APPENDIX 4.10

Report to the Board of SPARQ Solutions on ICT Expenditure Forecasts for the period: 2015 to 2010 - KPMG

KPMG

cutting through complexity

Report to the Board of SPARQ Solutions on ICT Expenditure Forecasts for the Period: 2015 to 2020

25 June 2015

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Commercial in confidence

25 June 2015

The Board of Directors
SPARQ Solutions
26 Reddacliff Street
Newstead QLD 4006

Dear Sirs

Report on SPARQ Solutions expenditure forecasts for the period 2015 to 2020

We have been engaged by the SPARQ Solutions Board of Directors (the Board) to provide analysis over the ICT expenditure forecasts submitted by SPARQ Solutions to Ergon Energy and Energex (the network businesses), as part of their AER regulatory proposal for the upcoming regulatory period 2015 to 2020. Our analysis has been performed in accordance with our engagement letter dated 25 May 2015 and outlined in the Scope section of the report.

This report has been prepared on the basis of fieldwork commencing on 25 May 2015 and carried out up to 9 June 2015. We have not undertaken to update this report for events or circumstances arising after that date. We have indicated in this report the sources of the information presented.

This report is solely to assist the Board in connection with the SPARQ Solutions ICT expenditure forecasts, and is for the Board's information. This report is not to be used for any other purpose or distributed to any other person, except as set out in our engagement letter, or as otherwise agreed by us in writing.

Yours faithfullv

Ted Surette

Important Notice

Inherent Limitations

This report has been prepared as outlined in the Scope Section. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

The findings in this report are based on a qualitative study and the reported results reflect a perception of SPARQ Solutions but only to the extent of the sample surveyed, being SPARQ Solutions' approved representative sample of management and personnel. Any projection to the wider management and personnel is subject to the level of bias in the method of sample selection.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, SPARQ Solutions management and consulted as part of the process.

KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after the report has been issued in final form.

The findings in this report have been formed on the above basis.

Third Party Reliance

Our consent to releasing this report to the AER is conditional to the terms below.

With respect to the release, and to the maximum extent permitted by law:

a) KPMG is not responsible to you or any other party for any loss you or any other party may suffer in connection with the release of the report to, or use of the report by, AER;

b) you agree to release and forever discharge KPMG, its affiliated entities, and their partners, officers and employees from, and not assert against them, any action, liability, claim, suit, demand, claims for costs or other expenses or any other proceedings arising out of, or in connection with, the release of the report to the AER; and

c) you will indemnify KPMG and its affiliated entities, and their partners, officers and employees against any loss, action, liability, claim, suit, demand, claim for costs or expenses or any other proceeding they may suffer arising out of, or in connection with, the release of the report to AER.

Glossary of terms

ACT	Australian Capital Territory
AER	Australian Energy Regulator
ASF	Asset Service Fee
CA	Category Analysis
Capex	Capital Expenditure
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIF	Client Investment Forum
CIO	Chief Information Officer
CPI	Consumer Price Index
DNSP	Distribution Network Service Provider
EB	Economic Benchmarking
Energex	Energex Limited
Ergon Energy	Ergon Energy Corporation Limited
FY	Financial Year
ICT	Information, Communications and Technology
IaaS	Infrastructure-as-a-Service
IRC	Investment Review Committee
IRP	Investment Review Panel
km	Kilometres
MAR	Maximum Allowed Revenue
NER	National Electricity Rules
NDM	New Delivery Model
Network businesses	Ergon Energy and Energex collectively
NSW	New South Wales
OCIO	Office of the Chief Information Officer
Opex	Operating Expenditure
PSP	Project Services Panel
QLD	Queensland
RCP	Regulatory Control Period
RIN	Regulatory Information Notice
RoR	Rate of Return
SA	South Australia
SPARQ Solutions	SPARQ Solutions Pty Limited
TAS	Tasmania
Totex	Total Expenditure
VIC	Victoria
WACC	Weighted Average Cost of Capital
WDV	Written Down Value
2010 to 2015	Current RCP, FY2010/11 to FY2014/15
2015 to 2020	Upcoming RCP, FY2015/16 to FY2019/20

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Attachments

- Ergon Energy – AER PTRM Model v3 – 3 Jun 15
- Energex – AER PTRM Model v3 – 3 Jun 15

Executive summary

Background, Scope and Approach

Background	On 30 April 2015, the Australian Energy Regulator (AER) published the preliminary determination for the Queensland electricity distribution network service provider's (DNSPs) for the upcoming regulatory control period, 2015 to 2020. In the preliminary determination, the AER requested four areas to be addressed in relation to SPARQ Solutions and the Information, Communications and Technology (ICT) expenditure forecasts, in both Energex's and Ergon Energy's revised regulatory proposals. Namely: ■ the lack of transparency in the reporting of ICT costs by Ergon Energy and Energex; ■ the over-recovery of financing costs charged by SPARQ Solutions to Ergon Energy and Energex via the asset service fee; ■ the SPARQ Solutions ICT costs have not been market tested; and ■ the 2012-13 base year used for the forecasting operational expenditure does not reflect anticipated reductions in operational support and telecommunications pass through costs;
Scope and approach	In accordance with our engagement letter dated 25 May 2015, Board of SPARQ Solutions on behalf of Ergon Energy & Energex has engaged KPMG to perform the following analysis to help address the AER's queries: ■ **ICT asset charging model:** Model the difference in the Annual Revenue Requirements that arises from the application of: – The current model, under which SPARQ Solutions levies charges on Energex and Ergon Energy who then capitalise some of them (about 59% for Energex and about 65% for Ergon Energy) and expense the balance. Note that there are four elements that make up SPARQ Solutions' current charges: Asset Service Fee; Telecommunications; "Mopex"; and Service Level Agreement fee. – The AER's RFM and PTRM, in which case it would be assumed that SPARQ Solutions' asset base, Capex and Opex would be treated as if they were Energex and Ergon Energy's. ■ **ICT cost benchmarking:** Undertake high-level benchmarking of the AER RIN data (publically available from the AER website), specifically on non-network ICT expenditure for 13 DNSP's over a 10 year period and analyse differences in Energex and Ergon Energy ICT expenditure trends. ■ **ICT Operating Model:** – Provide an overview of the current ICT Operating Model within SPARQ Solutions. – Summarise SPARQ Solutions' journey of outsourcing services, highlighting services currently in-sourced vs outsourced; and – Specifically provide a status update on the recommendations made by ITNewcom in 2013. ■ **ICT Governance Processes:** Provide an overview of the current ICT governance process within SPARQ Solutions and document the key touch points with Ergon Energy and Energex. As agreed, the Scope will exclude the following: ■ Analysis / impact on the financial statements or accounting treatments of Energex and Ergon Energy; ■ Detailed analysis of each DNSP's Basis of Preparation; ■ Detailed analysis of SPARQ Solutions' cost base, additional cost opportunities potentially arising from government initiatives/industry events; and ■ Detailed assessment of the ICT governance process.
Work performed	This report documents the findings from analysis performed during 25 May 2015 to 9 June 2015. A list of interviews performed, documentation received from SPARQ Solutions and supporting analysis are outlined in the Appendices.

Headlines (1)

Key analysis:

ICT asset charging model

The overall ICT recovery model is transparent and understood by internal stakeholders, Ergon Energy and Energex

SPARQ Solutions has a defined expenditure recovery model in place for the provision of ICT services to Ergon Energy and Energex. SPARQ Solutions passes through costs, without margins, to Ergon Energy and Energex via four cost categories as an operating expenditure line item:

- Telecommunication pass through – third party costs related to the provision of telecommunication services;
- Operational support – internal labour and third party costs (including licensing, maintenance and external labour) related to ICT support;
- Non-capital projects – costs related to project work that cannot be capitalised in accordance with the network business' capitalisation policies (predominately labour related expenditure); and
- Asset service fee (ASF) – depreciation, amortisation and financing charges as a consequence of the delivery of the approved capital program.

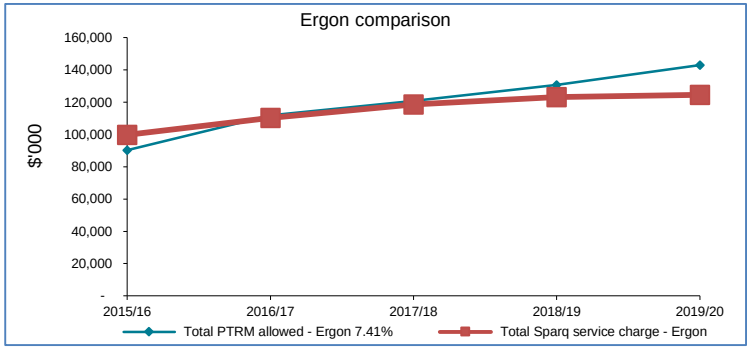
SPARQ Solutions discussed the expenditure recovery model with the AER as part of the 2010 to 2015 regulatory submission and propose to continue using this approach for the upcoming regulatory control period. This includes maintaining the same Regulatory RoR used by the network businesses for the purposes of calculating the ASF. This is an annual process to align the RoR used by SPARQ Solutions with Ergon Energy and Energex.

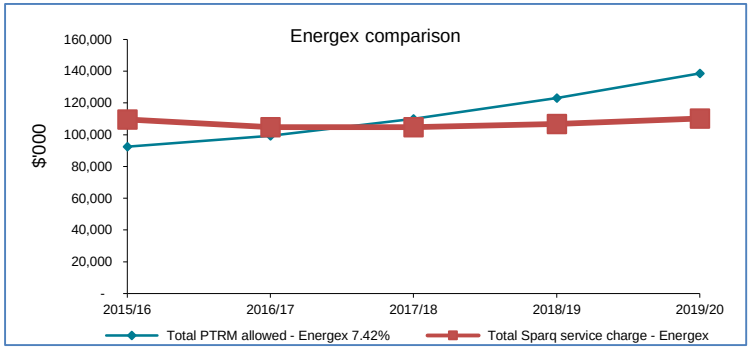
Lastly, these cost elements are forecasted, approved and tracked on a monthly basis to the boards of Energex and the Senior Leadership Team for Ergon Energy.

There is no material difference to the Maximum Allowed Revenue under the AER's Post-tax Revenue Model

KPMG modelled the Maximum Allowed Revenue (MAR) calculated under SPARQ Solutions' current ICT asset charging model to the AER's Post Tax Revenue Model (PTRM). The analysis found that after discounting the 5 year forecast differences by a post-tax vanilla Weighted Average Cost of Capital (WACC), there is no material difference to MAR for the forecast period 2015 to 2020. Specifically:

- approximately, 3.5% less than the NPV of the PTRM regulatory equivalent for Energex; and
- approximately, 2.6% less than the NPV of the PTRM regulatory equivalent for Ergon Energy.





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Headlines (2)

		Key analysis:
ICT cost benchmarking	**Using a variety of ICT expenditure benchmarks provides a more holistic view of Ergon Energy and Energex's ICT expenditure** Given the favourable results of the PTRM modelling analysis outlined previously, KPMG has benchmarked the ICT expenditure and forecasts for Energex and Ergon Energy against the other Distribution Network Service Providers (DNSP) non-network ICT expenditure. The benchmarks have been calculated using historical and forecast data submitted by the other 11 DNSPs as part of the Regulatory Information Notice (RIN) over two regulatory control periods (i.e. a 10 year period). For the purposes of this analysis, the benchmarks for Ergon Energy and Energex have been calculated using SPARQ Solutions' ICT expenditure data in order to compare the ICT Opex and Capex benchmarks to the other DNSPs. The AER identified Ergon Energy benchmarked as the highest ICT total expenditure (Totex) per customer. This is a direct result of the lower customer numbers in regional Queensland serviced by Ergon Energy. In assessing the relative performance to other DNSPs, KPMG has included a wide range of commonly used metrics to form a more holistic view of ICT expenditure. Hence for Ergon Energy, when considering other benchmarks such as ICT total expenditure to Network total expenditure, network kilometres (km), number of employees, number of ICT users and number of end user devices, Ergon Energy broadly tracks along the weighted average industry mean. Similarly for Energex, the ICT expenditure across a number of benchmarks also broadly tracks along the weighted average industry mean, including ICT Totex per customer. The main differences include the following: ■ Ergon Energy is a predominantly regional distributor and will have lower costs per km of line length and higher costs per customer; and ■ Energex is a urban distributor will have higher costs per km of line length and lower costs per customer. SPARQ Solutions has been a regular benchmarking participant for several years in the KPMG Biennial Utilities ICT Benchmarking Study. Management has consistently sought to understand insights from the analysis to enhance its services and strengthen its efficiency and prudent approach to ICT investments.	Page 16

Headlines (3)

		Key analysis:
ICT operating model	**SPARQ Solutions has increased the number of services outsourced in order to achieve cost efficiencies and capability uplift** Since the joint ICT function of SPARQ Solutions was established by Ergon Energy and Energex, the number of services outsourced has increased as a result of targeted market testing in order to achieve cost efficiencies and capability uplift. Approximately 45% of all costs charged to the network businesses are a direct pass through of third party fees. Key ICT services predominately outsourced include telecommunication services, servers, data centre, ICT service desk and end user computing. The most recent development is the implementation of SPARQ Solutions "New Delivery Model" which includes the establishment of a Project Services Panel (PSP). Since February 2014, $21 million ($ nominal) worth of Project Delivery services have been awarded to several of the five external service providers on the PSP. The PSP has achieved a reduction in SPARQ Solutions daily labour costs, reducing the daily labour cost from [redacted] ($nominal) to a range of [redacted] to [redacted] ($nominal) per day (refer to document D.18) for the delivery of approved capital works. Furthermore, SPARQ Solutions has developed an "ICT As-a-Service Decision Framework" which provides SPARQ Solutions the structure to prudently assess the risks and economic benefits of outsourcing additional ICT services in the future as new capability requirements are identified or existing ICT services come up for renewal.	Page 26
ICT governance process	**SPARQ Solutions operates within the Energex and Ergon Energy's ICT governance processes** There is a joint ICT governance framework between SPARQ Solutions, Ergon Energy and Energex consisting of a structured set of governance forums and controls with the following key objectives: ■ Robust review and approval of proposed ICT investments to ensure investments are in alignment with the overall business strategy; ■ Identification and implementation of synergies and joint opportunities between the network businesses; ■ Appropriate financial delegation approval is obtained for investments; and ■ Adequate and timely oversight of project progress, risks and benefits realisation. The key governance steps include: identifying the network business issue, the ICT requirements, assessing the cost and risk of various options to deliver the requirement and involving the appropriate business executive sponsors and financial delegates from the business in the sign-off and approval process. Governance processes are independently driven by each of the respective network business' for their specific business requirements, however, where possible alignment and synergies on common initiatives are pursued (e.g. single contact centre, infrastructure services) through the Joint Working Steering Committee. For the 2015 to 2020 ICT program of work, the non-network ICT investment portfolio governance and prioritisation process was extensive and considered the following: ■ National Electricity Rules (NER) expenditure objectives; ■ Alternate treatment options; ■ Risks assessment; and ■ Joint synergies and benefits.	Page 32

1. ICT charging model

SPARQ Solutions fee components

SPARQ Solutions fee components overview

KPMG analysed existing documentation and interviewed management to obtain an understanding of the fees (and margins) charged to Ergon Energy and Energex for the provision of ICT services.

The overall ICT recovery model is transparent and understood by internal stakeholders, Ergon Energy and Energex

SPARQ Solutions has a defined expenditure recovery model in place for the provision of ICT services to Ergon Energy and Energex. SPARQ Solutions passes through costs, without margins, to Ergon Energy and Energex via four cost categories as an operating expenditure line item:

- Telecommunication pass through – third party costs related to the provision of telecommunication services;
- Operational support – internal labour and third party costs (including licensing, maintenance and external labour) related to ICT support;
- Non-capital projects – costs related to project work that cannot be capitalised in accordance with the network business' capitalisation policies (predominately labour related expenditure); and
- Asset service fee (ASF) – depreciation, amortisation and financing charges as a consequence of the delivery of the approved capital program.

SPARQ Solutions discussed the expenditure recovery model with the AER as part of the 2010 to 2015 regulatory submission and propose to continue using this approach for the upcoming regulatory control period. This includes maintaining the same Regulatory RoR used by the network businesses for the purposes of calculating the ASF. This is an annual process to align the RoR used by SPARQ Solutions with Ergon Energy and Energex.

Expenditure recovery model

As part of the agreement with Ergon Energy and Energex, SPARQ Solutions consolidates its charges into four key categories:

- Telecommunication pass through;
- Operational support costs;
- Non-capital project costs ("Mopex"); and
- Asset service fee.

In line with other DNSP's, SPARQ Solutions has the following ICT Opex categories: telecommunication pass through, operating supporting costs and non-capital project costs (refer below).

Telecommunication pass through

This cost category represents a pass through of third party costs charged to SPARQ Solutions on behalf of Ergon Energy and Energex for carrier, mobile, data, voice, video and device management. There is no SPARQ Solutions overhead applied. Currently, there are separate contracts in place for voice and data (carrier services) and provision for managed contact centre services. These are 100% outsourced through market based contracts from Telstra and Optus, supplemented with services from Nexium (for Ergon Energy).

Table 1

Telecommunication Pass Through Costs - Energex ($ 2014/15)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	100%	100%	100%	100%	100%	100%	100%	100%
External Service costs ($M)	7.45	6.91	6.22	7.43	7.43	7.43	7.43	7.43
SPARQ costs ($M)								
Total ($M)	**7.45**	**6.91**	**6.22**	**7.43**	**7.43**	**7.43**	**7.43**	**7.43**

Source: SPARQ Solutions AER Response 47 – Final Amended 2

Table 2

Telecommunication Pass Through Costs - Ergon Energy ($ 2012/13)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	100%	100%	100%	100%	100%	100%	100%	100%
External Service costs ($M)	11.13	9.72	8.3	11.2	11.2	11.2	11.2	11.2
SPARQ costs ($M)	-	-	-	-	-	-	-	-
Total ($M)	**11.13**	**9.72**	**8.3**	**11.2**	**11.2**	**11.2**	**11.2**	**11.2**

Source: SPARQ Solutions AER Response 45 – Final Amended

Note: The data contained in the tables presented on this page align to the ICT expenditure forecasts within the network businesses' regulatory proposal submitted in November 2014. For the avoidance of doubt, KPMG has not adjusted the numbers to reconcile to the network businesses' revised regulatory proposal.

SPARQ Solutions fee components

Operational support costs

The operational support costs category collates the traditional ongoing operating costs for ICT services as defined within the Service Level Agreement (SLA) between SPARQ Solutions and its customers. This includes internal labour and external costs for the provision of end user services, business application services, ICT infrastructure services, ICT service desk, desktop support, data centre, software and hardware licencing, maintenance and support and corporate services. Costs for licensing and maintenance are allocated to Ergon Energy and Energex on an item by item basis using SPARQ Solutions' defined approach.

Non-capital project costs ("Mopex")

The non-capital project costs related to ICT project specific expenditure which cannot be capitalised under Australian Accounting Standards including business case development, initial scoping and conceptual design, decommissioning and some implementation costs. This expenditure is primarily labour related expenditure with 25% to 30% related to the use of general contractors and external service providers.

Table 3

Operational Support Costs - Energex ($ 2014/15)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	46%	47%	44%	45%	45%	45%	45%	45%
External Service costs ($M)	16.59	19.27	18.77	20.88	20.64	20.58	20.85	20.68
SPARQ costs ($M)	19.89	21.61	23.66	25.52	25.23	25.16	25.49	25.28
Total ($M)	**36.48**	**40.88**	**42.43**	**46.41**	**45.87**	**45.74**	**46.34**	**45.96**

Source: SPARQ Solutions AER Response 47 – Final Amended 2

Table 4

Opertaional Support Costs - Ergon Energy ($ 2012/13)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	37%	37%	36%	35%	35%	40%	40%	40%
External Service costs ($M)	13.4	15.1	16.2	17.5	17.7	20.7	21.4	21.8
SPARQ costs ($M)	22.6	25.5	29.6	32.5	32 .9	31	32.1	32.6
Total ($M)	**36.1**	**40.5**	**45.8**	**50**	**50.6**	**51.6**	**53.5**	**54.4**

Source: SPARQ Solutions AER Response 45 – Final Amended

Table 5

Non-capital Project Costs - Energex ($ 2014/15)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	N/A	N/A	N/A	25%	30%	30%	25%	0%
External Service costs ($M)				1.09	2.35	2.2	1.24	
SPARQ costs ($M)				3.27	5.49	5.14	3.71	1.83
Total ($M)	**3.41**	**2.78**	**2.66**	**4.36**	**7.84**	**7.34**	**4.95**	**1.83**

Source: SPARQ Solutions AER Response 47 – Final Amended 2

Table 6

Non-capital Project Costs - Ergon Energy ($ 2012/13)	2012/13 Actual	2013/14 Actual	2014/15 Actual + Forecast	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast	2019/20 Forecast
External Service proportion (%)	0%	0%	0%	25%	30%	30%	25%	0%
External Service costs ($M)				1.02	2.22	2.11	1.14	
SPARQ costs ($M)	3.03	3.34	5.5	3.06	5.18	4.92	3.43	1.86
Total ($M)	**3.03**	**3.34**	**5.5**	**4.08**	**7.39**	**7.03**	**4.58**	**1.86**

Source: SPARQ Solutions AER Response 45 – Final Amended

Note: The data contained in the tables presented on this page align to the ICT expenditure forecasts within the network businesses' regulatory proposal submitted in November 2014. For the avoidance of doubt, KPMG has not adjusted the numbers to reconcile to the network businesses' revised regulatory proposal.

SPARQ Solutions fee components

Management advised that upon the establishment of SPARQ Solutions, the key rationale for the structure and expenditure recovery approach was that it would be most efficient for the ICT assets to be held by SPARQ Solutions.

This approach enabled SPARQ Solutions to pool the benefits of both organisations, leveraging economies of scale to achieve increased efficiencies that Ergon Energy and Energex could not realise individually. Tangible benefits realised for the network businesses include:

- **Economies of scale discounts e.g. enterprise licensing;**
- **Taxation benefits; and**
- **Improved asset audit capabilities**

Note: The data contained in the tables presented on this page align to the ICT expenditure forecasts within the network businesses' regulatory proposal submitted in November 2014. For the avoidance of doubt, KPMG has not adjusted the numbers to reconcile to the network businesses' revised regulatory proposal.

Furthermore, the figures presented are an approximation of the "Regulated" costs based on a percentage allocation performed by SPARQ Solutions in line with cost allocation methodology (CAM).

Asset Service Fee

SPARQ Solutions is responsible for the delivery of the approved ICT capital works for Ergon Energy and Energex. In contrast to the other DNSPs the cost of delivering capital works is considered ICT Opex, referred to as the Asset Service Fee (ASF).

The ASF reflects the recovery of ICT asset depreciation, intangible asset amortisation (such as software) and related financing costs of the ICT assets held by SPARQ Solutions on behalf of network businesses. Hence, the level of ASF expenditure is directly related to the value of ICT assets from both past and proposed ICT investment programs.

Details of the proposed ICT capital programs for the forthcoming regulatory period are set out in the ICT capital expenditure forecast submissions. The tables to the right show the forecast of ASF for the forthcoming regulatory period.

The funding and asset charging model adopted by the network businesses and SPARQ Solutions for the provision of ICT assets is cost neutral. That is, the funding and asset charging model establishes "equal and opposite" transactions for the financing provided by the network businesses for ICT asset acquisition and the fees charged by SPARQ Solutions for the use of those assets.

The ICT depreciation and amortisation are calculated based on the capitalised value of the ICT asset and scheduled over the useful life of the asset. The useful life of the ICT asset is defined in the ICT Application Asset Management and ICT Infrastructure Asset Management guidelines.

Financing for the acquisition of ICT assets to be held by SPARQ Solutions for the benefit of the network businesses is provided by them. This carries a finance charge set at the network business' individual Regulatory Rate of Return (RoR). The process for aligning the RoR used by SPARQ Solutions is updated on an annual basis in line with the network businesses.

The finance cost recovery component of the ASF equates to the financing costs paid by SPARQ Solutions to the network businesses.

Table 7

Asset Service Fee (Ergon Energy) ($ 2012/13)	2015-16	2016-17	2017-18	2018-19	2019-20	Total
On Opening Assets	13.3	10.8	8.8	5.9	0.5	39.3
On Assets Capitalised 2014-15	7.8	10.1	9.8	9.6	9.4	46.6
Finance costs recovered	5.8	4.9	3.1	1.7	0.5	16.1
ASF - recovering costs of 2010-15 AER assets	26.9	25.8	21.8	17.1	10.4	102.0
On Assets Capitalised 2015-16	0.4	3.6	3.5	3.4	3.3	14.3
On Assets Capitalised 2016-17	-	0.1	4.3	4.2	4.1	12.8
On Assets Capitalised 2017-18	-	-	0.2	7.1	6.9	14.3
On Assets Capitalised 2018-19	-	-	-	0.4	5.8	6.1
On Assets Capitalised 2019-20	-	-	-	-	0.5	0.5
Finance costs recovered	0.2	1.3	2.9	6.8	8.0	19.1
ASF - recovering costs of 2016-20 AER assets	0.5	5.0	10.9	21.9	28.8	67.1
Asset Service Fees	**27.4**	**30.8**	**32.7**	**39.1**	**39.1**	**169.1**

Source: Forecast Expenditure Summary – Information Communication and Technology – 2015 to 2020

Table 8

Asset Service Fee (Energex) ($ 2014/15)	2015-16	2016-17	2017-18	2018-19	2019-20	Total
On Opening Assets	36.44	26.07	17.47	10.46	4.91	95.35
On Assets Capitalised 2014-15	6.16	8.01	7.82	7.63	7.42	37.04
Finance costs recovered	8.54	6.15	3.64	1.93	0.62	20.88
ASF - recovering costs of 2010-15 AER assets	51.15	40.23	28.93	20.01	12.95	153.27
On Assets Capitalised 2015-16	1.10	5.33	5.20	5.08	4.97	21.68
On Assets Capitalised 2016-17	-	0.02	5.60	5.46	5.32	16.40
On Assets Capitalised 2017-18	-	-	0.03	9.32	9.08	18.43
On Assets Capitalised 2018-19	-	-	-	0.52	7.90	8.42
On Assets Capitalised 2019-20	-	-	-	-	0.31	0.31
Finance costs recovered	0.41	1.79	3.72	8.45	9.96	24.33
ASF - recovering costs of 2016-20 AER assets	1.51	7.14	14.55	28.83	37.55	89.58
Asset Service Fees	**52.65**	**47.37**	**43.48**	**48.84**	**50.49**	**242.83**

Source: Appendix 32 – ICT strategic plan

AER Post-Tax Revenue Model findings (1)

AER Post-Tax Revenue Model analysis

Objective

- The objective of the analysis is to determine if the methodology used to develop the charges for SPARQ Solution's services to Energex and Ergon Energy results in materially different ICT charges to those which would have been calculated using the Australian Energy Regulator's (AER) Post-tax Revenue Model (PTRM) for a five year period from 1 July 2015 to 30 June 2020.

Testing methodology

- The methodology applied to test the SPARQ Solutions calculation of ICT service fees against an estimate of the results from a PTRM based calculation incorporated the development of a set of data inputs for a distribution PTRM published by the AER, and the comparison of the results to determine if there was a material difference.

There is no material difference to the Maximum Allowed Revenue under the AER's Post-tax Revenue Model

KPMG modelled the Maximum Allowed Revenue (MAR) calculated under SPARQ Solutions' current ICT asset charging model to the AER's Post Tax Revenue Model (PTRM). The analysis found that after discounting the 5 year forecast differences by a post-tax vanilla Weighted Average Cost of Capital (WACC), there is no material difference to MAR for the forecast period 2015 to 2020. Specifically:

- approximately, 3.5% less than the NPV of the PTRM regulatory equivalent for Energex; and
- approximately, 2.6% less than the NPV of the PTRM regulatory equivalent for Ergon Energy.

Application of methodology

The application of the methodology described above relied on data presented by SPARQ Solutions in a number of Excel workbooks, that were assembled to develop key inputs required for the calculation of the MAR in a PTRM approach, consistent with that applied by the AER in their decisions on the MAR for electricity distribution businesses in Australia. More specifically, this included the following six steps:

1. **The development of a value for the initial assets as at 30 June 2015, and a remaining life for each class such that it would calculate a similar amount of depreciation for the five year regulatory forecast period as would have been calculated from a detailed forecast of depreciation from a detailed asset register** – Financial data was extracted for Energex and Ergon Energy from a data file that was used to calculate opening written down value, and forecast depreciation as at 30 June 2015 (30Apr15 EE_EX_Fixed_Asset Register – Accounting.xlsx (refer to document D.15)).
2. **The inclusion of capital additions to the asset base, including capital works in progress** – Capital additions were extracted from the AER ICT Cost Model v4.20-Control.xlsx file, with assets split between asset classes with a 5 year life and a 10 year life.
3. **The incorporation of operating costs as a cost past through** – Operating costs were extracted from the categories of "Service Level Agreement", "Pass through" and "Project once-off Opex" identified for each business in AER ICT Cost Model v4.20-Control.xlsx (refer to document D.16) to determine an operating cost for each business and discounted by the escalations in that model to present data in real 2014-15 dollars for the PTRM.
4. **The development of a tax asset base to incorporate tax values and lives for the assets used in the development of the service charges for each of Ergon Energy and Energex** – A detailed asset register was obtained and tax values as at 30 June 2015 were matched to the asset descriptions identified in Step 1 above, along with a calculated average remaining life to determine a tax depreciation charge over the next five years similar to the detailed calculation of tax depreciation. Data was sourced from SPARQ Solutions Detailed Asset Register (ECA 688) at 30Apr15 - T1.xlsx (refer to document D.17)
5. **Applying these inputs to a version of the PTRM downloaded from the AER website** – The data identified in the steps 1 to 4 was entered into the input sheet in a PTRM, along with a Vanilla Weighted Average Cost of Capital (WACC) (7.42% for Energex and 7.41% for Ergon Energy), to calculate the MAR that would result from the application of the forecasting methodology used by the AER in determining revenues from asset and operating cost data. Operating cost data was presented in real 2014-15$ ready for input into the PTRM. Asset data was assumed to be in real 2014-15$ and entered without adjustment.
6. **Calculation of the differences over the five year forecast period** – The results from the PTRM forecasting resulted in a set of nominal outputs, representing the MAR for the assets and Opex applied to the model for each business. These results were compared with the results from the SPARQ Solutions forecasting of charges.

AER Post-Tax Revenue Model findings (2)

Findings

The comparison of the results of the PTRM modelling against the forecast charges prepared by SPARQ Solutions are not materially different. The results are presented to the right.

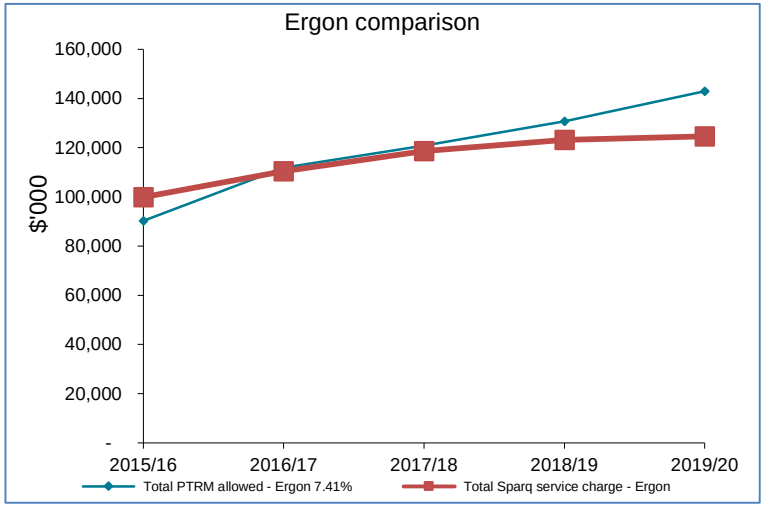
The differences in the NPV of revenues over the five years are:

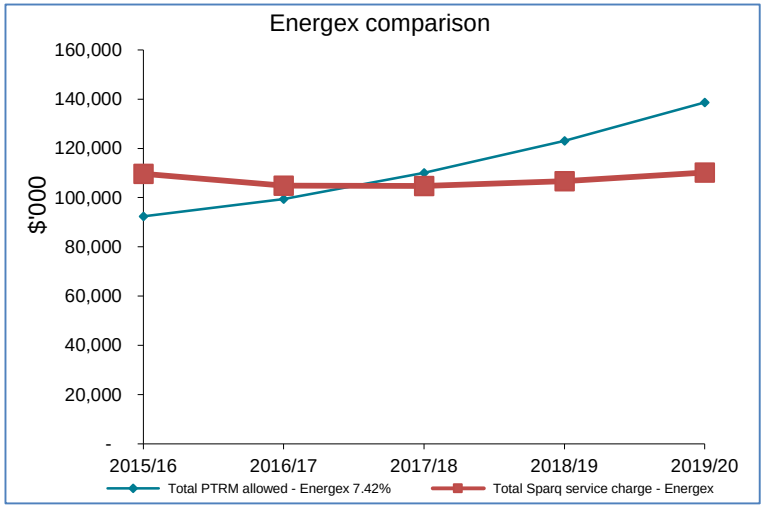
- approximately, 3.5% less than the NPV of the PTRM regulatory equivalent for Energex; and
- approximately, 2.6% less than the NPV of the PTRM regulatory equivalent for Ergon Energy.

These differences are not material to the ICT charges presented by SPARQ Solutions, and are significantly less material to the total MAR for Standard Control Services for Ergon Energy and Energex.

It is worth noting that the PTRM approach defers revenues as compared to the SPARQ Solutions approach. In both the Ergon Energy and the Energex cases, the PTRM revenues start the five year period below the SPARQ Solutions forecast, but end the five year forecast period well above the SPARQ Solutions forecast.

There are reasons for the similarity of charges and the differences in profiles.





AER Post-Tax Revenue Model findings (3)

Similarities

The SPARQ Solutions methodology applies a WACC to the WDV asset base and charges depreciation along with a pass through of the operating costs. This is broadly similar to that approach applied by the PTRM.

Differences

There are minor differences in the application of the methodology:

- Due to the detailed depreciation calculations applied in the SPARQ Solutions approach (each asset is depreciated separately) and the PTRM approach (depreciation is calculated in classes using an average remaining life). This produces a different depreciation profile more closely aligned to the actual depreciation of the assets;
- Further, the PTRM approach does not calculate depreciation or the return on assets in the year of addition. Depreciation and return on assets commences in the year after the year of addition and a half return on assets is capitalised into the asset base as compensation;
- The SPARQ Solutions approach calculates depreciation on a half year basis for new assets. The SPARQ Solutions process is slightly more accurate on a year by year basis. This is why the profiles are slightly different; and
- The SPARQ Solutions methodology applies a WACC to the average of the opening and closing balances for a year. The PTRM applies this on an opening balance, but inflates the asset base during the forecast period, where the SPARQ Solutions approach does not.

The PTRM applies a full post-tax methodology on a nominal asset base. This means that the incremental Consumer Price Index (CPI) is deducted from the depreciation in the year, a further difference in the depreciation charge.

2. ICT cost benchmarking

Analysis and findings

ICT cost benchmarking analysis

KPMG has benchmarked the SPARQ Solutions ICT costs of Energex and Ergon Energy against Regulatory Information Notices (RIN) responses submitted by the 13 DNSPs under the regulatory jurisdiction of the AER. Specifically, the:

- Category Analysis RIN;
- Economic Benchmarking RIN; and
- Reset RIN.

For the purpose of comparable analysis, SPARQ Solutions has provided Energex and Ergon Energy ICT expenditure prior to the expenditure being accounted in the network business's regulatory accounts.

Limitations to the work performed:

- Review and analysis of any difference in the RIN Basis of Preparation across the DNSPs was not performed;
- Benchmarking performed using the published RIN data

Using a variety of ICT expenditure benchmarks provides a more holistic view of Ergon Energy and Energex's ICT expenditure

Given the favourable results of the PTRM modelling analysis outlined previously, KPMG has benchmarked the ICT expenditure and forecasts for Energex and Ergon Energy against the other Distribution Network Service Providers (DNSP) non-network ICT expenditure. The benchmarks have been calculated using historical and forecast data submitted by the other 11 DNSPs as part of the Regulatory Information Notice (RIN) over two regulatory control periods (i.e. a 10 year period). For the purposes of this analysis, the benchmarks for Ergon Energy and Energex have been calculated using SPARQ Solutions' ICT expenditure data in order to compare the ICT Opex and Capex benchmarks to the other DNSPs.

The AER identified Ergon Energy benchmarked as the highest ICT total expenditure (Totex) per customer. This is a direct result of the lower customer numbers in regional Queensland serviced by Ergon Energy. In assessing the relative performance to other DNSPs, KPMG has included a wide range of commonly used metrics to form a more holistic view of ICT expenditure. Hence for Ergon Energy, when considering other benchmarks such as ICT total expenditure to Network total expenditure, network kilometres (km), number of employees, number of ICT users and number of end user devices, Ergon Energy broadly tracks along the weighted average industry mean.

Similarly for Energex, the ICT expenditure across a number of benchmarks also broadly tracks along the weighted average industry mean, including ICT Totex per customer.

The main differences include the following:

- Ergon Energy is a predominantly regional distributor and will have lower costs per km of line length and higher costs per customer; and
- Energex is a urban distributor will have higher costs per km of line length and lower costs per customer.

SPARQ Solutions has been a regular benchmarking participant for several years in the KPMG Biennial Utilities ICT Benchmarking Study. Management has consistently sought to understand insights from the analysis to enhance its services and strengthen its efficiency and prudent approach to ICT investments.

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Scope of benchmarking and RIN data

Scope of RIN Data

SPARQ Solutions ICT expenditure and forecasts for Energex and Ergon Energy have been benchmarked against the other Distribution Network Service Providers (DNSP) non-network ICT expenditure.

The benchmarks have been calculated using historical and forecast data submitted by the other 11 electricity DNSPs as part of the AER Regulatory Information Notices (RIN), over two regulatory control periods (a 10 year period).

Detail of the RIN data sets and the DNSPs are provided within Appendix B - AER RIN Data analysed in ICT cost benchmarking.

A list of the DNSPs is presented below:

Table 9

DNSP	State
Energex	Queensland
Ergon Energy	Queensland
ActewAGL	Australian Capital Territory
Ausgrid	New South Wales
Endeavour Energy	New South Wales
Essential Energy	New South Wales
SA Power Networks	South Australia
CitiPower	Victoria
Powercor	Victoria
Ausnet Services	Victoria
Jemena	Victoria
United Energy	Victoria
TasNetworks (Distribution)	Tasmania

RIN Data

Data from the following three types of RINs were collated for benchmarking:

- Category Analysis (CA) RIN;
- Reset RIN; and
- Economic Benchmarking (EB) RIN.

The scope and timeline of each type of RIN are as follows:

Table 10

State	CA RIN	EB RIN	Reset RIN (at proposal)
QLD	2009 – 2013 2014	2006 - 2013	2015 - 2020
ACT	2014	2006 - 2013	2009 – 2013 (Actual) 2015 -2019 (Estimate)
NSW	2014	2006 - 2013	2009 – 2013 (Actual) 2015 -2019 (Estimate)
SA	2009 – 2013 2014	2006 - 2013	2015 - 2020
VIC	2009 -2013 2014	2006 - 2013	2015 – 2020
TAS	2009 – 2013 2014	2006 - 2013	N/A

Energex and Ergon Energy ICT expenditure data

For comparison purpose, the benchmarks for Energex and Ergon Energy have been calculated using SPARQ Solutions ICT expenditure data, i.e. ICT expenditure realised by SPARQ Solutions before it is accounted in Energex and Ergon Energy regulatory accounts.

Energex and Ergon Energy non-network ICT expenditure

SPARQ Solutions has underspent its proposed ICT expenditure for the current regulatory control period by $61 million (7.22% underspend), delivering the following major ICT streams:

- **Knowledge management;**
- **Infrastructure and Communications maintenance; and**
- **Customer servicing.**

Continuing into the next regulatory control period, SPARQ Solutions has planned the following key capital projects for Energex and Ergon Energy:

- **Replacement of the Ellipse EAM and Administrative ERP modules with a contemporary solution; and**
- **Continuous improvement activities to maintain the reliability, supply and safety of Ergon Energy and Energex's ICT solutions**

Current regulatory control period (2010 to 2015)

Over the current regulatory period, 2010 to 2015, SPARQ Solutions has delivered the following ICT capital initiative categories and the associated ICT operating activities for Energex and Ergon Energy.

- Customer servicing;
- Energy management;
- Enterprise resource planning;
- Governance risk and compliance;
- Infrastructure and communications;
- Knowledge management;
- Network model, planning and design (including GIS Spatial);
- Network operations; and
- Workforce automation.

Refer to Table 11 for ICT expenditure in the current regulatory period and Table 12 for ICT expenditure forecasts for the upcoming regulatory period in nominal dollars ($000).

Next regulatory control period (2015 to 2020)

SPARQ Solutions has forecasted to deliver the following ICT capital initiatives on behalf of Energex and Ergon Energy in the 2015 to 2020 regulatory period:

- Enterprise Asset Management;
- Network Information Enablement;
- Distributed Workforce Automation;
- Administrative ERP;
- Market Systems Modernisation;
- Business Analytics Renewal;
- Information Security Enhancement;
- Integration Platform Renewal;
- Desktop and Productivity thin client;
- End User Devices;
- Infrastructure; and
- Applications Replacement and Continuous Improvement activities.

Table 11

	Energex ($000)		Ergon Energy ($000)	
Year	ICT Capex	ICT Opex	ICT Capex	ICT Opex
2011	53,928	38,574	19,331	36,754
2012	72,270	47,702	27,654	47,332
2013	61,790	47,341	25,871	42,745
2014	26,043	50,566	31,690	45,453
2015	43,820	49,346	67,391	47,419
Total	**257,851**	**233,529**	**171,937**	**219,703**

Table 12

	Energex ($000)		Ergon Energy ($000)	
Year	ICT Capex	ICT Opex	ICT Capex	ICT Opex
2016	32,910	52,471	45,280	49,894
2017	50,130	53,556	41,190	50,227
2018	67,890	54,838	63,040	51,396
2019	57,310	52,373	51,650	48,809
2020	29,930	49,216	24,700	46,640
Total	**238,170**	**262,454**	**225,860**	**246,966**

ICT expenditure trend

Nine DNSPs have proposed increasing ICT expenditure in their ICT strategic plans and regulatory submissions.

The increases are indications of greater reliance on ICT to deliver network business services and operation efficiencies, as well as impacts from increasing operational technology and customer services.

Energex and Ergon Energy's planned ICT expenditure forecasts are consistent with the industry trends.

The benchmark of Energex and Ergon Energy of ICT Totex as a percentage of Totex are trending close to the industry mean.

Note: (a) The mean line in the following graphs represents the weighted average across all included participants.

Industry non-network ICT Expenditure Trend

In general, when the ICT total (capital and operating) expenditures are compared over a ten year period, the following trends have been observed:

- One DNSP has planned a decrease from the current period into the next period;
- Two DNSPs have planned to maintain their expenditure levels into the next period;
- Nine DNSPs, including Energex and Ergon Energy, have planned increases from the current period into the next period within their regulatory price determination proposals.

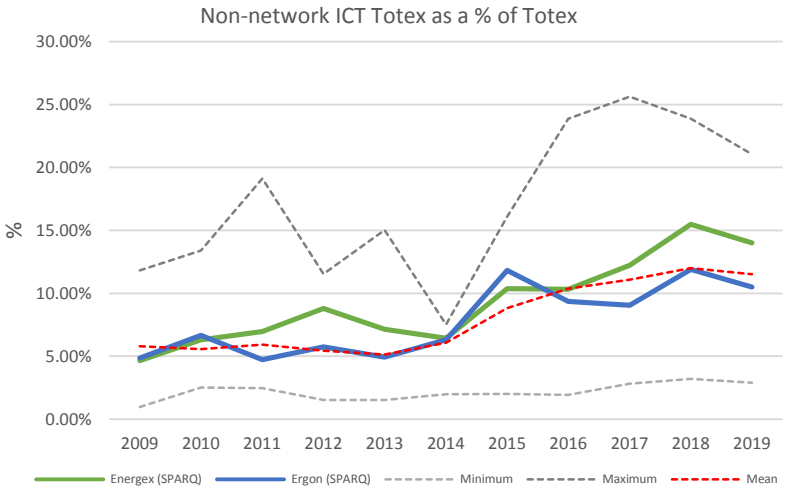
The DNSPs have indicated the following drivers in the increasing trend in ICT expenditures in their ICT strategic plans and regulatory submissions:

- ICT investment cycles have a lumpier profile to represent the shorter asset lives of ICT assets;
- Increasing reliance on ICT to delivery electricity network services and business efficiencies;
- Impact on ICT from rapid technology applications in operational technology, e.g. impact from smart technologies;
- Impact on ICT to deliver planned regulatory changes and customer expectations; and
- Regulatory requirements to consider non-network expenditures as an alternative to network expenditures.

Non-network ICT Total Expenditure as a % of Total Expenditure

The chart below illustrates ICT expenditure as a percentage of the overall business expenditure is increasing across the industry[a].

Note that the ICT expenditure forecasts benchmarks are based on the regulatory determination proposals, as such reduction in expenditure forecasts from the AER draft or final decisions have not been factored into the results.



In line with the industry trend, Energex and Ergon Energy have planned to increase their ICT expenditure from the current regulatory period into the next regulatory period.

The results of ICT Totex as a % of Totex suggest that Energex has been trending slightly above the industry mean in the current period and has planned to increase into the next period to above the mean.

For Ergon Energy, ICT Totex as a % of Totex has trended in line with industry mean over the current period, and will increase into the next regulatory period with their planned ICT capital project portfolio.

ICT capital expenditure benchmarks

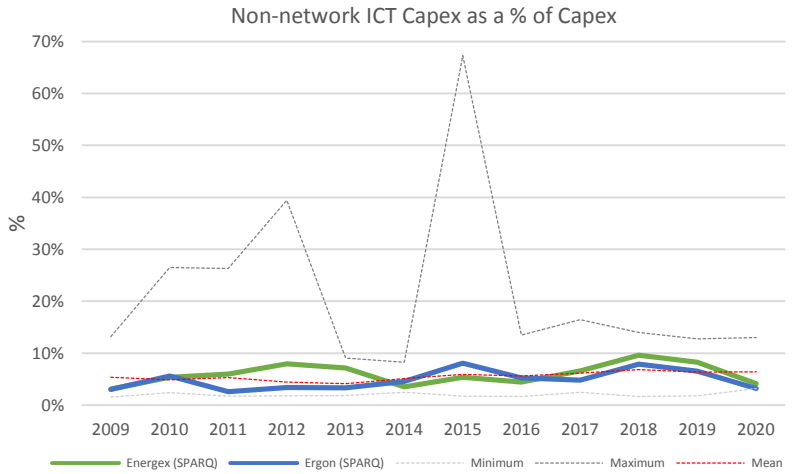
Ergon Energy's Non-network ICT Capex as a % of Total Capex was trending below the industry mean over the current period. In the next regulatory period Ergon Energy will continue to remain broadly in line with the industry mean.

Whilst Energex has trended slightly above the industry mean during the current period, its ICT Capex as a % of Total Capex is expected to decrease or be broadly in line with the industry mean over the next regulatory period.

Non-network ICT Capex as a % of Capex

The results of the Non-network ICT Capex as a % of Capex chart identify that Ergon Energy was trending below the industry mean over the current period. In the next regulatory period Ergon Energy will continue to remain broadly in line with the industry mean.

From the chart we can observe Non-network ICT Capex as a % of Capex for Energex has trended slightly above the industry mean during the current period due to their ICT capital project portfolio and is expected to decrease or be broadly in line with the industry mean over the next regulatory period.



AER benchmarking

The AER's preliminary determinations for Ergon Energy and Energex refers to the 2013 corporate benchmark of 4.48% for the Corporate ICT Capex as a percentage of Corporate Capex. We note the following considerations with the use of this benchmark:

- This is a corporate benchmark that includes Capex for unregulated activities. The equivalent benchmark for regulated ICT Capex in 2013 was 7.0%; and
- The AER has selected a benchmark from one year only (2013). As shown on the previous page, ICT investment cycles are lumpy and need to be considered over an extended period of time.

As such, KPMG prefers a holistic approach of using a range of benchmarks over a longer period of time.

ICT expenditure per customer benchmarks

Ergon Energy has perceived higher costs per customer than the other DNSPs due to its small customer base and the large geographical distribution area it covers.

The AER has acknowledged that low density networks such as predominantly rural distributors will have higher costs as their customers are more geographically dispersed than those of an urban distributor.

It is therefore prudent to assess and consider a range of alternate benchmarks such as ICT expenditure per kilometre, per user and per employee to get a more complete view of ICT expenditure performance.

AER benchmarking analysis

The Deloitte Access Economics Study commissioned and referred to by the AER focused strongly on Customer based key performance indicators (KPIs). These ICT expenditure per customer benchmarks do not portray in particular, Ergon Energy in the most favourable light. This can be explained, however, by the fact that the customer benchmark calculations are largely driven by the denominator, i.e. size of the customer base.

In Ergon Energy's case, it is a regional QLD distributor with a low customer density of approximately five customers per km and as expected and acknowledged by the AER it has perceived higher costs per customer than the other DNSPs due to its small customer base and the large geographical distribution area it services.

AER Annual Benchmarking Report of Electricity Distribution Network Service Providers

In the AER's own *Annual benchmarking report of Electricity distribution network service providers* (November 2014) report, it acknowledged that low density networks such as predominantly rural distributors will have high costs per customer because the customers of a rural distributor are more geographically dispersed than those of an urban distributor.

Given the disparate number of customers and geographical distribution areas amongst the DNSPs it would be considered prudent to analyse and consider alternative metrics that are not just customer based to ensure there is appropriate coverage and representation of a DNSP's performance against a number of metrics. These could include (but are not limited to):

- ICT expenditure per km;
- ICT expenditure per user;
- ICT expenditure per employee; and
- ICT expenditure per device.

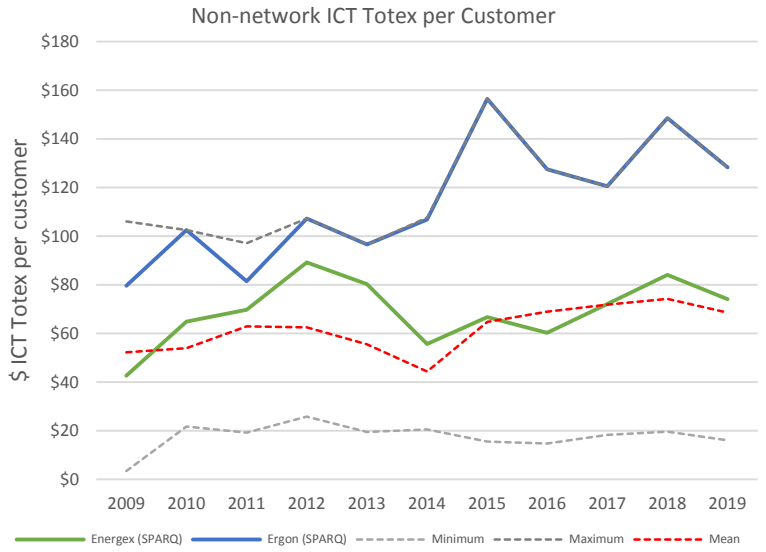
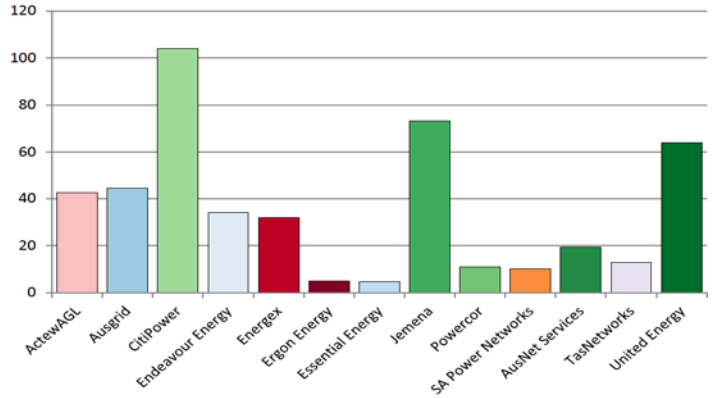


Figure 8 **Customer density (customers / km of route line length, average 2009–2013)**



Source: Electricity distribution network service providers: Annual benchmarking report November 2014

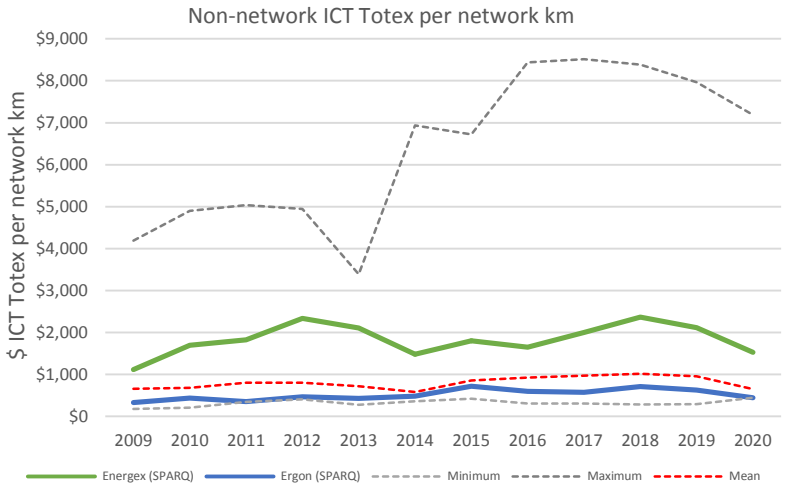
ICT expenditure per kilometre benchmarks

When comparing Non-network ICT Totex per network km we can observe that Ergon Energy is below the industry mean whereas Energex is slightly above.

Non-network ICT Totex per network km

The graph to the right provides an alternative to the per customer view by illustrating Non-network ICT Totex per network km. From the graph we can observe that Ergon Energy is below the industry mean whereas Energex is slightly above.

Energex and Ergon Energy have planned increases from the current period to the next regulatory period in their regulatory submission not dissimilar to the seven other DNSPs.

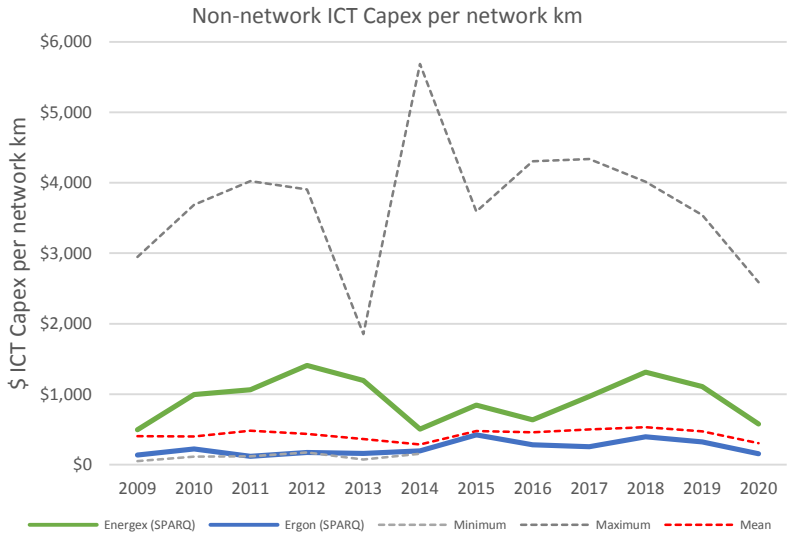


Ergon Energy's Non-network ICT Capex per network km appeared to be trending below the industry mean over the current and next regulatory period. Over the same period Energex was consistently trending above due to planned ICT Capex investments.

Non-network ICT Capex per network km

The chart to the right provides a snapshot of Ergon Energy and Energex's performance when considering Non-network ICT Capex per network km. From the chart we can observe that Ergon Energy appeared to be trending below the industry mean in the current period and will continue this downward trend in the next regulatory period.

Over the same period Energex's Non-network ICT Capex per network km trended above the industry mean and will continue to trend this way through the next regulatory period due to their planned ICT capital expenditure.



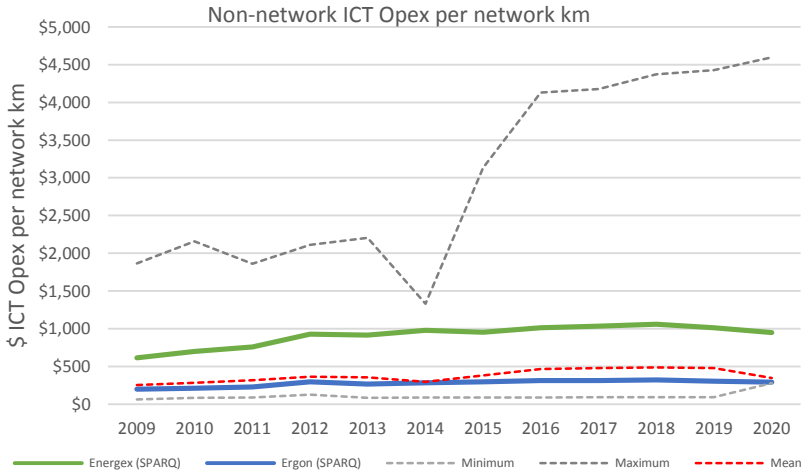
ICT expenditure per kilometre and per employee benchmarks

Ergon Energy's Non-network ICT Opex per network km appeared to be trending below the industry mean over the current and next regulatory period. Over the same period Energex was consistently trending above for increased Opex required to support ICT Capex investments.

Non-network ICT Opex per network km

The chart to the right provides a view of Ergon Energy and Energex's performance when considering Non-network ICT Opex per network km. From the chart we can observe that Ergon Energy appeared to be trending below the industry mean in the current period and will continue this downward trend in the next regulatory period.

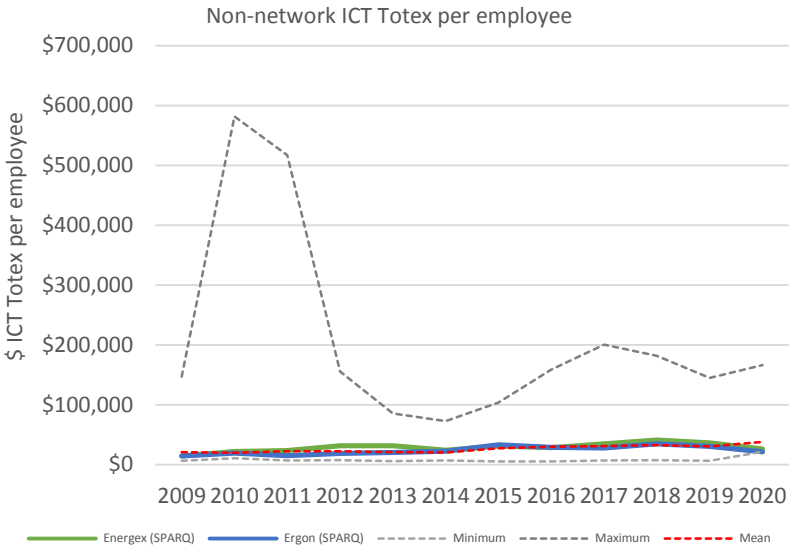
Energex's Non-network ICT Opex per km in the current period had trended above the industry mean and is planned to increase in the next regulatory period due to ongoing Opex required to support planned ICT capital expenditure as part of their investment cycle.



Ergon Energy and Energex's Non-network ICT Totex per employee both appear to be closely trending in line with the industry mean over the current period and this trend appears to be continuing into the next regulatory period.

Non-network ICT Totex per employee

The results of the Non-network ICT Totex per employee chart suggest that Ergon Energy and Energex both appear to be closely trending in line with the industry mean over the current period and this trend will continue into the next regulatory period.



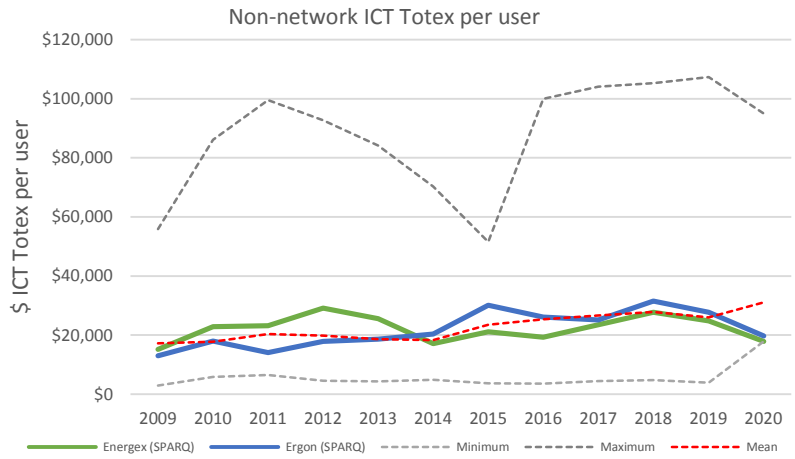
ICT expenditure per user and per device benchmarks

Ergon Energy Non-network ICT Totex per user was trending below the industry mean over the current period largely in line with the industry mean.

Non-network ICT Totex per user

The results of the Non-network ICT Totex per user chart identify that Ergon Energy was trending below the industry mean over the current period. In the next regulatory period Ergon Energy will again be largely in line with the industry mean.

From the chart we can observe Non-network ICT Totex per user for Energex has trended very slightly above the industry mean during the current period and is expected to decrease or be in line with the industry mean over the next regulatory period.

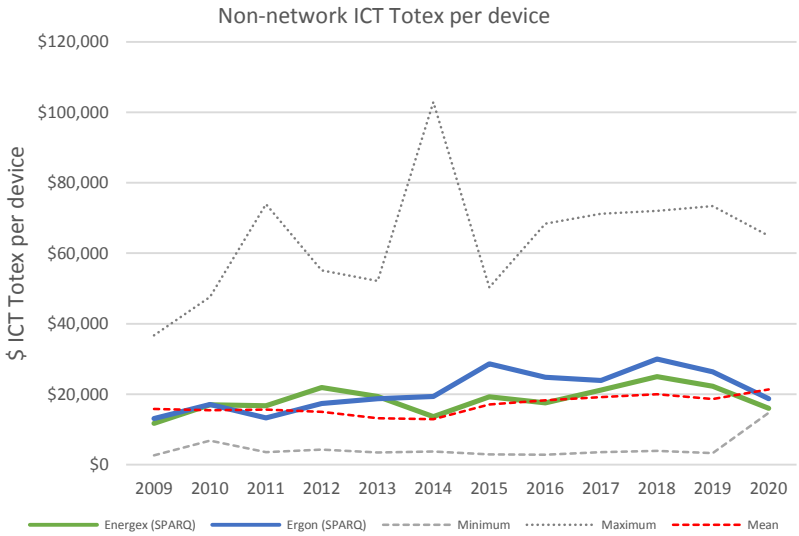


Both Ergon Energy and Energex Non-network ICT Totex per device appeared to trend in line with the industry mean over the current regulatory period. Ergon Energy is expected to increase over the next regulatory period as a result of increased ICT capital expenditure during this period.

Non-network ICT Totex per device

The results of the Non-network ICT Totex per device chart suggest that Energex was trending close to the industry mean over the current period. In the next regulatory period Energex is expected to continue this trend.

From the chart we observe Non-network ICT Totex per device for Ergon Energy has trended in line the industry mean during the current period, however is expected to increase over the next regulatory period as a result of increased ICT capital expenditure for this period.



3. ICT operating model

Overview

ICT operating model overview

KPMG performed the following procedures:

- Interviewed key stakeholders to understand the ICT operating model of SPARQ Solutions to support the requirements of Ergon Energy and Energex; and
- Completed desktop review of key SPARQ Solutions documents detailing the ICT operating model and SPARQ Solution's journey to outsourcing additional ICT services.

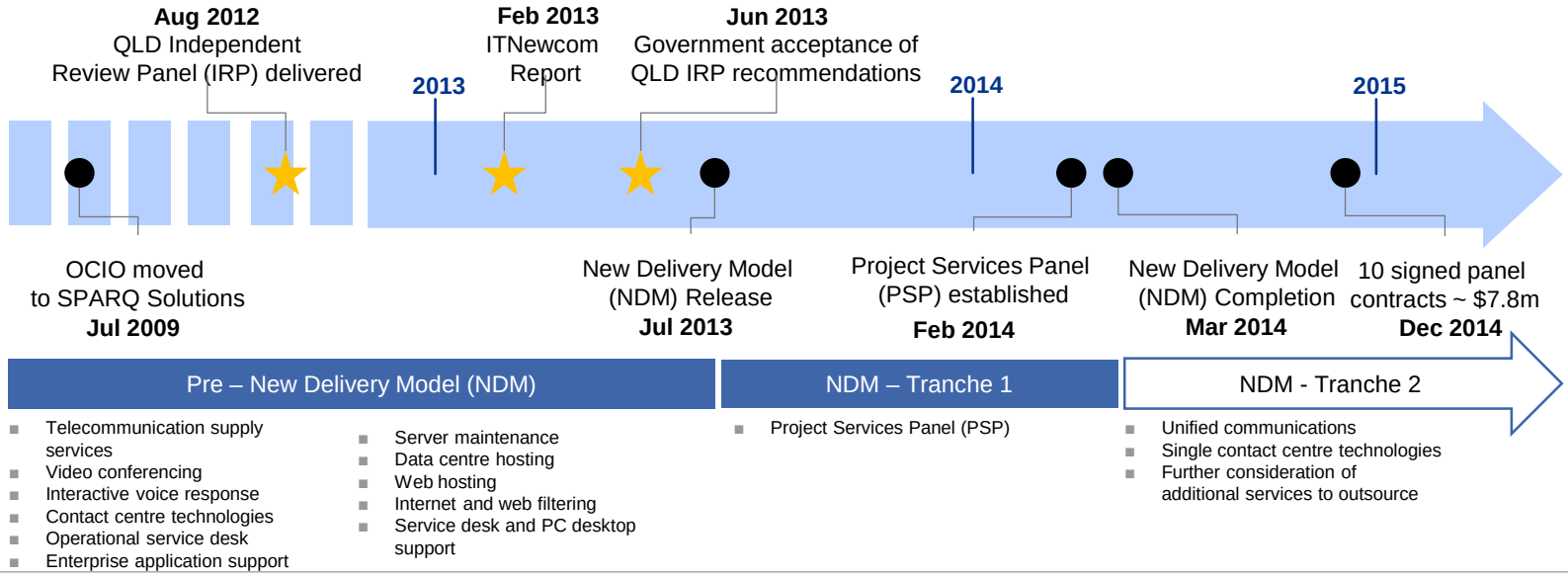
SPARQ Solutions has increased the number of services outsourced in order to achieve cost efficiencies and capability uplift

Since the joint ICT function of SPARQ Solutions was established by Ergon Energy and Energex, the number of services outsourced has increased as a result of targeted market testing in order to achieve cost efficiencies and capability uplift. Approximately 45% of all costs charged to the network businesses are a direct pass through of third party fees. Key ICT services predominately outsourced include telecommunication services, servers, data centre, ICT service desk and end user computing. The most recent development is the implementation of SPARQ Solutions "New Delivery Model" which includes the establishment of a Project Services Panel (PSP). Since February 2014, $21 million ($ nominal) worth of Project Delivery services have been awarded to several of the five external service providers on the PSP. The PSP has achieved a reduction in SPARQ Solutions daily labour costs, reducing the daily labour cost from [redacted] ($nominal) to a range of [redacted] to [redacted] ($nominal) per day (refer to document D.18) for the delivery of approved capital works.

Furthermore, SPARQ Solutions has developed an "ICT As-a-Service Decision Framework" which provides SPARQ Solutions the structure to prudently assess the risks and economic benefits of outsourcing additional ICT services in the future as new capability requirements are identified or existing ICT services come up for renewal.

SPARQ Solutions outsourcing journey

Below depicts a timeline of key reviews performed and key outsourcing opportunities.



Key

- ★ Independent report
- ● SPARQ Solutions Action Taken

Current state ICT Operating Model as of June 2015

The diagram shows the current outsourcing state of SPARQ Solutions.

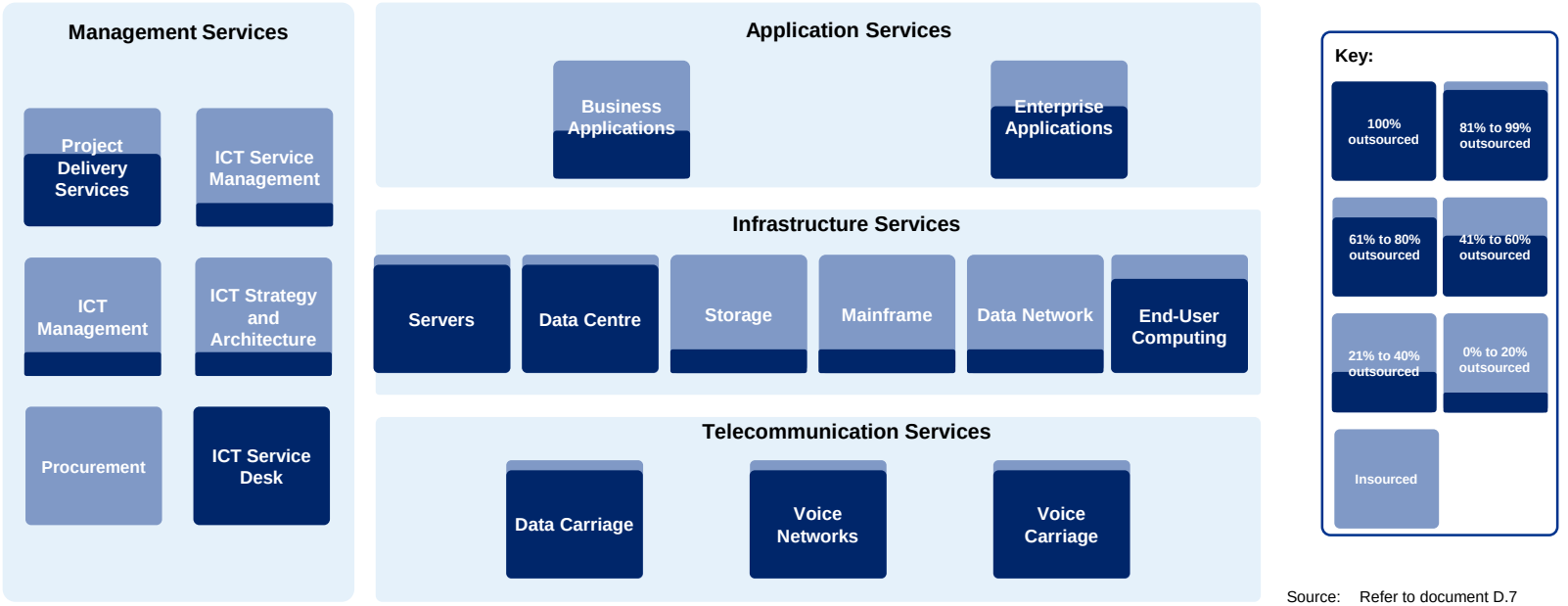
Over time, the number of outsourced services utilised by SPARQ Solutions has increased, with approximately 45% of all costs charged to the network businesses are a direct pass through of third party fees.

Currently, the following services are predominately provided by outsourced vendors:

- Telecommunications;
- Customer contact centre;
- Operational service desk;
- PC desktop support; and
- Data centre.

Further detail on the outsourcing breakdown of each service identified above can be found in Appendix D of this report.

ICT services – Estimate of third party fees



Source: Refer to document D.7

Current industry trend observations

Whilst there is no one-size fits all model for the appropriate use of outsourcing and offshoring of ICT, there are common trends within the general market and specifically within the energy distribution industry.

Common ICT services that tend to be fully outsourced include Telecommunications, Data Centre and End User Computing services.

Increasingly DNSPs are outsourcing non-production activities, such as Applications Development and Maintenance to take advantage of the cost reduction possibilities presented.

Utilising outsourced infrastructure management services for the support, maintenance and operation of servers and storage is now commonplace within this industry as is extensive use of virtualisation technologies to reduce operational costs

Another trend observed in the market is server and storage infrastructure being replaced by 'as a Service' delivery methods (Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS)) reducing the capital and operating expenditure requirements. This trend is somewhat less prevalent within the energy distribution industry due to the inherent complexities of legacy and proprietary systems..

SPARQ Solution's outsourcing journey

SPARQ Solution's outsourcing journey

SPARQ Solutions was established in July 2004, as the ICT Service Provider to Ergon Energy and Energex. At this time, several ICT services were outsourced, and continue to be outsourced including:

- Supply of telecommunication services;
- Interactive voice response services; and
- Contact centre technologies (Energex only).

When SPARQ Solutions was established, Ergon Energy and Energex had their own Office of the Chief Information Officer (OCIO). In July 2009, the decision was made to consolidate the OCIO into SPARQ Solutions to achieve greater transparency and drive efficiencies through the consolidation of capability.

Following the establishment of the OCIO in July 2009, SPARQ Solutions continued to market test its services and as a result these additional services were outsourced:

- Additional telecommunications services including video conferencing and mobile device management;
- PC desktop support and service desk platform; and
- Infrastructure support including server maintenance, data centre hosting and web hosting.

Response to the Independent Review Panel

In August 2012, the QLD government established the Independent Review Panel (IRP) to consider the optimal structure of the government owned corporation distribution network businesses (Ergon Energy and Energex) and identified a number of areas for consideration.

In response to the IRP, SPARQ Solutions engaged ITNewcom to perform a financial assessment of a range ICT sourcing options available to SPARQ by comparing their ICT baseline to their market leading benchmarking databases to identify opportunities to improve ICT value. The key action undertaken by SPARQ Solutions is the New Delivery Model and the Project Services Panel (refer to the following page). In addition, SPARQ Solutions has continued to assess its operating model and seeks to market test and outsource where it is prudent to do so.

SPARQ Solution's New Delivery Model

New Delivery Model (NDM)

ITNewcom identified a number of areas for outsourcing opportunities within SPARQ Solutions. One area identified of significant opportunity was that of Project Delivery services. As a result, SPARQ Solutions has since developed a New Delivery Model which has been endorsed by SPARQ Solutions' Board. The model started to, and will continue to, transition SPARQ Solutions' ICT services to a new delivery model. The model addresses several of the IRP recommendations including market testing SPARQ Solutions' ICT delivery of services and ensuring the segregation of duties between the Office of the Chief Information Officer (OCIO) and ICT governance functions from ICT service provision.

In addition to the outsourced ICT services, the NDM project has achieved further benefits for SPARQ Solutions including the collection of relevant SPARQ Solutions standards and procedures for use with outsourced engagements and a summary of relevant services provided by SPARQ Solutions to projects. Furthermore, SPARQ Solutions management have advised that the NDM has enabled SPARQ Solutions to reduce the number of project delivery related roles, whilst also increasing the span of control SPARQ Solutions, Ergon Energy and Energex staff have over ICT projects.

We note that SPARQ Solutions engaged an external vendor to review the New Delivery Model project (refer to document D.10). In this review, we note that the external review found there to be no major issues, with clear governance and appropriate oversight given to the project.

Implementation of the New Delivery Model

This initiative saw the grouping of SPARQ Solution's services into bundles for outsourcing analysis. These services were categorised into three bundles as follows:

- Services that were already outsourced (Tranche 0);
- Key opportunities for quick wins (Tranche 1); and
- Services which should be continually monitored for future outsourcing opportunities (Tranche 2).

Project Services Panel

As part of NDM Tranche 1, SPARQ Solutions established a Project Services Panel (PSP), consisting of five members. SPARQ Solution's strategy is to ensure that all Project Delivery Services will be delivered through the panel, delivering efficiency benefits to its customers. To date, approximately $20.9 million ($ nominal) of regulated ICT expenditure has been awarded to panel partners (i.e. $11.8 million ($ nominal) for Ergon Energy and $9.1 million ($ nominal) for Energex). Furthermore, material cost savings in labour rates have been achieved through the use of the PSP, with a reduction in average project labour hire costs from [redacted] ($ nominal) per day to [redacted] ($nominal) per day. Savings are more substantial for the projects which have been outsourced on an outcomes-basis, where average labour rates are [redacted] ($ nominal) per day (refer to document D.18).

ITNewcom key recommendations

ITNewcom key recommendations

In acknowledgment of the AER's comments regarding the ITNewcom report, KPMG performed the following procedures:

- Review the key recommendations made by the ITNewcom report commissioned by SPARQ Solutions in April 2013; and
- Interview SPARQ Solutions management to understand what actions have been undertaken to address to recommendations.

Summary of Findings

In February 2013, ITNewcom delivered a report which detailed the financial assessment of a range of ICT sourcing options for SPARQ Solutions. As part of this assessment, ITNewcom identified three key recommendations. These recommendations include:

- Recommendation 1: Develop a business case and seek approval to go-to-market for application development and support services;
- Recommendation 2: Identify if additional ICT infrastructure resources exist within Ergon Energy and Energex and include these resources in the SPARQ Solutions baseline to enable complete analysis of the ICT infrastructure services; and
- Recommendation 3: Identify and pilot a few applications and platforms that are suitable for provision via the Cloud.

Recommendation 1 – Develop Business Case

ITNewcom identified significant opportunities to reduce costs by outsourcing the application development, support and project management services. However, we note that ITNewcom indicated that "opportunity for outsourced application support services is of a lesser scale than the opportunity for outsourcing project delivery". In response to this statement SPARQ Solutions initiated the New Delivery Model (NDM) project which was completed in February 2014. The NDM delivered the Project Services Panel (PSP) which establishes the processes and governance structures to prudently and efficiently outsource capital ICT projects on behalf of Ergon Energy and Energex. Additionally, the NDM has enabled SPARQ Solutions to position itself to efficiently identify prudent opportunities to outsource additional services for SPARQ Solutions in the future.

Recommendation 2 – Infrastructure Services

It is noted within ITNewcom's report that some ICT infrastructure services were excluded from the analysis including telecommunication services and data centre services. This was due to several of the services either being outsourced prior to the review or delivered to Ergon Energy and Energex from a predominately virtualised capability. SPARQ Solutions indicated in the "SPARQ Solutions Outsourced ICT Services Overview" (D.7) document that the following infrastructure services were outsourced prior the ITNewcom review, in addition the exclusions noted above:

- Server maintenance;
- Web hosting; and
- Internet and web filtering.

Following the findings within the ITNewcom report, SPARQ Solutions has continued to monitor outsourcing opportunities within the Infrastructure space. For example, management have advised that SPARQ Solutions recently negotiated and signed a contract with Telstra to outsource the Unified Communication services for both Ergon Energy and Energex in May 2015.

Recommendation 3 – Cloud Computing Pilots

SPARQ Solutions developed an "As-a-Service Decision Framework" (D.6). This document documents a detailed assessment criteria which SPARQ Solutions will leverage to identify future outsourcing opportunities. SPARQ Solutions management have advised that the assessment of services is undertaken as per the renewal cycle for each service within the ICT Assessment Management framework. Furthermore, SPARQ Solutions management have advised they are investigating the use of alternate delivery models (e.g. cloud computing) for non-production and pre-production environments.

4. ICT governance model

Overview

ICT governance model overview

KPMG interviewed key stakeholders and obtained relevant documentation to understand the ICT governance model of SPARQ Solutions, including the consideration of the interactions with Ergon Energy and Energex.

SPARQ Solutions operates within the Energex and Ergon Energy's ICT governance processes

There is a joint ICT governance framework between SPARQ Solutions, Ergon Energy and Energex consisting of a structured set of governance forums and controls with the following key objectives:

- Robust review and approval of proposed ICT investments to ensure investments are in alignment with the overall business strategy;
- Identification and implementation of synergies and joint opportunities between the network businesses;
- Appropriate financial delegation approval is obtained for investments; and
- Adequate and timely oversight of project progress, risks and benefits realisation.

The key governance steps include: identifying the network business issue, the ICT requirements, assessing the cost and risk of various options to deliver the requirement and involving the appropriate business executive sponsors and financial delegates from the business in the sign-off and approval process.

Governance processes are independently driven by each of the respective network business' for their specific business requirements, however, where possible alignment and synergies on common initiatives are pursued (e.g. single contact centre, infrastructure services) through the Joint Working Steering Committee.

For the 2015 to 2020 ICT program of work, the non-network ICT investment portfolio governance and prioritisation process was extensive and considered the following:

- National Electricity Rules (NER) expenditure objectives;
- Alternate treatment options;
- Risks assessment; and
- Joint synergies and benefits.

ICT governance forums and controls

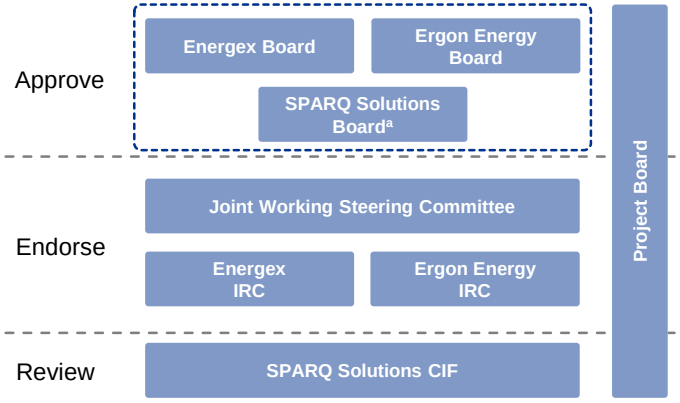
SPARQ Solutions key touch points and controls with Energex and Ergon Energy

There is a joint ICT governance framework consisting of a structured set of governance forums and controls with Ergon Energy and Energex that exist to ensure ICT investments are and remain prudent and efficient.

The key touch point is the representation of Ergon Energy and Energex at the SPARQ Solutions' Board level.

Key Corporate and ICT governance forums, sign-offs and approvals.

The following is a diagram of the key ICT governance forums that exist for review, sign-off and approvals of ICT investments.



Key decisions that demonstrated the effective operation of these governance forums included:

- Approvals for the New Delivery Model (NDM) and Organisational Changes; and
- Decision to suspend the Ellipse 8 Upgrade program.

SPARQ Solutions Service Level Management and Reporting

Individual Service Level Agreements (SLAs) exist for the provision of ICT services to Ergon Energy and Energex respectively. We were also able to inspect sample monthly performance reporting that is provided to the Energex Board and Ergon Energy Senior Leadership Team summarising financial expenditure, operational metrics, status of current projects and risk and issues.

Financial Delegations Matrix

Financial delegations approvals exist within Ergon Energy and Energex to ensure there is appropriate financial ownership and governance as part of the review and approval process. The financial delegations as they apply to ICT investments are set out in the respective delegations schedules and allow the appropriate financial governance and approval of budgets and the drawdown against the budgets.

AUTHORITY TO APPROVE INFORMATION TECHNOLOGY PROJECT FUNDING					
VALUE OF INVESTMENT	ENDORSEMENT FORUM			ENERGEX ICT DELEGATIONS	ERGON ENERGY ICT DELEGATIONS
$1-$100k	OOS			SPARQ ICT I&P MGR	SPARQ ICT I&P MGR
$100k - $500k	CIF			GM OCIO	GM OCIO
$500k-$1.0M				SPARQ CEO	SPARQ CEO/CFO
$1.0M-$1.5M		IRC			ERGON ENERGY CEO
$1.5M-$5M				ENERGEX CEO	
$5M-$20M			BOARD	ENERGEX BOARD	
$20M +					ERGON ENERGY BOARD

Note: (a) SPARQ Solutions Board includes executive representatives from both Ergon Energy and Energex.

ICT investment portfolio approach and governance

Refer to Appendix E and documents numbered D.1, D.2, D.3, D.4 and D.11 in the Documents List.

2015 to 2020 ICT investment portfolio governance and prioritisation

Identifying network requirements

The 2015 to 2020 technology expenditure plans for Ergon Energy and Energex were developed through a series of business-led workshops with key Ergon Energy and Energex business stakeholders, including Ergon Energy's Strategic Enablement Program team. The output from these workshops was a targeted list of ICT maintenance, strategic and tactical initiatives.

SPARQ Solutions together with Ergon Energy and Energex have then utilised further prioritisation tools which further refined the key initiatives taking into consideration the following:

- NER expenditure objectives;
- Alternate treatment options;
- Risks assessment; and
- Joint synergies and benefits.

System criticality and availability of support

Business critical and/or unsupported system initiatives are also given priority if it meant the potential risk of a outage or incident could be minimised. SPARQ Solution's Strategy and Architecture Group performed a detailed analysis of ICT system risk and capital expenditure in relation to each of the ICT initiatives identified. The results of this analysis were summarised in an Investment Review Committee (IRC) paper and tabled with the respective Ergon Energy and Energex IRCs for decision and approval.

Alternate treatment options

Once the category of spend had been established, Ergon Energy and Energex then assessed each individual initiative and the potential resultant impact under each scenario in order to determine the appropriate treatment. Treatment options considered included:

- Treatment 1 – Defer
- Treatment 2 – Accelerate Delivery
- Treatment 3 – Self Funded
- Treatment 4 – Unclear Benefits
- Treatment 5 – Not Prudent

Risk assessment

Each investment treatment option was assessed utilising Ergon Energy and Energex's risk management framework to assess the potential impact of each treatment and apply an appropriate risk rating. The risk rating was subsequently used as input to inform the overall prioritisation process;

Financial value and efficiency testing

As each shortlisted investment is assessed through SPARQ Solutions gated project management process, various financial value, efficiency tests and economic justification analysis is undertaken, with Net Present Value (NPV) analysis performed by Ergon Energy and Energex internally as part of the later stage gates.

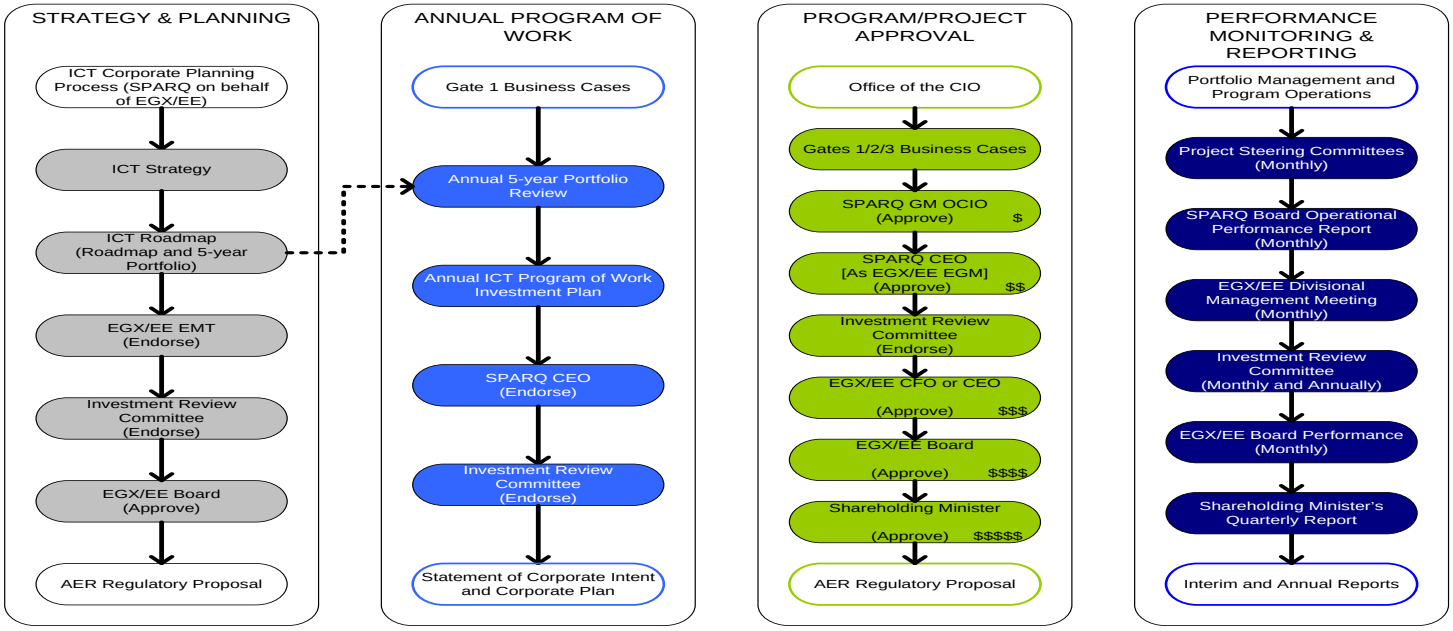
Synergy opportunities

All ICT investments are also assessed to make consideration of joint synergies and implications across both Energex and Ergon Energy where it is prudent and efficient. Current examples of join investments include infrastructure services and contact centre technology.

Overview

IT Project Approval and Delivery Phases

An overview of the IT project planning, approval and execution phases are depicted below:



Refer also to Appendix F for an overview of the underlying Project Governance and Delivery Lifecycle.

Appendices

Appendix A

Schedule of interviewees

Interviews performed		
Name	**Organisation**	**Position**
Peter Effeney	SPARQ Solutions	Chief Executive Officer
Jonathan Thompson	SPARQ Solutions	Chief Financial Officer
Peter Poncini	SPARQ Solutions	Chief Information Officer
Sam Nicolosi	SPARQ Solutions	Office of the Chief Information Officer
Nicole Wright	SPARQ Solutions	ICT Business Partner – Energex
Peter Scalia	SPARQ Solutions	Delivery Panel Manager
Mark Winks	SPARQ Solutions	Manager Finance & Performance Management
Graeme Finlayson	Ergon Energy	Ergon Energy Regulatory
Kevin Kehl	Energex	Energex Regulatory

Appendix B

Schedule of documentation received

Documentation received			
Ref	**Document name**	**Date Received**	**Version**
D.1	AER 2020 ICT Program Scenarios April 2014	May 2015	
D.2	AER Forecast Treatments – Energex	May 2015	
D.3	AER Forecast Treatments – Ergon Energy	May 2015	
D.4	EE IRC Memo 2015-2020 ICT Program	May 2015	
D.5	ICT Project Outsourcing Summary		V1.0
D.6	SPARQ Solutions – As a service decision framework (final)	May 2015	V1.0
D.7	SPARQ Solutions Outsourced ICT Services Overview	May 2015	
D.8	KPMG Information Request – Outsourcing Proportions June 2015	May 2015	
D.9	Outsourced L&M Overview	May 2015	
D.10	R075 New Delivery Model (NDM) Review	June 2015	April 2015
D.11	Energex ICT Program 2015-2020 OCIO	May 2015	
D.12	KPMG Information Request – Outsourcing Proportions	June 2015	
D.13	NDM Rollout Summary	May 2015	V1.0
D.14	NDM Business Case Realisation	May 2015	V1.3
D.15	EE_EX_Fixed_Asset Register – Accounting	May 2015	30 April 2015
D.16	AER ICT Cost Model	May 2015	V4.2
D.17	SPARQ Solutions Detailed Asset Register (ECA 688) at 30Apr15 - T1	May 2015	30 April 2015
D.18	NDM Business Case Realisation (June 2015)	June 2015	V1.1

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
Energex			
Non-network ICT Expenditure	SPARQ Solutions Energex ICT Capital and Operating Expenditures – Energex ICT Expenditure Forecast Document	Data provided by SPARQ Solutions 29 May 2015	2016-2020
Non-network ICT Expenditure	SPARQ Solutions Energex ICT Capital and Operating Expenditures – [Total SPARQ Solutions costs per entity Model]	Data provided by SPARQ Solutions 29 May 2015	2011-2015
Operational Data -Customer numbers	Energex 2006-13 - Economic Benchmarking RIN - templates - CONSOLIDATED - 30 April 2014 - PUBLIC	Economic Benchmarking RIN	2006-2013
Expenditure summary	Energex 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 2 June 2014 - PUBLIC_1	Category Analysis RIN	2009-2013
Expenditure summary	Energex - QLD - RESET RIN 2015-20 - Consolidated Public - October 2014	Reset RIN – at proposal	2016-2020
Operational Data -Customer numbers	Energex 2013-14 - Economic Benchmarking RIN - Templates D14 149046	Economic Benchmarking RIN	2014
Ergon Energy			
Non-network ICT Expenditure	SPARQ Solutions Ergon Energy ICT Capital and Operating Expenditures – Ergon Energy ICT Expenditure Forecast Document	Data provided by SPARQ Solutions 29 May 2015	2016-2020
Non-network ICT Expenditure	SPARQ Solutions Ergon Energy ICT Capital and Operating Expenditures – [Total SPARQ Solutions costs per entity Model]	Data provided by SPARQ Solutions 29 May 2015	2011-2015
Expenditure summary	Ergon Energy - 0C.02.01.02 QLD - RESET RIN 2015-20 - Consolidated Information - Public - October 2014	Reset RIN – at proposal	2016-2020
Operational Data - Customer numbers	Ergon Energy (D) 2013-14 - Economic Benchmarking RIN - Templates D14 149988	Economic Benchmarking RIN	2006-2013
Expenditure summary	Ergon Energy 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 2 June 2014 - PUBLIC	Category Analysis RIN	2009-2013

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
ActewAGL			
Non-Network ICT	ActewAGL 2013-14 - Category analysis RIN response - Templates - Consolidated - 14 November 2014 - PUBLIC	Category Analysis RIN	2014
Expenditure summary	ActewAGL 2013-14 - Category analysis RIN response - Templates - Consolidated - 14 November 2014 - PUBLIC	Category Analysis RIN	2014
Non-network ICT	ActewAGL - A3 - Regulatory reset (5 year) RIN report template - Actual information - 2014	Reset RIN (Actual)	2009-2013
Expenditure summary	ActewAGL - A3 - Regulatory reset (5 year) RIN report template - Actual information - 2014	Reset RIN (Actual)	2009-2013
Operational Data - Customer numbers	ActewAGL - EB data templates Consolidated Information (6)	Economic Benchmarking RIN	2006-2013
Non-network	ActewAGL - A3 - Regulatory reset (5 year) RIN report template - Estimated information - 2014	Reset RIN (Estimate) Before draft and final decisions	2015-2019
Expenditure summary	ActewAGL - A3 - Regulatory reset (5 year) RIN report template - Estimated information - 2014	Reset RIN (Estimate) Before draft and final decisions	2015-2019
Ausgrid			
Non-network	20140619 Ausgrid Consolidated RIN Template Public	Reset RIN (consolidated) – Actual & Estimate Before draft & final decisions	2015-2019
Expenditure summary	20140619 Ausgrid Consolidated RIN Template Public	Reset RIN (consolidated) – Actual & Estimate Before draft & final decisions	2015-2019
Operational Data - Customer numbers	Ausgrid economic benchmarking data templates – Consolidated Information (final)	Economic Benchmarking RIN	2006-2013
Non-network	Ausgrid (D) 2013-14 - Category Analysis RIN - Templates D14 149403	Category Analysis RIN	2014
Expenditure summary	Ausgrid (D) 2013-14 - Category Analysis RIN - Templates D14 149404	Category Analysis RIN	2014
Non-network	Ausgrid - RIN Estimated CONTROL FINAL (PUBLIC REDACTED) - 2014		

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
Endeavour Energy			
Non-network	Endeavour Energy - RIN.1 - NSW_ACT Electricity DNSPs reset RIN templates - Consolidated information (Public) - 2014	Reset RIN (consolidated) Actual & Estimate Before draft & final decisions	2015-2019
Expenditure summary	Endeavour Energy - RIN.1 - NSW_ACT Electricity DNSPs reset RIN templates - Consolidated information (Public) - 2015	Reset RIN (consolidated) Actual & Estimate Before draft & final decisions	2015-2019
Operational Data - Customer numbers	EndeavourEnergy 2006-13 - economic benchmarking data templates Consolidated Information 160914 revision to table 7.2	Economic Benchmarking RIN	2006-2013
Non-network	Endeavour Energy (D) 2013-14 - Category Analysis RIN - Templates D14 149366	Category Analysis RIN	2009-2019
Expenditure summary	Endeavour Energy (D) 2013-14 - Category Analysis RIN - Templates D14 149367	Category Analysis RIN	2009-2019
Essential Energy			
Operational Data - Customer numbers	Essential Energy EB RIN 2014 – Consolidated Information (29.04)	EB RIN	2006-2013
Non-network	Essential Energy - Attachment_4_2014_Reset_RIN_Workbook_Consolidated_Information_Formatted_Public	Reset RIN	2009-2019
Expenditure summary	Essential Energy - Attachment_4_2014_Reset_RIN_Workbook_Consolidated_Information_Formatted_Public	Reset RIN	2009-2019
Operational Data - Customer numbers	Essential Energy (D) 2013-14 - Economic Benchmarking RIN - Templates D14 149395	EB RIN 2014	2006-2013
Non-network	Essential Energy 2013-14 - Category Analysis RIN response - Templates - Consolidated - 14 November 201	CA RIN	2009-2013
Expenditure summary	Essential Energy 2013-14 - Category Analysis RIN response - Templates - Consolidated - 14 November 201	CA RIN	2009-2013

Appendix C

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
SA Power Networks			
Non-network	SA Power Networks 2008-13 - Category Analysis RIN - templates CONSOLIDATED - 12 June 2014 – PUBLIC	Category Analysis RIN Actuals	2009-2013
Expenditure summary	SA Power Networks 2008-13 - Category Analysis RIN - templates CONSOLIDATED - 12 June 2014 - PUBLIC	Category Analysis RIN Actuals	2009-2013
Non-network	SAPN - RESET RIN 2015-20 PUBLIC	Reset RIN Forecasts Before draft decision	2015-2020
Expenditure summary	SAPN - RESET RIN 2015-20 PUBLIC	Reset RIN Forecasts Before draft decision	2015-2020
Operational Data - Customer numbers	SA Power Networks economic benchmarking data templates - Consolidated Information	Economic Benchmarking RIN	2006-2013
Operational Data - Customer numbers	SA Power Networks 2013-14 - Economic Benchmarking RIN - Templates D14 149038	Economic Benchmarking RIN	2014
Non-network	SA Power Networks 2013-14 - Category Analysis RIN - Templates D14 149655	Category Analysis RIN Actuals	2014
Expenditure summary	SA Power Networks 2013-14 - Category Analysis RIN - Templates D14 149656	Category Analysis RIN Actuals	2014
CitiPower			
Non-network	CitiPower - RIN 1.1 - Reset RIN 2016-20 - Consolidated Information - April 2015	Reset RIN at proposal	2016-2020
Expenditure summary	CitiPower - RIN 1.1 - Reset RIN 2016-20 - Consolidated Information - April 2015	Reset RIN at proposal	2016-2020
Non-network	Citipower 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 2 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Expenditure summary	Citipower 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 2 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Operational Data - Customer numbers	CitiPower Benchmarking RIN - Consolidated Information FINAL	Economic Benchmarking RIN	2006-2013

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
Powercor			
Non-network	Powercor 2008-13 - Category Analysis RIN - responses CONSOLIDATED- 2 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Expenditure summary	Powercor 2008-13 - Category Analysis RIN - responses CONSOLIDATED- 2 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Non-network	Powercor - RIN 1.1 - Reset RIN 2016-20 - Consolidated Information - April 2015	Reset RIN at proposal	2016-2020
Expenditure summary	Powercor - RIN 1.1 - Reset RIN 2016-20 - Consolidated Information - April 2015	Reset RIN at proposal	2016-2020
Operational Data - Customer numbers	Powercor Benchmarking RIN - Consolidated Information FINAL	Economic Benchmarking RIN	2006-2013
Ausnet Services			
Non-network	AusNet Services - Reset RIN templates - April 2015	Reset RIN	2016-2020
Expenditure summary	AusNet Services - Reset RIN templates - April 2016	Reset RIN	2016-2020
Non-network	SP Ausnet (D) 2008-13 - Category Analysis RIN - templates CONSOLIDATED - 12 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Expenditure summary	SP Ausnet (D) 2008-13 - Category Analysis RIN - templates CONSOLIDATED - 12 June 2014 - PUBLIC	Category Analysis RIN	2009-2013
Operational Data - Customer numbers	SP AusNet Dist economic benchmarking data templates - Consolidated Information	Economic Benchmarking RIN	2006-2013

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
Jemena			
Operational Data - Customer numbers	JEN economic benchmarking RIN-Consolidated information 30Apr14	Economic Benchmarking RIN	2006-2013
Non-network	jemena 2008-13 - category analysis RIN response - revised 7 August 2014	Category Analysis RIN	2009-2013
Expenditure summary	jemena 2008-13 - category analysis RIN response - revised 7 August 2014	Category Analysis RIN	2009-2013
Non-network	Jemena - RIN supporting document index - April 2015	Reset RIN at proposal	2016-2020
Expenditure summary	Jemena - RIN supporting document index - April 2015	Reset RIN at proposal	2016-2020
United Energy			
Operational Data - Customer numbers	United Energy 2006-2013 - Consolidated Data Lodged to the AER	Economic Benchmarking RIN	2006-2013
Non-network	United Energy 2008-13 - Category Analysis RIN - CONSOLIDATED templates - 23 June 2014	Category Analysis RIN	2009-2013
Expenditure summary	United Energy 2008-13 - Category Analysis RIN - CONSOLIDATED templates - 23 June 2015	Category Analysis RIN	2009-2013
Non-network	United Energy -Reset RIN - April 2015	Reset RIN	2015-2020
Expenditure summary	United Energy -Reset RIN - April 2016	Reset RIN	2015-2020

AER RIN data analysed in ICT cost benchmarking

AER Electricity DNSP RIN Data			
Data	**RIN Dataset**	**RIN type**	**Data**
TasNetworks			
Operational Data -Customer numbers	TasNetworks (D) 2013-14 - Economic benchmarking RIN - Templates D14 151981	Economic Benchmarking RIN	2014
Operational Data -Customer numbers	Aurora economic benchmarking data templates – Consolidated Information	Economic Benchmarking RIN	2006-2013
Non-network	Aurora 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 30 May 2014 - PUBLIC	Category Analysis RIN	2009-2013
Expenditure summary	Aurora 2008-13 - Category Analysis RIN - responses CONSOLIDATED - 30 May 2014 - PUBLIC	Category Analysis RIN	2009-2013
Non-network	TasNetworks (D) 2013-14 - Category Analysis RIN - Templates D14 151858	Category Analysis RIN	2014
Expenditure summary	TasNetworks (D) 2013-14 - Category Analysis RIN - Templates D14 151859	Category Analysis RIN	2014

Appendix D

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
ICT Strategy and Architecture	0 - 20	■ Information strategy & planning ■ ICT portfolio mgmt & program mgmt ■ Information, application, technology & security architecture	■ All in is house, apart from some outsourced Architectural Resources.	[redacted]
ICT Management	0 – 20	■ Office of CIO ■ Financial mgmt and Admin ■ Vendor mgmt.	■ All in house, apart from some financial and HR administration support provided by Ergon Energy to SPARQ Solutions.	[redacted]
ICT Service Desk	100	■ Operational Service Desk ■ Service Desk Platform ■ PC Desktop Support	■ Outsourcing of ICT Service Desk functions to Data #3 commenced in 2006, with all functions outsourced from 2013 onwards.	[redacted] over four years for Data #3 services [c]

Note:
(a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source: D.9
(c) Source: D.8

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
ICT Service Management	0 – 20	■ Event, incident, access problem, change and request fulfilment ■ Release & deployment mgmt ■ Software asset & configuration mgmt ■ Knowledge mgmt ■ Service level & service category mgmt ■ Capacity and availability mgmt ■ Information security mgmt ■ Supply service mgmt systems software	■ Majority of these services are in house apart from some minor outsourcing in IS Mgmt.	[redacted]

Note: (a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source: D.9

Appendix D

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Project Delivery Service	60 - 80		■ Project Services Panel (PSP) established in February 2014 consisting of five members ■ Further outsourcing of services is envisioned in line with SPARQ Solutions' three year strategy to embed the PSP within the organisations ■ SPARQ Solutions' business case for outsourcing Project Delivery Services shows that 100% of non-continuous improvement projects would be outsourced by FY16/17. SPARQ Solutions is currently on track to achieve this timeline	[redacted] [c]
Procurement	0 – 20		■ In house	[redacted]
Business Applications	20 – 40	■ Analysis & Design ■ Develop & Integrate ■ Test & Deploy ■ Supply Software ■ Application Admin ■ Database Admin ■ Application Integration mgmt ■ Software Maintenance ■ Emergency Maintenance ■ Production Acceptance	■ Some of the significant contracts include: GE (PowerON, Smallworld), Hansen (PEACE), Oracle (Varous), ESRI (Varios), IBM (Endpoint & InfoSphere), Itron (Various Metering Apps), GHD (DINIS), REDHAT (RHEL), SAP (Business Objects), UXC (TOHT) (MDA), SQUIZ (Content Management), AutoCAD, Bentley (Microstation), Bluemark (Filenet).	[redacted]

Note:
(a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source: D.9
(c) Source: D.5

Appendix D

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Enterprise Applications	40 – 60	▪ See Business Applications	▪ Some of the significant contracts include: Microsoft (Enterprise Agreement & Premium Support), Ventyx (Ellipse & Service Suite), NGA.NET (Various), Loop Technologies (Virus Scanning), Geomatic Technologies (Various) , Huegin (BCT), Zavanti (Artemis), Pitney Bowels (StreetPro)	[redacted]
Mainframe	0 – 20	▪ Solution design ▪ Supply infrastructure, systems & software ▪ Install and configure ▪ Mainframe support & hardware ▪ System database administration ▪ Infrastructure systems software support ▪ System software mgmt. ▪ Break / Fix maintenance ▪ Preventative maintenance	▪ Majority of mainframe services are supporting Ergon Energy's FACOM application ▪ FACOM due for decommissioning during 2015 to 2020 period (migrating to Energex's PEACE solution), at which point the mainframe services will be re-evaluated for outsourcing opportunities (if required)	[redacted]

Note:
(a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Dollar values are based on the categorisation of fees paid by SPARQ Solutions to service providers as per document D.9

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Servers	80 – 100	■ Solution design ■ Supply infrastructure, systems & software ■ Install and configure ■ Server support & hardware ■ System database administration ■ Infrastructure systems software support ■ System software mgmt. ■ Break / Fix maintenance ■ Preventative maintenance	■ HP and Oracle based services are 100% outsourced. An outsourcing arrangement has been in place since CY 2011/12 ■ Some services are still in-sourced which are supporting legacy solutions for Ergon Energy and Energex. Management have advised that these services will be transitioned to outsourced arrangements as legacy solutions are upgraded to COTS solutions	[redacted] & [redacted] over 3 years for HP servers [c]

Note:
(a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source D.9
(c) Source D.8

Appendix D

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Storage	0 – 20	■ Solution design ■ Supply infrastructure, systems & software ■ Install and configure ■ Storage support & hardware ■ System database administration ■ Infrastructure systems software support ■ System software mgmt. ■ Break / Fix maintenance ■ Preventative maintenance	■ [redacted] through Hitachi for various storage services	[redacted]

Note: (a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source D.9

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Data Centre	80 - 100	■ Solution design ■ Supply infrastructure, systems & software ■ Install and configure ■ Data centre facilities support & hardware ■ System database administration ■ Infrastructure systems software support ■ System software mgmt. ■ Break / Fix maintenance ■ Preventative maintenance	■ Backup service is provided in house by SPARQ Solutions. ■ SPARQ Solutions is in the process of transitioning the remaining Ergon Energy on site data centres to the Polaris Data Centre ■ In process of transitioning services provided by the Next DC data centre to the main data centre hosted by Polaris over the next 24 months ■ Data centre services were excluded from ITNewcom's report as these services were outsourced prior to the report	[redacted] over 5 years [c]

Note:
(a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source: D.9
(c) Source: D.8

SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
End-User Computing (EUC)	60 – 80	■ Solution design ■ Supply infrastructure, systems & software ■ Install and configure ■ EUC support & hardware ■ System database administration ■ Infrastructure systems software support ■ System software mgmt. ■ Break / Fix maintenance ■ Preventative maintenance	■ Majority of these services are outsourced to Data#3. However, services such as System Database Admin, System Software Mgmt. and Break/fix & Preventative Maintenance are in house.	[redacted]
Data Network	0 – 20	■ Network design ■ Supply network hardware & carriage links ■ Install and configure ■ Test & certify ■ Data network support		[redacted]

Note: (a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source D.9

Appendix D

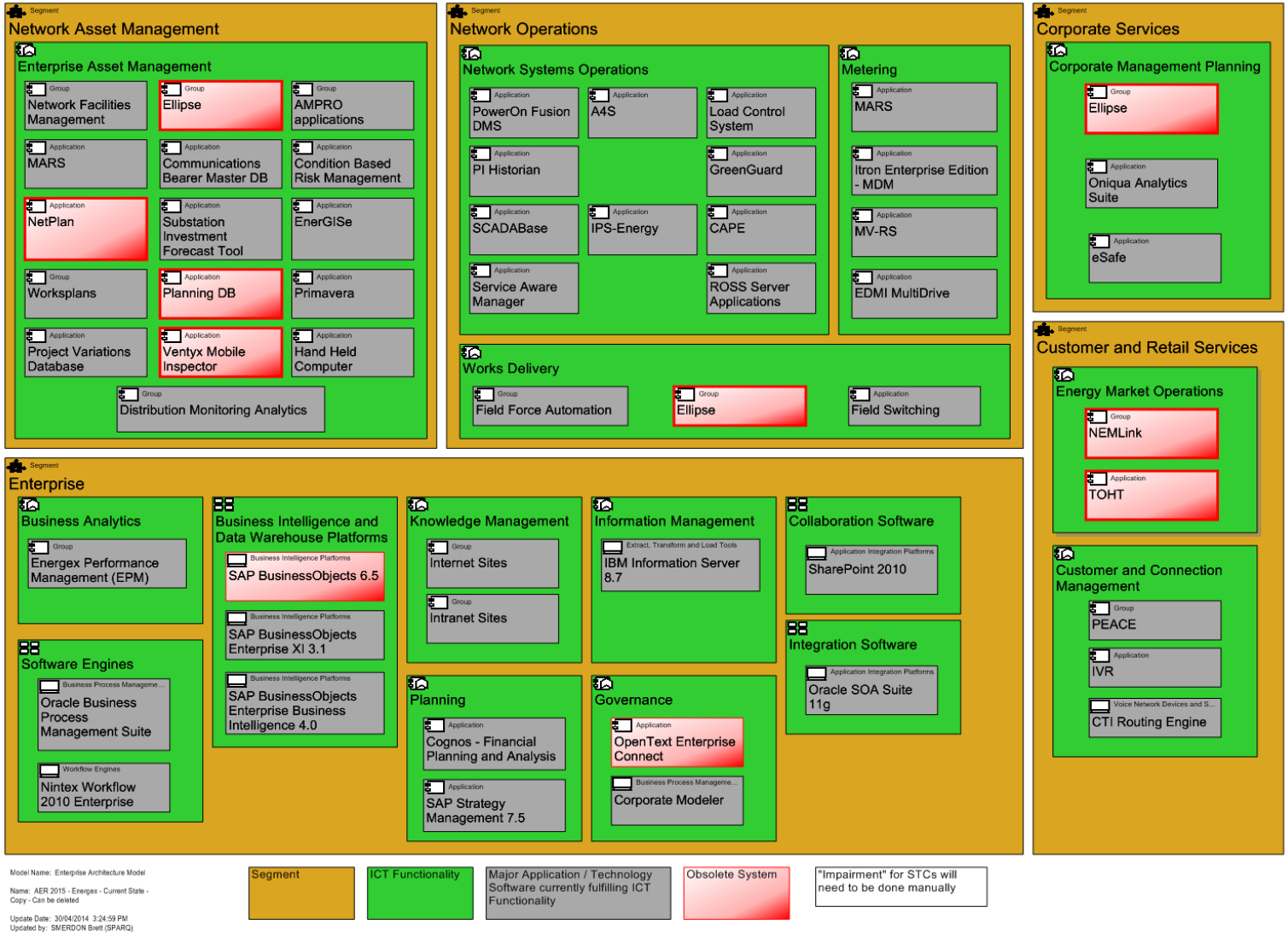
SPARQ Solutions services – outsourcing status

Service outsourcing current status				
Service	**Outsourcing status (%)[a]**	**Sub services**	**Rationale / Commentary**	**$ AUD Outsourced [b]**
Data Carriage	80 – 100	■ Network design ■ Supply network hardware & carriage links ■ Install and configure ■ Test & certify ■ Data carriage services	■ SPARQ Solutions is currently in the process of signing a 5 year agreement with Telstra to outsource all Unified Communications (UC) ■ Telstra was selected as the preferred partner after SPARQ Solutions undertook a RFP process where Telstra and Optus both responded ■ The agreement with Telstra is estimated to deliver $180,000 in cost savings per annum on a Total Cost of Ownership basis	[redacted] over 3 years for Rutledge Engineering services [c]
Voice Networks	80 – 100	■ Network design ■ Supply network hardware & carriage links ■ Install and configure ■ Test & certify ■ Voice network support	■ See Data Carriage line item	[redacted]
Voice Carriage	80 - 100	■ Network design ■ Supply network hardware & carriage links ■ Install and configure ■ Test & certify ■ Voice carriage services	■ See Data Carriage line item	[redacted]

Note: (a) Outsourcing status percentage is based on cost savings achieved by SPARQ Solutions.
(b) Source D.9
(c) Source D.8

Current State ICT Environment Risk Assessment

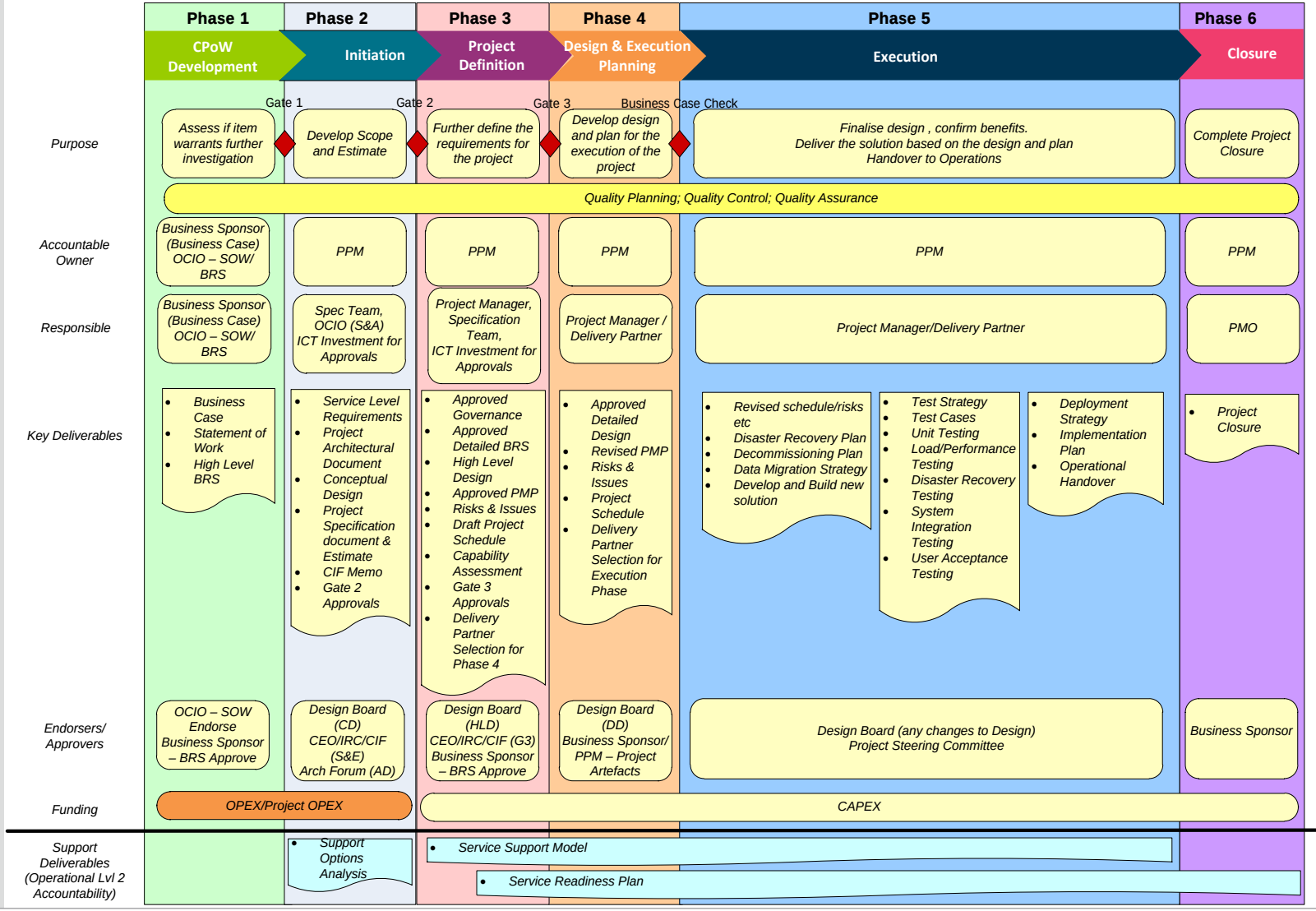
The diagram to the right is a summary of key systems and their associated risk assessment by business segment.



Appendix F

Project Governance and Delivery Lifecycle

The diagram to the right is a summary of project governance and delivery lifecycle methodology as at 9 March 2015.



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