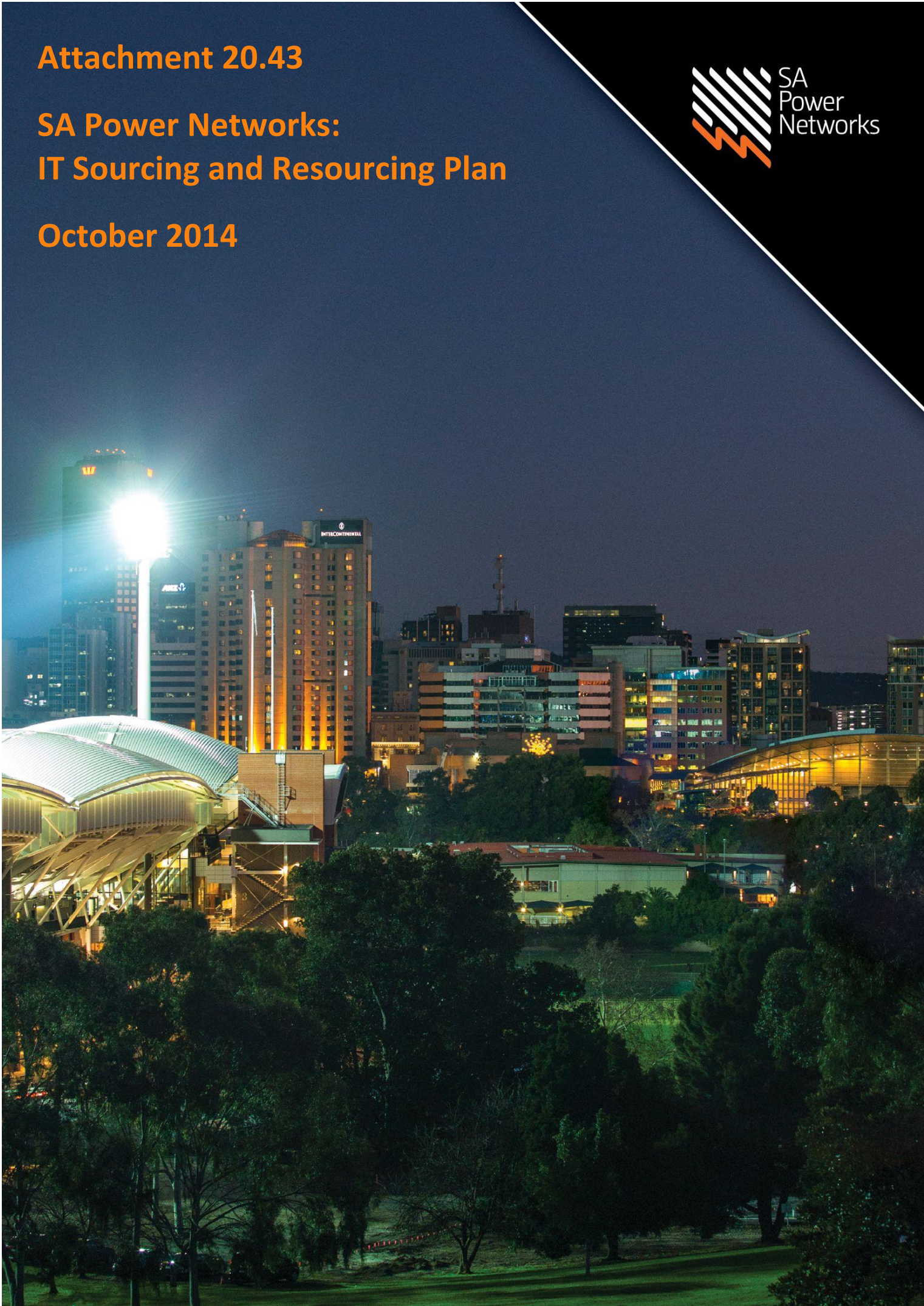


**Attachment 20.43**

**SA Power Networks:  
IT Sourcing and Resourcing Plan**

**October 2014**







# IT Sourcing and Resourcing Plan 2015-20

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**SA Power Networks**

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## Executive summary

SA Power Networks has seen a significant increased focus on IT as a means to improving business outcomes over the 2010-2015 Regulatory Control Period (**RCP**). This shift in demand over the 2010-2015 RCP, challenged SA Power Networks IT function's ability to be proactive or strategic in responding to demand, which not only led to some reactive responses from a technology perspective, but also from a resourcing perspective.

This increasing demand for IT services and delivery of outcomes for the business continues inexorably, and is clearly evident in the 2015-2020 capital and operating IT forecast. The gap between the capabilities required to meet the demand, and the SA Power Networks IT operating model became increasingly evident, culminating in the creation of an IT Transformation program in 2013.

The IT Transformation program has repositioned the IT Function to deliver a capital and operating program congruent with the needs of the business. A key feature of this transformation has been the implementing of a fit-for-purpose IT Operating Model, including a significant shift away from a highly in-sourced and tactical contract labour heavy workforce. Instead, we will leverage strategic partnerships to assist with technology and solutions that are outside of core capabilities. As a result, the key role of SA Power Networks IT function has shifted from one of a service provider, to business change and growth enabler.

The resource requirements derived from the 2015-20 RCP forecast are significant in comparison to historical demand. The total effort to deliver the capital and operating forecast is almost double that of the 2010-2015 RCP, ranging from 353 to 370 full time equivalent (**FTE**) resources per year.<sup>1</sup> This forecast already takes into consideration decisions made during detailed planning with respect to how projects and services will be delivered, such as cloud or on-premise solutions. This plan therefore addresses the residual effort and how it can be resourced in the most efficient and effective manner whilst also maintaining an appropriate risk profile.

Appropriate sourcing methods to meet this demand were investigated with respect to the mix of internal labour, supplementary labour and professional/managed services, with three options finally considered:

- **Option 1** - Maintain in-sourced FTE levels (inclusive of 20% supplementary labour) at the 2014 Q2 IT Operating Model target of 155 FTEs;
- **Option 2**- Increase in-sourced IT FTE levels in proportion to the forecast growth in total organisational FTEs (as per 2013 and 2014 Gartner Worldwide Utilities benchmark of IT FTEs at 6.6% of total FTEs); and
- **Option 3** - Increase in-sourced FTE levels by the amount required to limit outsourcing levels to 30% for IT Operations and 65% for IT Capital Program delivery, based primarily on risk mitigation factors

Option 3 is the proposed option on the basis that:

- it is linked to the forecast IT effort, rather than organisational-wide benchmarks unrelated to effort. Option 3 therefore takes into consideration the shift in the organisation's strategic focus on IT as a means to improving business outcomes; and
- continues to support the objectives of the IT Transformation program by:
  - limiting the use of supplementary labour to 20% of in-sourced FTEs;
  - leveraging external professional services in the delivery of the capital program where appropriate, but at the same time ensuring the in-sourced workforce has sufficient

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<sup>1</sup> Excludes non-IT resource contribution to IT capital projects.

- capacity to contribute the minimum levels of involvement required to facilitate successful project outcomes (35%); and
- o seeking opportunities to transition operational activities to external managed services, but doing so in a methodical and well planned fashion and limiting outsourced operational services to 30% of total operational IT effort as a risk mitigation strategy.

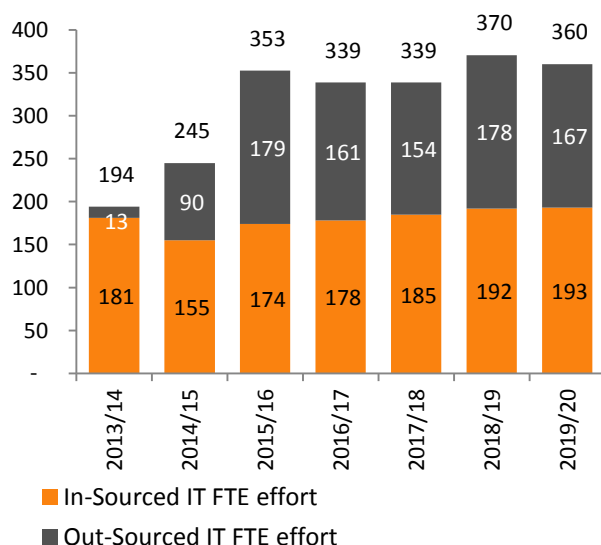
The outcome in terms of the number of in-sourced FTEs, outsourcing levels and accommodation requirements of option 3 are summarised in Table 1. This shows that over the 2015-20 RCP, SA Power Networks IT will:

- operate with approximately 193 in-sourced FTEs by FY 2019/20 (inclusive of a maximum 20% supp labour). This is 38 additional staff and associated corporate and business overheads, over Q2 2014 levels;
- operate with total FTE effort outsourced close to 50%, which represents a challenging but achievable target with respect to the KPMG 2013 Australian Utilities benchmarks (24% mean, 74% max); and
- require accommodation for approximately 80 seats in addition to the current 200 as well as additional meeting rooms to support the collaboration requirements of onsite/offsite resources.<sup>2</sup>

Table 1 Information Technology Resource Summary

	13/14	14/15	15/16	16/17	17/18	18/19	19/20
In-Sourced IT Operations FTEs	98	91	100	112	119	123	127
Out-sourced IT Operations FTEs (30% cap)	9	34	43	48	51	53	55
<b>Total Operations Forecast FTE Effort</b>	<b>107</b>	<b>125</b>	<b>143</b>	<b>160</b>	<b>170</b>	<b>176</b>	<b>182</b>
In-Sourced IT Capital Works FTEs	83	64	74	66	66	69	66
Out-sourced IT Capital Works FTEs (65% cap)	4	56	136	112	103	126	112
<b>Total Capital Works FTE Effort</b>	<b>87</b>	<b>120</b>	<b>210</b>	<b>178</b>	<b>169</b>	<b>195</b>	<b>178</b>
Total In-Sourced IT FTEs	181	155	174	178	185	192	193
Total Out-sourced IT FTEs	13	90	179	161	154	178	167
<b>Total Required IT FTE Effort</b>	<b>194</b>	<b>245</b>	<b>353</b>	<b>339</b>	<b>339</b>	<b>370</b>	<b>360</b>
<b>% Total Outsourced FTE Effort</b>	7%	37%	51%	47%	45%	48%	46%
<b>Accommodation Seats Req'd</b>	201	201	266	258	260	280	274

Figure 1 Information Technology Resourcing Summary



Sourcing option 3 provides a balance between maximising the use of external services that specialise in capabilities, skills and experience that SA Power Networks needs to deliver the forecast capital and operating forecast, and managing the inherent risk associated with outsourcing via the IT Operating model put in place by the 2013/14 IT Transformation program and the overall outsourcing level limits proposed by this plan.

<sup>2</sup> Exclusive of non-IT resources contributing to delivery of the capital program.



## 1 Introduction

### 1.1 Purpose

The purpose of the Information Technology (IT) Sourcing and Resourcing Plan is to outline the resourcing requirements for the operation of SA Power Networks IT function over the 2015-20 Regulatory Period (**RCP**). In addition, potential sourcing methods in terms of ratios of in-sourcing (employees and supplementary labour) and professional/managed service are outlined and the impact of each sourcing method is analysed.

The 2015-20 capital and operating forecast and supporting business cases include inherent assumptions regarding the way in which particular IT initiatives will be delivered, particularly with respect to the choice of on-premise or cloud delivered solutions. The total forecast labour effort and modelling presented already takes these decisions into account. Accordingly this document does not make any determination of what projects or services will be provided by way of cloud delivered services, rather it focuses on the residual effort required and how it will be delivered.

### 1.2 Background

The profile of IT Capital Expenditure in SA Power Networks is changing rapidly as SA Power Networks faces its changing role in the electricity distribution business. There is a significant uplift in capital works (24% increase in calendar year 2014) with further significant uplifts forecasted for 2015 onwards. It is therefore critical that SA Power Networks IT function is well positioned to deliver the program of work and provide adequate post implementation operational maintenance and support. This will require the IT function to operate in new and more effective ways to deliver an increased level of work within the timeframes that the business requires the new functionality to be operational.

#### 1.2.1 IT Transformation

In 2013 SA Power Networks recognised the challenges presented by the incumbent IT operating model and the impact it would likely have on the ability of IT to efficiently and effectively deliver the forecasted IT capital program for the 2015-20 RCP, as well as the uplift in the 2014 capital program. Accordingly, the IT function embarked on a transformation program with a view to complete the transformation in 2014.

Under the new model IT now has a lean Organisational Structure in line with industry benchmarks, with the internal IT workforce reshaped with a more strategic focus and with a mix of Supplementary Labour aligned to industry averages of circa 20%.

For this to happen whilst delivering to an increased capital works program, increased delivery capacity needed to be sourced from other avenues. In 2013 SA Power Networks established the “IT Services Panel” comprised of IT services organisations that have the people and skills, capabilities and experience aligned with SA Power Networks requirements. From a resourcing perspective, the IT Transformation program, through the implementation of the IT Services Panel and the shift to an outsourcing model with robust vendor management functions, has enabled SA Power Networks to:

- expedite procurement;
- access an on-demand, scalable and flexible labour supply;
- focus on outcomes/delivery; and
- facilitate the IT function’s shifting focus from basic service provider to enabler of business growth and transformation initiatives.

In addition, not directly related to resourcing, but critical to the ability to deliver the 2015-20 IT forecast has been:

- the implementation of a fit-for-purpose IT Operating Model that is aligned with and able to adapt to evolving business requirements, with effort rationalised across build and run functions in favour of enhanced planning and compliance capabilities;
- the establishment of a portfolio management governance model to agree the right investments and deliver them efficiently, as well as a portfolio management office to ensure alignment at the enterprise, portfolio and project levels; and
- the implementation of effective, repeatable processes for program and project delivery, estimating, benefits realisation management, risk management and delivery Governance.

The culmination of these initiatives has been the repositioning of the IT function, equipping it with the foundations necessary for the delivery of the 2015-20 RCP capital and operating forecast. The new IT Operating model is also a significant factor in the selection and evaluation of options in this plan; with this plan building on and complimenting the work already completed in preparing SA Power Networks for the next regulatory period.

### 1.3 Approach

The approach to the development of this plan includes:

- analysis of historic IT resourcing levels and comparison to industry benchmarks;
- forecasting future staffing needs by modelling raw projected resources requirements for:
  - maintaining projected baseline; and
  - execution of grow/transformation projects and transitioning these to operations.
- analysing the impact of the forecast in terms of:
  - uplift if demand and ability to service that demand;
  - accommodation requirements; and
  - other impacts and challenges presented by the forecast increases in IT capital and operating expenditure.
- responding to the impacts of the forecast in terms of:
  - how the IT Transformation has positioned the SA Power Networks IT function to deliver the portfolio of work;
  - model alternate approaches to resourcing particularly the mix of internal/supp labour vs. outsourced work; and
  - maintaining continuity of staff and retention/transition of knowledge and IP.
- recommendations.

## 2 Historic Human Resource Model and Current State

This section outlines SA Power Networks current and historical IT resourcing levels and operating model and the equivalent benchmarks.

### 2.1 Historical Analysis

SA Power Networks' IT function is currently staffed by a headcount of 160 comprised of 130 employees and 30 supplementary staff with a full time equivalent (FTE) of 155. The current resource model is the outcome of the IT Transformation program. In Q1 2014, prior to the introduction of a new organisational structure, SA Power Networks IT was operating with a headcount of 193; comprised of 121 permanent and 72 supplementary labour staff (Jan-Mar 2014 Avg), with a full time equivalent (FTE) of 181. Until Q1 2014, both operations and projects have been predominantly in-sourced<sup>3</sup>.

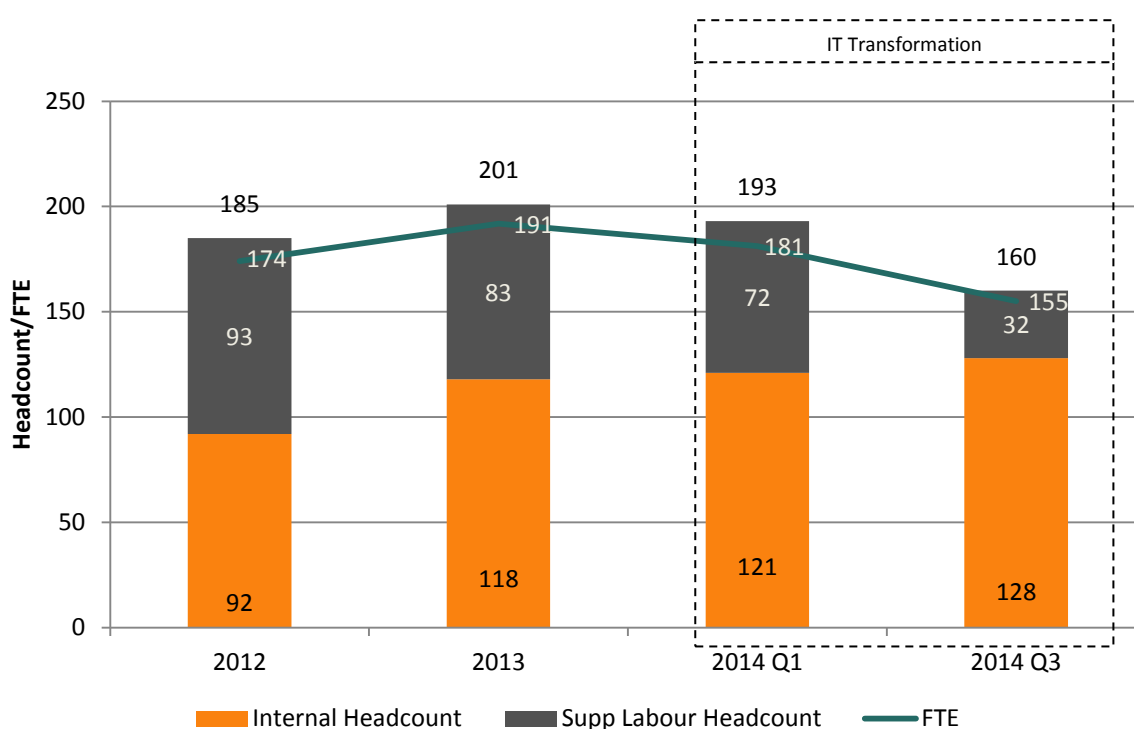


Figure 2 - SA Power Networks Historical Resource Statistics<sup>4</sup>

Prior to transformation, SA Power Networks operated an internal delivery model for new and upgraded system development and implementation with a mere 12% of budget directed to outsourced delivery/ service providers compared to an Australian Utilities Industry average of 24% (KPMG 2013). The 12% of budget allocated to outsourced delivery of services is predominantly related to the provision of services provided by sister company PowerCor/ CitiPower under the CKI/HEI Electricity Distribution Services Pty Ltd Services (**CHED Services**) agreement. Prior to transformation, very little of the capital budget not related to CHED Services was outsourced.

<sup>3</sup> In-sourced refers to both employees and resources engaged under supplementary labour or contract labour arrangements.

<sup>4</sup> SA Power Networks Analysis 2014



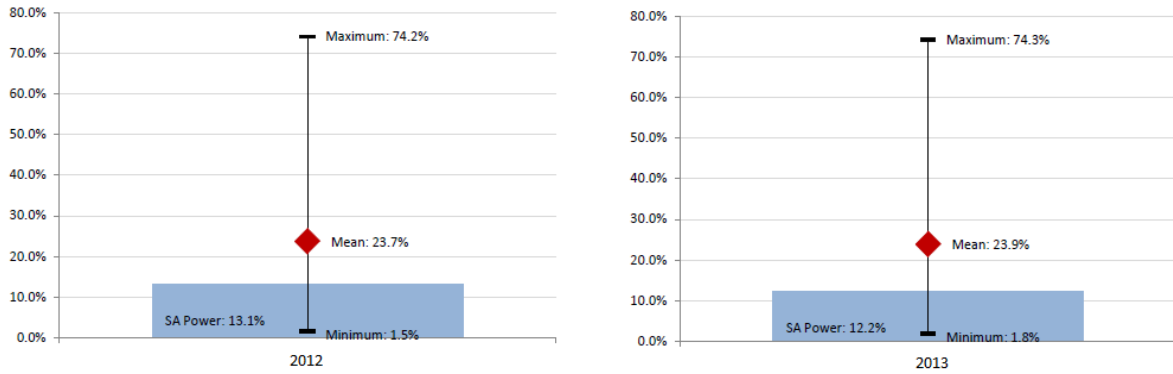


Figure 3 – Expenditure on outsourcing arrangements as a % of total ICT Expenditure<sup>6</sup>

As per Figure 2, SA Power Networks proportion of supplementary/contract IT labour to total ICT labour has been decreasing in the last 3 years. As depicted in Figure 4 below, SA Power Networks was operating with 45% and 46% supplementary labour FTEs in 2012 and 2013 respectively. In comparison, the Australian Energy and Utilities industry average is 35% (KPMG, 2013<sup>6</sup>), while the worldwide industry benchmark (Gartner, 2013<sup>5</sup>) is between 33% (Energy) and 22% (Utilities). Note: this does not include external resources engaged under outsourcing arrangements. The reliance on supplementary labour was reduced to approximately 20% during the 2014 IT Transformation program and the use of outsourcing arrangements was increased.

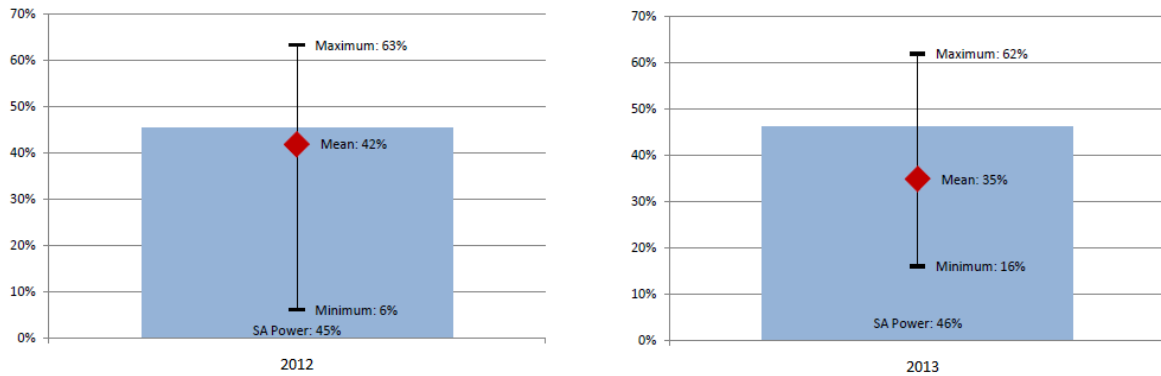


Figure 4 – Proportion of Internal vs. Supp Labour FTEs<sup>6</sup>

<sup>5</sup> Gartner IT Key Metrics 2013 & Gartner IT Key Metrics 2014

<sup>6</sup> KPMG 2013 Australian Utilities Benchmarking

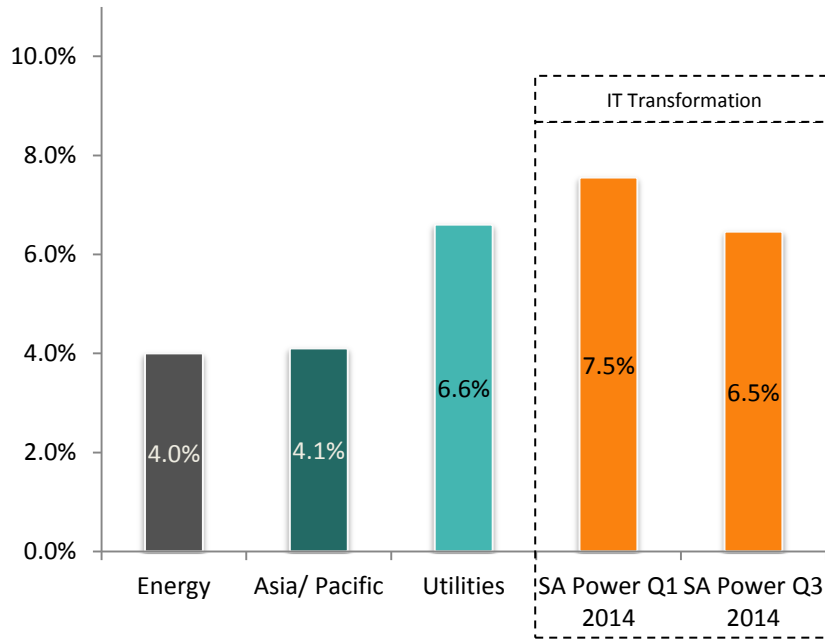


Figure 5 - SA Power Networks IT FTEs as % of Total FTEs<sup>7</sup>

The aforementioned measurements and benchmark comparison of SA Power Networks IT resourcing serve to demonstrate that prior to the IT Transformation program SA Power Networks was overusing supplementary labour in lieu of permanent staff and outsourcing arrangements.

<sup>7</sup> Gartner IT Key Metrics 2013 & Gartner IT Key Metrics 2014

### 3 IT Human Resource Model

#### 3.1 2015-20 Regulatory Control Period Forecast

SA Power Networks has forecast a major capital program and operational uplift for the 2015-20 RCP as depicted in below. This forecast has resulted in equally incremental uplift in the resourcing requirements to deliver the forecast. The forecast and the resulting effort to deliver the forecast have been subject to review and refinement with respect to the dependencies and sequencing of initiatives within the capital program. Therefore the required effort to deliver the capital program and operational forecast reflected in this section, takes these dependencies and sequencing into consideration.

Table 2: Summary of Capital and Operating expenditure forecast, real \$ (June 2014)<sup>8</sup>

Forecast cost, \$'000,000	Business Unit	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015-20
<b>Capital</b>	<b>IT</b>	71.85	52.83	50.24	59.72	52.29	<b>286.92</b>
	<b>Non-IT</b>	8.36	14.33	8.61	7.50	4.23	<b>43.02</b>
<b>Operating</b>	<b>IT</b>	31.01	36.78	39.04	39.90	41.16	<b>187.89</b>

Figure 6 represents the raw FTE requirements for the SA Power Networks 2015-20 RCP capital and operating forecast, inclusive of effort that may be delivered by outsourcing arrangements, but exclusive of non-IT effort. This therefore represents the effort required and not necessarily the in-sourced (internal and supplementary labour) staffing levels required.

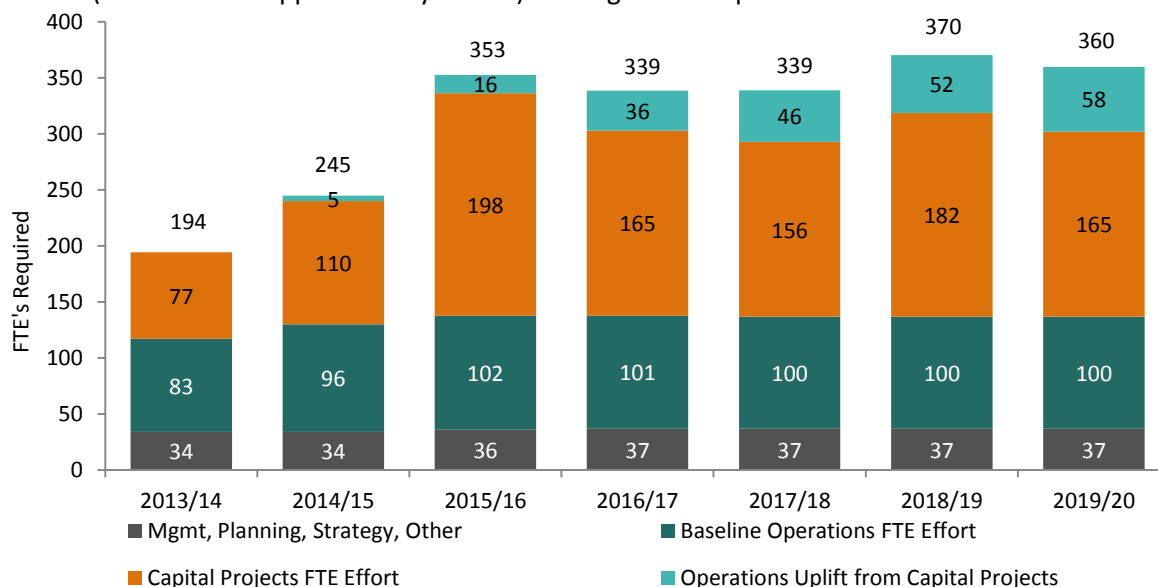


Figure 6 - SA Power Networks IT 2015-20 Capital and Operating FTE requirements<sup>9</sup>

The non-IT FTE effort associated with business transformation projects that is not evident in Figure 6 above can be found in **Error! Reference source not found.**

Figure 7 below represents the raw FTE requirements (inclusive of effort that may delivered by outsourcing arrangements) for the SA Power Networks 2015-20 RCP Capital Projects forecast.

<sup>8</sup> IT Investment Plan 2015-20. The costs exclude escalators such as CPI, increased number of depots, vehicles, users, etc

<sup>9</sup> IT Investment Plan 2015-20



Note: The 34 'Management, Planning, Strategy and Other' FTEs have been distributed as 30% Capital Projects (10 FTEs) and 70% Operations (24 FTEs), in line with the SA Power Networks IT historical distribution of labour.

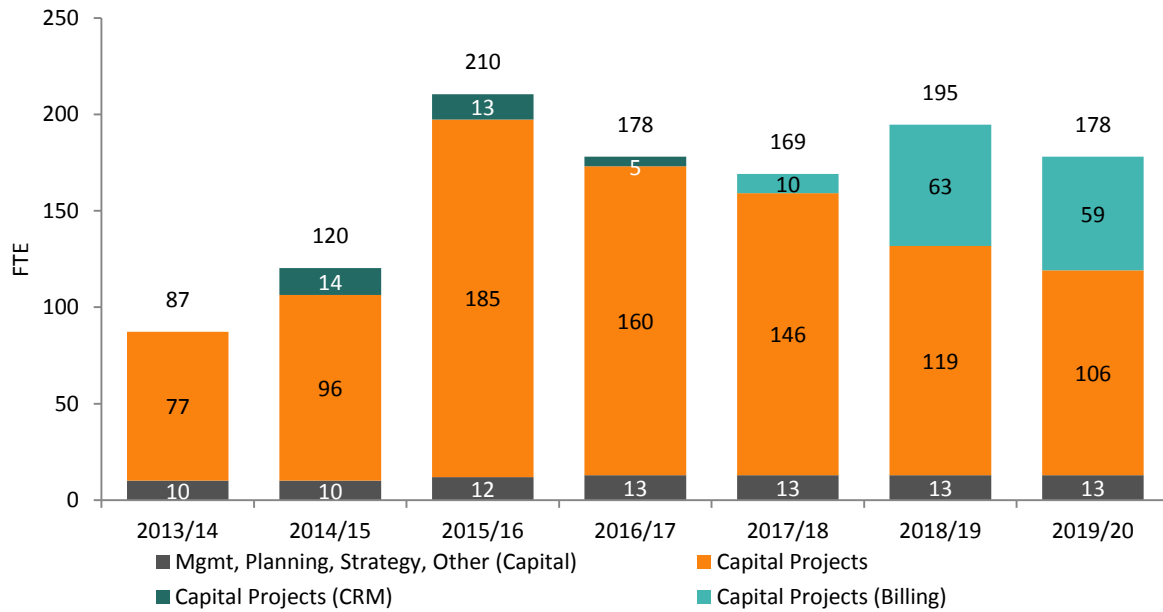


Figure 7 - SA Power Networks IT 2015-20 IT Capital Projects FTE Requirements

Figure 8 represents the raw FTE requirements (inclusive of effort that may delivered by outsourcing arrangements) of the SA Power Networks 2015-20 RCP IT Operations forecast.

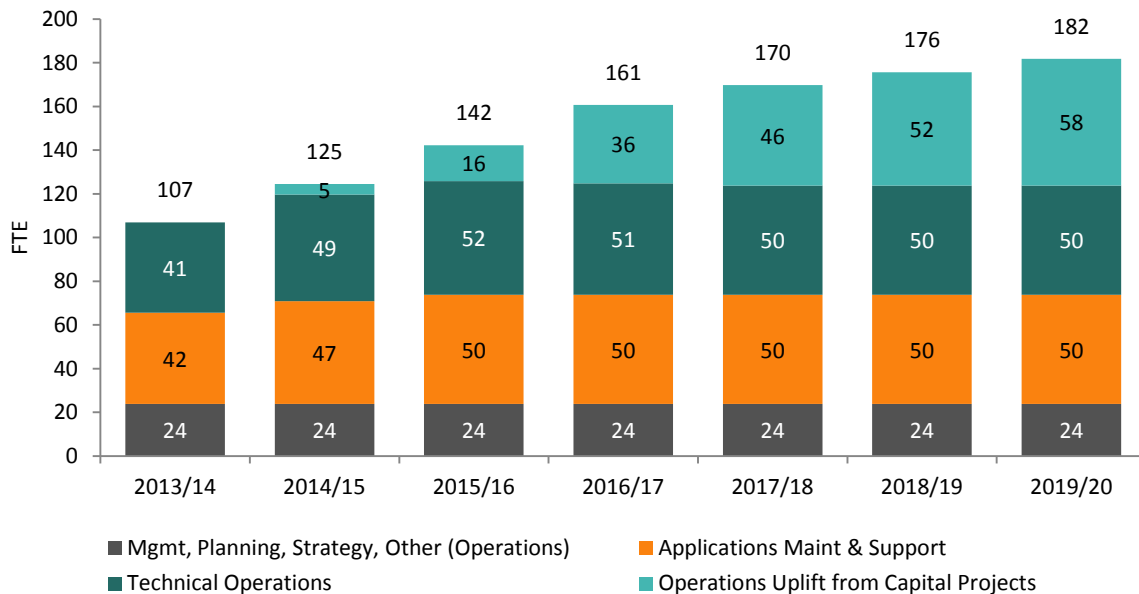


Figure 8 - SA Power Networks IT 2015-20 IT Operating FTE Requirements

### 3.2 Sourcing Options

This section analyses different approaches to meeting the resourcing requirements of the 2015-20 RCP IT forecast. In preparation of these options the following assumptions have been made:

- Of SA Power Networks' current 155 FTE resource capacity:
  - 54 FTEs contribute toward the effort required for the delivery of capital projects (35%). Based on the distribution it is therefore assumed that regardless of the FTE

- forecast, an internal contribution to each project of 35% is the generally accepted level required to facilitate positive project outcomes
- 67 FTEs contribute toward the effort required for system support, maintenance and technical operations services. (43%)
  - 34 FTEs (22%) do not directly contribute to the forecasted effort required to deliver the capital program or system support, maintenance and technical operations services on the basis that they are:
    - IT Management roles
    - Strategy, Planning, Business Engagement or Quality, Risk and Compliance roles
    - IT Services including PMO, supplier management, commercial and administration.
  - For the purpose of calculating outsourcing percentage levels, these 34 FTEs have been distributed as 30% Capital (10 FTEs) and 70% Operational (24 FTEs)<sup>10</sup>
  - The proportion of in-sourced resources that are supplementary labour is 20%, in line with the SA Power Networks IT Operating Model target. This may fluctuate slightly from year to year in order to meet variability in demand
  - Total SA Power Networks human resources (employees and supplementary labour) will increase by 50 FTEs per annum.
  - The 2013 and 2014 Gartner Utilities benchmark of 6.6% for ICT FTEs as a percentage of Organisational FTEs is constant over the forecast period.

The subsequent sections model different scenarios with respect to the level of in-sourced resources (employees and supp labour) and the resulting levels of outsourcing arrangements.

The different scenarios modelled are:

- Maintain in-sourced FTE levels at the 2014 IT Operating Model target of 155 FTEs. All subsequent resource requirements are fulfilled by outsourcing arrangements;
- Grow the SA Power Networks in-sourced IT function in line with the growth of the organisation as a whole. Specifically this means increasing in-sourced FTE levels by the amount required to align to the 2012 and 2013 Gartner utilities industry benchmark associated with the ICT FTEs as a percentage of total organisational FTEs (6.6%); and
- Increase in-sourced FTE levels by the amount required to maintain capped outsourcing levels and therefore mitigate to some extent the risks associated with higher levels of outsourcing. This option is modelled on capped outsourcing levels at:
  - IT Operations – 30%: There are no specific benchmarks driving the selection of 30%, however given the inherent risks of outsourcing of operations, 30% has been selected as an achievable target whilst maintaining an appropriate risk profile. Relevant benchmarks for overall outsourcing levels (Capital and Operating) such as the KPMG Aus Utilities 2013 benchmark show a mean of 24% and maximum of 74%.
  - Capital Program Delivery – 65%: Allowing minimum 35% contribution by internal FTEs to maximise overall chances of successful project outcomes.

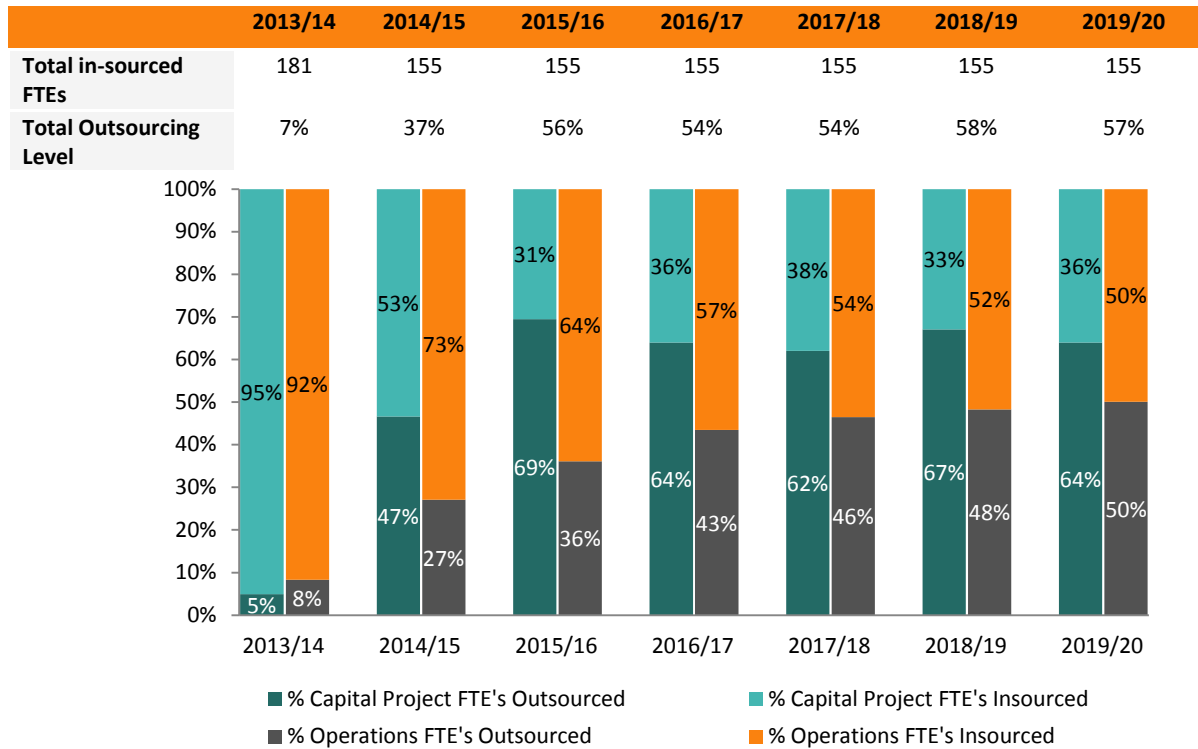
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<sup>10</sup> The FTEs that do not contribute to the forecasted effort have been added to both the forecast effort and the in-sourcing capacity for the purpose of calculation of outsourcing levels.

**3.2.1 Option 1 - Maintain current in-sourced FTE levels**

This section examines the impact were SA Power Networks to adopt a strategy of maintaining a fixed in-sourced labour capacity at current levels of 155 FTEs, with the shortfall in resourcing requirements across both projects and operations being outsourced to external service providers.

Figure 9 represents the % of project and operational resource FTEs fulfilled by outsourcing arrangements given an SA Power Networks ICT workforce of 155 FTEs (inclusive of 20% supp labour) as well as the total level of outsourcing across projects and operations.



**Figure 9 – SA Power Networks IT 2015-20 Capital Project and IT Operations Outsourcing Levels at 155 Total FTEs**

As per Figure 10, the impact of option 1 on the comparison of SA Power Networks to the relevant benchmarks shows that with no increase in in-sourced FTEs, the SA Power networks IT function would likely be undersized in comparison to the 2013 Garter benchmark of ICT FTEs as a percentage of total FTEs SA Power Networks IT FTEs falling to 5.74% of total FTEs by 2019/20. This is representative of a shortfall of approximately 23 in-sourced FTEs, with 178 FTEs required in order to



maintain the ICT workforce size in line with the benchmark.

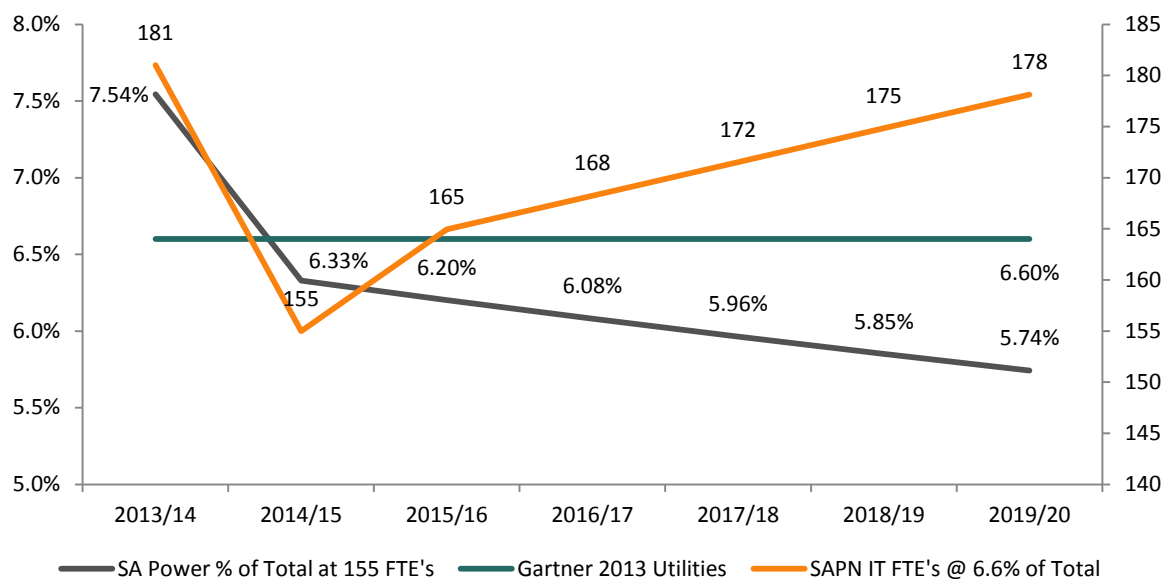


Figure 10 – SA Power Networks IT 2015-20 IT FTEs as % of Total FTEs with IT FTEs at 155

With overall levels of outsourcing at 54-58% over the 2015-20 RCP, the total level of outsourcing is significantly higher than the KPMG 2013 Australian utilities mean of 24%. Even with an upward trend to outsourcing factored in, the rate of change to outsourcing arrangements for the SA Power Networks IT function modelled in this sourcing option is rapid.

### Operational Impact

As shown in Figure 9, maintaining in-sourced IT resourcing levels at 155 FTEs results in an increase in outsourced operational activities to between 36% (FY14/15) and 50% (FY19/20) over the 2015-20 RCP. Given IT Operations has been traditionally in-sourced (8% in 2012/13 in FTE terms) with outsourcing of IT Operations generally limited to services provided by CHED, increasing outsourcing of operations to the levels modelled within such a tight timeframe represents a significant challenge and carries significant risk.

Whilst there is opportunity for possible cost saving via managed services in the form of accommodation and other business overheads, without detailed analysis of the specific functions that could be fulfilled by managed services, managed services for operational functions are considered to be cost neutral with in-sourced labour.

Outsourcing operational activities to managed services presents some advantages for SA Power Networks, namely:

- **Specific Expertise** – operational services could be outsourced to vendors who specialise in their field, such as service desk, database administration, data centre/infrastructure etc. The efficiency gained via this specialisation can offset the cost differential of in-sourced vs. outsourced labour;
- **Ability to concentrate on core processes** – the in-sourced staff can concentrate on the core focus areas of the SA Power Networks operating model, particularly planning and compliance, with less emphasis on build and run activities; and
- **Risk Sharing** – outsourcing certain operational activities could help SA Power Networks shift certain responsibilities and risk to the vendor.

Outsourcing operational activities, particularly to the modelled levels of 36%-50% presents some significant risks which would require substantial effort to mitigate and manage effectively:

- **Unforeseen Costs** - SA Power Networks needs to accurately understand the IT services it provides and the costs incurred in the delivery of those services in order to be able to make informed decisions on the appropriateness of outsourcing particular IT services. Failure to gain this understanding could leave SA Power Networks with unforeseen costs associated with remediating service shortfalls. Furthermore the costs of evaluating vendors, managing major contracts, travelling to offshore sites and enhancing security are costs that must be considered in addition to transitional costs. In addition, customisation of standard vendor services to meet the specific requirements of the business can add significant costs as can the exit costs associated with prematurely ending an arrangement;
- **Poor Service Performance** - SA Power Network would be relying on a third party to provide operational services and if this third party is not managed effectively, this could negatively affect SA Power Networks operations and customers, particularly where poor performance impacts regulatory compliance;
- **Loss of Control** - As service providers build up intellectual knowledge (IP) about SA Power Networks' business and systems, SA Power Networks becomes more dependant on that service provider. In parallel, turnover of in-sourced resources leaves fewer in-sourced resourced with the necessary knowledge or skills, creating barriers to switching, diminishing competition and increasing service provider pressure to increase prices;
- **Staff Resistance** – Outsourcing can disrupt existing in-sourced staff, reduce morale, increase turnover and lower in-sourced staff's productivity and service levels; and
- **Process Fragmentation** – The linking of outsourced operational processes to other key internal processes can be difficult and costly.

### Project Delivery Impact

As with IT Operations, the delivery of the capital program becomes highly outsourced with in-sourced resourcing maintained at 155 FTEs. For FY 2015/2016, outsourcing levels reach a peak of 69% (146 of 210 FTEs) and continue at an average of 64% for the remainder of the 2015-20 RCP.

Outsourcing capital program delivery offers a number of advantages namely:

- The risk of not delivering to time, cost and quality parameters is shared between SA Power Networks and the service provider. There is a greater emphasis to deliver outcomes where there is a shared risk for outcome delivery.
- The ability to be flexible and agile and scale up and down to meet changing delivery profiles of the 2015-20 RCP IT forecast is increased.
- The ability to adopt newer technologies is enhanced as the need to constantly keep the in-sourced resources abreast of new technology development. I.e. let the service providers do this and focus in-sourced resources education and training on the technologies actually in use.

The key impact on project delivery is the availability of the 31% (64 of 210 FTEs in 2015/16) of in-sourced resources that can contribute to the capital program. With a large capital program there is a risk that these resources could not provide the necessary internal expertise and experience to facilitate successful project outcomes. I.e. they are spread too thinly across projects, therefore cannot provide the necessary input, become 'blockers' as service providers wait for information and guidance etc. At capital program outsourcing levels of 69% (2015/16) this presents a material risk to successful delivery of the program.

Many of the risks associated with widespread outsourcing outlined for operations are equally applicable to the outsourcing of the capital program. In some ways these risks have a lower impact as service providers are typically engaged on a project by project basis and therefore the risks associated with ability to switch providers is not as prevalent as it is with long term managed services.

With 65% on average of the capital program to be delivered by external services, the travel and accommodation cost impacts of service providers bringing resources to Adelaide must also be factored into the cost forecast. It is envisaged that a significant portion of the required skills and capabilities can be sourced in Adelaide; however it must be assumed that there will be cases where the resources are required to travel from interstate.



### 3.2.2 Option 2 - Increase In-Sourced FTE Levels According to Australian Utilities Average

This section examines the impact were SA Power Networks to adopt a strategy of increasing in-sourced labour capacity (inclusive of supp labour) in line with the Gartner 2013 and 2014 Worldwide Utilities industry benchmark of 6.6% of total FTEs. This benchmark has been trending up from 5.5% in 2010, but has remained static over 2013 and 2014, therefore for the purpose of modelling this option, the benchmark is presumed to remain at 6.6% over the 2015-20 RCP. The shortfall in resourcing requirements across both projects and operations would be outsourced to external service providers. Based on an organisation wide increase of 50 non-IT FTEs per annum, the corresponding growth in the IT function in-sourced FTEs is approximately 3-4 FTEs per year to a total of 178 FTEs in 2019/20 as depicted in Figure 11.

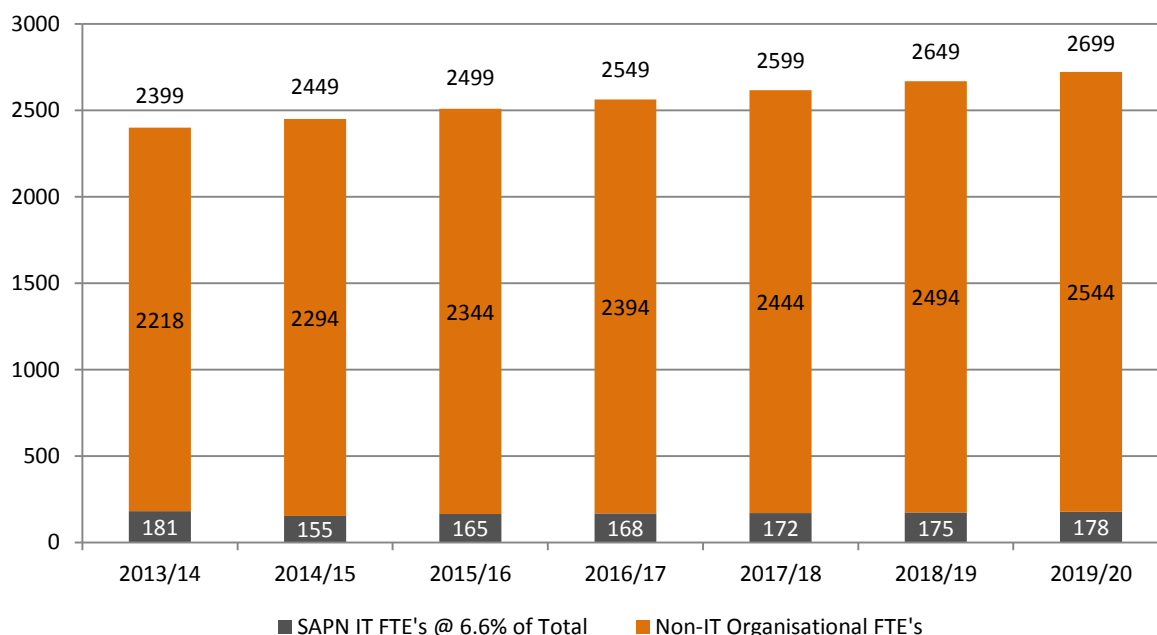


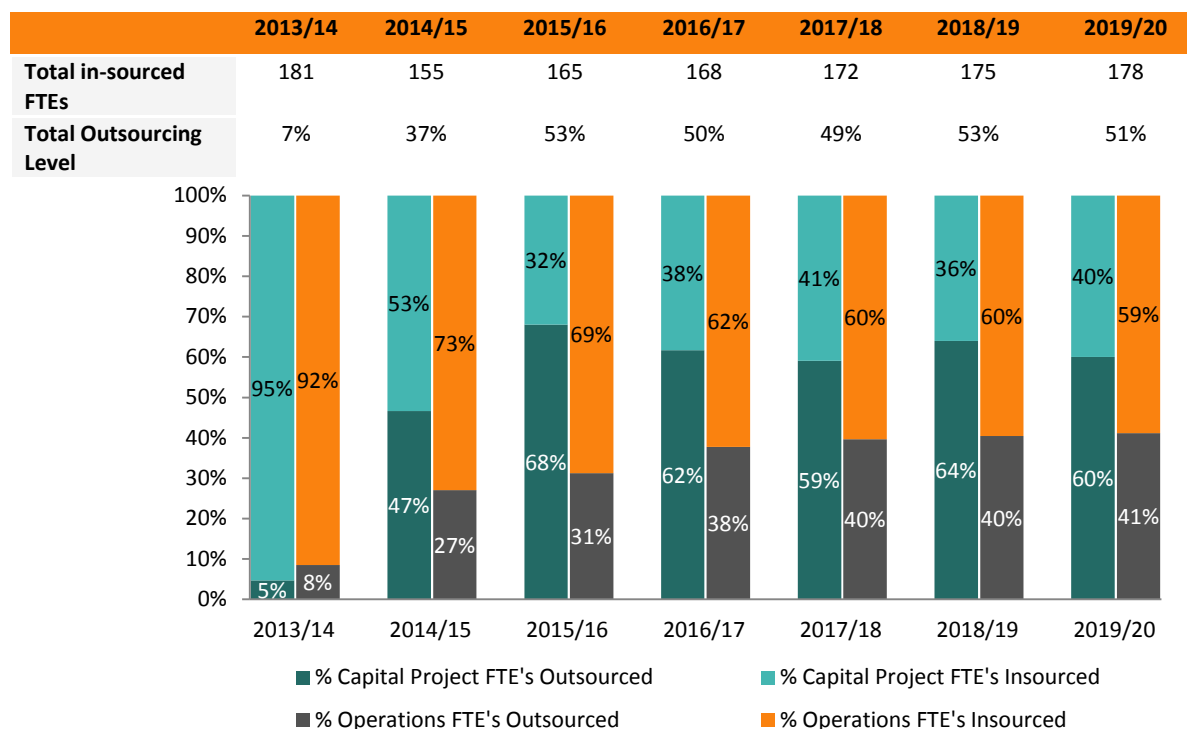
Figure 11 – SA Power Networks IT FTEs at 6.6% of Total FTEs

In this modelling it has been assumed that the additional resources (3-4 per year) are distributed between FTEs that contribute to the delivery of the capital program and FTEs that contribute toward the effort required for system support, maintenance and technical operations services in the ratio of 30% and 70% respectively. None of the uplift has been associated with FTEs that do not directly contribute to the forecasted effort required to deliver the capital program or system support, maintenance and technical operations services. The resulting FTE distribution is therefore:

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Capital Contribution	73	54	57	58	59	60	61
Operating Contribution	74	67	74	76	79	81	83
Mgmt, Planning, Strategy, Admin, Other	34	34	34	34	34	34	34
<b>Total FTEs</b>	<b>181</b>	<b>155</b>	<b>165</b>	<b>168</b>	<b>172</b>	<b>175</b>	<b>178</b>

Table 3 – SA Power Networks IT FTEs at 6.6% of Total FTEs

Figure 12 represents the percentage of project and operational FTEs fulfilled by outsourcing arrangements vs. in-sourced labour, given an SA Power Networks ICT workforce corresponding to that modelled in Table 3 (inclusive of 20% supp labour) as well as the total level of outsourcing across projects and operations. The net result when compared to option 1 is a reduction in the level of outsourcing for operations by 7% on average, and a reduction in the level of outsourcing for delivery of the capital program by 3% on average.



**Figure 12 – SA Power Networks IT 2015-20 Capital Project and Operations Outsourcing Levels**  
IT FTEs maintained at 6.6% of total FTEs

Whilst option 2 is based on alignment to the 2013 and 2014 Gartner worldwide utilities benchmark of ICT FTEs as a percentage of total FTEs, given the size of the capital and operating forecast the total level of outsourcing is still significantly higher than the KPMG 2013 Australian utilities average of 24%. Whilst there is an overall reduction in the level of outsourcing across operations and delivery of the capital program, the rate of change to outsourcing arrangements modelled in this sourcing option, is not materially different to option 1.

**Operational Impact**

The operational impact of sourcing option 2 is not materially different to the operational impacts (benefits and risks) outlined for option 1. Whilst the levels of outsourcing arrangements for operations under option 2 are marginally lower than those modelled in option 1, with levels rising quickly from currently levels of circa 8% to 38% by FY 2016/17, the risks outlined in option 1 associated with outsourcing of operations are applicable to option 2, albeit with a marginally lower probability and impact.

**Project Delivery Impact**

Given the marginal increase in in-sourced FTEs, as with option 1, under option 2 the delivery of the capital program becomes highly outsourced. For FY 2015/2016, outsourcing levels the delivery of capital projects reaches a peak of 68% (143 of 210 FTEs) and continues at circa 65% until FY 2018/19.

As there is only an average 3% reduction in outsourcing of the delivery of the capital program under option 2, the benefits and risks associated with option 2 are considered to be the same as those outlined under option 1.

### 3.2.3 Option 3 – Capped Outsourcing Target

This section examines the impact were SA Power Networks to adopt a strategy of increasing in-sourced labour capacity to meet the needs of the forecast, but without exceeding specific outsourcing levels. The outsourcing levels have been capped at:

- Operations – 30%
- Capital Program Delivery – 65%

Capital Program Delivery outsourcing has been capped out 65% on the basis that maintaining 35% in-sourcing (inclusive of 20% supp labour) is the minimum level required to enable sufficient internal contribution to the projects to facilitate positive project outcomes. This includes:

- Facilitating a smoother transition to operations
- Provide sufficient access to internal resources with specialised business process knowledge and knowledge of existing systems and technology to identify potential opportunities, risks and issues and guide the project with appropriate responses to risks and issues.
- Expedite projects by reducing the overall learning curve for the project team as a whole.

The outsourcing of IT Operations has been capped at 30% primarily to mitigate the risks associated with high levels of outsourcing of operations as outlined in Option 1 (41%-50% in Options 1 and 2). There are no specific relevant benchmarks for outsourcing that look at outsourcing levels delineated by operations and capital projects. Overall outsourcing levels (Capital and Operating) such as the KPMG Aus Utilities 2013 benchmark show a mean of 24% and maximum of 74%.

To operate within the constraints of the capital program and operations outsourcing levels proposed by sourcing option 3, the in-sourced FTEs need to increase from the current 155 FTEs to approximately 174 FTEs by financial year 2015/16, growing steadily to 193 FTE by financial year 2019/20 as depicted in Figure 13.

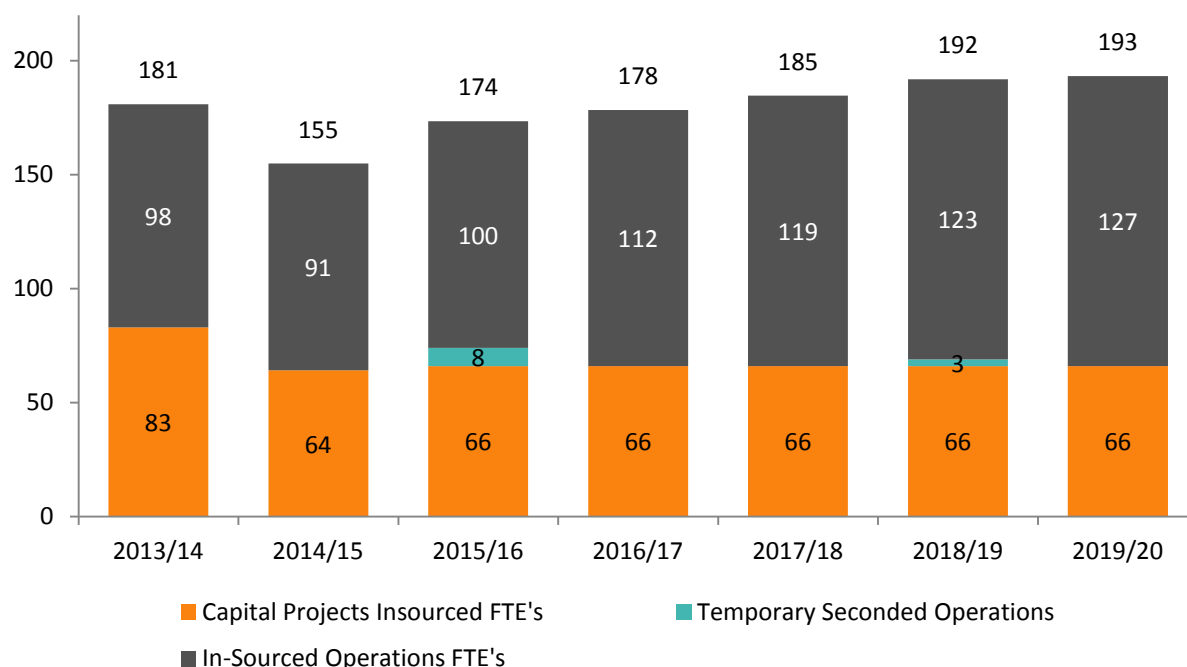


Figure 13 – Option 3 – In-Sourced FTEs at Capped Outsourcing Levels

Figure 13 shows that there is a step increase in in-sourced operational FTEs in 2015/16 followed by moderate incremental growth. In-sourced FTEs contribution to the delivery of the capital program rises from 2014 IT Operating levels of 64 FTEs, to 66 FTEs from 2015/16 onwards. In 2015/16 the

capital contribution of in-sourced FTEs is actually 74 to keep outsourcing below 65%, however given the 12 FTE increase in operational FTEs in 2016/17 it is proposed that a proportion of the resources contributing to the spike in capital work in 2015/16 could later transition to an operational focus in 2016/17. The alternative is to manage this spike with a temporary lift in the 20% supp labour target or 65% outsourcing target. However the advantage of altering the capital and operating mix is that the staff required for the 2016/17 operational uplift would already be well versed in SA Power Networks systems, particularly those they were involved in the delivery of.

Figure 14 contrasts the option 3 levels of outsourced and in-sourced labour across operations and capital program delivery over the 2015-20 RCP as well as the total level of outsourcing resulting from the Option 3 capped outsourcing targets.

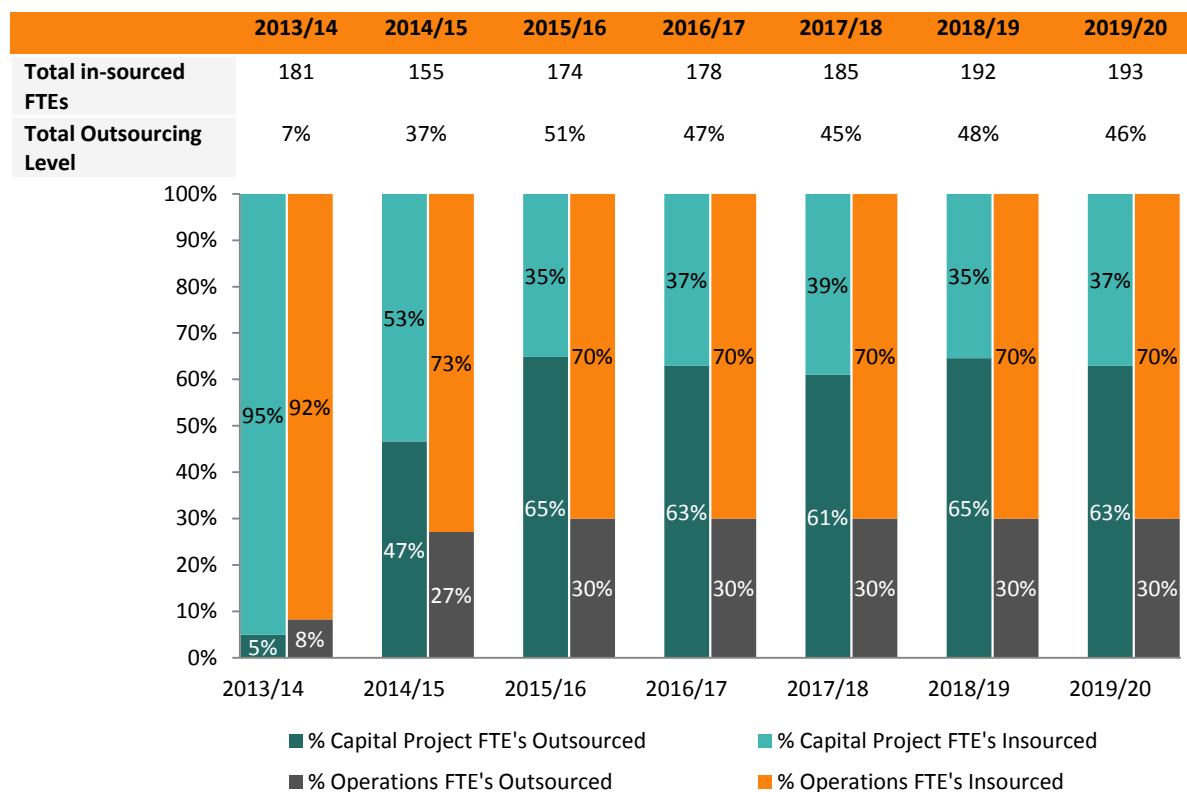


Figure 14 – SA Power Networks IT 2015-20 Project and Operations with Capped Outsourcing Levels

**Operational Impact**

The operational impact of sourcing option 3 is materially different to options 1 and 2 with outsourcing to managed services capped at 30%. The lower level of operations outsourcing serves to lower the risks associated with long term managed services to manageable levels.

The increased in-sourced resources also provides a higher degree of flexibility for the organisation to float resources between operations and delivery of capital projects, as is evident in Figure 13 with the spike in demand from the capital program in FY 2015/16 largely being absorbed by the required uplift (12 FTEs) in operations the subsequent year. Where the spike is larger than that than can be absorbed, small fluctuations in supplementary labour levels will be used to match labour supply and demand.

**Project Delivery Impact**

There is little to differentiate option 3 from options 1 and 2 with respect to the delivery of the capital program with the exception of the 2015/16 spike in projects. Under option 3, the increased

headcount provides the necessary internal resources to keep the outsourced capital program component below 65%. Overall however, given an average outsourced capital program of circa 63% over the 2015-20 RCP, the benefits and risks associated with the delivery of the capital program under option 3 are not considered materially different to options 1 or 2, with the specific exception that option 3 provides what is considered to be the minimum required level of internal input and expertise to capital projects.



### 3.3 Sourcing Options Comparison

This section summarises the key differences in the sourcing options in relation to outsourcing levels, accommodation requirements and other overheads. The overall approach to sourcing is largely the same between options in terms of:

- limiting the use of supp labour to 20% of total in-sourced FTEs;
- seeking opportunities to leverage external professional services in the delivery of the capital program wherever possible; and
- seeking opportunities to transition operational activities to external managed services where benefits can be derived and the risks effectively managed.

The key difference between options is largely in the level of outsourcing of operations, and to a lesser extent, the outsourcing of the capital program of work which doesn't vary significantly between options.

#### 3.3.1 In-sourced FTEs

Figure 15 contrasts the different numbers of in-sourced FTEs (inclusive of 20% supp labour) for the SA Power Networks IT Function under the three options modelled. Options 1 and 2 follow a linear path given they are modelled on FTE targets. Option 3 however is modelled on a limiting the use of outsourcing arrangements and is therefore linked to the forecast effort, resulting in a growth of in-sourced FTEs congruent with the 2015-20 forecast.

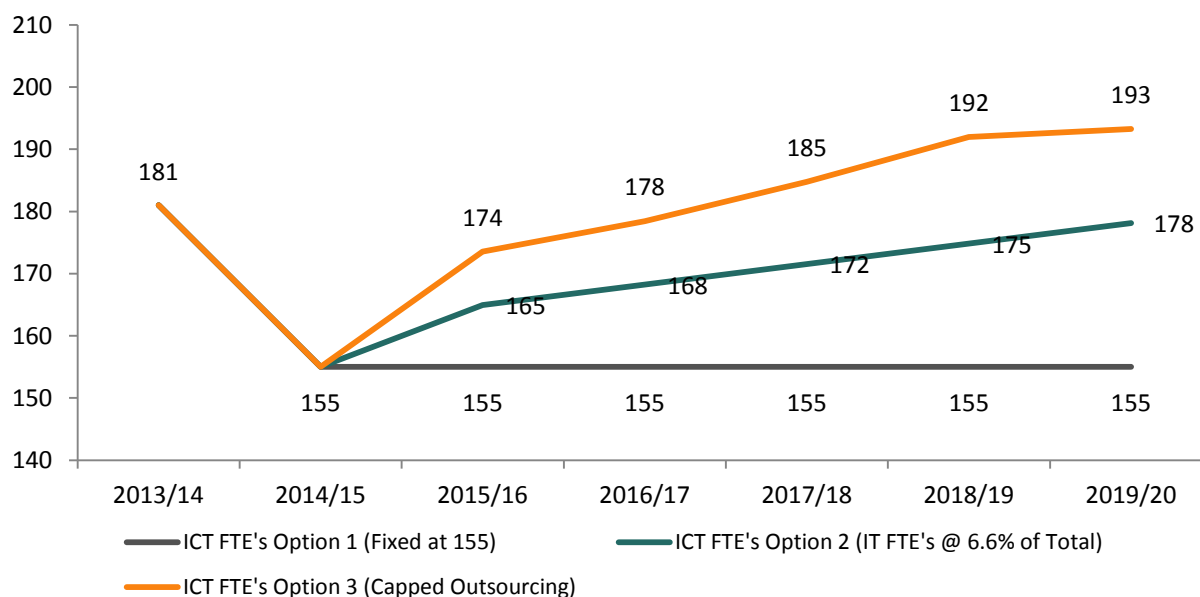


Figure 15 – Options Comparison - SA Power Networks IT 2015-20 In-sourced FTEs

The impact on the comparison of SA Power Networks to the relevant benchmarks shows that with no increase in in-sourced FTEs (Option 1), the SA Power networks IT function would likely be undersized in comparison to the 2013 Gartner benchmark of ICT FTEs as a percentage of total FTEs.

The 2014 equivalent Gartner data shows no change in this benchmark for utilities with greater than \$1B in revenues, therefore 6.6% (ICT FTEs as % of total) is assumed to be relatively constant over the forecast. Figure 16 highlights this difference, with SA Power Networks IT FTEs falling to 5.74% of total FTEs by 2019/20 under Option 1. This is representative of a shortfall of approximately 23 in-sourced FTEs in order to maintain the ratio in line with the benchmark as evident in Figure 15. As option 3 is tied to the forecast effort, option 3 would represent the SA Power Networks ICT workforce as oversized compared to the benchmark, albeit by only circa 0.4%-0.6%.

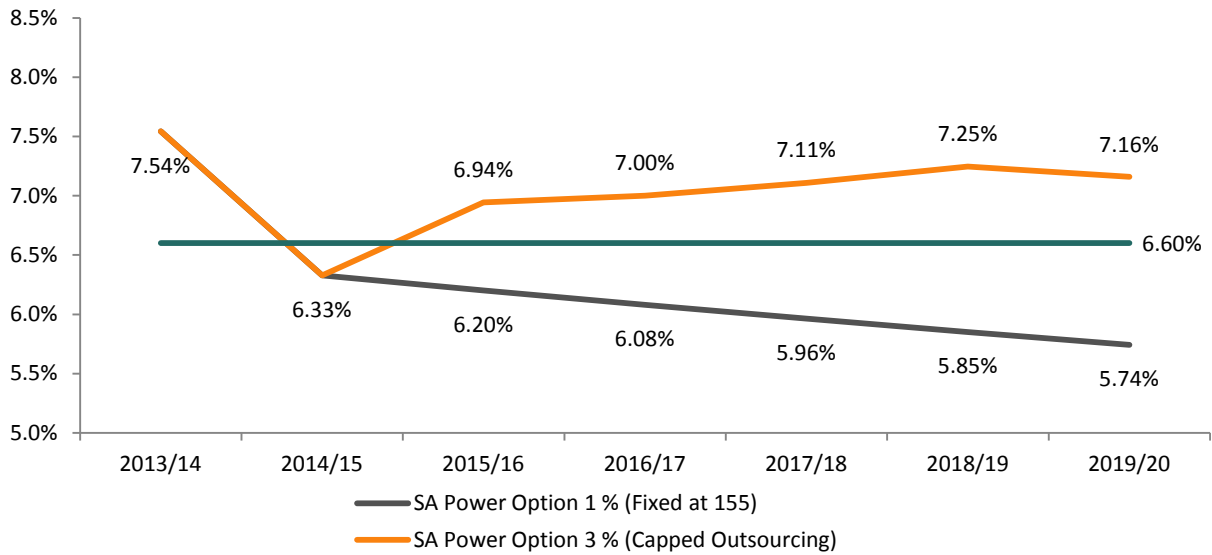
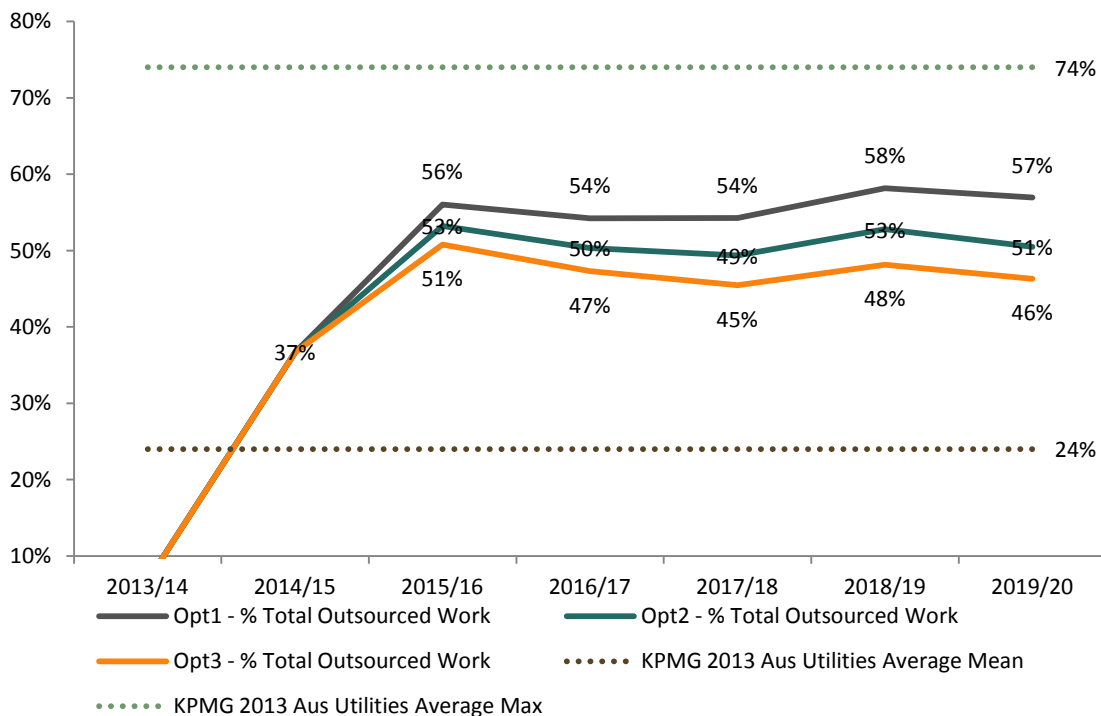


Figure 16 – Options Comparison – ICT FTEs as % of Total FTEs

### 3.3.2 Outsourcing Levels

Figure 17 contrasts the total outsourcing levels for the SA Power Networks IT function under the three options modelled. This shows that between options 1 and 2 there is approximately a 5% difference in total outsourcing across the 2015-20 RCP, and an average 8% difference when comparing options 1 and 3. Whilst these levels are well above the KPMG 2013 Australian Utilities Mean, it is well below the maximum of 74% reported in the same study, therefore providing a certain level of confidence that the modelled levels of outsourcing achievable. It is however unknown over what period the participant with outsourcing at 74% performed such a transition, nor how successful it has been. The mid point between the benchmark mean and the benchmark maximum at around 50% represents a challenging but achievable target. With this in mind option 3 represents a desirable sourcing option at an average of 48%.

Figure 17 – Options Comparison - SA Power Networks IT 2015-20 Total Outsourcing



## 4 Recommendation

Sourcing Option 3 is recommended as the preferred sourcing option for the SA Power Networks 2015-20 RCP due to the fact that it:

- a) Is directly linked to the forecast IT effort, as opposed organisational wide benchmarks such as those used in option 2 that are unrelated to the forecast effort. Option 3 therefore takes into consideration the shift in the organisation's strategic focus on IT as a means to improving business outcomes.
- b) Supports the IT Transformation objective of limiting the use of supplementary labour to 20% of in-sourced FTEs. This 20% provides a sufficient level of flexibility to meet short term fluctuations in labour demand. Furthermore, the use of Term Employment Contracts (TEC) and/or Term Award Contracts (TAC) for employees also provides a mechanism to manage longer term fluctuations in labour requirements.
- c) Supports IT Transformation objectives by leveraging external professional services in the delivery of the capital program where appropriate, but with limits in place to minimise risk. Of particular importance is the flexibility this provides in scaling up and down corresponding to variability in demand and congruence with the IT functions shifting role from service provider to enabler.
- d) Supports IT Transformation objectives by seeking opportunities to transition operational activities to external managed services where benefits can be derived and the risks effectively managed.
- e) Maintains an appropriate risk profile by limiting the risk exposure associated with outsourcing of operational activities to managed services by ensuring there is sufficient in-sourced FTEs to fulfil 70% of operational IT functions. This still represents an increase in operational IT functions fulfilled by managed services by circa 20% over 2013/14 levels and allows SA Power Networks to make this transition in a controlled and diligent manner targeting areas best suited to managed services. The transition to managed services modelled in options 1 and 2 at circa 50% and 41% respectively in a relatively short period of time would present a risk to operations and compromise the satisfaction levels that could otherwise be expected of managed services.
- f) Maximises the chances of success for capital projects by ensuring there is a minimum 35% input from in-sourced FTEs to the capital program.

## 5 Sourcing Approach

Assuming the selection of Option 3 as the recommended option, this section seeks to provide further detail on the sourcing approach and how the risks will be managed.

### 5.1.1 Labour Terms of Engagement

Under sourcing option 3, the use of supplementary labour is has a fixed maximum of 20%. The flexibility provided by this 20% will be sufficient to manage the short term fluctuations in labour demand over the 2015-20 RCP, particularly where very specialised skills or unique experience is required.

The use of Total Employment Contracts (TEC) and/or Term Award Contracts (TAC) will also be utilised where appropriate to manage longer term variability in labour demand. Whilst tempting to maximise the use of term employment contracts and therefore reduce risk for the SA Power Networks, they should only be used where the duration of the role is uncertain. Overuse of term employment contracts could limit the ability of SA Power Networks to attract and retain the best talent as people will often be attracted to roles that offer longer term financial stability.

### 5.1.2 Operations

Between FY 2013/14 and FY 2016/17, under option 3 the SA Power Networks in-sourced IT Operations workforce is forecast to grow by 29 FTEs from 98 FTEs to 127 FTEs, whilst at the same time increasing the level of operational IT functions fulfilled by managed services to 30%. This represents a significant level of change to the organisation than can only be accomplished via carefully architected strategies. Pivotal to the success of managing this growth in operational requirements will be the careful and diligent method by which SA Power networks transitions to managed services. Where applicable SA Power Networks will make every effort to retain staff affected by the transition of operational functions to managed services by utilising those staff to meet the forecast growth in in-sourced operational effort of the 2015-20 forecast. This will ensure that the investment SA Power Networks has made in recruiting, training and up-skilling resources is not wasted and that the in-house knowledge of systems and processes is retained.

The Australian managed services industry is mature and there is therefore ample suppliers willing and highly capable, to assist SA Power Networks in transitioning operational activities to outsourced managed services. A number of risks were highlighted in the outsourcing of operational IT functions under Option 1 (section 3.2.1). Whilst the levels of operations outsourcing under Option 3 is approximately 20% less than Option 1, the risks are still applicable and must be effectively managed.

The SA Power Networks IT Transformation program has put in place plans and strategies to address these risks and foremost is treating each transition as a project to ensure the best chance of success. SA Power Networks via the IT Transformation Program is mitigating the associated risks through close definition of processes to ensure there is a clear understanding of the services being provided and the cost of delivering those services. In addition SA Power Networks has been specifically addressing process maturity issues (lifting) via the IT Transformation program, prior to any consideration being given to shifting the related services to an external provider. This 'Lift and Shift' approach seeks to mitigate risk, with the 'Lift' consisting of the three key project activities of:

- 1) Defining business process;
- 2) Analysing information risks; and
- 3) Updating business continuity and disaster recovery plans place prior to a 'Shift' to Managed Services.

	Lift and Shift	Shift and Lift
Description	<ul style="list-style-type: none"> <li>Address functional and process maturity issues ('fix') prior to transition to a vendor</li> <li>Processes that require fixing are typically inefficient, ill defined, complex, or non-compliant</li> </ul>	<ul style="list-style-type: none"> <li>Transition operations in their current state (along with any inefficiencies and issues) to a vendor</li> <li>Process improvements and redesign may be implemented by the vendor post transition</li> </ul>
Key Considerations	<ul style="list-style-type: none"> <li>Ability and desire to invest the capital and time in transformation initiatives</li> <li>Long term view of costs and benefits</li> <li>Need to de-risk and uplift organisational areas</li> </ul>	<ul style="list-style-type: none"> <li>Vendor has the capability to execute desired transformation</li> <li>Need for short term cost reduction</li> <li>High level of risk and loss of control</li> </ul>
Process Considerations	<ul style="list-style-type: none"> <li>Not all areas can be shifted – dependent on regulatory/compliance restrictions, process stability and requirement for face to face interaction</li> <li>For areas which are immature, it may not make sense to shift immediately.</li> </ul>	<ul style="list-style-type: none"> <li>Not all areas can be shifted – dependent on regulatory/compliance restrictions, process stability and requirement for face to face interaction</li> <li>For areas that are mature, standardised and where vendors have capability, shifting may provide savings to fund additional transformation efforts.</li> </ul>

Table 4 – Managed Services Transition Approach

In addition SA Power Networks has investigated major risk categories associated with Managed Services and is actively addressing these risks, namely:

- Operational and transaction risk:** Operational failure occurs when activities in a business process are executed incorrectly, not to service or quality standards, or with poor judgement. If any steps in a business process are outsourced, it is important to know what role suppliers play in a failure.
- Risks to the information confidentiality:** An important risk to consider is the transmission and utilisation of organisational information. The IT Transformation program has been assessing the specific types, sensitivity and frequency of confidential information that will be used by vendors. The higher the volume of sensitive data a third party manages and the more frequently they handle it, the greater the risk that the confidentiality of that data will be compromised.



- **Risks to business continuity:** SA Power Networks IT has a Business Continuity Plan and Disaster Recovery Plan in place. It is important that this is extended to cover the managed services vendor. Vendors will typically have their own business continuity and disaster recovery plans; however besides assessing their plans, SA Power Networks is developing exit strategies in case a service provider goes out of business. SA Power Networks will also be testing vendor assurances by simulating crises with vendors to test reactions in a realistic scenario. E.g. Simulate a network or data centre outage so to test vendor response time to bringing up an alternate data centre in another location.

Under sourcing option 3, almost 50% of SA Power Networks IT expenditure directed to services, therefore it is imperative that there is a robust vendor management capability. Under the IT Transformation program and part of the implementation of Managed Services, the office of IT Services has been expanded to include a Managed Services Vendor Management function consisting of an IT Supplier Relationship Manager for Managed Services and Vendor Support Officers. The remit of this office is to manage the lifecycle of Managed Services activities from procurement through to inbound transition, monitoring and reporting of service level agreement (SLA) measures, ensuring adequate knowledge transfer and outbound handover activities.

### 5.1.3 Capital Program Delivery

Unlike operations, which has outsourcing capped at 35%, under option 3 the delivery of the capital program by external service providers increases substantially over the 2015-20 RCP to the capped levels of 65%. This continues a trend that commenced in 2014 as a result of the capital program uplift that occurred in 2014 and the IT Transformation program that occurred in parallel. The delivery of SA Power Networks IT capital program has historically been delivered almost 'in-house', albeit with undesirable levels of contract labour. Even though the labour split between operations and capital has generally been in the order of 70% operations, 30% capital, the comparatively small capital program meant the need to use external service providers was limited and delivery could occur almost entirely 'in-house' with this 30% contribution.

The 2014 capital program and even more so the 2015-20 forecast highlighted the unsustainable nature of the old operating model. The new IT operating model however, in conjunction with the recommended sourcing option for the 2015-20 RCP, places SA Power Networks in a sound position to be able to deliver the forecast IT capital program in the most efficient manner. Under option 3, the FTE contribution of the in-sourced workforce to the capital program is steady at 66 FTEs, with the exception of FY 2015/16 and FY 2018/19 where the mix of capital and operating effort temporarily altered to ensure the minimum 35% in-sourced contribution target to the capital program. The mix is reversed in the subsequent years with the excess headcount fulfilling the operating uplift in the subsequent year. Keeping in mind however that resources are rarely contributing to just project or just operational effort, it is imperative that the internal workforce is increased to circa 174 FTEs by FY 2015/16 to meet the overall in-sourced IT capital and operating demand.

With respect to the proportion of the capital program of work to be delivered by external service providers, as mentioned in section 1.2.1, the 2014 Transformation program established an "IT Services Panel" with the ability to deliver the 2014 and 2015-20 IT capital programs being a driving consideration in doing so. In many cases, particularly smaller projects, capital projects are delivered by a single system integrator. For larger initiatives, SA Power Networks has transitioned to a multiple 'best of breed' approach in the delivery of capital works. For example, responsibility for applications development, integration and infrastructure, each being awarded to different vendors. Where the same 'best of breed' vendor already manages the related service operationally, the associated transition to operations is also vastly simplified. The utilisation of a 'best of breed' approach also specifically addresses the risk of loss of control to vendors as summarised in Table 5 below.

	Single Full Service Vendor	Multiple 'Best of Breed' Vendors
Advantages	<p>Perceived as highest scale of cost savings due to economies of scale</p> <p>Perceived as having higher speed and flexibility due to larger resource pool</p> <p>Potential for better linkage between managed services areas</p>	<p>Mitigates key risks – issues with a single vendor are less likely to impact the overall business</p> <p>Competitive tension may lead towards shorter contract duration and comparable cost savings</p> <p>Better and more transparent access to specialist resources</p>
Disadvantages	<p>Lack of competitive tension</p> <p>Single point of failure</p> <p>Typically longer contract duration</p> <p>Possibility of invisible 'fourth and fifth' party vendors negating advantages</p>	<p>Higher implementation and transition cost due to liaison with multiple vendors</p> <p>Potentially higher ongoing vendor management costs and governance complexity</p>

**Table 5 – Vendor Mix Approach**

The locality of SA Power Networks being Adelaide South Australia, also means the availability of Full Service Vendors is limited without incurring significant additional fly-in-fly-out related expenses as in many cases it would be unlikely for a full service vendor to have all the resources covering the required capabilities in Adelaide. Using multiple best-of-breed vendors from the SA Power Networks IT Services Panel enables SA Power Networks to leverage local skills and expertise where available and therefore keep travel and accommodation costs to a minimum.

The composition of the IT Services Panel has been specifically built around IT services organisations that SA Power Networks can build long term strategic partnerships with, and that have the people and skills, capabilities and experience aligned with SA Power Networks requirements. This in combination with a strategy to provide a minimum 35% in-sourced contribution provides SA Power Networks with a solid foundation on which the forecast capital program can be delivered. Most importantly sourcing option 3 enables the capital program to be delivered in the most efficient manner possible whilst maximising the effectiveness of the program and driving the realisation of the benefits that the program can provide to the business and its customers.

## 5.2 References

The following documents were referenced in completion of this document:

Ref	Document Name	Date	Version	Author
1	IT Investment Plan 2015-20	15/10/2014	1.0	Anna Lebedev
3	KPMG 2013 Utilities ICT Benchmarking - SA Power Networks	7/03/2014	NA	KPMG
4	Gartner IT Key Metrics 2013	Dec 2012	NA	Gartner
5	Gartner IT Key Metrics 2014	Dec 2013	NA	Gartner

## 5.3 Acronyms and Abbreviations

Acronym / Abbreviation	Definition
FTE	Full Time Equivalent
HR	Human Resources
IT	Information Technology
RCP	Regulatory Control Period
SAPN	SA Power Networks

**A.1.1 Capital Program Delivery Non-IT FTE Effort by Resource Types**

Table 6 outlines the high level resource types for the capital program delivery by resource type.

Note: This does not include the non-IT opex impact of the capital program.

<b>Non-IT Labour Category</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>	<b>17/18</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>
Project Management	0	2	11	9	9	11	8	1
Business Analysis	0	3	7	9	8	7	3	1
<b>Sub Total PM/BA</b>	<b>0</b>	<b>4</b>	<b>19</b>	<b>18</b>	<b>17</b>	<b>18</b>	<b>12</b>	<b>2</b>
Change Management	0	0	2	2	1	1	1	1
Asset Inspection	0	0	8	32	0	0	0	0
Data Quality	0	0	4	12	15	8	0	0
Business SME	0	5	11	15	12	8	6	7
<b>Sub Total Other</b>	<b>0</b>	<b>5</b>	<b>25</b>	<b>60</b>	<b>29</b>	<b>16</b>	<b>7</b>	<b>8</b>
<b>Total Non-IT FTE</b>	<b>0</b>	<b>9</b>	<b>44</b>	<b>78</b>	<b>46</b>	<b>34</b>	<b>19</b>	<b>10</b>

Table 6 – Capital Program Delivery non-IT FTE Effort