

Attachment 20.42

**SA Power Networks:
IT Benefits Map**

October 2014





IT Benefits Map

SA Power Networks' Regulatory Proposal

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1. Purpose

This document provides a high level summary of the proposed benefits associated with the delivery of projects as documented in SA Power Networks' Regulatory Proposal (the Proposal), Section 20.8.1.

Additional project information is contained in the SA Power Networks' Information Technology Investment Plan 2015-2020 and associated business cases.

All dollar amounts in this document are expressed in June 2015 dollars.

2. Summary

- Approximately **\$62.1m** worth of benefits have been forecast to result from these projects in the 2015-2020 Regulatory Control Period (RCP) with additional benefits in the subsequent periods.
- **\$25.3m** worth of benefits will be realised across the business to offset forecast increases in OPEX (\$21.2m from IT and \$4.1m from other Business units).
- An additional **\$36.8m** worth of avoidance benefits arise predominantly from leveraging technology as the most efficient means of meeting the increased regulatory reporting requirements, compared to increasing the number of staff.
- Approximately 68% of the proposed IT capital expenditure is for initiatives primarily associated with maintaining current levels of service including system updates, upgrades, refreshes and replacements for which there are few additional tangible benefits but substantial risk management benefits.

3. Background

The business rational for the IT initiatives is provided throughout the Proposal, particularly in Chapters 12 and 16. The IT Capital Expenditure Financial Summary is provided in Section 20.8.1 and the IT Operational Expenditure Impact Summary in 21.6.2.

This substantial program of work fully embraces a period that will see the most significant and transformative change in the distribution sector since the establishment of the NEM. These changes include:

Technology – digital technologies continue to proliferate in all areas of our industry and society, data volumes are rising exponentially, convergence and integration of technologies, systems and processes are accelerating, legacy systems that are unable to provide required flexibility;

Consumer – everyday usage of mobile technologies is changing expectations of service providers, information access is now regarded as essential, interest in and adoption of new distributed energy resources is now mainstream, choice in energy options to help manage costs and convenience is increasingly expected;

Market – new sectors have emerged around micro-generation, energy usage and demand patterns have transformed, new markets for electrical products like electric vehicles and storage are



emerging, new competitive sectors are emerging (eg metering, home energy systems and energy services);

Regulatory – governments are highly active in energy policy and incentive systems, regulators are pursuing competition outcomes in previous monopoly sectors, and are demanding new data requirements of monopoly sectors for oversight and benchmarking purposes; and

Workforce – ageing employees will soon retire, transfer of skills to new employees is critical, there is a need for new skills to support emerging service requirements.

This program of work is a heavily interconnected set of initiatives that delivers on the immediate business requirements while laying down the platforms and capabilities for the long term future.

This document provides breakdown of the benefits and costs based on the primary NER and business drivers.

4. Scope

The benefits discussed here only cover the tangible cost reduction, cost recovery and cost avoidance benefits that materialise during the 2015-20 RCP. The benefits go beyond this period and the individual business cases provide detail on the benefits realisation period as part of the Net Present Value calculations. The business cases also provide detail on a substantial list of intangible and risk management benefits.

5. Benefits Classification

A prudent conservative approach has been used in defining benefits for use in the financial analysis. Tangible benefits were classified into three basic types as defined in Table 1.

Table 1: High Level Benefit Definitions

Benefit	Definition
Cost Reduction	A direct tangible benefit associate with reducing the cost of service as a result of the changes implemented
Cost Recovery	A tangible benefit associated with increasing revenue due primarily to improved information
Cost Avoidance	A real benefit associated with avoiding increased costs of service driven by activity that is reasonably expected to happen or currently will happen without a change in approach.

Cost Recovery only applies to one initiative (the CIS/OV replacement) and hence the final benefits were classified into two predominant types – Cost Reduction/ Recovery and Cost Avoidance.

The following were considered in a number of business cases but removed from the final financial consideration:

- Cost avoidance associated with speculative risk management, system failures, security breach impacts or possible fines;



- Benefits that assume a speculative future market structure. Instead the focus is on what will happen no matter what the future market scenario might be;
- Benefits that were duplicated in two or more business cases;
- Benefits of an intangible nature.

6. Benefits Summary for 2015-2020

The list of initiatives by driver, benefit and cost is detailed in Table 2 below.

Overall an estimated **\$62.1m** worth of quantifiable benefits are forecast to be delivered by these initiatives. This consists of \$25.3m of Cost Reduction/Cost Recovery and \$36.8m of Cost Avoidance benefits.

Figure 1 shows the benefits by type and by forecast year for the 2015-2020 RCP. Benefits increase as capability is delivered.

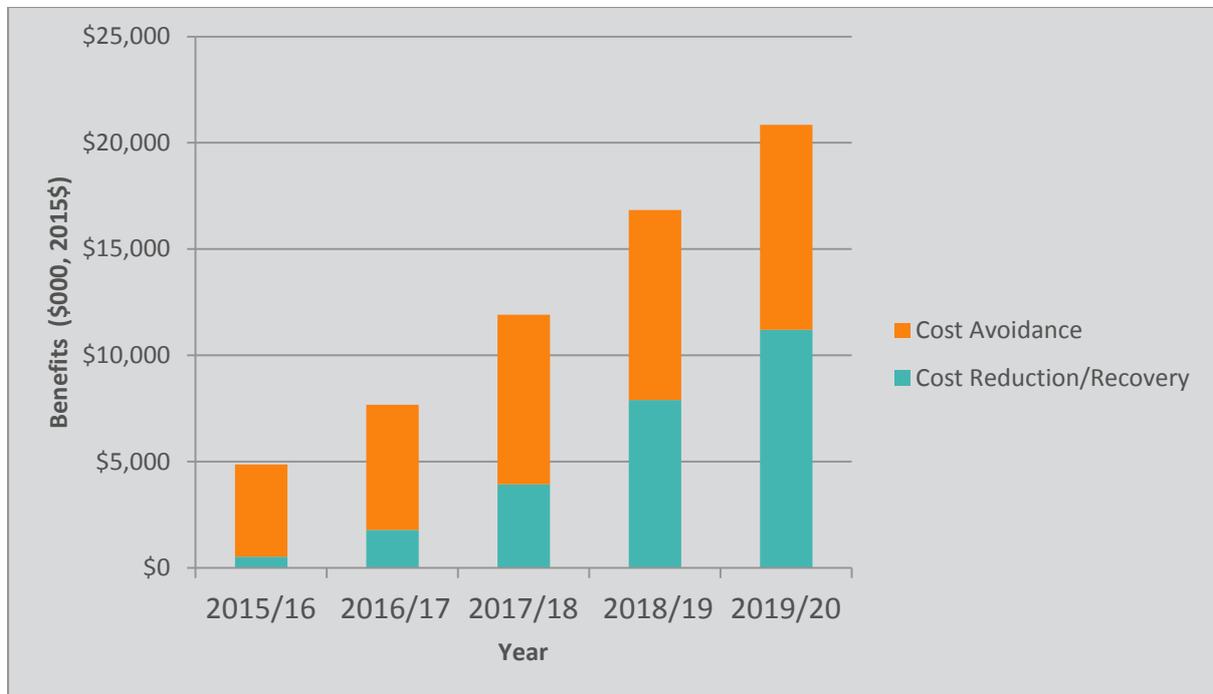


Figure 1: Forecast Benefits per annum for the RCP 2015-2020

Table 2: Summary of Benefits, Drivers and Costs for the IT Initiative (\$'000, 2015\$)

ID	Business Case	Drivers			CAPEX Costs (2015-2020)			Benefits (2015-2020)			
		Primary NER Objective	Primary Business Driver	Submission Classification	IT Costs	Business Costs	Total Costs	Cost Reduction/ Recovery	Cost Avoidance	Total Benefits	Regulatory Submission Benefits Assignment
BC01	CISOV/CRM Replacement	Maintain Reliability	Maintain	Customer	54,304	4,086	58,390	947*	2,000	2,947	IT OPEX Offset
BC02	Customer Call Management Solution	Maintain Reliability	Maintain	IT Management	842	0	842	20	432	452	IT OPEX Offset
BC02a	Customer Facing	Maintain Reliability	Customer	Customer	8,334	0	8,334	98	377	475	IT OPEX Offset
BC03	Enterprise Asset Management	Comply with Obligations	Compliance	Compliance	14,069	17,374	31,443	7,886	10,907	18,793	IT OPEX Offset
BC04	Financial Management	Comply with Obligations	Compliance	Compliance	5,072	2,818	7,890	0	2,416	2,416	IT OPEX Offset
BC05a	Supply Chain	Maintain Reliability	Efficiency	Enterprise Business	3,280	909	4,189	4,574	0	4,574	IT OPEX Offset
BC05b	Project, Portfolio Management (PPM)	Maintain Reliability	Efficiency	Enterprise Business	3,105	895	4,000	0	4,013	4,013	IT OPEX Offset
BC07	Enterprise Architecture Tools	Maintain Reliability	Compliance	Enterprise Technology	860	0	860	0	310	310	IT OPEX Offset
BC09	SAP Foundation	Maintain Reliability	Maintain	Enterprise Business	6,215	8	6,223	0	0	0	IT OPEX Offset
BC10	Intelligent Design Management System	Maintain Reliability	Efficiency	Enterprise Business	7,888	1,322	9,210	4,027	0	4,027	IT OPEX Offset
BC11	HR Systems	Maintain Reliability	Compliance	Enterprise Business	1,446	721	2,167	830	423	1,253	IT OPEX Offset
BC12a	Unified Communications	Maintain Reliability	Maintain	Enterprise Technology	1,878	0	1,878	1,486	0	1,486	IT OPEX Offset
BC14	Enterprise Mobility	Maintain Reliability	Efficiency	Enterprise Technology	2,369	0	2,369	0	0	0	IT OPEX Offset



ID	Business Case	Drivers			CAPEX Costs (2015-2020)			Benefits (2015-2020)			Regulatory Submission Benefits Assignment
		Primary NER Objective	Primary Business Driver	Submission Classification	IT Costs	Business Costs	Total Costs	Cost Reduction/ Recovery	Cost Avoidance	Total Benefits	
BC16	Field Force Mobility	Maintain Reliability	Efficiency	Customer	6,778	1,918	8,696	2,860	6,543	9,403	Business OPEX Offset
BC17	Data Centre	Maintain Reliability	Maintain	Enterprise Technology	4,333	0	4,333	602	0	602	IT OPEX Offset
BC18	Enterprise Integration	Maintain Reliability	Maintain	Enterprise Technology	6,641	0	6,641	0	2,266	2,266	IT OPEX Offset
BC20	Tariffs and Metering	Comply with Obligations	Customer	Customer	22,664	4,319	26,983	1,289	0	1,289	Business OPEX Offset
BC21	BI Enablement	Comply with Obligations	Compliance	Enterprise Technology	2,570	0	2,570	0	0	0	IT OPEX Offset
BC22	Data Management	Comply with Obligations	Compliance	Enterprise Technology	2,557	113	2,670	0	4,181	4,181	IT OPEX Offset
BC24	Enterprise Information Management	Comply with Obligations	Compliance	Enterprise Technology	7,408	0	7,408	0	0	0	IT OPEX Offset
BC26	Enterprise Information Security	Comply with Obligations	Compliance	Enterprise Business	7,135	0	7,135	0	0	0	IT OPEX Offset
BC27	Technical Operations	Maintain Reliability	Maintain	IT Management	44,714	0	44,714	0	0	0	IT OPEX Offset
BC28	Applications	Maintain Reliability	Maintain	IT Management	64,470	0	64,470	0	0	0	IT OPEX Offset
BC29	IT Management and Operations	Maintain Reliability	Maintain	IT Management	6,516	85	6,601	729	702	1,431	IT OPEX Offset
BC31	Risk, Governance & Compliance	Comply with Obligations	Maintain	Compliance	1,679	92	1,771	0	0	0	IT OPEX Offset
BC32	RIN Reporting	Comply with Obligations	Compliance	Compliance	3,942	11,108	15,050	0	2,209	2,209	Business OPEX Offset



ID	Business Case	Drivers			CAPEX Costs (2015-2020)			Benefits (2015-2020)			Regulatory Submission Benefits Assignment
		Primary NER Objective	Primary Business Driver	Submission Classification	IT Costs	Business Costs	Total Costs	Cost Reduction/ Recovery	Cost Avoidance	Total Benefits	
	Non Business Case Mandatory Expenditure	Maintain Reliability	Maintain	IT Management	16,916	0	16,916	0	0	0	IT OPEX Offset
	Total				307,985	45,768	353,753	25,348	36,779	62,127	

A number of initiatives are 'enabling' or 'foundational' initiatives. That is, they are of a relatively technical nature to implement a specific service or technology (an outcome) that the business then uses to deliver the benefits. Hence not all initiatives have financial benefits associated with them although they may be delivering new functionality. The benefits have been associated with the later initiatives that deliver the business capability.



7. Benefits Analysis

Primary NER Objective

Initiatives have been classified according to the primary NER Objective most relevant to them (Table 3). The majority (78%) of the IT forecast spend falls into Maintaining the Quality, Reliability and Security of the Supply of services and these contribute a little over half of the \$62.1m of quantifiable benefits.

Table3: Benefits and IT Cost by Primary NER Objective

Short Name	Percent of Total IT CAPEX	Total Value of Benefits (2015-2020)	AER Objective Name
Maintain Reliability	78%	\$33.2m	Maintain the quality, reliability and security of supply of services provided by SA Power Networks
Comply with Obligations	22%	\$28.9m	Comply with regulatory obligations
Total		\$62.1m	

This simple classification emphasises the extent to which the forecast IT spend is driven by the need to replace or refresh a number of aging core systems to maintain reliable services. This includes the aging core billing and customer and Enterprise Resource Planning (ERP) systems. These systems are between 15 and 20 years old and in need replacement (the billing and customer system) or refresh (the ERP). The benefits on refresh and replacement are generally of a risk management type and not as tangible - unless the system fails. However if the system does fail then the impact can be very substantial. For example, the system failure would affect monthly billing cycle cash flow until the system is fixed, and could lead to unrecoverable financial loss; the likelihood of fixing the system quickly diminishes with time due to the vendor risk and the required technical skills becoming scarcer on the market

However this simple classification also hides some more important detail on the sources of the benefits and this is highlighted more effectively in the next section.

Primary Business Driver

A high level analysis was undertaken to classify the initiatives based on their primary business driver according to the following definitions (Table 4):

Table 4: Benefits and IT Costs by Primary Business Driver

Driver	Percent of Total IT CAPEX	Total Value of Benefits (2015-2020)	Description
Maintain	68%	\$9.2m	Initiatives primarily associated with the maintenance of current systems including system updates, upgrades, refreshes or replacements to manage the risk to current service. There are some benefits associated with these initiatives however the primary focus is that of maintaining service rather than adding capability.
Compliance	14%	\$29.3m	Initiatives primarily associated with achieving regulatory, legal or security compliance and compliance reporting. Benefits for initiatives in this category are predominantly cost avoidance – in particular associated with leveraging technology instead of hiring of additional staff to manage and meet compliance requirements.
Efficiency	8%	\$22.0m	Initiatives associated with improving the effectiveness and efficiency of SA Power Networks services. There are cost reduction and cost avoidance benefits associate with these business cases.
Customer	10%	\$1.8m	Initiatives associated with expected developments in the customer services, primarily the expected changes in the contestable metering market place and customer information demands.
Total		\$62.1m	

Table 3 and Figure 2 below indicate the extent to which the IT CAPEX increase is driven by the requirements to maintain service reliability and refresh or replace our aging key billing and customer and ERP systems - 68% of the forecast spend is associated with this.

However this breakdown also highlights that approximately one third of the total IT spend is related to delivering new or improved capability. Almost half the new capability is related to achieving compliance (14% overall), with smaller amounts to delivering improved efficiencies and responding the changes in the customer market place.

Proportionally the largest benefits will result from the efficiency initiatives (\$22m). These benefits are derived from:

- Improving overall resource management and work scheduling
- improving field management of work, data collection and safety management

- Improving design and drawing management and consolidating design systems
- Improving supply chain management processes
- Contributing to meeting the compliance requirements

Compliance benefits total \$29.3m and are predominantly cost avoidance. Initiatives in this group are dominated by the need to delivery more accurate asset and costing information to meet regulatory and compliance obligations. However this means substantial refreshes of our Financial, Human Resource, Assets Management and reporting systems to enable this to happen, as well as new capabilities associated with end to end business processes. Finally a considerably augmented Enterprise Security capability is required to meet the expanding challenges, risks and legal obligations of our operational and information networks.

Initiatives associated with responding to the customer and market changes (Customer) have a smaller quantity of quantifiable benefits (\$1.8m). In part this is because these are not scheduled to come fully online until towards the end of the 2015 -20 RCP. SA Power Networks will be making the system and process changes to accommodate the different tariff arrangements and the gradually changing meter market from 2015 but the benefits will only materialise once a greater number of customers have moved to new tariff arrangements. This is not expected to occur until the end of the 2015-20 RCP.

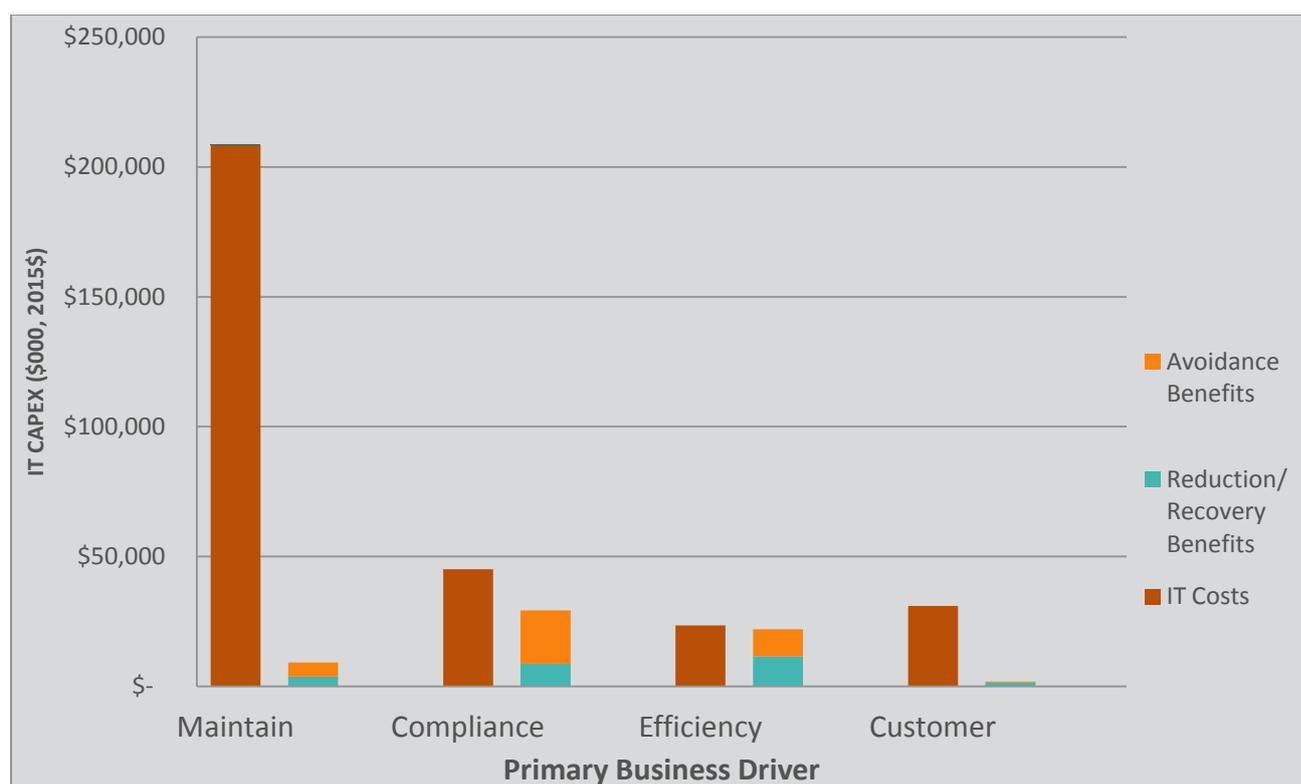


Figure 2: Benefits and IT Costs by Primary Business Driver

There are some benefits associated with the replacement and refresh of our systems (Maintain - \$9.2m). These fall into two basic categories.

1. Taking the opportunity of major change to consolidate our systems and contain the longer term management costs
2. Leveraging the newer versions of the technology to deliver some additional required business capabilities

These initiatives also deliver capability that is leveraged by the other sets of initiatives – Efficiency, Customer and particularly Compliance.

The offset to the other business units involves a business OPEX offset of \$1.3m for Tariffs and Metering and a \$2.9m reduction in resource requirements for the field force as a result of Field Force Mobility improvements. Please refer to the Resource Plan in the "Network Program Delivery Strategy" - attachment 20.27 of the Proposal.

10. Conclusion

The proposed IT program of work has primary benefits of managing risk and ensuring current levels of service are securely maintained.

SA Power Networks is also entering a significant growth stage in the expansion of the use of technology. This program of work delivers tangible benefits now; both cost reduction/cost recovery and cost avoidance and importantly lays the technical foundations for the future.

These technical foundations underpin SA Power Networks ability to:

- support outcomes from Power of Choice efficiently;
- be compliant to regulatory requirements;
- continue to maintain our levels of service and
- respond effectively to our consumers requests.



Document Authorisation and History

Template

This document is based on template **PMM_T_019** issued March 2013.

Revision History

Date	Version	Author	Description of Change/Revision
14/10/2014	0.2	Peter Chapman	Initial Draft
16/10/2014	0.3	Peter Chapman	Feedback from CIO and Janette Bettcher
24/10/2014	1.0	Peter Chapman	Final and Feedback from Dana Rankine

Approvals

Name and Title	Role	Signature and Date
Chris Ford	Chief Information Officer	

References

The following documents were referenced in completion of this document:

Document Name	Date	Version	Author
SA Power Networks' Regulatory Proposal 2015-2020	Oct 2014	1.0	SA Power Networks
SA Power Networks' Information Technology Investment Plan 2015-2020	Oct 2014	1.1	SA Power Networks

Acronyms and Abbreviations

Acronym / Abbreviation	Definition
RCP	Regulatory Control Period

