training; however no assets (depots, vehicles, and equipment) were transferred to the LSAs without payment. Initially, the LSAs were mostly run as open-book businesses, with Powercor reviewing their financial status annually. LSAs were paid based on agreed unit rates and later added both construction and maintenance work packages. A retainer base was also established which has been progressively wound back as both the LSAs and Powercor have grown more confident in the arrangement. Where LSAs were taken over by incumbent depot staff, Powercor also encouraged them to seek other similar business opportunities, such as local electrician work to improve their business sustainability.

Today, as outlined in Figure 3.2, Powercor continues to operate 12 regional depots and has a network of 14 LSAs, some of which have common owners, but many of which compete among each other for work packages. LSAs are fully qualified to work on lines and operate on the network. For emergency work, LSAs travel to support the Powercor depots and vice-versa, as required.

Powercor continues to provide all equipment (cross arms, conductors, meters), retaining its economies of scale in equipment purchase. LSAs are contracted on agreed rates for five year period, through competitive processes. Packages of work are competitive in terms of total cost (hours per job).

Figure 3.2 Powercor – Depots and LSAs in 2015



Source: CitiPower and Powercor Customer Charter, p.4.

Although it is difficult to quantify the impacts which have occurred over the period since 1997, it is clear that the LSA model has increased the operational efficiency of Powercor's regional network areas. These efficiency outcomes result from:

- Reductions in the absolute number of depots and sites
- Reductions in staff per depot, with more flexibility in rostering

- Cultural change, driven by the small business incentives to reduce costs. Once the LSA model was established, significant efficiencies were identified and achieved in a range of existing processes, driven by a more cost-conscious approach and the need to reduce overtime.

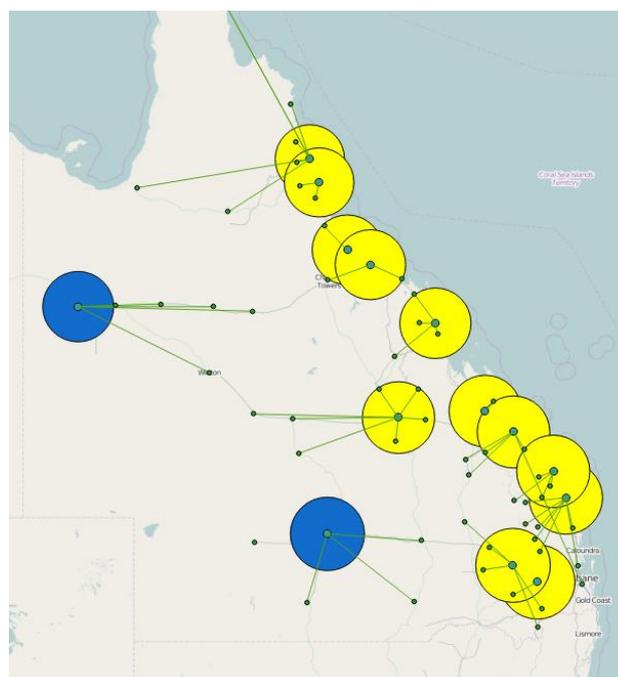
We understand that AusNet Services also implemented a similar model as Powercor, however we have not reviewed that model.

3.8.2 Application to Ergon’s territory

Ergon also highlighted that the climatic conditions in Queensland differ from Victoria, with more extreme weather and emergency events in Queensland potentially creating a need for higher staffing levels in regional areas than Powercor.¹⁶¹ Nevertheless, in our view, it is likely that Ergon could reduce its regional depot staffing levels through an LSA model.

We have reviewed information provided by Ergon on the location and staff numbers of its regional sites, as presented in Figure 3.3. This illustrative analysis shows that there are a large number of depots in the Eastern areas of Ergon’s network which serve territories significantly smaller than the one hour drive radius benchmark applied by Powercor. There are currently 21 smaller depots (‘spokes’) in Ergon’s network with more than 10 staff, including 8 with more than 20 staff.¹⁶²

Figure 3.3 Ergon’s hub and spoke model – depot locations



¹⁶¹ Ergon, *How Ergon Energy Compares – Examples of Our Harsh Operating Environment*, January 2015.

¹⁶² Ergon Energy, *Regulatory Proposal – Attachment 07.08.06*

Source: Ergon Energy, *Regulatory Proposal – Attachment 07.08.06*; Deloitte analysis. Note: Dots with circles around represent hubs, dots connected to these hubs represent spokes. The circles around hubs have a radius of 100km and are coloured yellow if there is a spoke present within 100km radius, and blue if not.

We have not attempted to conduct a comprehensive review of the potential for Powercor’s LSA model to be applied to Ergon, and note that in particular the 100km radius between depots may not be an applicable assumption. A decision on the application of the model requires detailed analysis and consultation, and we agree that there may be areas where, due to Ergon’s unique characteristics it may not be appropriate. However, it appears that applying an LSA model, combined with reform of the EBA restrictions around contractor switching, could deliver significant workforce cost efficiencies within Ergon. We note that Ergon advised the IRP that it was considering the implementation of an LSA model for selected depots.¹⁶³

[REDACTED]

In addition, the IRP mentioned that an LSA model has the potential to provide business opportunities for employees, which is consistent with Powercor’s own findings noted above.

3.8.3 Conclusion – Local Service Agent Model

We agree with the analysis of potential benefits [REDACTED] and consider efficiencies could be realised should an LSA model be implemented. Implementation of an LSA model would require removal of the EBA restrictions around contractor switching.

¹⁶³ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 62.

¹⁶⁴ Ergon Energy, Response to AER Information Request 024, document: *Ergon Energy Operations - Local Service Agent Concept Paper*, p. 3.

¹⁶⁵ *Ibid*, p. 1.

3.9 Conclusions

In this chapter, we have presented information on the main factors that are likely to be contributing to Energex's and Ergon's opex being relatively greater than their peers' in 2012-13 and 2013-14.

While the data does not allow accurate quantification of the separate factors, high labour costs due to high staff numbers are likely to be the major cause. Ergon's labour costs appeared particularly high, contributing to its productivity score being one of the lowest among the group of NEM DNSPs. Energex's labour costs and Average Staffing Levels appear to be higher than the DNSPs on the efficiency frontier, on a per customer basis.

There will be a number of reasons for this, including workforce culture, management and operational decisions. However one factor is the restrictions inherent in the DNSPs' EBAs, as well as the relatively high percentage of employees subject to EBAs.

In addition to those restrictions which are relatively widespread across the industry, requirements preventing contractor switching and related activities are a source of inefficiency which is unique to Queensland. The impact of these requirements is higher costs of engaging contractors, [REDACTED]

[REDACTED] These restrictions also impose costs on the DNSPs' internal workforces, as staff are required to carry out tasks that in other states, in many cases, would be more efficiently carried out by contractors who are on site, preparing for work.

Other EBA provisions which appear to impose higher costs on Energex and Ergon include restrictions on involuntary redundancies, minimum average apprentice intake and consultation requirements around work scheduling and management. We note that these provisions are not unique to Energex and Ergon - for example the NSW DNSPs also have restrictions on involuntary redundancies. Indeed some constraining provisions are present in the DNSPs with lower overall labour costs, including the Victorian and South Australian DNSPs. However, the fact that a significantly greater proportion of staff are employed under EBAs in Queensland than the Victorian DNSPs means that such arrangements are likely to have a bigger impact on their overall labour costs and therefore opex efficiency. Differences among DNSPs in the way that similar EBA provisions apply in practice are also likely to be a function of historical factors (including the existing workforce size and structure), the relationships between management and the workforce, management approach to decision making, as well as the influence of State Government shareholders.

ICT costs appear to be another source of costs which could be affecting the opex benchmarking results. SPARQ's fees for Energex and Ergon significantly increased over the last regulatory control period, with particular increases in the capex fees (Asset Management/usage fees) and operational costs for SPARQ. The descriptions of SPARQ's capex investments and operational costs incurred over the regulatory period suggest there are some areas of material inefficiency associated with maintaining bespoke, customised and out-of-date (legacy) systems. The IRP's concerns about SPARQ's governance arrangements do not yet appear to have been addressed by the panel arrangements established by the DNSPs and SPARQ, representing only a very small proportion of SPARQ's

total program of works, although we note the arrangements were implemented very recently.

The 2012 IRP report highlighted areas of inefficiency in Energex's and Ergon's indirect costs, which had materially increased their opex. We have reviewed materials associated with the businesses' completed and ongoing business efficiency improvement programs, and conclude that while significant efficiency gains have been achieved since the IRP's recommendations were released, these appear to be largely realised after the 2012-13 base year. Both businesses are expecting to make further efficiency gains in the 2015-20 regulatory period, including through further reducing their numbers of employees.

The following figures illustrate the materiality of opex savings which were made by Energex and Ergon after 2012-13 and which are therefore not incorporated into base year opex. They also highlight the expected savings that Energex has incorporated into its opex forecast. For Ergon, the information provided did not enable a clear analysis of the impact of its base year and forecast efficiency/productivity adjustments on SCS opex over 2015-20.

Chart 3.8: Energex Efficiency Improvements (\$m, 2014-15)

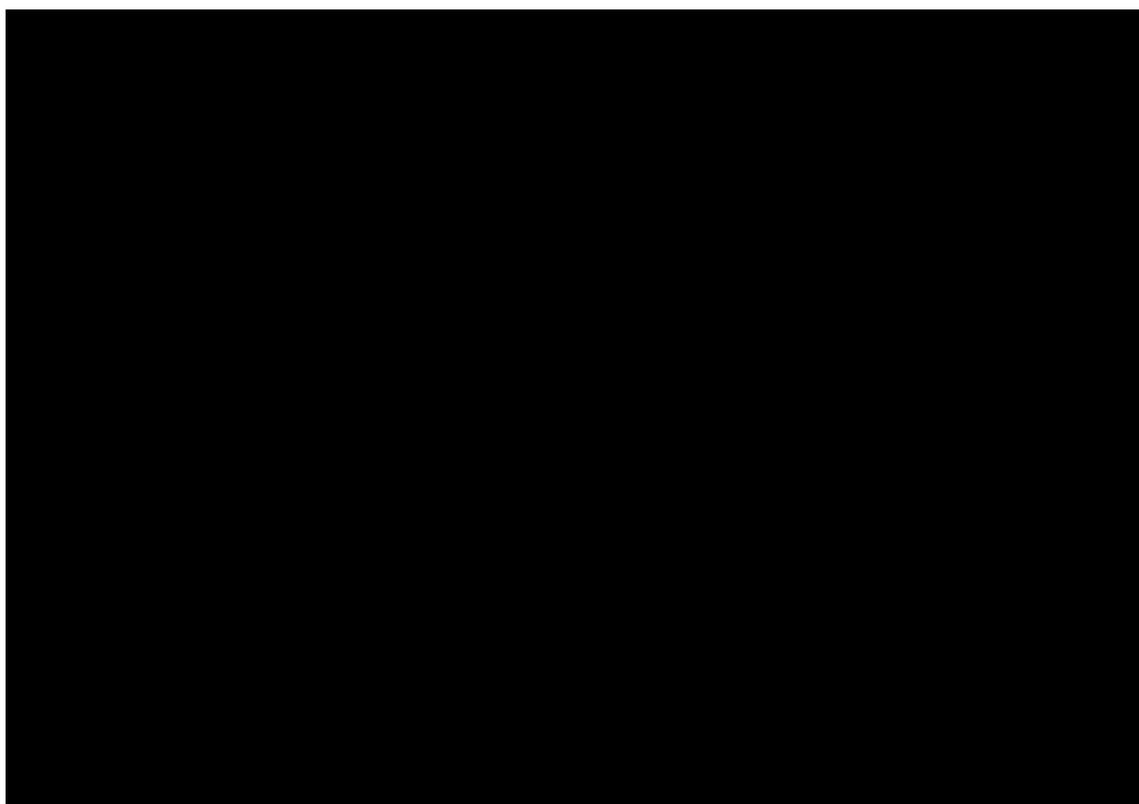


Chart 3.9: Ergon Efficiency Improvements (\$m, 2014-15)



The following charts present information on the number of FTEs Energex and Ergon have reduced from their workforces, with associated savings either reflected in the base year or after the base year.

Chart 3.10: Energex FTE reductions

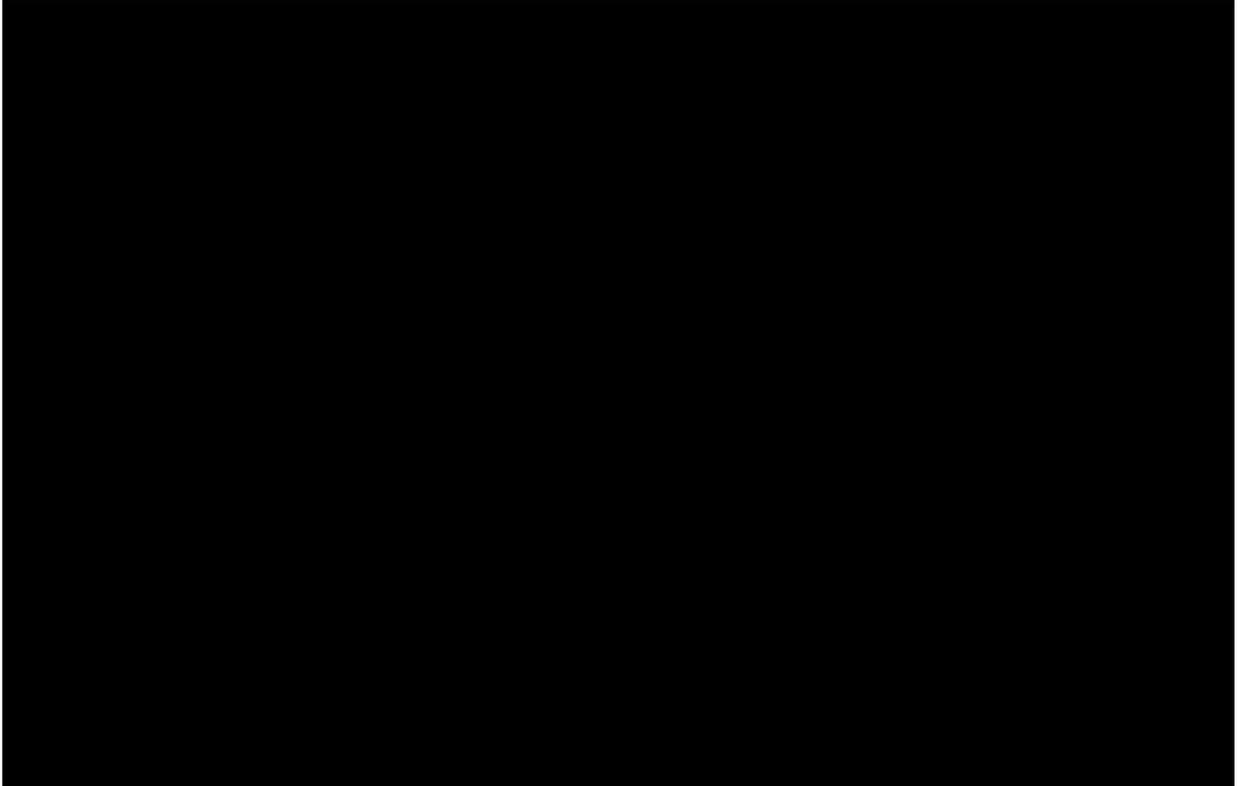
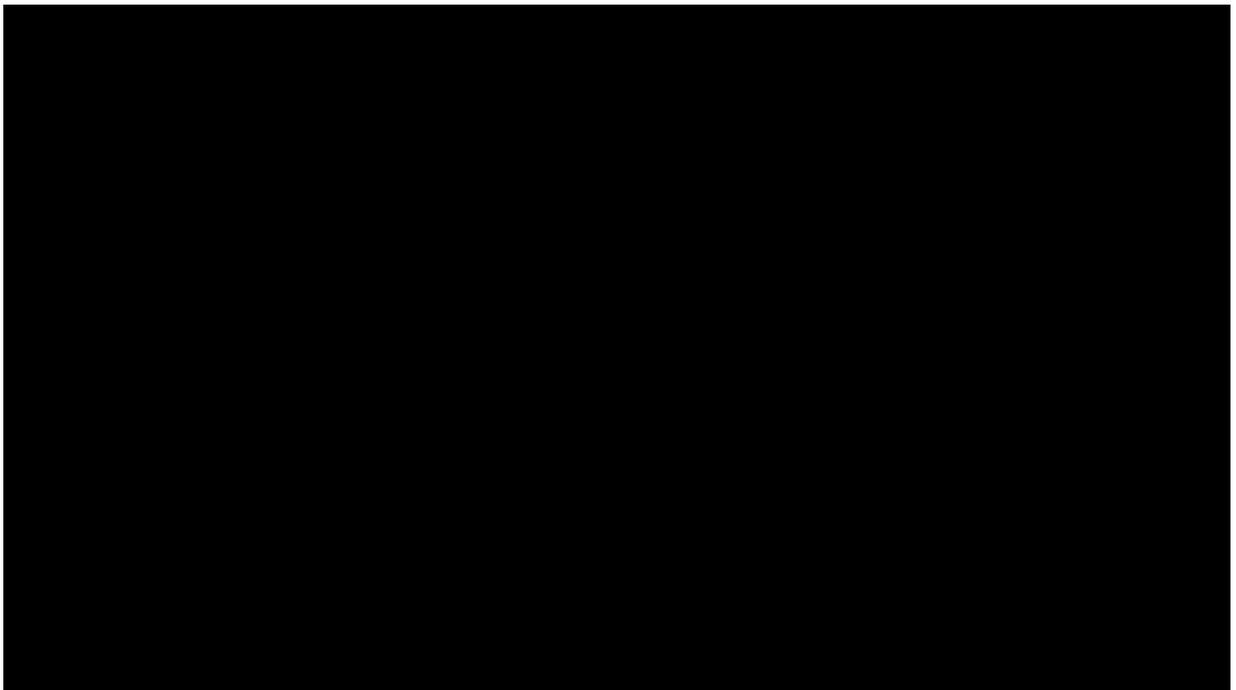


Chart 3.11: Ergon FTE reductions



While it has been difficult to get an accurate picture of the total value of opex efficiencies reflected in the base year, separate from those that are expected to be realised after the base year, the FTE figures highlight that the DNSPs have clearly both reduced their

workforces since 2012-13. They also highlight the efficiencies which have not been quantified or commenced by the DNSPs but which could be expected to contribute to efficiencies during the 2015-20 regulatory period.

4 Progress on the IRP recommendations

In response to Question 2 in our scope of work, this section discusses to what extent the Queensland DNSPs have implemented the recommendations made by the Independent Review Panel on Network Costs. We have focused on the timing of reforms being implemented, which is relevant to the efficiency of the base year opex.

In general, both businesses, and particularly Energex, have made good progress on the recommendations, although some are still being implemented and benefits have not been fully realised. While some cost reductions were made in base year 2012-13, further cost reductions occurred in 2013-14 and further reductions are expected.

Some of the recommendations have not been implemented.

This chapter examines recommendations 11 through to 28 (excluding 25), a total of 16 recommendations, which relate to the efficiency of direct and indirect cost activities of the Queensland DNSPs.¹⁶⁶ Responsibility for implementation of these reforms was assigned to the DNSPs by the IRP.

4.1 Energex

4.1.1 Overall progress

Energex has made significant progress in addressing the recommendations made by the IRP. Of the 11 IRP recommendations relevant to Energex, it has fully implemented eight.

Most of the changes resulting from the IRP recommendations took place in 2013-14 (after the opex base year). As a result, benefits realised from these reforms will not be accounted for in the opex base year. Table 4.1 summarises the progress of Energex in addressing the recommendations of the IRP. Significant areas of progress and non-progress are discussed in further detail below and in Appendix A.

We note that recommendation 16 (minimise touch points between SPARQ and Energex) is partially contingent upon the Queensland Government establishing a holding company for

¹⁶⁶ Recommendations 17, 18, 19, 27 and 28 are specific to Ergon and as such, Energex was only required to address a total of 11 recommendations. Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013.

Energex and Ergon, which was a separate IRP recommendation that has not been carried out.¹⁶⁷ A more detailed table is provided in the appendix.

Table 4.1: Summary of Energex's progress against IRP recommendations

IRP Recommendation	Implemented	Progress
11 – Continue with implementation of efficiency programs	Yes - ongoing	Continuing with the BEP
12 – Return the CIO to Energex and Ergon	No	No progress
13 – Implement software testing tool	Yes	SPARQ has deployed the HP Quality Suite Testing Tool
14 – Review ICT capex spend	Yes - partial	ICT capex spend reviewed, few changes have been made to the program
15 – Market test ICT services currently provided by SPARQ	No	SPARQ has internally established a panel to outsource components of work, however, this panel does not actually market test SPARQ's service provision as intended by the IRP
16 – Minimise touch points between SPARQ and the DNSPs	No	Dependent upon structural changes being made to Energex and Ergon (IRP recommendation 30)
20 – Reduce consultant and contractor spend	Yes	Energex has reduced contractor/consultant spend by approximately \$26 million over 2012-13 and 2013-14.
21 – Implement scheduling tool	Yes – partial	Energex has started to scope out the requirements for this tool but has not yet deployed the tool.
22 – Output based performance measures	Yes	Energex has implemented depot-level output based performance measures.
24 – Overtime	Yes - partial	Energex has established new guidelines around overtime; however, few efficiency gains have been made so far.
26 – Workforce planning and safety standards	Yes	Energex has implemented this recommendation; however, efficiency gains are as yet unclear.

Source: Energex, Response to information request AER ENX 006, Question 1.

4.1.2 Progress on recommendations

Recommendation 11 – Efficiency programs

During the course of the IRP's consultation with the Queensland DNSPs, it was found that the ongoing DNSP-initiated efficiency 'reviews varied in coverage and some areas within

¹⁶⁷ IRP Recommendation 30.

each business were not subject to full scrutiny’, therefore the ‘efficiency programs can be expanded to identify and capture a broader range of possible cost savings’¹⁶⁸. Recommendation 11 of the IRP was ‘the boards of the DNSPs continue with the implementation of their efficiency programs.’ Prior to the release of the IRP’s report in 2012, Energex initiated the BEP targeted at reduction of capex and opex.¹⁶⁹ Following the release of the IRP report, Energex has continued with the BEP, entering the implementation phase in early 2012-13. [REDACTED]

Savings achieved were primarily driven by 461 redundancies over 2012-13 and 2013-14. Of these 461, 59 per cent were carried out in 2012-13,¹⁷¹ and would be accounted for in the opex base year cost calculations for the base step trend model noting that savings may only be part year savings for 2012-13. Energex has also indicated that it has further to go with cost reductions in 2014-15 with an FTE target of 2800.¹⁷²

Recommendations 12-16 – SPARQ

The IRP made a series of recommendations aimed at increasing the competitive pressure on SPARQ and enabling it to operate more as a service provider than an internal arm of the DNSPs. As we have discussed in section 3.7 above, the DNSPs have made some progress on some of the recommendations, but the most important changes recommended to improve the competitive pressure on SPARQ have not been implemented.

Recommendation 20 – Consultancies and Contractors

In 2011-12, Energex spent \$30 million on non-frontline external contractors, consultants and professional services, which according to the IRP represented a ‘systemic disregard for cost and a culture of over-reliance on external services.’¹⁷³ In response to this, IRP recommended that the DNSPs ‘take immediate action to reduce expenditure on consultancies, professional services and non-frontline contractors’. [REDACTED]

[REDACTED] Note that savings made here may overlap with those made in response to recommendation 11.

Recommendation 24 - Overtime

During the IRP’s review of the Queensland NSPs, it was identified that across Energex, Ergon and Powerlink, 647 employees earned in excess of 1.5 times their base pay and 27

¹⁶⁸ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 49.

¹⁶⁹ Energex, Response to AER Information Request 013, document: *Quantifying the benefits of BEP*, January 2015

¹⁷⁰ Ibid.

¹⁷¹ Energex, Response to information request AER ENX 006, Question 1.14b.

¹⁷² Ibid.

¹⁷³ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p.63.

employees earned twice their base pay in 2011-12. The IRP commented that 'such high ratios are likely to result in lower levels of productivity', and recommended that the NSPs 'take urgent action to reduce overtime to benchmark levels and review gross pay to base ratios for all employees.'¹⁷⁴

Energex reported to have taken some action to reduce overtime; however as discussed earlier in this report it continues to have relatively high overtime expenses and a large proportion of employees with a high gross to base salary ratio (GBR).¹⁷⁵

Recommendations 21, 22 and 26 – Work practices

In the IRP review, it was found that the Queensland DNSPs have previously not had appropriate tools or processes in place to give sufficient oversight of work carried out and that this has contributed to under-utilisation of labour, and poor management of external labour resources.¹⁷⁶

Recommendations 21, 22 and 26 relate to recommended changes in work practices, namely scheduling of work and performance indicators. Energex has made progress in implementing all three of these recommendations, however, the implementation of the reforms occurred after the opex base year, and the impacts of the reforms on expenditure are unclear.

¹⁷⁴ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 56.

¹⁷⁵ The gross to base ratio measures the proportion of the base salary that an employee earns in overtime and other associated benefits. An example of this is where an employee earns \$100,000 in base pay and in one year earns \$50,000 in overtime pay, this employee would have a gross to base ratio of 1.5.

¹⁷⁶ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, pp. 59-60, 64.

4.2 Ergon

4.2.1 Overall progress

Ergon has made some progress in addressing the recommendations made by the IRP. Of the 17 IRP recommendations relevant to Ergon, it has implemented nine, however progress on a further four recommendations are unclear. Four recommendations have not yet been implemented.

Table 4.2 summarises the progress of Ergon in addressing the recommendations of the IRP. Significant areas of progress and non-progress are discussed in further detail below and in Appendix A. A more detailed table showing Ergon's progress against recommendations is provided in Appendix B.

Table 4.2: Summary of Ergon's progress against IRP recommendations

IRP Recommendation	Implemented	Progress
11 – Continue with implementation of efficiency programs	Yes	Unclear whether efficiency programs have continued during 2014.
12 – Return the CIO to Energex and Ergon	No	No progress to date.
13 – Implement software testing tool	Yes	SPARQ has deployed the HP Quality Suite Testing Tool
14 – Review ICT capex spend	Yes - partial	ICT capex spend reviewed, 52 per cent underspend in current regulatory control period
15 – Market test ICT services currently provided by SPARQ	No	SPARQ has internally established a panel to outsource components of work, however, this panel does not actually market test SPARQ's service provision as intended by the IRP
16 – Minimise touch points between SPARQ and the DNSPs	No	Dependent upon structural changes being made to Energex and Ergon (IRP recommendation 30)
17 – Commercialise and sell ROAMES	Yes	Ergon has sold the ROAMES business.
18 – Divest workshop business	No	Ergon has not divested this business in light of a consultant report concluding that the workshop had comparable costs to the rest of the industry. ¹⁷⁷

¹⁷⁷ Ergon, Response to AER Information Request 024, Question 6.

19 – Divest forest land holdings	No	Ergon has issued a request for expressions of interest but not yet divested its forest land holdings.
20 – Reduce consultant and contractor spend	Yes	Ergon has reduced contractor/consultant spend by approximately \$18 million in 2012-13.
21 – Implement scheduling tool	Yes	Ergon deployed ‘Schedule Viewer’ in 2013-14.
22 – Output based performance measures	Yes	Ergon has implemented two phases of depot-level output based performance measures in 2013-14.
23 – Local service agent	No	The local service model has not been implemented.
24 – Overtime	Yes	Ergon has reduced overtime by over 150,000 hours between 2011-12 and 2012-13, a reduction of 20 per cent, and made further reductions in 2013-14.
26 – Workforce planning and safety standards	Yes	Ergon has implemented this recommendation; however, efficiency gains are as yet unclear.
27 – Overhead allocation to isolated generation and networks	Yes	Ergon has removed \$19 million of overheads from the Isolated Generation and Networks.

Source: Ergon, Response to information request AER ERG 006, Question 1.

4.2.2 Progress on recommendations

Recommendation 11 – Efficiency programs

During the course of the IRP’s consultation with the Queensland DNSPs, it was found that the ongoing DNSP-initiated efficiency ‘reviews varied in coverage and some areas within each business were not subject to full scrutiny’, therefore the ‘efficiency programs can be expanded to identify and capture a broader range of possible cost savings’¹⁷⁸. Recommendation 11 of the IRP was that ‘the boards of the DNSPs continue with the implementation of their efficiency programs.’

Prior to the release of the IRP report, Ergon pre-emptively engaged in a series of reform initiatives under the banner of the EEP. This program continued as phase two EEP after the release of the IRP report. [REDACTED]

[REDACTED] Phase 2 of the EEP is currently ongoing.

¹⁷⁸ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 49.

¹⁷⁹ Ergon, Response to information request AER ERG 006, Question 4 document: *1401-13 Efficiency and Effectiveness Program Update*, January 2014.

[REDACTED]
[REDACTED]
[REDACTED] Ergon indicated that its proposed 15 per cent adjustment to total business overheads incorporated into its base-step-trend opex forecast (outlined in section 2.3) will require additional cost reductions, however it provided limited specific detail on how these cost reductions could be delivered, citing 'new management structures, driving a culture of operational and financial efficiency.'¹⁸¹

Recommendations 12-16 – SPARQ

The IRP made a series of recommendations aimed at increasing the competitive pressure on SPARQ and enabling it to operate more as a service provider than an internal arm of the DNSPs. As we have discussed in section 3.7 above, the DNSPs have made some progress on some of the recommendations, but changes recommended to improve the competitive pressure on SPARQ have not been fully implemented.

Recommendations 17-19 – Divest non-core business assets

The IRP identified that Ergon had a range of businesses which complemented their core service delivery functions but were better suited to be provided or managed by external parties. In light of this the IRP made recommendations that these businesses be sold. Recommendations 17, 18 and 19 relate to the divestment of Ergon's three non-core business assets: ROAMES, Ergon's modular substations and associated infrastructure workshop business, and Ergon's land holdings for the production of hardwood power poles. Based on information provided by Ergon¹⁸², it is apparent that although the ROAMES project has been successfully divested, there has been limited progress on recommendations 18 and 19.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁸⁰ Ergon, File note of meeting on 22 January 2015.

¹⁸¹ Ergon Energy, *Regulatory Proposal – Supporting Documentation: Our Journey to the Best Possible Price* (October 2014), p. 14; and Ergon Energy, *Regulatory Proposal – Supporting Documentation: Forecast Expenditure Summary*, p. 15.

¹⁸² Ergon, Response to information request AER ERG 006, Questions 1, 2 and 3.

¹⁸³ Ergon, Attachment to response to information request AER ERG 006, *Question 4 – 1309 SEP EEP SubCommittee 7 Nov 13 (3)A*, September 2013.

¹⁸⁴ Ibid.

The IRP recommended that Ergon divest its forest and land holdings. [REDACTED]
[REDACTED] To date, Ergon has not implemented this recommendation.¹⁸⁵

Recommendation 20 – Consultancies and Contractors

In 2011-12, Ergon spent over \$30 million on non-frontline external contractors, consultants and professional services, which according to the IRP reflected a ‘systemic disregard for cost and a culture of over-reliance on external services.’ In response to this, the IRP recommended that the DNSPs ‘take immediate action to reduce expenditure on consultancies, professional services and non-frontline contractors’.

Ergon has fully implemented this recommendation and according to information provided to the AER, on 30 June 2014 there were a total of 76 labour hire and professional services contractors engaged at Ergon Energy, down from 291 at 30 June 2012. The reduction in costs arising from Ergon’s response to this recommendation are estimated to be \$17.64 million in 2012-13.¹⁸⁶

Recommendation 23 – Local service agents

The IRP considered the extent to which greater private sector participation in Ergon’s smaller depots could lead to efficiency gains. Reflecting upon the successful Victorian experience, the IRP recommended that consideration be given to the adoption of a LSA model for ‘depots in the range to 8 to 15 employees where there would be improved services to customers, service delivery would be more cost effective and where there is broad support amongst staff for the adoption of this type of service delivery model’.¹⁸⁷

Ergon has reported that they have made no progress on this recommendation and stated that this decision ‘is with Government and therefore no formal consultation or development can take place until this decision is made.’¹⁸⁸ [REDACTED]
[REDACTED]
[REDACTED]

Recommendation 24 - Overtime

During the IRP’s review of the Queensland NSPs, it was identified that across Energex, Ergon and Powerlink, 647 employees earned in excess of 1.5 times their base pay and 27 employees earned twice their base pay in 2011-12. The IRP commented that ‘such high ratios are likely to result in lower levels of productivity’, and recommended that the NSPs ‘take urgent action to reduce overtime to benchmark levels and review gross pay to base ratios for all employees.’¹⁸⁹

¹⁸⁵ Ergon, Response to information request AER ERG 006, Question 9.

¹⁸⁶ Ergon, Response to information request AER ERG 006, Question 1.

¹⁸⁷ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, p. 52.

¹⁸⁸ Ergon, Response to AER Information Request Ergon 006, Question 1.

¹⁸⁹ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, p. 56.

As discussed in section 3.6 Ergon has moved to reduce its overtime levels, which were not high compared to Energex.

Recommendations 21, 22 and 26 – Work practices

In the IRP review, it was found that the Queensland DNSPs have previously not had appropriate tools or processes in place to give sufficient oversight of work carried out and that this has contributed to under-utilisation of labour, and poor management of external labour resources.¹⁹⁰

As discussed in section 3.3 Ergon has put in place a number of changes to scheduling, efficiency measurement and resource planning.

Recommendations 27 and 28 – Overhead allocation methodology

The IRP recommended that Ergon remove some of the overheads that were annually applied to its isolated and regional communities, through its broader efficiency programs. Ergon indicated that it has complied with this recommendation, noting that the overhead reductions form part of its overall efficiency programs carried out since 2011.

¹⁹⁰ Independent Review Panel on Network Costs, *Electricity Network Costs Review*, 2013, pp. 59-60, 64.

4.3 Conclusions

Energex has made significant progress in addressing the recommendations made by the IRP. Of the 11 IRP recommendations relevant to Energex, it has fully implemented eight.

Similarly Ergon has made progress in addressing the recommendations made by the IRP. Of the 17 IRP recommendations relevant to Ergon, it has implemented nine, however progress on a further four recommendations are unclear. Four recommendations have not yet been implemented.

Implementation of the recommendations resulted in cost reductions in 2013-14, and further savings in 2014-15, however completion of the recommendations not yet fully implemented is likely to result in further savings.

5 Energex's productivity trends

We have been asked whether there reasons for Energex's opex productivity deteriorating between 2011-12 and 2012-13 other than inefficiency.

Much of the fall in productivity can be explained by significant ICT capex, redundancy costs, and other one-off costs.

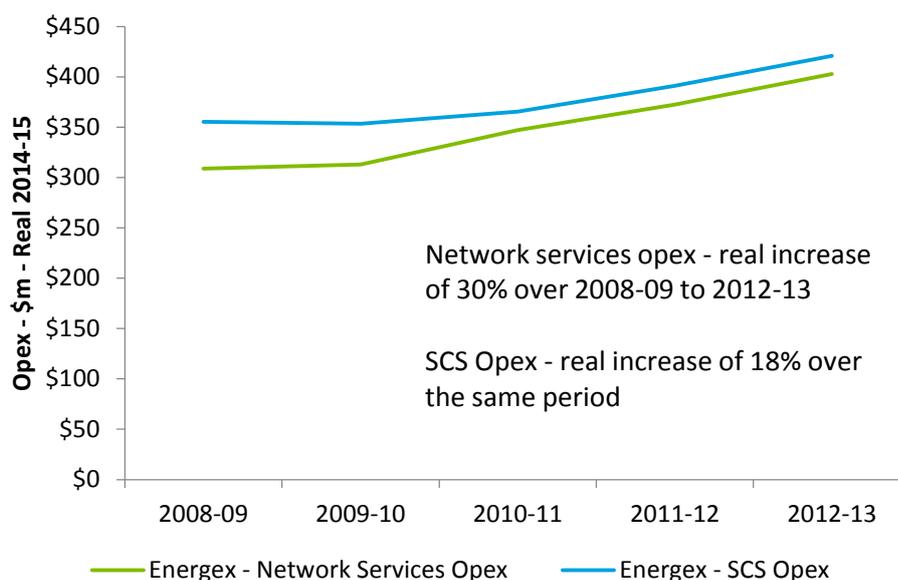
5.1 Pace of growth in opex

In Chapter 2, we explained that the reason Energex's opex productivity has declined in recent years is due to growth in network services opex outstripping growth in the outputs measured in the AER's benchmarking analysis.

Energex's rate of network services opex growth over the 2006-13 period is among the highest of all the DNSPs, having increased by 105 per cent over the period. Energex's opex increased in 2010-11, growing by 14 per cent, and then 10 per cent and 11 per cent in 2011-12 and 2012-13 respectively.

This significant growth in opex corresponds with the period over which Energex commenced efficiency programs and reduced its total FTEs by around 20 per cent.

Chart 5.1 Energex – network services opex and SCS opex trends



Source: Energex RINs – Economic benchmarking and reset RINs

The reasons for the sharp growth in Energex's opex appear to be redundancy costs, ICT capital investments and one off costs associated with Cyclone Oswald and faulty service lines. Each of these drivers is discussed in the following sections.

Table 5.1: Energex opex growth factors, (\$'000, 2014-15)

	2008-09	2009-10	2010-11	2011-12	2012-13
Network services opex				\$372,410	\$402,709
	\$308,752	\$313,050	\$347,129		
SCS opex	\$355,260	\$353,269	\$365,325	\$390,969	\$420,825
Redundancy costs					\$52,950
ICT capital investments (increase in SPARQ asset management fees over 2010-11 levels)				\$9,615	\$19,309
Faulty service lines				\$18,357	
Cyclone Oswald					\$11,882

Source: Energex RINs - Economic benchmarking and reset RINS; Response to AER Information Request ENX 006, Question 12; Energex, Regulatory proposal, p. 36; Energex, ICT Strategic Plan October 2014, p. 20.

5.2 ICT investments

As discussed in section 3.7, Energex's ICT costs increased significantly during the regulatory period, due to increases in the fees charged to Energex by SPARQ.

ICT costs increased by 20 per cent over the three years 2011-12 to 2013-14, driven by increases in the asset management fee (increased by 40 per cent) and the Operational support fees (21 per cent increase). The biggest increase in ICT costs occurred in 2011-12 (17 per cent increase).

ICT costs represented approximately 30 per cent of Energex's total SCS opex over 2011-12 to 2013-14. The 20 per cent increase in ICT costs therefore results in an approximate 6 per cent increase in opex over the three years, which has a material impact on the benchmarking results.

As discussed in section 3.7, increases in the SPARQ asset management fees over 2011-12 and 2012-13 were associated with ICT investments with short asset lives. The increase in asset management fees over 2011-12 and 2013-14 added \$9.6 million and \$19.3 million (\$2014-15) to the total ICT costs incurred by Energex, when compared to the 2010-11 asset management fees, as shown in Table 5.2.

Table 5.2: Energex ICT Asset Management Fees, (\$'000, 2014-15)

	2010-11	2011-12	2012-13
Energex – SPARQ Asset management fees	\$41,994	\$50,483	\$58,989
Increase in SPARQ asset management fees over 2010-11 levels		\$9,615	\$19,309

Source: Energex RINs - Economic benchmarking and reset RINS; Response to AER Information Request ENX 006, Question 12; Energex, Regulatory proposal, p. 36; Energex, ICT Strategic Plan October 2014, p. 20.

5.3 Redundancy costs

As part of the BEP, a large-scale voluntary redundancy initiative was implemented to reduce the number of Energex's internal employees. As a result of this, in 2012-13 and 2013-14 Energex incurred large redundancy payout costs, driving an increase in opex in those years.

The provisions for voluntary redundancy in Energex's EUCA allow:

- An ex-gratia retrenchment payment of 3 weeks per year of service (with minimum of 4 weeks), together with a proportionate amount for an incomplete year. The maximum Retrenchment Payment will be 75 weeks.
- A Separation Date Incentive Payment of 13 weeks' pay.
- Payment for recreation leave
- Payment for long-service leave of 1.3 weeks for each completed year of service
- Payment for Days of Time Off in Lieu
- An income protection policy to provide specified insurance cover for loss of earnings due to illness in the twelve months immediately following retrenchment.¹⁹¹

Redundancy costs vary between employees, affected by tenure. [REDACTED]

[REDACTED] Energex incurred a total cost of \$51 million redundancy expenditure in 2012-13, and \$18.1 million in 2013-14 (\$nominal).¹⁹³ It is reasonable to expect that further redundancy costs will be incurred in 2014-15 as further reductions in FTEs are expected.

Chart 5.2 below shows the effect of the redundancy costs combined with once-off costs on Energex's labour opex. The spike in the number of redundancies in 2012-13 is a key reason for the increase in opex in 2012-13.

5.4 One-off costs – Faulty service lines and Cyclone Oswald

In 2011-12, Energex identified a manufacturing defect in its service lines, which required an increase in its inspection activities. This fault resulted in a provision of \$16.8 million (\$nominal), which is reflected in its 2011-12 opex.¹⁹⁴

In January 2013, Tropical Cyclone Oswald passed over South East Queensland, causing severe storms and flooding. As a result of the cyclone, Energex incurred \$11.2 million (\$nominal) in incremental opex, which is reflected in its 2012-13 opex.¹⁹⁵

¹⁹¹ Energex Union Collective Agreement 2011, cl. 4.4.11

¹⁹² Energex, Response to AER Information Request 006, Question 4, document: *Sizing the Opportunity*, September 2012.

¹⁹³ Energex, Response to information request AER 002.

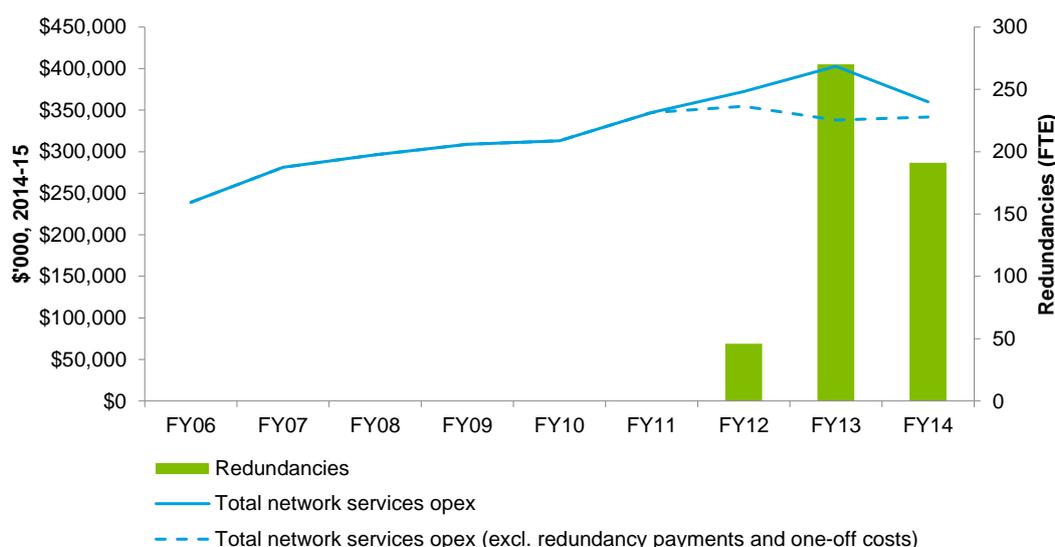
¹⁹⁴ Energex, Regulatory proposal, October 2014 p. 36.

¹⁹⁵ Ibid.

Both of these factors have contributed to the growth in Energex’s opex over 2011-12 and 2012-13.

Chart 5.2 illustrates the impact of both redundancies and one-off costs on Energex’s Network Services Opex.

Chart 5.2 Energex Opex – accounting for redundancies and one-off costs (\$’000, 2014-15)



Source: Energex economic benchmarking RIN; Energex, Response to information request AER Energex 002, received 19 December 2014; Energex, Response to AER Information Request ENX 006, Question 12.

5.5 Conclusions

The fall in Energex’s opex productivity over 2011-12 and 2012-13 is associated with significant growth in its opex relative to both peer opex and output growth.

This productivity decline aligns with a period of restructuring and various efficiency programs to address matters identified by the IRP, which we have described in Chapter 4. It is clear that savings from these efficiency programs were offset by the costs of redundancy payments, higher ICT costs, Cyclone Oswald and a manufacturing defect in service lines.

Appendix B: Detailed tables of Energex and Ergon Efficiency Programs progress

Energex – IRP recommendation progress

#	Description	Completed?	Actions taken	Impact
11	The boards of the DNSPs continue with the implementation of their efficiency programs.	Yes	Energex has continued with the Business Efficiency Programs finding efficiencies in a range of opportunities that were initially identified by PwC and then further developed by the Energex management.	Savings of \$ [REDACTED] m opex in 2011-12.
12	Return the role of the office of the chief information officer to each of the DNSPs and SPARQ solutions focus on its role as a service provider to the DNSPs	No	The Office of the CIO is still located within SPARQ and there are no plans to return the role of the Office of the CIO to each of the DNSPs under the current ownership structure.	Unclear.
13	Each of the DNSPs reassess its Information Communication and Technology capital expenditure priorities and focus on the prudent capital expenditure required to maintain its core distribution business activities (including regulatory compliance and safety obligations).	Yes	Energex and SPARQ have reviewed the capital works program for ICT and as a result have delayed several large ICT capex programs, including a major upgrade to Ellipse.	[REDACTED] [REDACTED] [REDACTED] [REDACTED]

#	Description	Completed?	Actions taken	Impact
14	<p>In addition to the cost savings already identified by SPARQ solutions, further efficiencies should be achieved through actions such as:</p> <ul style="list-style-type: none"> Streamlining the testing process through the adoption of an automated testing tool; Developing a common set of automated financial and management reports for the DNSPs; and Reviewing existing system contracts to reduce user license costs in line with future staffing levels within SPARQ Solutions and the DNSPs 	Yes	<p>SPARQ has adopted and implemented the HP Quality Suite of testing tools which includes an automated software testing solution. SPARQ has invested in reporting tools which are common to Energex and Ergon. Taking action on a common set of financial reports is dependent on recommendation 30. SPARQ has reviewed system contracts and license rationalisation has engaged in license rationalisation.</p>	Unclear.
15	<p>Alternative service delivery models for Information and Communication Technology services currently delivered by SPARQ solutions should be tested as follows:</p> <ul style="list-style-type: none"> Issue market tenders for the delivery of capital projects; and Issue market tenders for the delivery of the relevant operational Information Communication and Technology services. 	No	<p>Have implemented a new model within SPARQ of outsourcing some project work. SPARQ established a panel in 2014 comprised of Accenture, Cap Gemini, HCL, Wipro and SMS. Note that the panel does not market test SPARQ's service provision as intended by the IRP.</p>	<p>SPARQ has set up a panel of providers. The benefit of this is not yet clear.</p>
16	<p>Implement an integrated operating model that consolidates the Planning and Partnering positions within DNSPs to minimise the number of touch points between SPARQ solutions and the DNSPs.</p>	Unclear	<p>SPARQ established OCIO group in 2012 and further improved the engagement model with new "Planning and Partnering (P&P)" roles and a "CIO Forum/IT reference group" within Energex.</p>	<p>Unclear. It is possible that actions taken have actually increased the number of touch points between SPARQ and Energex, contrary to the IRP recommendation.</p>
20	<p>The DNSPs take immediate action to reduce expenditure on consultancies, professional services and non-frontline contractors and achieve reductions commensurate with the revised programs of work.</p>	Yes	<p>Reductions were completed as part of the 2013-14 Business planning.</p>	<p>Approximately \$██████ in 2012-13 and ██████ in 2013-14.</p>

#	Description	Completed?	Actions taken	Impact
21	The DNSPs pursue as part of current efficiency programs the implementation of an effective scheduling tool to improve the efficiency of scheduling and increase the productivity of the workforce.	Yes - look further	Improved scheduling practices have contributed to an improved unit rate and will continue to enable Energex to deliver on a 10 per cent improvement on labour component of the unit rates targeted for the 2014-15 financial year. A capability, system and process review for scheduling practices has been completed including scheduling guidelines, a schedule efficiency auditing program and targeted interventions where improvement opportunities have been identified.	Unclear. Suggested 10 per cent improvement.
22	The DNSPs implement a common set of output-based performance measures at the depot level to ensure that labour efficiency is measured and reported.	Yes - not in base year	Energex has developed output based efficiency metrics that allow visibility of program efficiency and product efficiency unit rates. These metrics are tracked and monitored through monthly performance and delivery forums and also monitored through the Network Operations Committee.	Unclear.
24	The NSPs take urgent action to reduce overtime to benchmark levels and review gross pay to base pay ratios for all employees.	Partial	A revised overtime guideline/policy has been developed and implemented. Overtime management tool deployed to key operational managers detailed total overtime and highlighting key individuals above tolerance limits for gross to base pay.	Energex overtime costs increased from \$17.5m in 2011-12 to \$21.7m in 2012-13 and then decreased to \$16.6m in 2013-14. It is unclear as to whether the recent decrease will be sustained.

#	Description	Completed?	Actions taken	Impact
26	<p>The NSPs remove internal constraints to improved efficiency, as follows:</p> <ul style="list-style-type: none"> • Apart from categories of work which are contracted as a matter of policy, NSPs should fully utilise internal resources before packaged maintenance and minor works are contracted out. Some projects could also be jointly resourced to increase field workforce utilisation. • The DNSPs improve workforce flexibility to match start/finish times with work requirements. • The NSPs harmonise their Fatigue Management Policies by 1 July 2013 	Yes - not in base year	<p>Energex resource plan/strategy has been reviewed against the future PoW:</p> <ul style="list-style-type: none"> • Efficiency/productivity opportunities identified and enacted • Opportunities identified to jointly resource work where skills shortages exist • Continue to contract non-core work where appropriate/economical. <p>Energex continues to review Span of Hours for BAU work with a particular focus on utilisation of Shift and Stand-by crews. Actions are currently focused on extending or increasing the utilisation of BAU crews at the end of day to manage trouble call/call-out work to minimise the engagement of stand-by and shift crews/call-outs. Further work is also being under-taken to assess the spread of Connection Officer work across all hours to ensure any amendments to span of hours address key peak periods.</p> <p>Energex has engaged Fatigue Expert, Dr Drew Dawson to provide advice on and support for the review of the Energex Fatigue Management Policy.</p>	Unclear.

Ergon – IRP recommendation progress

#	Descriptions	Completed?	Actions taken	Impact
11	The boards of the DNSPs continue with the implementation of their efficiency programs.	Yes	Ergon has implemented EEP wave 1 and wave 2.	[REDACTED]
12	Return the role of the office of the chief information officer to each of the DNSPs and SPARQ solutions focus on its role as a service provider to the DNSPs	Unclear	Office of the CIO is still within SPARQ.	Unclear.
13	Each of the DNSPs reassess its Information Communication and Technology capital expenditure priorities and focus on the prudent capital expenditure required to maintain its core distribution business activities (including regulatory compliance and safety obligations).	Yes	Have delayed several large ICT capex programs which would have otherwise resulted in high opex.	Reduced ICT capex due to delayed implementation of new systems. This has in turn led to decreased asset services fees through SPARQ.
14	In addition to the cost savings already identified by SPARQ solutions, further efficiencies should be achieved through actions such as: <ul style="list-style-type: none"> Streamlining the testing process through the adoption of an automated testing tool; Developing a common set of automated financial and management reports for the DNSPs; and Reviewing existing system contracts to reduce user license costs in line with future staffing levels within SPARQ Solutions and the DNSPs 	Yes	SPARQ has adopted and implemented the HP Quality Suite of testing tools prior to the IRP recommendation. This includes the module 'unified functional testing' which is an automated software testing solution. SPARQ continues to leverage common investments in reporting and business intelligence between Energex and Ergon where possible.	Unclear.
15	Alternative service delivery models for Information and Communication Technology services currently delivered by SPARQ solutions should be tested as follows: <ul style="list-style-type: none"> Issue market tenders for the delivery of capital projects; and Issue market tenders for the delivery of the relevant operational Information Communication and Technology services. 	No	Have implemented a new model within SPARQ of outsourcing some project work. SPARQ established a panel in 2014 comprised of Accenture, Cap Gemini, HCL, Wipro and SMS. Note that the panel does not market test SPARQ's service provision as intended by the IRP.	SPARQ has set up a panel of providers. The benefit of this is not yet clear.

16	Implement an integrated operating model that consolidates the Planning and Partnering positions within DNSPs to minimise the number of touch points between SPARQ solutions and the DNSPs.	Unclear	SPARQ established OCIO group in 2012 and further improved the engagement model with new "Planning and Partnering (P&P)" roles and a "CIO Forum/IT reference group" within Energex.	Unclear. It is possible that actions taken have actually increased the number of touch points between SPARQ and Energex, contrary to the IRP recommendation.
17	Progress the ROAMES project in partnership with parties that can assist with the commercialisation process and provide the additional capital required.	Yes	ROAMES has been transferred to a wholly-owned subsidiary of Ergon, ROAMES Asset Services SPV, and then sold to Fugro holdings on 1 March 2014.	Unclear.
18	Ergon Energy seek expressions of interests from external providers of modular substations and other related workshop services and discontinue the internal provision of these services if this results in lower cost.	No	Ergon commissioned Slattery Australia Pty to carry out an independent evaluation of the direct costs of the design and construction of modular substations and 11kV switch-rooms. Slattery found that Ergon's costs were at least equal to best cost in the industry.	Unclear.
19	Ergon Energy divests its holdings of land for forests and reinvests the sale proceeds in core network assets.	No	Ergon has issued an expression of interest, however, other than this no progress has been made.	Unclear.
20	The DNSPs take immediate action to reduce expenditure on consultancies, professional services and non-frontline contractors and achieve reductions commensurate with the revised programs of work.	Yes	Ergon has reduced the number of professional services contractors from 291 in 30 June 2012 to 76 in 30 June 2014.	\$17.64 million in 2012-13 and \$20.56 million in 2013-14. There is an anticipated further benefit of \$18.53 million in 2014-15. Ergon also state that there is a saving of \$6.12m in 2012-13 and \$4.28m in 2013-14.
21	The DNSPs pursue as part of current efficiency programs the implementation of an effective scheduling tool to improve the efficiency of scheduling and increase the productivity of the workforce.	Yes - look further	A scheduling tool, Scheduler Viewer, has been implemented. The introduction of Scheduler Viewer enables the removal of multiple corporate reports and user maintained spreadsheets currently in use. Version 1 of the Schedule Viewer was implemented in the Operations business unit during the second half of 2013, with Version 2 of the Scheduler Viewer released in 2014.	Reduction of one FTE.
22	The DNSPs implement a common set of output-based performance measures at the depot level to ensure that labour efficiency is measured and reported.	Yes - not in base year	This recommendation has been implemented. Phase 1 Depot Level Performance Measures were deployed across all Ergon Energy depots in September 2012. Phase 2 measures were deployed in February 2014.	Unclear.

23	In the Ergon Energy service delivery area, consideration be given to the adoption of a Local Service Agent Model for depots in the range of 8 to 15 employees.		No action has been taken, see discussion in section 3.8.	Unclear.
24	The NSPs take urgent action to reduce overtime to benchmark levels and review gross pay to base pay ratios for all employees.	No	Strong management focus has been placed on reducing overtime levels as much as possible. Overtime reduction was a particular focus for the Operations Business Unit in 2012-13. Managers routinely monitor overtime reports with a view to minimising overtime without customer disruption, where feasible.	Bookable overtime hours reduced from 668,261 in 2011-12 to 533,127 in 2012-13 and 425,146 in 2013-14.
26	<p>The NSPs remove internal constraints to improved efficiency, as follows:</p> <ul style="list-style-type: none"> • Apart from categories of work which are contracted as a matter of policy, NSPs should fully utilise internal resources before packaged maintenance and minor works are contracted out. Some projects could also be jointly resourced to increase field workforce utilisation. • The DNSPs improve workforce flexibility to match start/finish times with work requirements. • The NSPs harmonise their Fatigue Management Policies by 1 July 2013 	Partial	Ergon continued with a range of productivity and efficiency measures in 2013. These include: improvements in the use of estimating, planning and scheduling technology; improved works reporting and analysis; improved discipline in works planning change control; restructuring of internal resources and end-to-end planning of works; improved engagement of unions; utilisation of mixed internal employees and external resources; reduced number of 'guaranteed' base load contractors.	Unclear.
27	Ergon Energy should reduce the overhead allocated to isolated generation and networks from the current level of \$23 million per annum to no more than \$4 million per annum. The reduction in overhead of \$19 million should not be re-allocated within the Ergon Energy business and should instead be removed through the efficiency programs from total overhead costs.	Unclear	No information.	Unclear

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