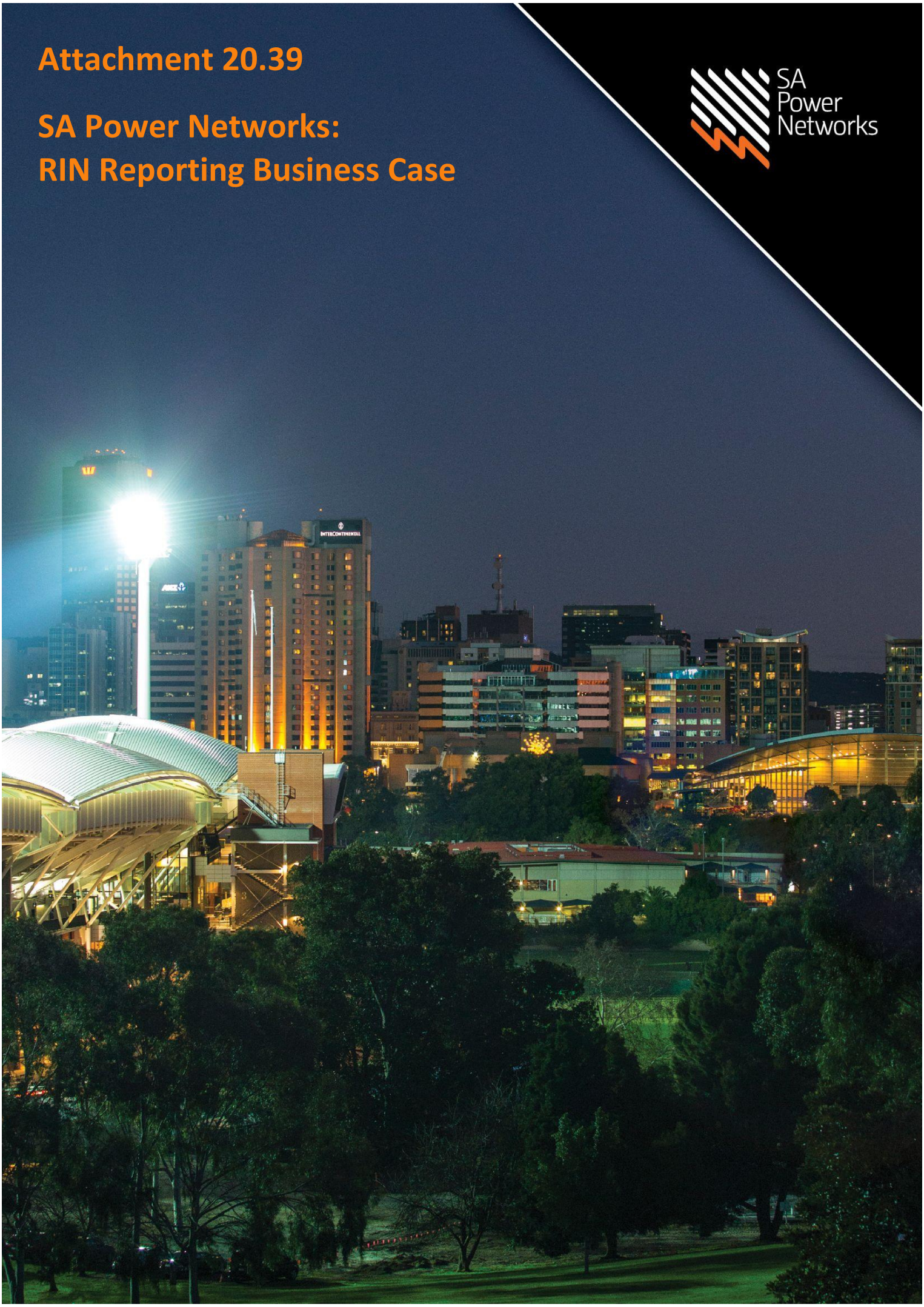
Attachment 20.39

SA Power Networks: RIN Reporting Business Case



Business Case

RIN Reporting

Project Ref Number : BC32

SA Power Networks

www.sapowernetworks.com.au

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1. Executive Summary

1.1 Reasons for the Project

The purpose of this RIN reporting business case is to analyse at a high level, the current state of SA Power Networks' processes and systems with respect to their ability to meet the new RIN requirements, identify and evaluate alternative options of meeting these requirements and recommend the most feasible option in line with the AER Expenditure Assessment Guidelines.

The level of volume and detail demanded by the Australian Energy Regulator (AER) going forward as part of the new Regulatory Information Notice (**RIN**) reporting has significantly increased. Of the four mandatory RINs that must be completed (three annual and one every five years), only the Annual RIN requirements are well known to the business as they have previously prepared this. The Category Analysis RIN and Economic Benchmarking RIN are new information requirements to SA Power Networks and seek a more granular level of financial and non-financial information that is currently not captured by SA Power Networks' systems and processes.

SA Power Networks' information reported in this year's Category, Economic Benchmarking, Annual and Reset RINs will include some level of estimation of historical information. However, SA Power Networks is required to provide actual data from 2014/15 in the case of the economic benchmarking information and from 2015/16 in the case of Category Analysis information. The financial and non-financial information required for the additional RINs is far from straightforward and the increase in compliance activities has had a significant resourcing impact. SA Power Networks' employees undertook extended effort in addition to normal work responsibilities to gather the information. It is not sustainable in the current approach. A considerable step change is therefore essential and not unexpected.

Intrinsic to the ability of this business case to successfully realise its objectives, is functionality that will be delivered via multiple other business cases. These business cases outlined in Section 4.1.2 provide the backbone to systems and processes that will enable data to be captured and collated in such a way that can be subsequently be applied to the RIN reporting processes. This business case scopes the requirements not already captured.

AER considers the new RIN data requirements will deliver a positive net benefit and maximise social benefit, despite the additional costs required to implement on both sides

Compliance with this new and demanding regulatory reporting framework creates both new challenges for the business and the need for a significantly increased resource profile in order to be fully compliant. The RINs seek to collect detailed information from all areas of the business including Field Services, Network Operations, Finance, Human Resources as well as the Regulatory Team at such a level of detail that is not currently collected. The current time and effort taken to prepare and collate each RIN relies heavily on individuals, with current systems, processes and data inadequate to support this new increased and ongoing reporting requirement.

In the *AER Expenditure Forecast Assessment Guideline*, the AER acknowledges that NSPs will face expenses as a consequence of the business and operational changes required to comply with new data requirements and adjusted reporting standards. This may include (but is not limited to) training staff, adjusting IT systems, and reorganising data compliance procedures. Further the AER also recognises that it too will too incur ongoing costs associated with the new assessment techniques and data requirements (including collecting and publishing data, assessing compliance with RINs and detailed reporting templates, and assessing confidentiality claims) and there will also be increased

labour costs for AER staff to learn and apply new expenditure assessment techniques and the refinement of information systems [1].

Balancing all these factors, the AER still considers the implementation of the new RIN assessment and reporting techniques and accompanying data requirements will deliver a positive net benefit. AER believes the additional RIN imposed compliance costs to NSPs will be outweighed by the AER's ability to maximise social benefit through the setting of efficient expenditure allowances [2].

Need for significant IT investment to establish fundamental capabilities that enable RIN reporting

In previous regulatory period, SA Power Networks has been required to tactically respond to a number of unforseen changes in business demand and priorities. This has lead to planned strategic IT investments ($30 million billing system replacement) being delayed and funding being redirected to more business-critical areas, but also an increase in the overall IT expenditure. These unforseen and faster than expected changes in the SA Power Networks business environment included:

- increased customer expectation regarding customer-facing initiatives and greater demand for communication and interaction (SMS outage notification and NECF regulatory changes); and
- increased business demands for IT services in Works Management and Asset Management initiatives.

Therefore the key focus during the proposed 2015-20 regulatory control period (**RCP**) is to develop a robust technology platform and foundational capabilities to adapt to changes in the business and better meet the increasing customer and regulatory demands.

Consideration of the evolving nature of RIN reporting requirements

Whilst the AER has indicated that there may be opportunity to eliminate some duplication of RIN reporting through consolidation of the three annual RINs (that is, all except the 5 year cycle Reset RIN) into a single Regulatory Information Order (**RIO**) over the medium term, the scope of this business case is based on the premise that regardless of format, the same level of data and granularity would still be required.

To define the requirements of this RIN reporting business case, the current state of SA Power Networks' processes and systems were analysed at a high level, with respect to their ability to meet these new RIN requirements. This business case has identified and evaluated alternative options of meeting the RIN reporting requirements and recommends the most prudent and efficient investment option in line with the AER expenditure objectives, criteria and factors.

1.2 Business Options Considered

The following options were considered:

> **Option 0. Do Nothing** – implement manual process to the extent possible, maintaining existing systems and processes with increased labour resources to capture, record, collect, amalgamate, assess, verify and interpret manually recorded data. The Do Nothing option, which is unable to wholly satisfy all of the RIN requirements, results in continued reliance on manual processes and workarounds with additional RIN dedicated Asset Accountants and Data Analysts and internal audit costs.

[1] P 155, Better Regulation | Explanatory Statement | Expenditure Forecast Assessment Guideline
[2] P 155, Better Regulation | Explanatory Statement | Expenditure Forecast Assessment Guideline

Option 1. Extends SAP solution for RIN reporting – This option involves an one-off capex extending the current enterprise system (SAP) which would enable an integrated approach to, reviewing and redesigning business processes which will aid business long term efficiency and permit the capture of data required to comply with the AER RIN notices. This option leverages the proposed investments in SA Power Networks' core systems. As with option 1 this option would also involve an extensive data capture and cleansing exercise of existing data set to enable RIN compliant reporting, including a one-off Vegetation Management scoping cost and addition internal audit fees.

Option 2. Implement a standalone RIN reporting solution – Introduce a standalone solution for RIN compliance reporting to be integrated with SAP and other SA Power Networks' systems. Extensive data capture and cleansing as well as many systems enhancements, interface development and process changes will be required to enable fully automated and compliant RIN reporting.

1.3 Recommended Option

Option 1 – Extend SAP solution for RIN reporting is considered the preferred option as it leverages and extends the current SAP system and processes to enable SA Power Networks to meet RIN compliance reporting requirements and is inline with the IT strategic direction of leveraging our ERP.

The "Do Nothing" option (Option 0) is not considered a viable option as it is unsustainable recurrent opex without any control mechanism to reduce expenditure over time. It also exposes SA Power Networks to increased risk of non-compliance with AER RIN reporting requirements and financial penalties.

Option 2 – Implement a standalone RIN reporting solution is also not the preferred option. Although it would minimise the risk of non-compliance with AER RIN reporting requirements and reduce the administrative burden of completing the RINs, it does not leverage any previous investment and places a significant cost burden on SA Power Networks without providing due benefit or return on investment.

2. Reasons

SA Power Networks operates in a tight regulatory framework. Within that framework, the AER has recently issued very specific and detailed reporting requirements that, if not complied with, may affect SA Power Networks' reputation, its expenditure allocations, as well as the potential incursion of financial penalties.

SA Power Networks' systems, processes and data do not currently meet the standard, in terms of:

- completeness of information;
- accuracy of information;
- granularity of data; and
- what is expected by the AER in order to be deemed compliant with the RIN reports.

It is important to note that whilst the AER has accepted estimates for the current financial year and this is deemed compliant, the AER has an expectation that SA Power Networks will provide actual information from the 2014/15 financial year onwards.

The business either does not currently have, or has significant difficulty extracting and matching, all the information necessary to be deemed compliant with AER Actual information requirements.

This is particularly in relation to assets and projects and the integration of systems. The existing systems and processes, built and developed over many years, have not been configured or designed to capture and categorise information in the manner recently required for regulatory reporting purposes. The reliability of existing information is also compromised by the substantial number of records kept off systems, in Excel Spreadsheets, and therefore not integrated and prone to error due to a lack of controls.

The impact on SA Power Networks of regulatory reporting on this basis is therefore exacerbated by an intensive labour resource requirement, diverted from core business activities, to manually extract, match and/or manipulate and then compile the information into the form required for AER.

It is for these reasons that SA Power Networks Regulatory Team has identified a number of initiatives designed to address the shortfalls and ensure that SA Power Networks has the ability to meet the regulatory demands both now and into the future. Regardless, SA Power Networks will be unable to meet the AER's timelines to provide Actual data from 2014/15; this project seeks to attain compliance in the most cost and time effective manner.

Date	Economic benchmarking	Annual reporting milestones	Reset RIN data
28 Nov 2013	Issue final RIN		
Early Dec 2013		Issue draft RIN for category analysis data (back cast)	
Feb 2014		Issue final RIN for category analysis data (back cast)	
3 Mar 2014	Unaudited RIN responses due		
Mar 2014	Begin data checking/ validation process		
30 April 2014	Audited RIN responses due Publicly release EBT data, seek submissions		
May 2014		RIN responses due	Issue final RINs for SAPN
Sept 2014		Publish first benchmarking report	
Oct 2014			RIN responses due for SAPN
Jan 2015		Issue draft RIO for 2015 benchmarking report	
Apr 2015		Issue final RIO	
Jul 2015		RIO responses due	

Date	Economic benchmarking	Annual reporting milestones	Reset RIN data
Nov 2015		Publish 2015 benchmarking report	
Jan 2016		Issue draft RIO for 2016 benchmarking report	
Apr 2016		Issue final RIO	
Jul 2016		RIO responses due	
Nov 2016		Publish 2016 benchmarking report	

Figure 3: RIN Reporting timetable to 2016

2.1 Objectives

The proposed business case and its associated expenditure will seek to deliver the key business objectives as follows:

- Facilitate the necessary SA Power Networks' system and process changes required to produce actual (rather than estimated) information in order to populate the known future RINs to meet the AER's expectations (this does not include developing the functionality being delivered via multiple other business cases but does include the program co-ordination to ensure an efficient delivery, see Section 4.1.2)
- Initiate the capture of the existing base asset data at the detail level necessary to complete the RINs;
- Enable the ongoing capture and cataloguing of RIN required financial and non-financial data;
- Record and report expenditure on both network and non-network assets;
- Improve the collection, storage and management of RIN required data; and
- Automate RIN compliance reporting.

Given the significant amount of change required to SA Power Networks' systems and processes to meet the RIN reporting objectives, the project will be delivered in a logical sequence, facilitating core components of the RINs whilst seeking to manage the workload on the business.

2.2 Relationship to Business Strategies and Programs

The SA Power Networks Strategic Plan for 2014-2018 identified a number of emerging challenges. The analysis focussed on the operating environment challenges that have the greatest potential to affect business performance over the medium term. The single most significant issue identified was the preparation for the next regulatory reset and the changing regulatory requirements.

To address this issue, a number of reviews have been completed or are in process. The various and multiple impacts on the way SA Power Networks presently operates are being progressively identified and addressed as part of the program of activities.

The program of activities outlined in this business case address the foundations of the strategic framework, primarily through excellence in regulatory management and also through innovation and relentless improvement that will be necessary to deliver on the RIN Reporting requirements.

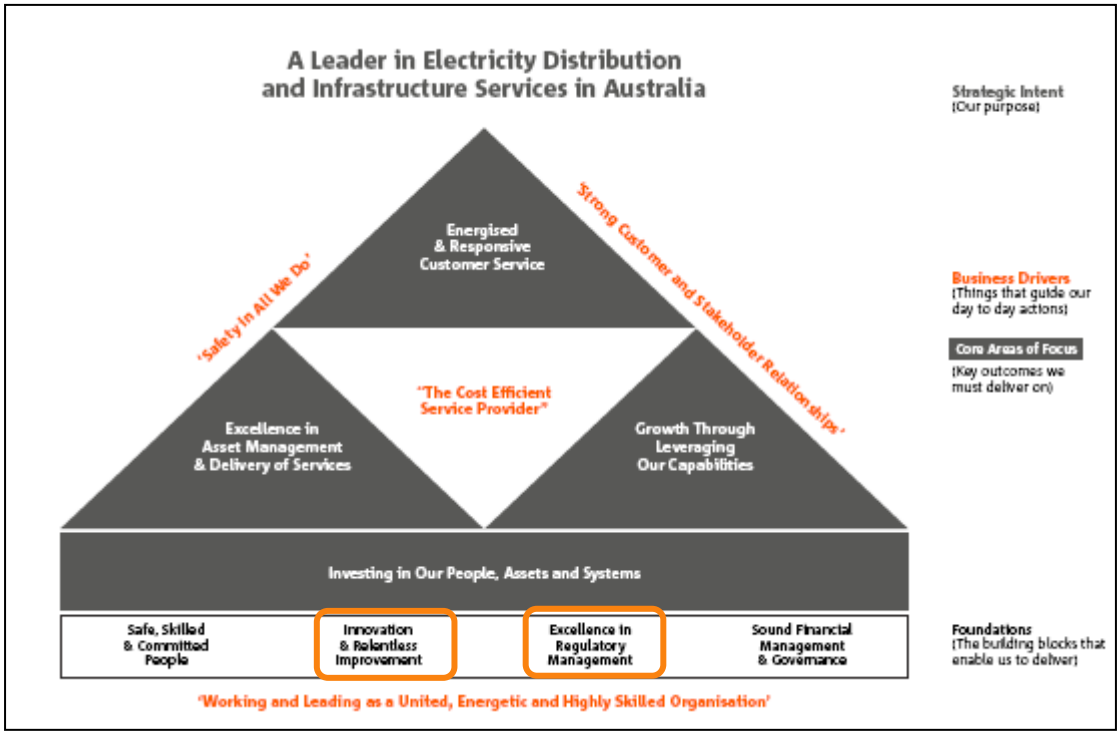


Figure 4: SA Power Networks Strategic Intent (Source Strategic Plan 2014-2018)

This business case outlines the need for significant business and IT transformation with respect to the way the business, as a whole, collects and manages information with regard to assets, projects and cost identification and categorisation. The transformation involves embedding and governing common processes, providing integrated and aligned systems, the creation and availability of reliable data and a knowledgeable workforce.

The span of the RIN reporting requirements impacts business units such as Supply, Field Services, Networks, Finance and Human Resources as well as multiple systems across SA Power Networks as broadly depicted below:

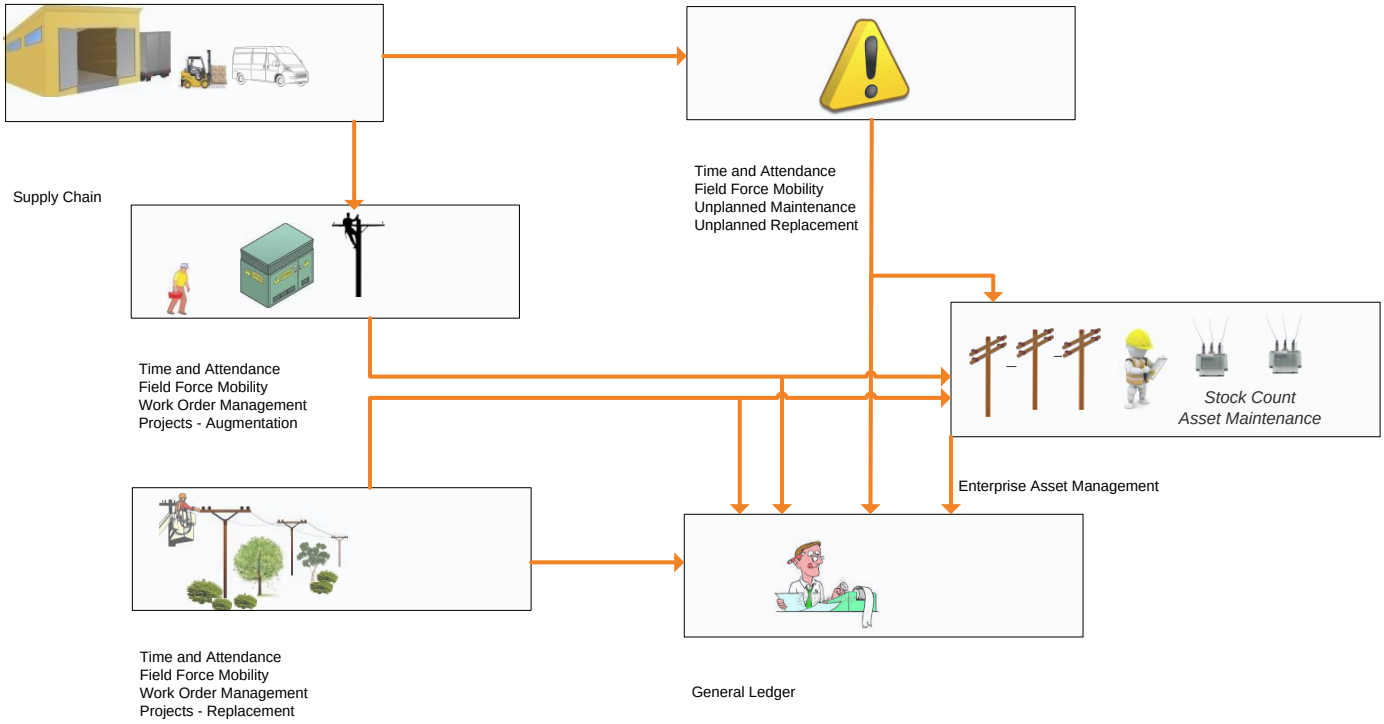


Figure 5: Simplified data flow analysis and prerequisite business cases that enable RIN data requirements capture and reporting

This business case seeks to build on and leverage existing systems and develop new processes and capabilities in SA Power Networks staff, primarily for regulatory reporting purposes, but with added business benefits including excellence in asset management and delivery of service; delivery of an energised and responsive customer service; and delivery of technology, systems and processes that support SA Power Networks' long-term business direction.

The project contributes to achievement of strategic objectives as described in Table 1.

Table 1: Contribution to corporate strategic objectives

Corporate Strategic Objective	Contribution
Delivering on the needs of our shareholders, by achieving our target returns, maintaining the business' risk profile, and protecting the long term value of the business	*Improvements in systems, processes and data capture that enable the business to be compliant with AER RIN reporting requirements significantly reduces the business risk profile both financial and reputational, in a regulatory setting. By virtue of meeting the RIN requirements, the other strategic objectives are met; requiring the business to capture costs and revenues at a level that also allows for or provides:* ▪ *significant improvements in financial forecasting,* ▪ *the capture of true costs associated with jobs and projects* ▪ *a complete view of assets including* – *age profile* – *complete and detailed asset listing* – *maintenance schedule for all assets* – *unplanned maintenance costs associated with specific asset types* *This greatly reduces the risk profile of the business, facilitates the achievement of target returns and will assist protect the long term value of the business*
Providing customers with safe, reliable, value for money electricity distribution services, and information that meets their needs	*The AER is responsible for determining efficient prices for electricity distribution services that should reflect value for money to clients. Enhancements to systems and processes that enable the business to effectively and efficiently capture and categorise data including costs and revenues at a level that allows significant improvements in:* ▪ *costing the management and maintenance of the distribution network at a detail level;* ▪ *enhancements in the locating and defining of assets at a granular level of detail* ▪ *planned asset maintenance scheduling and condition based monitoring* ▪ *ability to benchmark against industry peers* *contributes to SA Power Networks' strategic objective of providing a safe, reliable electricity distribution service to customers that also delivers true value for money.*
Maintaining our business standing in the community as an exemplary corporate citizen of South Australia.	*Exemplary corporate citizenship is evidenced by a visible commitment to meeting regulatory requirements and providing South Australians with a safe, and reliable, value for money electricity distribution service.*
Ensuring that our workforce is safe, skilled and committed, and that our resourcing arrangements can meet our work program needs	*Greater visibility, control and maintenance of distribution assets, achieved through enhanced systems, processes and data capture mandated by the AER RIN reporting requirements, will also facilitate the accurate planning and allocation of resources to meet work program needs. Adequate training in both systems and process combined with a holistic change management approach will ensure SA Power Networks' committed and engaged workforce is safe and suitably skilled to meet work program needs*
Maintenance and development of key capabilities that will help sustain our success into the future	*To meet the RIN Reporting requirements, core capabilities centred around* ▪ *data collection and accurate cataloguing,* ▪ *measuring the cost of core business build and maintenance activities* ▪ *creating a culture that values information and the benefits to customers and SA Power Networks that accrue from it* *will enhance SA Power Network ability to sustain success far into the future*

Table 2: Contribution to corporate core areas of focus

Corporate Core Areas of Focus	Contribution
Energised and responsive customer service	*The right tools combined with complete and accurate data sets and processes that aid staff and customers readily energises a workforce. It allows this newly energised workforce to provide a responsive customer service in a cost effective way*
Excellence in asset management and delivery of service	*The RIN reports require a far-reaching view over asset data that includes detailed recording of individual assets, asset age profiles, asset costing, maintenance and locations. This comprehensive view provides an open gateway to SA Power Networks achieving excellence in asset management and delivery of service*
Growth through leveraging our capabilities	*SA Power Networks has a strong capability in terms of its work force and existing systems. By implementing the initiatives outlined in this business case to comply with RIN reporting requirements, it will be able to leverage these capabilities by enhancing those systems and giving staff the tools, including data and processes necessary to be able to accommodate growth as the network expands.*
Investing in our people, assets and systems	*The initiatives outlined propose to build on the assets and systems already owned by SA Power Networks. Adequate training and development of staff is also a core component of this business case and will allow SA Power Networks staff to work more efficiently and effectively in an environment that fosters and values practical commitment to the strategic objectives.*

Table 3: Contribution to IT strategic objectives

IT Strategic Objective	Contribution
Ensure technology, systems and processes support SA Power Networks' long-term business direction	*A number of drivers (both internal and external) influence the strategic direction of SA Power Networks, including regulatory change and the new or enhanced technologies required to support compliance with those changes. These drivers affect the needs of SA Power Networks' stakeholders. The organisational strategic planning process transforms these needs into specific business objectives and priorities by considering the requirements of all stakeholders and assessing the benefits, risk and resource implications of business decisions and thereby the long term business direction.*
Ensure IT governance, planning and reporting are aligned with SA Power Networks' strategy	
Partner with other business departments to deliver value through technology	*IT has built key relationships throughout the business to deliver technologies that meet business strategies across multiple disciplines. These same relationships and strategic alliances will continue to be further nurtured and developed as the detailed intricacies of data flows, connections and the level of process change required to take advantage of the technological change are explored to achieve full compliance with the RIN Reporting requirements.*
Ensure our people are informed and engaged, and have the right skills aligned with business objectives	*To address the RIN reporting requirements in the most complete and cost effective manner, the onus is on the business to articulate functional and data requirements to IT in such a way that allows IT to understand the objectives and the technical requirements necessary to address the RIN reporting requirements through the deployment of technology and the management of data (collection, cleansing and migration)*

IT Strategic Objective	Contribution
Improve efficiency of our processes in line with good industry practices	*The initiatives of the RIN Reporting Business Case will ultimately improve processes in line with good industry practices. The technology and processes developed or enhanced to support the capture and recording of RIN data also promotes better business practices in terms of financial and asset management. The AER's standardisation of information requirements from many electricity distribution and transmission organisations also aids SA Power Networks align with industry practice.*
Continually identify and manage IT-related business risks to reduce potential business impact	*The main IT related business risk in relation to the RIN Reporting business case is the ability of SA Power Networks to provide the technology in a time frame to meet the objectives.* *A successful outcome will be dependent on IT providing not only the right skills, but also the right number of personnel with a breadth of experience to work across the business and across project functions such as data cleansing transformation and migration. This will need to be closely managed by IT to make certain the best resources and the correct number of resources is allocated to the project.*

2.3 Relationship to National Electricity Rules Expenditure Objectives

Mapping to the relevant "*Capital expenditure objective(s)*" (Chapter 6, National Electricity Rules)
The forecasted capital expenditure is considered necessary to achieve:

NER Expenditure Objective	Contribution
6.5.7(a)(2) comply with all applicable regulatory obligations or requirements associated with the provision of Standard Control services	The proposed expenditure seeks to implement mandatory changes required to SA Power Networks' systems in response to AER Regulatory Information Notice (RIN) reporting requirements. This will enable SA Power Networks as a market participant to: ▪ Achieve increased completeness and accuracy of "Actual" historical data and reduced requirement for use of Estimates; and ▪ Meet and maintain RIN reporting compliance going forward.

Table 4: Contribution to the National Electricity Rules expenditure objectives

2.4 Meeting the National Electricity Rules Expenditure Criteria

Mapping to "*Capital expenditure criteria*" (Chapter 6, National Electricity Rules) The forecasted capital expenditure reasonably reflects each of the following:

NER Expenditure Criteria	Activity
6.5.7(c)(1) the Efficient costs of achieving the capital expenditure objectives;	By performing RIN compliance activities as and when they are required. Not implementing systems and process changes required to support RIN reporting is considered a non-feasible option as this would require additional FTE resources and still result in non-compliance. SA Power Networks would fail to meet its obligations under the capital expenditure objective 6.5.7.(a)(2) and likely result in financial penalties.
6.5.7(c)(2) the costs that a Prudent operator would require to achieve the capital expenditure objectives; and	If systems and process changes required to support RIN reporting are not implemented this exposes SA Power Networks to an increased risk of non-compliance and could potentially result in SA Power Networks failing to meet its obligations under the capital expenditure objective 6.5.7.(a)(2) and likely result in financial penalties.
6.5.7(c)(3) a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives.	Cost inputs will be based on reasonable estimates as specified within the SA Power Networks "*IT Expenditure Forecasting Methodology and Approach*".

Table 5: Activities to Meet the National Electricity Rules expenditure objectives

3. Scope

3.1 Scope of need

The scope of the business case includes all SA Power Networks' organisational processes, systems and data that need to be considered and potentially modified, or in the case of data, collected, to meet the AER information requirements (over and above the other projects in Section 4.1.2) for each of the following:

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

The revised RIN reporting framework requires an unprecedented level of detail in the actual information that is not currently captured, primarily in relation to assets and projects. The complexity of the data collection and interconnectivity and flow-through-effects, span the entire business.

An exercise to collect and record this information is in scope, as is the revision and refinement of business processes and systems necessary to address the ongoing information requirements.

A high-level gap analysis between the current systems, processes and data against the RIN reporting requirements, has been performed. The analysis revealed a significant amount of change required to multiple systems as well new business processes to be developed to capture and catalogue information at the required level of detail and accuracy.

For example, the table below indicates the AER's view of NSPs' outputs and inputs that should be used for efficiency measurement in the Economic Benchmarking RIN[3]:

Inputs	Outputs
Preferred model specification	
Nominal opex / Weighted average price index	Customers (no.)
Overhead lines (MVA–kms)	Capacity (kVA*kms or MVA)
Underground cables (MVA–kms)	Interruptions (customer minutes)
Transformers and other (MVA)	
Other inputs and outputs	
Nominal RAB straight–line depreciation / Capital goods price index	Energy delivered (GWh)
Nominal depreciated RAB / Capital goods price index	Disaggregated customer types

Abbreviations: MVA – megavolt amperes, kVA – kilovolt amperes, GWH – gigawatt hour

Figure 6: DNSP outputs and inputs to be included in the Economic Bench Marking RIN

In order to calculate the inputs and outputs, the operating environment variables must also be captured. As an indication of the breadth of the overall change to SA Power Networks' systems and processes, the operating environment variables (representing only one block of information out of eight sets in the RIN) required for Economic Benchmarking are outlined in the following tables.

[3] Source: Explanatory Statement - Expenditure Forecast Assessment Guideline. November 2013, p142.

As evidenced below, SA Power Networks' (**SAPN**) ability to source information directly from systems is currently limited.

DNSP operating environment factors	Captured?	Actual or Estimate	Reason/Basis of Preparation
Weather Stations			
List weather station post code, suburb and materiality	–	Actual	Weather stations are collected from Bureau of Meteorology website. Feeders are assigned to the nearest AWS providing 30 minute intervals on wind and temperature data
Terrain factors			
Rural proportion (%)	✘	Estimate	Estimate of route line length in Table 8.3 is based on GIS circuit length data
Urban and CBD vegetation maintenance spans (No. of spans)	✘	Estimate	Assumes two defects per span in NBFRA, and number of spans in BFRAs
Rural vegetation maintenance spans (No. of spans)	✘	Estimate	Assumes two defects per span in NBFRA, and number of spans in BFRAs
Total vegetation maintenance spans (No. of spans)	–	Actual	Vegetation clearance contractors
Total number of spans	✘	Estimate	Number of poles or spans not recorded. Based on route length and average span length per base voltage level.
Average urban and CBD vegetation maintenance span cycle (years)	✘	Estimate	SAPN does not separately record information in this category. Pro-rata estimate based on number of spans for each feeder category
Average rural vegetation maintenance span cycle (years)	✘	Estimate	SAPN does not separately record information in this category. Pro-rata estimate based on number of spans for each feeder category
Average number of trees per urban and CBD vegetation maintenance span	✘	Estimate	SAPN does not separately record information in this category. Vegetation clearance contractors estimate
Average number of trees per rural vegetation maintenance span	✘	Estimate	SAPN does not separately record information in this category. Vegetation clearance contractors estimate
Average number of defects per urban and CBD vegetation maintenance span	✘	Estimate	SAPN does not separately record information in this category. Vegetation clearance contractors estimate
Average number of defects per rural vegetation maintenance span	✘	Estimate	SAPN does not separately record information in this category. Vegetation clearance contractors estimate
Tropical proportion (No. of spans)	–	Actual	Bureau of Meteorology website used
Standard vehicle access (Kilometres)	✘	Estimate	SAPN does not separately record information in this category. Approximate estimate of 7% of route line length
Network characteristics			
Line length	✘	Estimate	SAPN does not separately record information in this category. GIS and average span length per base voltage level is used.
Density factors			
Customer density (customers/ km)	✘	Estimate	Density factors calculated from other RIN variables

DNSP operating environment factors	Captured?	Actual or Estimate	Reason/Basis of Preparation
Energy density (MWh/customer)	✓	Actual	
Demand density (KVA/customer)	✗	Estimate	Density factors calculated from other RIN variables

Table 6: Current availability of data from source systems to meet RIN data requirements

The level of accessible information is similar in the Category Analysis RIN. Replacement Expenditure (RepEx) information must be categorised by Asset. Although SA Power Networks captures this information at a higher level of detail, both for its own business needs and in accordance with ESCOSA requirements, under the new RIN data requirements it is insufficient to achieve AER compliance.

Poles	Transformers
Pole top structures	Switchgear
Overhead conductors	Public lighting
Underground cables	Services
Other	

Source: AER analysis.

Figure 7: Repex Asset Groups required for Category Analysis RIN

For each of the asset categories in the above table, the AER requires NSPs to provide data on:

- mean replacement asset life (years);
- the standard operating voltage;
- standard deviation of the mean replacement asset life ;
- age profile data;
- replacement unit cost ($ nominal);
- total number of asset replaced during the regulatory year ;
- total number of failures for each asset during the regulatory year; and
- total quantity (number) of each asset type that was commissioned in each financial year.

DNSP operating environment factors	Captured?	Actual or Estimate	Reason/Basis of Preparation
Poles by: highest operating voltage ; material type; staking (if wood)	✗	Estimate	One size of stobie pole used for various voltages, for example, to clear vegetation. Approximately one third of poles are not in SAP. Failures are grouped. They are not split between conditional failure and functional failure
Pole top structures by: highest operating voltage	✗	Estimate	Phases are estimated based in the number of wires
Overhead conductors by: highest operating voltage; number of phases (at HV); conductor length by feeder type; conductor length material type	✗	Estimate	Data not captured at the granular level required
Underground cables by: highest operating voltage and cable length by feeder type	✗	Estimate	Data not captured at the granular level required

Service lines by: connection voltage; customer type; connection complexity	✘	Estimate	Data not captured at the granular level required
Transformers by: Mounting type; highest operating voltage ; ampere rating; number of phases (at LV) and total MVA	✘	Estimate	SAPN does not separately record information in this category. Pro-rata estimate based on number of spans for each feeder category
Switchgear by: Highest operating voltage ; switch function	✘	Estimate	Data not captured at the granular level required
Public lighting by: asset type ; lighting obligation	✘	Estimate	Data not captured at the granular level required
SCADA, network control and protection systems by: function	✘	Estimate	Data not captured at the granular level required

Legend	
✓	Data captured in SAPN systems
✘	Data not captured
–	Data captured by third parties and manually collated with SAPN information

The results of a further analysis can be seen in Appendix A – Current RIN Reporting Capability – High Level Analysis.

3.2 Scope Inclusions

The scope includes systems, processes, data and reporting requirements to address the gaps in the current state analysis. It also includes the co-ordination of the organisation to deliver the critical functionality contained within other initiatives required to satisfy RIN compliance.

Financial Information – Unit Costing:
A key deliverable of the RIN Project will be establishing unit costs to the level of granularity sought in the AER's Category Analysis (**CA**) RIN. This will require both process change and system enhancements to deliver.

Process change
Currently costs are largely driven by tasks for operating expenditure, or by work breakdown structures (**WBS**) for capital projects. Tasks are generic and are driven by the type of work, for example replacement of a pole, or may be driven by a location. WBS are driven by the phase of the project (eg design, construct) and by the package of work being undertaken (eg construct line, install transformer). Neither supports the AER's detailed unit cost requirements in their current form. The CA RIN will require much more detailed data, as an example maintenance costs are sought separately for poles and pole tops.

We will investigate the use of standard compatible units and bills of material where possible, but regardless, additional data will need to be captured by field personnel to enable 'actual' reporting of unit costs at the AER prescribed level. Deliverables of the RIN Project will include:

- identification and implementation of best practice processes to capture the required data in the most resource and cost efficient way;
- provision of significant ongoing training to field personnel; and
- provision of significant change management to embed the new processes.

System enhancements

System enhancements for the RIN Project will be required on two fronts. Firstly, to capture the additional data without major detrimental impacts on field productivity, the utilisation of superior data capture devices will be of critical importance. A deliverable of the RIN Project will be the selection and configuration of such devices, and the development of training and support tools to reinforce their use.

Additionally, investigation will be required of SA Power Networks' integrated mainframe system (SAP) to store, analyse and report the information required, including identifying and configuring fields not currently used, to provide the level of detail required by the CA RIN. This latter deliverable is the subject of system enhancements described in other IT business cases.

Non-Financial Information

- Fully integrated Project Module capable of capturing planned projects:
  - Capturing sufficient detail to allocate costs to AUGEX or REPEX
  - Integrating to Enterprise Asset Management solution when the Project is commissioned as an Asset
  - Integrating to the General Ledger to allocate costs at required level of detail
  - Integrated to Time and Attendance module to allow collection of staff costs against the project
  - Integrated to stores in the Supply Chain to allow collection and allocation of inventory items used to specific jobs.
- Fully integrated Enterprise Asset Management solution, including:
  - Capturing of Asset information arising from unplanned replacements
  - Adoption of International Asset Management Standard ISO 55000 as the Asset Management Policy and Strategy and the development and modification of supporting business processes
  - Enhanced configuration of asset capture fields to facilitate data capture and categorisation at the required RIN reporting detail
  - Enhanced integration with the Projects module to capture REPEX and AUGEX information as applicable
  - Enhanced configuration to allow capture of asset failure reasons
  - Enhanced reporting capability to allow reconciliation and reporting of asset movements including asset commissioning and retirements
  - Ensure the functional requirements to enable asset analytics are met, including probability of failure, connection point reliability and whole of life costs
  - Ensure the functional requirements to enable investment modelling are met
  - Ensure the functional requirements to enable Level of Service (LoS) Performance reporting are met
  - Improve the businesses capability to manage assets from a 'whole of life' perspective, from asset planning and design through to disposal
  - Integration with non SAP systems including the Geographical Information System and the Outage Management System

Data Collection and Governance

In light of the RIN Reporting requirements, industry trends, recent strategies developed and the expectations of the future state, there is an increasing need to manage SA Power Networks' data

efficiently as well as the need for more robust governance of people, processes and systems to make informed decisions based on quality data.

Furthermore, due to the limited availability (in terms of completeness, categorisation, and granularity) of source data, a data collection exercise must be undertaken to:

- separately deconstruct assets in the asset register to their core components (i.e. from assets recorded at Feeder level down to the individual components of poles, transformers and conductors); and
- collect and record missing asset data at the granular level required by the AER.

Processes must also be put in place to confirm that data is managed in such a way as to ensure security, accuracy and timeliness of data is maintained and that responsibilities for data ownership and custodianship are established.

Business Processes

Current business processes do not enforce the complete collection of information as required by the RIN reports. A full As Is and To Be process mapping exercise for RIN reporting will be performed to assist determine requirements for the enhanced system functionality.

The business processes will be reviewed and where necessary, re-designed or created to ensure:

- projects capture the costs specific to that project (and no other);
- projects are recorded in such a way as to readily identify Repex versus Augex expenditure;
- integration between Time and Attendance; Work Order Management, the maintenance systems as well as to the Asset Register and General Ledger; and
- assets are recorded / commissioned at the detail level required by the RINs, including cable spans/route lengths, connection types, individual poles and transformers, region classification such as urban, rural.

Change Management

The size and scope of the transformation to both systems and processes, directly affecting the majority of the business, means a significant and concerted change management action is required.

A workforce used to operating in a set way for many years, faced with changes to systems and processes, for which there is initially no obvious benefit to them, raises a number of challenges that must be addressed. Therefore,

- Training of staff during and post-delivery of the new systems and processes has been provided for all new initiatives detailed in this option.
- Operational Change Management and support are included.

3.3 Scope Exclusions

- This business case excludes the costs associated with the prerequisite business cases required to deliver the necessary foundational system capability uplift.

3.4 Supporting evidence of the need

The AER has mandated the completion of each RIN using Actual, rather than Estimated data from 2015 onwards.

Each RIN requires a level of detail that is not currently recorded by SA Power Networks, particularly with regards to Projects and Assets. This was evidenced by a review of the basis of preparation of each RIN, where available and a record of whether the data was deemed an estimate or actual.

The gap between the RIN reporting requirement and the current available information to meet that requirement was assessed by reviewing each category within each RIN and making a determination as to the cause of the estimate, that is, whether the estimate is caused by a business process issue that does not mandate the capture of specific information, or, a technological issue, such as field or system does not exist to capture and record the necessary information.

3.4.1 Approach

The basis of preparation for each RIN (where available) has been reviewed to understand:

- what RIN data is "estimated", how and why;
- what RIN data is not currently captured; and
- what RIN data is captured, but not compliant?

Where data is not currently captured, it was assessed for whether:

- a system or field is available but not used, therefore a process issue; and/or
- no system or field is available, therefore a technology issue.

Where the data is captured, it was assessed for whether:

- it meets RIN data input requirements; and/or
- it does not meet RIN data input requirements due to:
    - accuracy or integrity issue;
    - completeness or level of detail issue; and
    - AER categorisation issue.

The results of the gap analysis can be seen in Appendix A – Current RIN Reporting Capability High Level Assessment.

4. Business Options

4.1 Key assumptions and dependencies

Intrinsic to the ability of this business case to successfully fulfil its objectives, is functionality that will be delivered via multiple other business cases. The other business cases, outlined below, provide the backbone to systems and processes that will enable data to be captured and collated in such a way that can subsequently be applied to RIN reporting purposes.

If funding is not received for other business cases, the RIN Reporting Business Case will be required to bridge the gap to ensure the RIN reporting requirements can be met in the most efficient and effective manner achievable.

4.1.1 Assumptions

The following additional key assumptions have been identified:

- SA Power Networks will be required to complete the four variants of RIN reporting (Category Analysis, Economic Benchmarking, Annual and Reset);
- From 2014/15 all DNSPs including SA Power Networks will be required to provide Actual data to achieve compliance;
- Only options delivering full RIN reporting compliance will be considered; and
- Business cases on which the RIN Reporting Business Case is dependent will be funded.

4.1.2 Dependencies

The following business case dependencies have been identified:

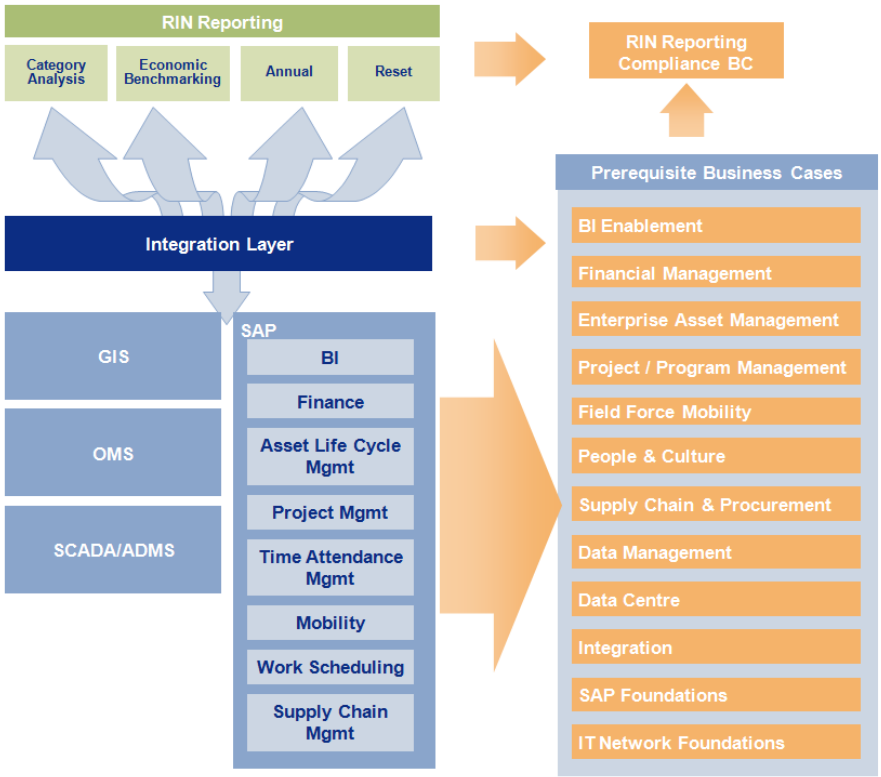


Figure 8: Summary of key prerequisite business cases

A brief description of the prerequisite business case and its impact on RIN reporting is provided below.

Table 7: Brief description of prerequisite business cases

Business Case dependencies	*Description of RIN reporting impact*
Enterprise Asset Management (EAM)	This business case puts forward the key foundational components required to support RIN Reporting requirements such as: • collection of all information about an asset at a granular level as required by AER; • costs and commissioning dates sourced from Projects; • integration to CBRM, to allow costing and tracking of maintenance activities; and • integration to GIS and SCADA/ADMS to support location and voltage information.
Financial Management Business Case	All costs and revenues are posted to and categorised within the General Ledger. The Financial Management Business Case supports the differentiation between the allocation of costs and revenues required to meet each of Regulatory, Corporate and Statutory Reporting obligations.
Business Intelligence (BI) Business Case	Development and implementation of the necessary Business Intelligence and Performance Management capability to enhance data analysis and performance reporting functionality enabling more advanced asset performance and reliability management to provide insights that drive better decision making (including predictive decisions), asset management, customer outcomes, and regulatory reporting.
Integration Business Case	The integration layer is a key technology component that supports the field force in accessing and updating corporate systems as cost effectively as possible.
Field Force Mobility Business Case (Field Services)	Filed force mobility allows time and attendance to be recorded and allocated to specific jobs. It also allows projects to be closed real time and all costs posted.
PPM Business Case	This business case covers the integrated resource and job scheduling for field workers. It also covers the integration to Time and Attendance and EAM which is a necessary capability to deliver RIN Reporting Requirements. Projects need to capture FTE hours, cost of inventory items, the nature of the work (for example, REPEX or AUGEX) and all other costs until such time as the project is closed or commissioned as an asset in the asset register.
Data Management Business Case	Underpinning the RIN Reporting requirements is a need to collect and store a wide array of detailed data. The Data Management Business Case puts forward a case for strong data management and governance capabilities.
Supply Chain Business Case	This business case puts forward the foundational integration of the supply chain to the work order management and project management to allow: • allocation of inventory/store items to specific repairs and maintenance or replacements jobs; • effective costing of jobs and projects; and • accurate record of inventory as required by AER.

Business Case dependencies	*Description of RIN reporting impact*
SAP Foundations	As SAP is the Enterprise Resource Planning (**ERP**) system that contains the asset and work order information, there is a dependency on the SAP roadmap to provide the back-end functionalities (eg maintenance orders) that is required by workers.
IT Network Foundations	The IT Network Foundations provides the technology components that enable the overall integration of GIS, OMS, SCADA and ADMS to SAP but also allows field based staff to connect to SA Power Networks' corporate systems irrespective of their location and device that they are using.
Enterprise Blueprint & EA Business Case	Input for Enterprise Data Architecture Model.
Integrated Design Management System Business Case	Collecting more information about assets, projects and jobs requires more efficient means of delivering the available information to the field and more efficient means of collecting, organising and distributing the data once it has been updated or added by the field staff. Job packages which are based on template 'compatible units' for each asset class, which includes the standard inventory, tasks, task estimates and design information for each job and asset type provide the capability to collect the data as accurately as possible. The integration of the compatible units falls within this business case.

4.2 Option 0 – Do Nothing

In this Business Case 'Do Nothing' involves continuing with current systems. However, as compliance with the RIN reporting requirements is mandatory, the 'Do Nothing' approach does include enhancing current business processes (within existing system capabilities) and increasing the level of internal resources to meet RIN reporting deadlines and capture a granular level of detail required in the RIN reports to be nominally compliant.

4.2.1 Option 0 Project Costs

Not Applicable as option zero is to do nothing.

4.2.2 Option 0 Costs

The 'Do Nothing' approach determines that no systems changes will be made to enable the delivery of each of the four Regulatory Information Notices.

In the context of meeting the AER's mandate to provide actual data within the timeframe allowed, the improvement, where possible, of business processes and the implementation of manual workarounds has been factored in, as has the effort to capture data at the level of detail required in the RINs. An ongoing opex budget of ***$22.3m*** (***$19.0m*** for the 2015-20 RCP has been estimated as required to achieve the specified AER RIN data requirements objectives.

The ongoing impediment to the business's ability to deliver 'Business As Usual' tasks, as resources are diverted towards RIN reporting has also been considered in terms of the resourcing required.

To meet the RIN reporting requirements within the specified time frame, to a level of detail that will be materially compliant and continue to deliver core business activities, the finance team will need to increase resources by four FTEs:

- 1 Asset Accountant;
- 1 Regulatory Finance Analyst;
- 1 Field Services Analyst;
- 1 Network Finance Analyst; and

The Network Operations Team will need additional resources as follows:

- an additional 4 FTEs (senior engineers) on an ongoing basis; and
- 6 FTE's to assist with data collection, process definition and data analysis for a 3 year period.

Field Service crews are also impacted, although the extent is still to be determined. It is expected that to continue to meet customer service level agreements, and carry out the detailed data collection necessary per job, it is likely to be necessary for SA Power Networks to increase the number of crews in some depots. Due to time restrictions in place, SA Power Networks was unable to fully assess the impact of the additional data collection. This will be done as part of a comprehensive requirements gathering exercise.

Further FTE's are required to assist with data governance across the business, with most emphasis on Field Services where the majority of the data is produced, as well as change management personnel to assist staff with the transition to new processes and expectations around data collection.

It is expected that an additional 0.5 FTE will be required per each of the 28 depots across SA for the first 3 years, with 0.5 FTE to cover 2 depots each for the following 2 years and declining to 0.5 FTE's per every three depots in 2020.

There will be potentially higher resourcing requirement at large depots to manage the additional paperwork to be given to field crews to complete on each job and then to collate the data as completed forms are returned.

Data Governors will be put in place to centrally manage and set the data quality standards. It is anticipated 1 FTE will be required in 2015, rising to 2 FTEs in 2016 and 2017 and rising to 3 FTEs thereafter.

The incursion of additional labour costs will assist SA Power Networks meet AER's RIN data requirements to a nominally compliant standard. However, it is neither a scalable nor sustainable approach. Without system enhancements, the capture of data may be performed inconsistently, across disparate spreadsheets and thereby prone to potentially material errors. This increases the complexity of the audit process and may affect the audit certification.

Due to the extensive data collection requirements, without substantial systems support, field productivity is likely to decline, impacting costs as well as the ability to deliver to the prescribed service standards.

The table below is a summary of the recurrent/ ongoing costs.

Table 8: "Do Nothing" opex costs ($M Real 2013/14)

Cost component	Cost type	FTE[4]	Financial Year	Financial Year					Total 2015/16 - 2019/20	Grand Total
			2014/15	2015/16	2016/17	2017/18	2018/29	2019/20		
Economic Benchmarking RIN										
Labour Costs	Opex	3.27	0.164	0.328	0.328	0.328	0.328	0.328	**1.642**	**1.806**
Services Costs	Opex		0.035	0.070	0.070	0.070	0.070	0.070	**0.350**	**0.385**
Sub-Total			**0.199**	**0.398**	**0.398**	**0.398**	**0.398**	**0.398**	**1.992**	**2.191**
Category Analysis RIN										
Labour Costs	Opex	4.86	0.244	0.488	0.488	0.488	0.488	0.488	**2.440**	**2.685**
Services Costs	Opex		0.034	0.067	0.067	0.067	0.067	0.067	**0.335**	**0.369**
Sub-Total			**0.278**	**0.555**	**0.555**	**0.555**	**0.555**	**0.555**	**2.775**	**3.053**
Annual RIN										
Labour Costs	Opex	3.13	0.157	0.314	0.314	0.314	0.314	0.314	**1.571**	**1.728**
Services Costs	Opex		0.068	0.068	0.068	0.068	0.068	0.068	**0.340**	**0.408**
Sub-Total			**0.225**	**0.382**	**0.382**	**0.382**	**0.382**	**0.382**	**1.911**	**2.136**
Reset RIN										
Labour Costs	Opex	2.9	0.145	0.145	-	-	-	0.145	**0.291**	**0.436**
Services Costs	Opex		0.027					0.041	**0.041**	**0.068**
Sub-Total			**0.173**	**0.145**	**-**	**-**	**-**	**0.186**	**0.332**	**0.505**

[4] As the Reset RIN had not been published at the time of writing, the resources required to complete the Reset RIN have been estimated.

Universal Costs											
Ongoing resourcing costs to staff RINs[5]	Opex	8	0.628	0.063	0.208	0.208	0.208	0.063	**0.750**	**1.378**
Data Capture	Opex	6	0.591	1.181	1.181	0.591	-	-	**2.954**	**3.544**
Data Governance	Opex	3	0.631	1.349	1.435	1.250	1.064	1.060	**6.157**	**6.788**
Change Management Costs	Opex	7	0.630	0.945	0.540	0.450	0.225	-	**2.160**	**2.790**
Sub-Total			**2.480**	**3.538**	**3.365**	**2.499**	**1.497**	**1.123**	**12.021**	**14.501**
Total Costs - Do Nothing			**3.354**	**5.019**	**4.701**	**3.834**	**2.833**	**2.645**	**19.032**	**22.386**

[5] SA Power Networks will be required to engage additional resources, allocated to completing the RINs. The overhead in staff salaries whilst there are no RIN's to complete has been factored into the universal costs

4.2.3 Option 0 Cost Assumptions

- Costs and the subsequent breakdown have been taken from the various information sources provided by SA Power Networks.
- Funding to implement the preferred option will not be available until 2015.
- No changes will be made to systems to facilitate the preparation of the RIN reporting requirements.
- No changes will be made to systems to improve the accuracy, detail or categorisation of data to meet the RIN reporting requirements.
- Data will be captured, where systems are unavailable, in spreadsheets.
- A data governance model will be developed and data quality monitors will be engaged to work in each depot on a part time basis.
- Additional staff will be required to deliver core business activities, capture and analyse RIN reporting data and meet RIN reporting deadlines. Staff will need to be hired in the new financial year to familiarise themselves with SA Power Networks staff.
- Costs are based on time and resource effort estimated by the business to prepare the 2012-2013 RINs, discounted by a 'history' factor and process determination factor6.
- Although there are no changes to systems, the level of change to processes and data capture is significant. Change Management resources have been factored into the Do Nothing costs to manage the change in the business.
- It is expected that SA Power Networks will incur higher internal and external audit fees as a result of the manual, off system information used to generate the RIN reports;
- This opex amount is assuming the other projects delivering base capabilities are funded otherwise the costs would increase significantly.

4.2.4 Option 0 Expected Benefits

Not applicable as Option 0 is to "Do Nothing".

[6] The 2012-2013 RINs each required the collection and collation of data for up to 10 years prior, to allow the AER to establish a base line set of data. As this was the first year of collecting this detailed level of information, time was spent establishing the process for extracting the data. From 2013 /14 only one year of data must be collected and it will be done using an established process.

4.2.5 Option 0 Expected Dis-benefits

Table 9: Expected dis-benefits

Dis-benefit	Consequence outcome (Value, Measure)
Material effort , cost and resource commitment expended without fulfilling RIN Reporting requirements	▪ Information is not held in central, controlled repository ▪ Data quality, completeness and integrity issues ▪ Audit qualifications and increased audit costs ▪ Additional resources required that do not focus on or deliver core activities ▪ Incursion of penalties
Data is not captured to a level of detail required by the AER	Inefficient processes and systems must be relied upon to capture and report the level of data required leading to increased costs to the business as the level of detail required increases ▪ Increased Audit costs ▪ Data integrity issues
Manual process to meet regulatory and legislative obligations	Additional time and effort spent on meeting regulatory and legislative obligations could lead to further delays in meeting RIN obligations.
Higher possibility of data errors arising from work arounds using manual data capture and processing	The 'double handling' of data (paper-based forms and entry into system) combined with the challenges of reading handwritten forms could result in a significant error rate in data.
Continued heavy reliance on off-system products, affecting accuracy and integrity of reported information	▪ Significant duplication of effort ▪ Information not held in the corporate system ▪ Multiple versions of the truth ▪ Ineffective use of resources ▪ Data integrity issues ▪ Extra resources will be required to meet the increasing information requirements of the AERs Regulatory Information Notices.
The lack of a single source of asset information compromising the integrity and timeliness of asset-related reporting	▪ Using multiple sources of information for asset reporting leads to deterioration in data integrity, making it difficult to validate and provide accurate reporting.

Dis-benefit	Consequence outcome (Value, Measure)
Collection of detailed information by field crews will have negative impacts on productivity	▪ Additional cost of services ▪ Negative impact on ability to meet service standards

4.2.6 Option 0 Timescale

Not applicable as Option 0 is to "Do Nothing".

4.2.7 Option 0 Major Business Risks

The AER have advised it is not a reasonable excuse for SA Power Networks to fail to provide the information or produce the documents referred to in the Notice on the ground of any duty of confidence. SA Power Networks will not be required to provide information or produce documents that are subject to legal professional privilege.

The following risk assessment has been conducted in accordance with the SA Power Networks' corporate risk framework, including the application of the appropriate qualitative measures of likelihood and consequence, and the resulting overall risk rating as defined in Appendix C.

Major business risks of proceeding with a 'Do Nothing' approach are listed in the table below.

Table 10: Major business risks of preceding with a Do nothing approach

Risk ID	Risk Description (Risk Line Item)	Consequence Description	Inherent Likelihood	Inherent Consequences	Risk Rating
B01	Data not captured to a level of detail required by the AER	Business must capture data details in alternative applications such as MS Excel leading to data integrity issues and increased audit costs Lead to potential inaccuracies in data leading to lack of business confidence in utilising the data to make informed decisions	Likely (4)	Moderate (3)	HIGH
B02	Penalty under section 28N of the NEL for not complying with the Notice.	If the AER has reason to believe this provision has been contravened, it may issue an infringement notice for a pecuniary penalty under section 74 of the NEL. The maximum penalty is $4,000 for a natural person and $20,000 for a body corporate.	Likely (4) H	Moderate (3)	HIGH

Risk ID	Risk Description (Risk Line Item)	Consequence Description	Inherent Likelihood	Inherent Consequences	Risk Rating
B03	AER may also institute civil proceedings under Section 59 of the NEL seeking orders including a civil penalty.	The maximum civil penalty the AER can seek for a natural person is $20,000 and $2,000 for every day during which the breach continues and for a body corporate, respectively $100,000 and $10,000.	Likely (4) H	Moderate (3)	HIGH
B04	Penalty if a person knowingly provides information to the AER that is false and misleading in complying with the Notice	Under section 36 of Schedule 2 to the NEL, a contravention of the relevant sections will constitute an offence that is punishable, on conviction, by a penalty not more than the maximum penalty. The maximum penalty is $2,000 in the case of a natural person and $10,000 in the case of a body corporate.	Likely (4) L	Moderate (3)	HIGH
B05	Giving false or misleading information is a serious statutory offence under the Criminal Code Act 1995 (Cth). Section 137.1 of the Criminal Code makes it an offence to give information to the AER knowing it to be false or misleading or omitting any matter or thing without which the information is misleading.	Under section 4B(3) of the Crimes Act 1914 (Cth), a court may impose on a body corporate a penalty not exceeding $33,000.	Likely (4) H	Moderate (3)	HIGH

4.3 Option 1 - Extend SAP solution for RIN reporting

Leverage and extend the current SAP systems, review and redesign business processes and perform an extensive data capture and cleansing exercise of existing data sets to enable compliant RIN reporting.

4.3.1 Option 1 Project Costs

To achieve the specified objectives as shown, a capital and operating budget of ***$25.06m*** has been estimated for the period 2014/15 to 2019/20. (***$23m*** for the 2015-20 RCP)

Table 6: Option 1 Cost Summary – ($M Real 2013/14)

Cost Type	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015/16 - 2019/20	Total
Capex	1.720	3.778	4.280	4.117	1.906	0.051	**14.133**	**15.853**
Opex	0.335	2.128	0.335	2.138	2.138	2.138	**8.876**	**9.211**
TOTAL	**2.055**	**5.906**	**4.615**	**6.255**	**4.044**	**2.189**	**23.009**	**25.064**

Table 8: Option 1 – Core RIN Compliance Project Team Resource Model

Resource Mix	FTE's per annum 2014	2015	2016	2017	2018	2019	2020	Cost Centre
Non-IT Project/Program Manager	-	1	1	1	0.5	-	-	Business
Non-IT Project Coordinator	-	1	1	1		-	-	Business
Non-IT Business Analyst	-	2	2	1		-	-	Business
Economist	-	1	1	1	0.5	-	-	Business
SME - RIN	-	1	1	1	1	-	-	Business
SME - Finance	-	2	2	2	2	-	-	Business
SME - Network Management	-	1	1	1	-	-	-	Business
SME - Customer Relations	-	0.5	0.5	0.5	-	-	-	Business
SME - People & Culture	-	0.5	0.5	0.5	-	-	-	Business
SME - Field Services	-	1	1	1	-	-	-	Business
Data quality monitors/analysts[7]	-	-	7	14	14	-	-	Business
Data governors	-	-	1	1	1	-	-	Business
IT Architect	-	1	1	1	-	-	-	IT
SAP Functional Analyst / Developer	-	1	1	1	-	-	-	IT
Solution Architect	-	1	1	1	-	-	-	IT
Developer Other	-	1	1	1	-	-	-	IT
Systems Analyst	-	1	1	1	0.40	-	-	IT
BI Analyst (reporting/data analyst)	-	1	1	1	0.40	-	-	IT
Test Analyst	-	1	1	1	-	-	-	IT

[7] 0.5 FTE at each of the 28 Depots

4.3.2 Option 1 Capital Delivery and Change Management Costs

The table below is a summary of the project delivery and change management costs. The total capital investment is distributed between IT and non-IT as follows:

Table 7: Capital costs –Option 1 –RIN Compliance Team ($M Real 2013/14)

Business Unit	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015/16 - 2019/20	Total
IT Delivery and Change Mgmt	0.681	1.398	1.398	0.760	0.094	0.051	**3.703**	**4.384**
Non-IT Delivery and Change Mgmt	1.039	2.380	2.882	3.357	1.811	0.000	**10.430**	**11.469**
TOTAL	**1.720**	**3.778**	**4.280**	**4.117**	**1.906**	**0.051**	**14.133**	**15.853**

4.3.3 Option 1 Project Cost Assumptions:

- AER deems the SA Power Networks' proposed tactical solution acceptable in the interim and SA Power Networks is exempt of non-compliance and incurring financial penalties;
- It is assumed core asset accounting system capability will be delivered by the end of 2016 calendar year, enabling asset centric data required for RIN reporting to begin to be captured;
- The underlying capability required to support RIN Reporting will be delivered by other prerequisite business cases (dependencies outlined in *Section 4.1.2 Dependencies*) will be approved and delivered. This business case excludes costing outlined in prerequisite business cases.
- Should key foundational functionality (and/or components of prerequisite business cases) not receive AER funding approval, the RIN business case would need to be appropriately expanded to compensate for these omissions so as to ensure the objective of meeting RIN reporting compliance is not comprised and delivered by 2017/18 as intended.
- 12 months of asset data and key RIN data requirements will be captured by the system for the 2017/18 regulatory year; and
- Regulatory year 2017/18 will be the first full year of system enabled and automated RIN reporting of actuals.

4.3.4 Option 1 Recurrent Costs

The table below is a summary of the ***$9.2m*** opex step change by IT and non-IT for the revised Option 1 of which ***$8.9m*** is required during the 2015-2020 Regulatory Control Period.

Table 8: Opex Step Change costs – Revised Option 1 – Core RIN Compliance Team ($M Real 2013/14)

Business Unit	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015/16 - 2019/20	Total
IT Opex	-	-	-	0.047	0.047	0.047	**0.141**	**0.141**
Non-IT Opex	0.335	2.128	0.335	2.091	2.091	2.091	**8.736**	**9.071**
TOTAL	**0.335**	**2.128**	**0.335**	**2.138**	**2.138**	**2.138**	**8.876**	**9.211**

4.3.5 Option 1 Recurrent Cost Assumptions

The resource model shown in was used as the basis for the revised Option 1 core RIN compliance project team.

Table 9: Revised Option 1 – RIN Compliance Opex Step Change Resource Model

Opex Step Change Resource Mix	FTE'sper annum 2014	2015	2016	2017	2018	2019	2020	Cost Centre

5. Regulatory Resources – Economists & RIN SME	-	2	2	2	2	2	2	Non-IT
Asset Accountants x2	-	-	-	2	2	2	2	Non-IT
Material Governors	-	-	-	13	13	13	13	Non-IT
Data Governors	-	-	-	2	2	2	2	Non-IT
IT Business Intelligence Analyst	-	-	-	0.25	0.25	0.25	0.25	IT

In addition, the following services costs are assumed in the RIN Compliance opex step change:

- Vegetation Management - New RIN reporting requires 'actual' data to be provided by 2015 for some information that is not currently being collected. This will result in a one-off increase in scoping costs of $1.8M in 2016.
- Audit Fees - Increase in current workload and implementation of new initiatives will require an additional auditor at approximately $205K per annum.

5.1.1 Option 1 Recurrent Cost Assumptions

- An interim tactical solution will be required to manually complete the Category, Economic and Annual RINs manually until end of regulatory year 2016/17.
- It is assumed core asset accounting system capability will be delivered by the end of 2016 Calendar Year, enabling asset centric data required for RIN reporting to begin to be captured.
- 12 months of asset data and key RIN data requirements will be captured by the system for the 2017/18 regulatory year.
- Regulatory year 2017/18 will be the first full year of system enabled and automated RIN reporting of actuals.

5.1.2 Option 1 Expected Benefits

The following benefits are expected:

The AER has identified a number benefits (highlighted below with an asterisk *). Other benefits may accrue to SA Power Networks and they have been listed below:

Table 10 Expected benefits

Benefit Type	Benefit Effect	Benefit	Measure	Date Benefit Expected	Value
Intangible	Direct	Meet RIN compliance requirements	Single source of data, improving the integrity, quality and timeliness of reporting. Avoidance of penalties	01/07/2018	

Benefit Type	Benefit Effect	Benefit	Measure	Date Benefit Expected	Value
Intangible	Direct	Savings in administrative, legal and consultancy costs for the AER, SA Power Networks and other stakeholders. The AER considers the increased transparency and consistency in regulatory process will reduce the costs of all parties associated with legal scrutiny, with potentially fewer and/or more limited appeals [8]*	Savings in administrative, legal and consultancy costs for the AER	01/07/2018	
Tangible	Direct	Process Efficiency and Cost Reduction	Single source of data, improving the integrity, quality and timeliness of reporting. Cost avoidance of additional resources for RIN compliance	Not determined	
Intangible	Indirect	Better informing users about matters which may affect their interests, thus enabling them to better engage and further their own interests through the regulatory process.*	Single source of data, improving the integrity, quality and timeliness of reporting to enable better analysis of information and therefore positioning with the AER	01/07/2018	
Tangible	Direct	Reduced paper and printing costs due to process automation and elimination of manual processes	Paper consumption Printing costs	2017	
Intangible	Direct	Improved Regulatory Planning & Modelling process	▪ Reduction in the cycle time to generate Regulatory Plan. ▪ Regulatory Planning & Modelling process executed within the corporate system. ▪ Cost reductions, better cash management, and less financial risk from improved processes and a better view of the future.	2019	

[8] Source : Explanatory Statement - Expenditure Forecast Assessment Guideline. November 2013

Benefit Type	Benefit Effect	Benefit	Measure	Date Benefit Expected	Value
Intangible	Direct	Parallel ledgers for Regulatory accounting enable accurate, efficient transaction processing and timely reporting	▪ Parallel Ledgers operating as expected for Regulatory accounts. ▪ Segment Reporting available for both the Balance Sheet and Income Statement. ▪ Activity Based reporting meets the requirements of the AERs Regulatory Information Notices.	2016	
Tangible	Direct	Opportunity saving in resources due to more efficient capability to meet the AER RIN requirements	▪ Ability to extract required reporting data from the Corporate ERP	2015	3.5 FTEs at approx. $475k p.a.

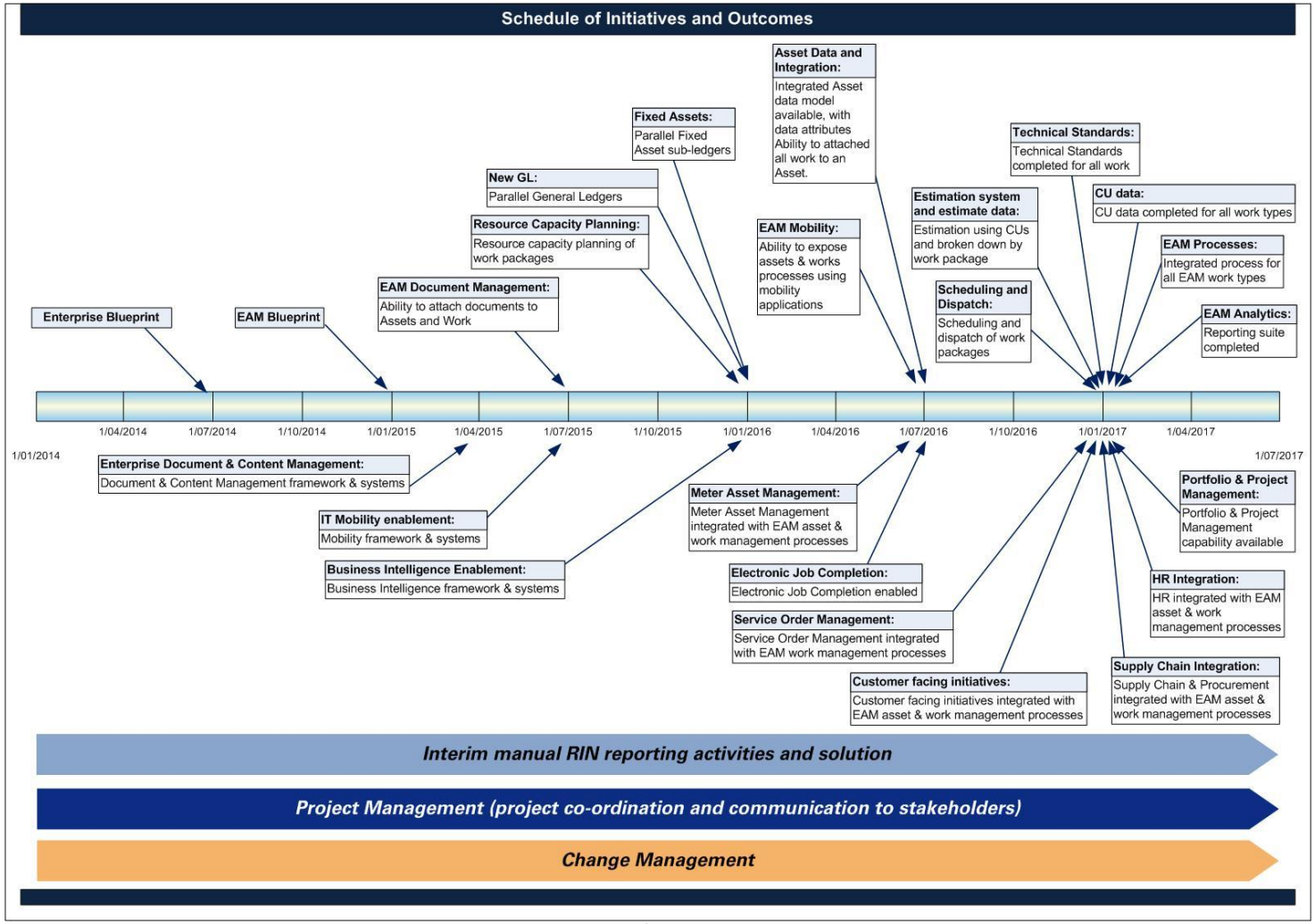
Option 1 Expected Dis-benefits

Table 14: Expected dis-benefits

Dis-benefit	Consequence outcome (Value, Measure)
SA Power Networks staff may not be engaged and will return to use of off-system products rather than use the new system	The significant benefits associated with the implementation of the new toolsets will not be realised. Resources will require extra time and effort to produce the increasing level of detail required.
Additional time spent to gather customer and asset related information	As it is expected that field staff will be required to capture more information than is currently done, it will take additional time of the field staff. However it is expected to be minimal, assuming the use of superior data collection devices.
Additional support for enhanced functionalities and more field staff who are mobility enabled	This will take additional effort and resources to sufficiently support and train SA Power Networks staff.
Short-medium term cultural impact	▪ Implementing EAM as detailed will have an impact on a large number of staff members across the business. Despite long-term benefits from this change, in the short-medium term there will be significant effort required to manage this change to ensure the success of these initiatives. This commitment to change must come from all levels of the organisation. ▪ Failure to adequately manage this change will not only result in the financial cost, but could also lead to even more inefficient management of the network, and increased staff turnover.

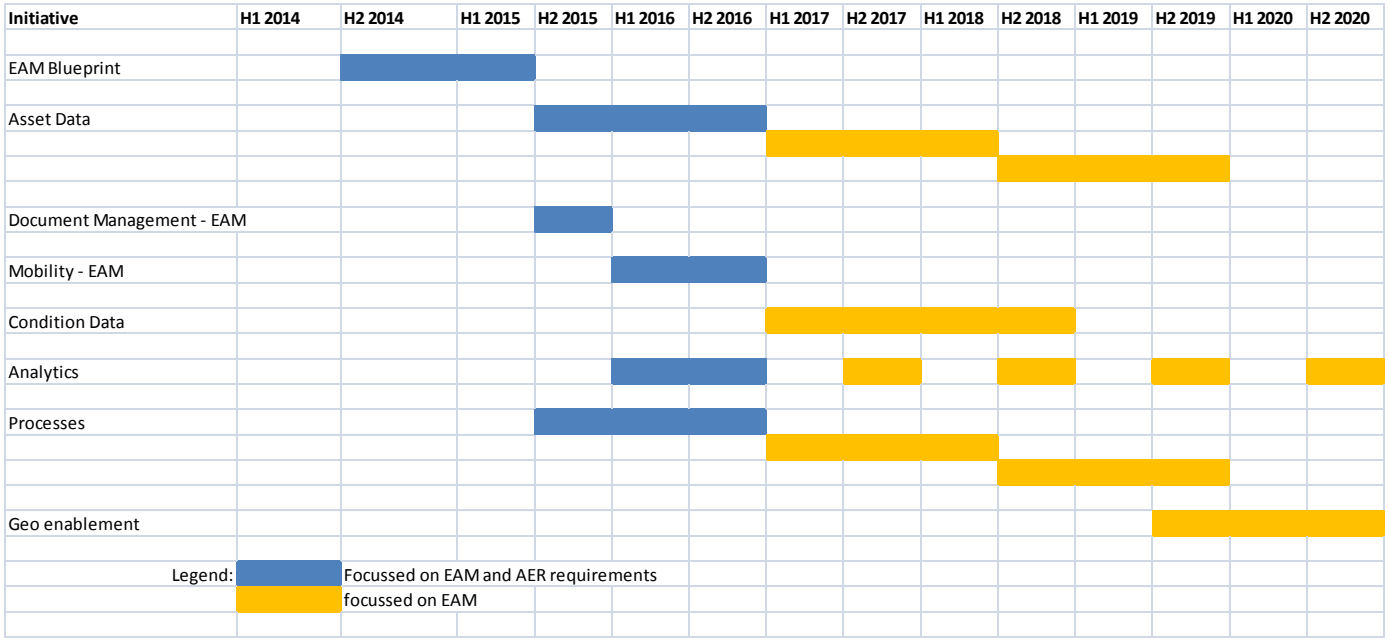
5.1.3 Option 1 Timescale

The diagram below outlines the high-level schedule of prerequisite initiatives and outcomes required to enable RIN data requirements and reporting:



This following figure displays an indicative high-level schedule of the specific core EAM initiatives that have been identified as prerequisites to enable RIN data requirements capture and reporting:

Figure 9: Delivery schedule of prerequisite business cases (as per *Business Case BC03 AER Category Analysis addendum*)



Note: The schedule above indicates that the AER Category Analysis related capabilities should be in place by the **end of the Calendar Year 2016**, assuming the necessary pre-requisites are achieved.

The most prudent and efficient method would be to have a coordinated program of work and perform the RIN data requirements analysis and design, build and execution in parallel with the broader EAM program and prerequisite business cases. Anticipated RIN-specific planning activities and roles have been outlined at a high level below. However, following detailed blueprint planning and analysis, it is expected generic activities for subsequent phases would be refined and expanded as required.

Table 11 Project timescale (in-line with Business Case BC03 AER Category Analysis addendum)

RIN specific Timescale Activity	Resource	Start Date	End Date
EAM Blueprint			
Planning – Business Requirements:		01/07/2014	**31/12/2014**
– Provide RIN specific input as part of business requirements collection and documentation process	RIN SME / Regulatory Team		
– Attend Full Business Requirements Finalisation Walkthrough Workshops	RIN SME / Regulatory Team		
– Review, approve and sign-off on RIN business requirements	Regulatory Team		
Planning – Business Process Definition:			
– Attend "**As-Is**" workshops	RIN SME / Regulatory Team		
– Attend "**To Be**" Workshops	RIN SME / Regulatory Team		
– Provide RIN context and inputs into "**To Be**" documentation process. For example: • Data structure definition as per RIN (functional locations, equipment types, classifications, etc) • Asset Condition and History Management • Asset register design, including level of detail required for RIN and link between financial and technical view • Redesign of cost allocation methodology aligns with AER guidance • Planning and Budgeting Process aligns with AER guidance and 5 year cycle • General Ledger supports RIN reporting • Overhead accounting as per RIN • Materials Planning and Forecasting • Inventory Management and reporting aligns to RIN reqs • Work Scheduling and Dispatching enables RIN reporting requirements to be met • Work Order Management categories and	RIN SME / Regulatory Team		

RIN specific Timescale Activity	Resource	Start Date	End Date
data enable RIN reporting • Project Structures design • Work Order Costing design inline with RIN reqs to enable benchmarking • Design of management and operational reports inline with RIN			
– Review Design Definition and provide sign-off	Regulatory Team		
Implementation (Generic Phase and indicative RIN activities)			
– Revisit and revise Business Requirements and Design (as required) in preparation for Implementation	RIN SME / Regulatory Team		
– Review Technical Specifications document to ensure all RIN business requirements have been adequately carried forward	RIN SME / Regulatory Team		
– Perform Solution Acceptance testing of RIN components (i.e. RIN specific functionality and reporting) to ensure they meet requirements, test objectives and quality acceptance criteria	RIN SME / Regulatory Team		
– Review developed user documentation and training specific to RIN functions and reporting	RIN SME / Regulatory Team		
– Review and sign-off on RIN deliverables as part Go/No Go Decision	Regulatory Team		
Warranty (Generic Phase and indicative RIN activities)			
– Perform Production Verification testing of RIN functionality and reporting	RIN SME / Regulatory Team		
– Final Acceptance and sign-off on RIN deliverables	Regulatory Team		

5.1.4 Option 1 Major Business Risks

Major business risks of this option are as follows.

The following risk assessment has been conducted in accordance with the SA Power Networks' corporate risk framework, including the application of the appropriate qualitative measures of likelihood and consequence, and the resulting overall risk rating as defined in Appendix C.

Table 16: Major business risks associated with Option 2

Risk ID	Risk Description (Risk Line Item)	Consequence Description	Inherent Likelihood	Inherent Consequences	Risk Rating
	New business processes undefined and/or misunderstood	Ambiguous business process objectives – take up of new solutions will be low	Possible (3)	Minor (2)	Low
	Insufficient collaboration with EAM initiatives.	EAM initiatives are expected to be rolled out across the organisation. If these initiatives are not implemented in conjunction with these financial management initiatives (particularly FIE02 – Financial Asset Register), there is risk the EAM will not deliver the expected benefits.	Possible (3)	Moderate (3)	MEDIUM (6)

5.2 Option 2 - Implement a standalone RIN reporting solution

Introduce a standalone solution for RIN compliance reporting to be integrated with SAP and other SA Power Networks systems. Extensive data capture and cleansing as well as systems and process enhancements will be required to enable fully automated and compliant RIN reporting.

5.2.1 Option 2 Project Costs

The table below is a summary of the project delivery costs. Please refer to the Financial Assessment Sheet in Appendix A for a detailed view of these costs.
To achieve the specified objectives, a capex budget of ***$46.5m*** has been estimated (with $26.6m required in ongoing opex). The total is comprised as follows:

- Standalone RIN reporting tool (based on figures produced for *BI Enablement Business Case Option 1*); and
- Supporting Data Management function (based on figures produced for *Data Management Business Case: Option 1*).

Table 12 Option 2 Delivery costs – Stand*alone RIN reporting tool ($M Real 2013/*14)

Cost component	Cost type	Financial Year 2014/15	Financial Year 2015/16	2016/17	2017/18	2018/29	2019/20	2015/16 - 2019/20	Grand Total
Standalone RIN reporting tool									
Labour Costs	Capex	1.109	1.505	0.525	0.305	0.305	0.305	**2.943**	**4.053**
Services Costs	Capex	0.089	0.133	0.089	0.089	0.089	0.089	**0.489**	**0.578**
Sub-Total		**1.198**	**1.638**	**0.614**	**0.394**	**0.394**	**0.394**	**3.433**	**4.631**
Data Management									
Labour Costs	Capex	0.334	0.462	0.128	-	-	-	**0.591**	**0.925**
Services Costs	Capex	0.727	0.727	-	-	-	0.727	**1.454**	**2.180**
Sub-Total		**1.061**	**1.189**	**0.128**	**-**	**-**	**0.727**	**2.044**	**3.105**
Integration									
Labour Costs	Capex	1.669	1.630	2.209	1.545	0.683	0.207	**6.274**	**7.943**
Services Costs	Capex	0.897	1.526	0.629	-	-	-	**2.155**	**3.052**
Sub-Total		**2.566**	**3.156**	**2.838**	**1.545**	**0.683**	**0.207**	**8.429**	**10.995**
Economic Benchmarking RIN									
Labour Costs	Capex	0.938	0.688	0.103	-	-	-	**0.791**	**1.729**
Services Costs	Capex	-	-	-	-	-	-	**-**	**-**
Sub-Total		**0.938**	**0.688**	**0.103**	**-**	**-**	**-**	**0.791**	**1.729**
Category Analysis RIN									
Labour Costs	Capex	2.802	2.055	0.309	-	-	-	**2.365**	**5.167**
Services Costs	Capex	-	-	-	-	-	-	**-**	**-**
Sub-Total		**2.802**	**2.055**	**0.309**	**-**	**-**	**-**	**2.365**	**5.167**
Annual RIN									
Labour Costs	Capex	2.525	1.851	0.278	-	-	-	**2.129**	**4.654**
Services Costs	Capex	-	-	-	-	-	-	**-**	**-**
Sub-Total		**2.525**	**1.851**	**0.278**	**-**	**-**	**-**	**2.129**	**4.654**
Reset RIN									

Labour Costs	Capex	3.427	2.513	0.377	-	-	-	**2.890**	**6.317**
Services Costs	Capex	-	-	-	-	-	-	**-**	**-**
Sub-Total		**3.427**	**2.513**	**0.377**	**-**	**-**	**-**	**2.890**	**6.317**
Universal Costs									
Data Capture	Capex	1.937	1.292	0.646	-	-	-	**1.937**	**3.875**
Data Governance	Capex	0.308	0.206	0.103	-	-	-	**0.308**	**0.617**
Change Management Costs	Capex	1.392	1.659	0.712	0.534	0.534	0.534	**3.973**	**5.365**
Sub-Total		**3.638**	**3.156**	**1.461**	**0.534**	**0.534**	**0.534**	**6.219**	**9.857**
Total		**18.156**	**16.247**	**6.108**	**2.473**	**1.610**	**1.861**	**28.300**	**46.456**

5.2.2 Option 2 Project Cost Assumptions

General:

- Tactical solutions to deliver RIN manually will be required until mid 2017
- It is assumed systems capability will be delivered by the end of 2016 Calendar Year, and RIN data will be captured for the 2017/2018 financial year
- First year of full RIN compliance FY17/18
- The underlying capability and integration required to support RIN Reporting will be delivered by other prerequisite business cases (dependencies outlined in *Section 4.1.2 Dependencies*)

Standalone RIN reporting tool:

- Does not include in-memory capabilities.

Data Management:

- Initial set up of the Enterprise Architecture toolset is costed in the Enterprise Architecture business case
- Set up and establishment of the necessary standards, processes to support the toolsets for Enterprise Architecture Management, Meta Data Management, Data Quality Management and Master Data Management (12 weeks and 2 full time resources)
- The material costs include the software costs for Information Steward of 701k in 2014
- Selection of the appropriate toolset for the Data Archiving solution (10 weeks and 2 full time resources)
- Set up and establishment of the necessary standards, processes to support the toolsets for Data Lifecycle Management (8 weeks and 2 resources) included in the 2015 labour costs
- It is suggested that there are 4 roll outs for the data archiving toolsets across the key areas (customer, assets, works management and human resources). Two of these roll outs have been costed as part of 2015 and two have been costed as part of 2016. The initial roll out in 2015 is for 10 weeks and 2 full time resources and the subsequent roll outs are for 8 weeks and 2 full time resources.

- The material costs include the licence costs of 524,000 for the Data Archiving solution. The costs have been included in 2015 as per the first year of the proposed roll out

5.2.3 Option 2 Recurrent Opex Costs

The table below is a summary of the ***$26.6m*** project recurrent/ on-going costs.

Table 13: Option 2 Recurrent costs ($M Real 2013/14)

Cost component	Cost type	Financial year	Financial Year						Total
		2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2015-20	
Interim tactical solution:									
Economic Benchmarking RIN									
Labour Costs	Opex	0.167	0.335	0.335	-	-	-	**0.670**	**0.837**
Services Costs	Opex	0.035	0.070	0.070	-	-	-	**0.140**	**0.175**
Category Analysis RIN									
Labour Costs	Opex	0.249	0.498	0.498	-	-	-	**0.995**	**1.244**
Services Costs	Opex	0.034	0.067	0.067	-	-	-	**0.134**	**0.168**
Annual RIN									
Labour Costs	Opex	0.160	0.320	0.320	-	-	-	**0.641**	**0.801**
Services Costs	Opex	0.068	0.068	0.068	-	-	-	**0.136**	**0.204**
Sub-Total		**0.713**	**1.358**	**1.358**	**-**	**-**	**-**	**2.716**	**3.429**
Standalone RIN reporting tool:									
Licence	Opex	0.361	0.180	0.180	0.180	0.180	0.180	**0.902**	**1.263**
Maintenance	Opex	0.206	0.127	0.143	0.158	0.174	0.190	**0.792**	**0.998**
Vendor Support	Opex	3.219	2.445	2.445	2.445	3.021	3.021	**13.379**	**16.598**
Sub-Total		**3.785**	**2.753**	**2.768**	**2.784**	**3.376**	**3.392**	**15.074**	**18.859**
Data Management:									
Labour Costs	Opex	0.707	0.707	0.330	0.330	0.330	0.330	**2.027**	**2.735**
Material Costs	Opex	0.212	0.212	0.278	0.278	0.278	0.278	**1.325**	**1.537**
Sub-Total		**0.919**	**0.919**	**0.608**	**0.608**	**0.608**	**0.608**	**3.353**	**4.272**
Total Costs		**5.417**	**5.030**	**4.735**	**3.393**	**3.985**	**4.001**	**21.142**	**26.560**

5.2.4 Option 2 Recurrent Cost Assumptions

The recurrent cost assumptions include:

General:

- Includes additional resources for running a data warehouse and business Intelligence tools specifically to manage RIN reporting requirements
- Tactical solutions to deliver RIN manually will be required until mid 2017. It is assumed systems capability will be delivered by the end of 2016 calendar year, and RIN data will be captured for the 2017/18 financial year
- Key system capability, enabling asset centric reporting required for RIN becomes available end of the 2017/18 financial year
- First year of full RIN compliance will be 2017/18 financial year

Standalone RIN reporting tool:

- The following activities/tasks/FTE are included in the estimated costs:
    - IT Architect x 1 FTE
    - Solution Architect x 2 FTEs
    - Project Business Analyst x 1 FTE
    - Project Manager x 1 FTE
    - Functional Analyst x 2 FTEs
    - Developer x 2 FTEs

Data management:

- Annual software maintenance fees of 22% of original purchase price.
- 2 full time resources (Data administrators) will be required on an ongoing basis to maintain the implemented toolsets.
- 1 full time resource (Data Analyst) is required in 2015 and 2016 to support the implementation of the data archiving solution.
- The services costs from 2015 include $154,264 per annum for the maintenance of Information Steward and 22% of the original purchase price ($524,000) for the Data Archiving solution.
- From time to time, there will be a requirement to apply upgrades and patches to the corporate ERP and other systems, which will impact the solution sets. The costs related to this work is not included in recurring costs for this Business Case as it applies across the entire system and will included in the overall system ongoing upgrade and enhancement costs.

Change Management:
The following assumptions have been made in the estimation of the change management cost:

- Training of staff during and post-delivery of the new systems and processes has been provided for all new tools detailed in this option.
- Up skilling of the Corporate Data Architect and the Data Administrator is on the job training.
- Operational Change Management, including IT training and support are included in these costs.
- The amount includes change costs during Planning & Delivery, and post-implementation/ warranty stages.
- A detailed breakdown of these costs is provided in the Evaluation Worksheet attached to this document.

5.2.5 Option 2 Expected Benefits

The following benefits are expected:

Table 14 Expected benefits

Benefit Type	Benefit Effect	Benefit	Measure	Date Benefit Expected	Value
Intangible	Direct	Meet RIN compliance requirements	Single source of data, improving the integrity, quality and timeliness of reporting. Avoidance of penalties	01/07/2018	-
Intangible	Direct	Savings in administrative, legal and consultancy costs for the AER, SA Power Networks and other stakeholders. The AER considers the increased transparency and consistency in regulatory process will reduce the costs of all parties associated with legal scrutiny, with potentially fewer and/or more limited appeals [9]	Savings in administrative, legal and consultancy costs for the AE	01/07/2018	-
Tangible	Direct	Process Efficiency and Cost Reduction	Single source of data, improving the integrity, quality and timeliness of reporting. Cost avoidance of additional resources for RIN compliance	Not determined	-
Intangible	Indirect	Better informing users about matters which may affect their interests, thus enabling them to better engage and further their own interests through the regulatory process.	Single source of data, improving the integrity, quality and timeliness of reporting to enable better analysis of information and therefore positioning with the AER		-

[9] Source: Explanatory Statement - Expenditure Forecast Assessment Guideline. November 2013

Benefit Type	Benefit Effect	Benefit	Measure	Date Benefit Expected	Value
Tangible	Direct	Reduced paper and printing costs due to process automation and elimination of manual processes	Paper consumption Printing costs	2017	-
Intangible	Direct	Improved Regulatory Planning & Modelling process	▪ Reduction in the cycle time to generate Regulatory Plan. ▪ Regulatory Planning & Modelling process executed within the corporate system. ▪ Cost reductions, better cash management, and less financial risk from improved processes and a better view of the future.	2019	-
Intangible	Direct	Parallel ledgers for Regulatory accounting enable accurate, efficient transaction processing and timely reporting	▪ Parallel Ledgers operating as expected for Regulatory accounts. ▪ Segment Reporting available for both the Balance Sheet and Income Statement. ▪ Activity Based reporting meets the requirements of the AERs Regulatory Information Notices.	2016	-
Tangible	Direct	Opportunity saving in resources due to more efficient capability to meet the AER RIN requirements	▪ Ability to extract required reporting data from the Corporate ERP	2015	3.5 FTEs at approx $475k p.a.

5.2.6 Option 2 Expected Dis-benefits

Table 20: Expected dis-benefits

Dis-benefit	Consequence outcome (Value, Measure)
Significant outlay of funds required for additional warehousing and reporting tools	Insufficient return on investment
Additional resources required to run and manage the warehouse and reporting function, maintaining in line with RIN reporting requirements	Additional costs and training
SA Power Networks staff may not be engaged and will return to use of off-system products rather than use the new system	The significant benefits associated with the implementation of the new toolsets will not be realised. Resources will require extra time and effort to produce the increasing level of detail required.
Additional time spent to gather customer and asset related information	As it is expected that field staff will be required to capture more information than is currently done, it will take additional time of the field staff. However it is expected to be minimal.
Additional support for enhanced functionalities and more field staff who are mobility enabled	• This will take additional effort and resources to sufficiently support and train SA Power Networks staff.
Short-medium term cultural impact	• Implementing EAM as detailed will have an impact on a large number of staff members across the business. Despite long-term benefits from this change, in the short-medium term there will be significant effort required to manage this change to ensure the success of these initiatives. This commitment to change must come from all levels of the organisation. *Failure to adequately manage this change will not only result in the financial cost, but could also lead to even more inefficient management of the network, and increased staff turnover.*
Reconciliation of financial information between RIN reporting solution and ERP	• Financial information required to reconcile to statutory accounts, contained in ERP GL. Reconciliation will be required with stand alone RIN reporting system.

5.2.7 Option 2 Timescale

Table 21: Project timescale

Timescale Activity	Start Date	End Date
Standalone RIN reporting tool enablement – Project	*Jul 2014*	*Dec 2016*
Standalone RIN reporting tool enablement - Benefits	*Dec 2016*	*Ongoing*

5.2.8 Option 2 Major Business Risks

Major business risks of this option are as follows.

The following risk assessment has been conducted in accordance with the SA Power Networks' corporate risk framework, including the application of the appropriate qualitative measures of likelihood and consequence, and the resulting overall risk rating as defined in Appendix C.

Table 22: Major business risks associated with Option 2

Risk ID	Risk Description (Risk Line Item)	Consequence Description	Inherent Likelihood	Inherent Consequences	Risk Rating
	Project risk, i.e., typical risks associated with delivering initiatives using a standard project lifecycle approach	Unacceptable scoring of measures against which the project is monitored, i.e., Schedule, Scope, Quality, Risk Management and Cost	Possible (3)	Moderate (3)	Medium (6)
	Lack of adherence to governance, principles or strategy.	Significant likelihood of failure.	Unlikely (2)	Major (4)	Medium (6)
	Implementation or usage is limited to specific business units rather than providing the enterprise-wide capability	Only some of the benefits will be realised and others will be eroded as initiatives are duplicated.	Likely (4	Minor (2)	Medium (6)

6. High Level Summary of Options

Business Case	Alternate options	Cost impact rating	Risk Rating	Reasons leading to selecting the preferred option
RIN compliance reporting	0. Do nothing	High	High	Advantages: • No disruption to the business resulting from changes in systems and processes Disadvantages: • Exposes SA Power Networks to increased risk and non-compliance with RIN reporting requirements. Significant financial and reputational penalties may result • Significant manual work arounds required, increasing costs through additional personnel • Prolonged heavy workloads may lead to staff turnover of experienced key personnel
	1. Extend SAP solution for RIN reporting **(Preferred Option)**	**Medium**	**Low**	Advantages: • Compliance with RIN reporting requirements • Extends the current SAP system and leverages prior investment • Efficiency gains in project and asset costing which will allow SA Power Networks, with improved forecasting information, to prioritise areas of expenditure to meet strategic objectives • Increased ability in Asset Lifecycle Management via better planned maintenance routines and better expenditure forecasting Disadvantages: • Significant change impact on staff, both systems and process. • Initial cost impact
	2. Implement a standalone RIN reporting solution	High	Low	Advantages: • Compliance with RIN reporting requirements • Highly automated solution that significantly reduces the time and effort to produce the RINs • Efficiency gains in project and asset costing which will allow SA Power Networks, with improved forecasting information, to prioritise areas of expenditure to meet strategic objectives • Increased ability in Asset Lifecycle Management via better planned maintenance routines and better expenditure forecasting Disadvantages:

Business Case	Alternate options	Cost impact rating	Risk Rating	Reasons leading to selecting the preferred option
				• Significant change impact on staff, both systems and process. • Substantial cost impact with little benefit over option two • Time (and cost) impact on designing the reporting tool to deliver the completed RINs • Format changes in RINs will need to be reproduced in the reporting tool, creating an ongoing impact on resources and therefore costs of design, build and test of the reporting tool • Reconciling to 'one source of the truth'

7. Recommendation

Option 1 – Extend SAP solution for RIN reporting is considered the preferred option as it leverages and extends the current SAP system and processes to enable SA Power Networks to meet RIN compliance reporting requirements.

The business benefits, costs and associated risks outlined for each option in Section 4 support this recommendation. Additional key reasons for the recommendation are:

- The recommended approach satisfies the National Electricity Rules expenditure objectives;
- Implementing the Preferred Option will enable SA Power Networks to prudently and most efficiently achieve RIN compliant reporting and will also provide more accurate and timely information for key decision makers across the business; and
- Compliance with RIN data requirements and reporting will enable the AER to set efficient expenditure allowances, allow business units to improve processes and maximise the direct social benefit to customers and the community.

The below table illustrates the key components of the options analysis whereby the recommended option has the competitive cost, competitive NPV, least risk and is therefore ranked first overall.

#	Option	Cost[10]	NPV[11]	Overall Risk Rating	Benefits	Overall rank
0.	**Do Nothing**	$22.4m	-$18.9m	High	Intangible	3
1.	**Extend SAP solution for RIN reporting (revised)**	**$25.1m**	**-$19.3m**	**Medium**	**Intangible**	**1**
2.	Implement a standalone RIN reporting solution	$73.0m	-$62.3m	High	Intangible	2

Table 24: Recommended option

The "Do Nothing" option (Option 0) is not considered a viable option as it is unsustainable recurrent opex without any control mechanism for reduce expenditure over time. It also exposes SA Power Networks to increased risk of non-compliance with AER RIN reporting requirements and financial penalties.

Option 2 – Implement a standalone RIN reporting solution is also not the preferred option. Although it would minimise the risk of non compliance with AER RIN reporting requirements and reduce the administrative burden of completing the RINs, it does not leverage any previous investment and places a significant cost burden on SA Power Networks without providing due benefit or return on investment.

[10] $ Real 2013/14. The period is from 2014/15 to 2019/20.
[11] Discount Rate 5.44%. Base Year 2013/14.

7.1 References

The following documents were referenced in completion of this document:

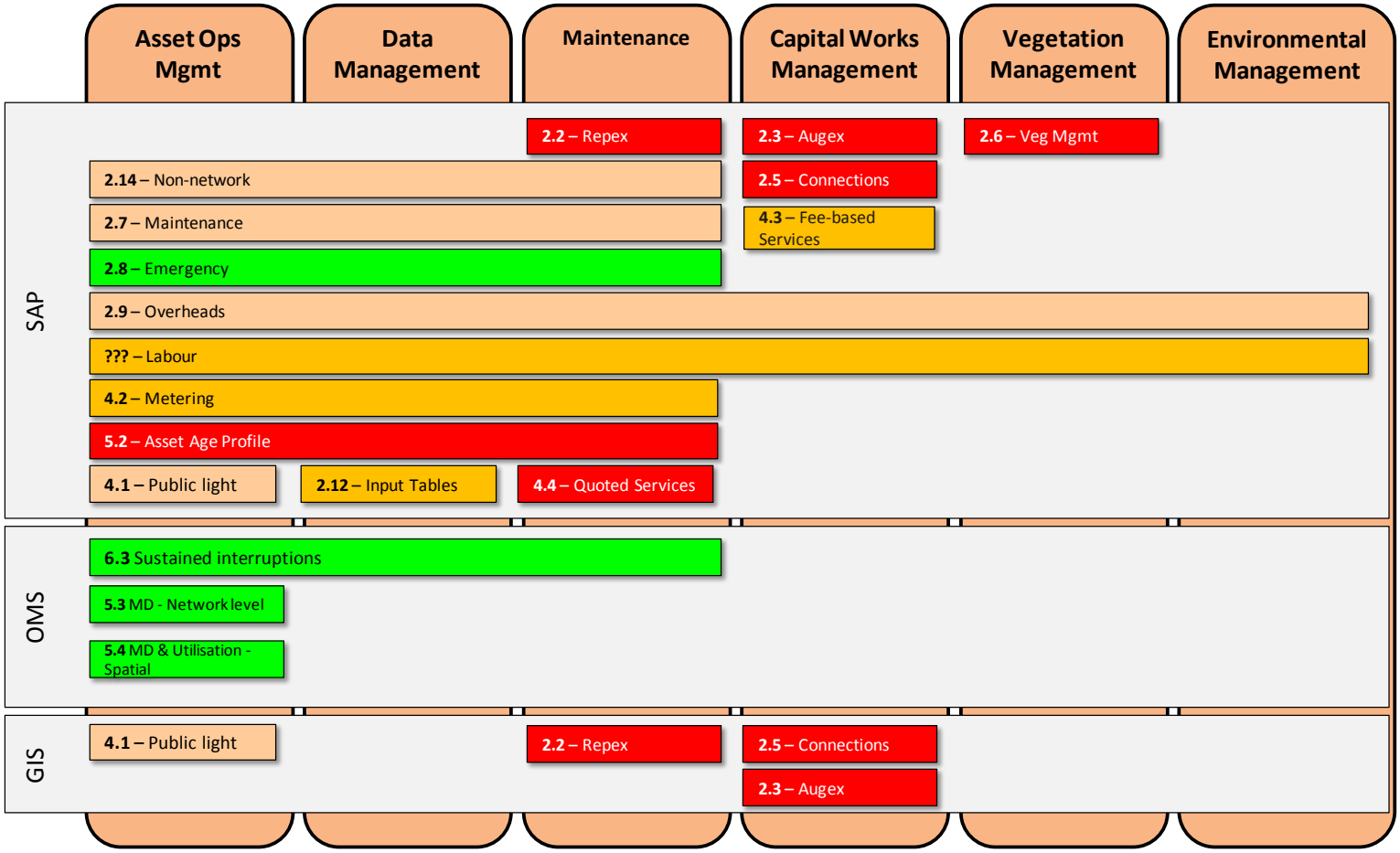
Ref	Document Name	Date	Version	Author
	SA Power Networks Basis of preparation – Economic Benchmarking RIN			
	SA Power Networks Basis of preparation – Category Analysis RIN			
	20131207 Appendix B - AER Draft RIN Category Analysis Data Templates			
	AER explanatory statement - category analysis draft RIN - September 2013			
	DNSP economic benchmarking data templates – Actual Information			
	DNSP economic benchmarking data templates – Consolidated Information			
	DNSP economic benchmarking data templates – Estimated Information			
	Economic benchmarking RIN for distribution network service providers – Instructions and Definitions			
	SA Power Networks - ANNUAL RIN - 2012-13 to 2014-15 templates financial information			
	SA Power Networks - Annual RIN - 2012-13 to 2014-15 templates non financial information			

7.2 Acronyms and Abbreviations

Acronym / Abbreviation	Definition
AER	Australian Energy Regulator
RIN	Regulatory Information Notice
RIO	Regulatory Information Order

7.2.1 Category Analysis RIN

Leveraging the supporting Basis of preparation documentation developed to accompany the current RIN submission we have used this analysis to generate a high-level snapshot of the gaps in “actual information” and SA Power Networks systems and processes.



CA RIN – Financial data

			Current State – SA Power Networks Category Analysis RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual / estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Expenditure Summary	SAP - GL	Actual		X	X		X	X	High	High	CAM used for categorisation / allocation
	Repex	SAP - GL SAP - EAM HV Database	Estimate		X	X		X	X	High	High	Information not captured at detail level (feeder type (CBD, URBAN etc); CAM used. Fin Yr issue applies.
	Augex	SAP - GL spreadsheets	Estimate		X	X	X	X	X	V.High	High	Project expenditure not recorded correctly, necessary data not captured or not well captured. Many Augex projects do not have dedicated project controls. Fin Yr issue has impact
	Connections	SAP- GL GIS SAP - EAM	Estimate		X	X	X	X	X	V.High	High	Information not captured in sufficient detail to fulfil AER requirements
	Non-Network	SAP	Actual	X						-	-	
	Vegetation Management	SAP GL	Estimate			X	X	X		V.High	High	Reliant on third parties and accuracy of asset register
	Maintenance	SAP GL	Estimate		X			X		Med	Med	Inadequate record of assets owned, and maintenance data and job cards stored in SAP on limited basis and costs recorded at Feeder level only

			Current State – SA Power Networks Category Analysis RIN Reporting Process								
#	RIN data category	Data Source	Nature of data (Actual / estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Emergency Response	OMS	Actual	X	X					-	-	Requires manual process. Capitalisation not in line with SA Power Networks Accounting Policy
	Overheads	SAP GL	Estimate		X			X	X	Med	Med	Cost centres capture some of the data, not all of it
	Labour	SAP	Estimate		X	X		X	X	High	High	Classification and grouping of labour issue
	Public Lighting	SAP GL	Estimate			X				Med	Med	Currently a negotiated Service. This may change, currently no systems to support it
	Metering	SAP	Estimate		X		X	X		High	High	Data captured, process issue to break down costs
	Fee Based Services	SAP	Estimate		X		X	X		High	High	Data captured, process issue to break down costs
	Quoted Services		Estimate		X		X	X		High	High	Data captured, process issue to break down costs

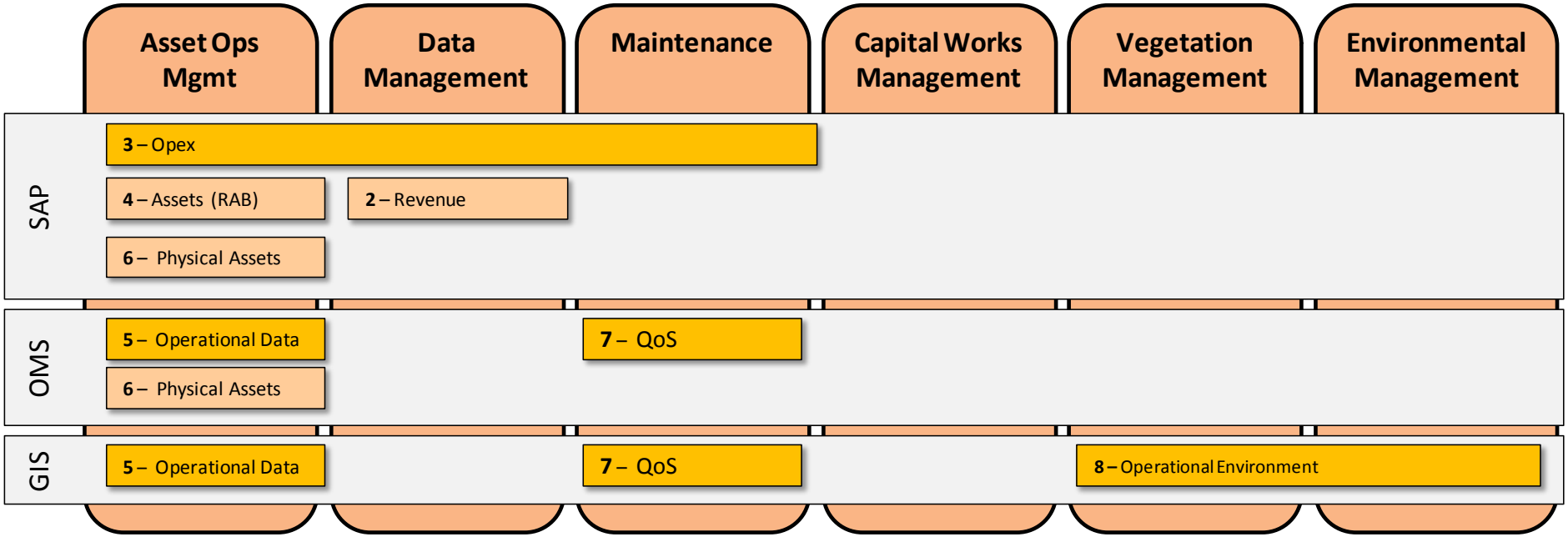
CA RIN – Non-financial data

			Current State – SA Power Networks Category Analysis RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field NOT availabl e	Accuracy/i ntegrity	level of detail	AER categorisation issue			
	Repex	GIS SAP - EAM	Estimate		X	X	X	X	X	V.High	High	Information not captured at detail level. Record of all assets owned is incomplete, locations incomplete. Commission date not available
	Augex	GIS SAP - EAM spreadsheets	Estimate		X	X	X	X	X	V.High	High	Information not captured at detail level or information incomplete.
	Connections	GIS SAP - EAM SAP CARE	Estimate		X	X	X	X	X	V.High	High	Information not captured in sufficient detail to fulfil AER requirements
	Non-Network	SAP GL, Financial Asset Register	Estimate		X			X	X	Med	Med	Manually intensive to extract data in correct format and reconcile.
	Vegetation Management	SAP Asset Register	Estimate			X	X	X		V.High	High	Reliant on third parties and accuracy of asset register
	Maintenance	SAP Asset Register	Estimate		X			X		Med	Med	Inadequate record of assets owned, and maintenance data and job cards stored in SAP on limited basis. costs recorded at Feeder level only
	Labour	SAP	Estimate		X	X		X	X	High	High	Classification and grouping of labour issue
	Public Lighting	SAP Asset Register	Estimate			X				Med	Med	Currently a negotiated Service. This may change, currently no

			Current State – SA Power Networks Category Analysis RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field NOT availabl e	Accuracy/i ntegrity	level of detail	AER categorisation issue			
		GIS										systems to support it
	Metering	Excel, Asset Management System	Estimate		X		X	X		High	High	Data captured, process issue to capture detail at correct level
	Fee Based Services	Excel, Asset Management System	Estimate			X	X	X		V.High	High	Data captured, process issue to capture detail at correct level
	Quoted Services		Estimate			X	X	X		V.High	High	Data captured, process issue to capture detail at correct level
	Asset Age Profile	SAP Asset Register	Estimate		X			X		V.High	High	Data has not been captured or if captured, not at necessary level of detail
	MD - Network Level	OMS	Actual	X						-	-	
	MD & Utilisation - Spatial	OMS	Actual	X						-	-	
	Sustained Interruptions	OMS	Actual	X						-	-	Classification of feeder is an issue

7.2.2 Economic Benchmarking RIN

Leveraging the supporting Basis of preparation documentation developed to accompany the current RIN submission we have used this analysis to generate a high-level snapshot of the gaps in “actual information” and SA Power Networks systems and processes.



ECON RIN – Financial data

#	RIN data category	Data Source	Current State – SA Power Networks Economic Benchmarking RIN Reporting Process							Complex Factor	Change Factor	Explanatory Notes
			Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality					
				Meets RIN data reqs	System & Field avail / Process issue	System or Field NOT availabl e	Accuracy / integrity	level of detail	AER categorisation issue			
	Revenue	SAP - GL ESCOSA Fin Reports	Estimate		X			X	X	Med	Med	Revenue not separately recorded by Incentive Scheme, Customer Type & chargeable qty
	Opex	SAP - GL	Actual	X						-	-	Costs attributed to SCS using CAM
	Assets (RAB)	SAP - EAM	Actual		X			X		Med	Med	Predominantly Roll forward calculations are estimates

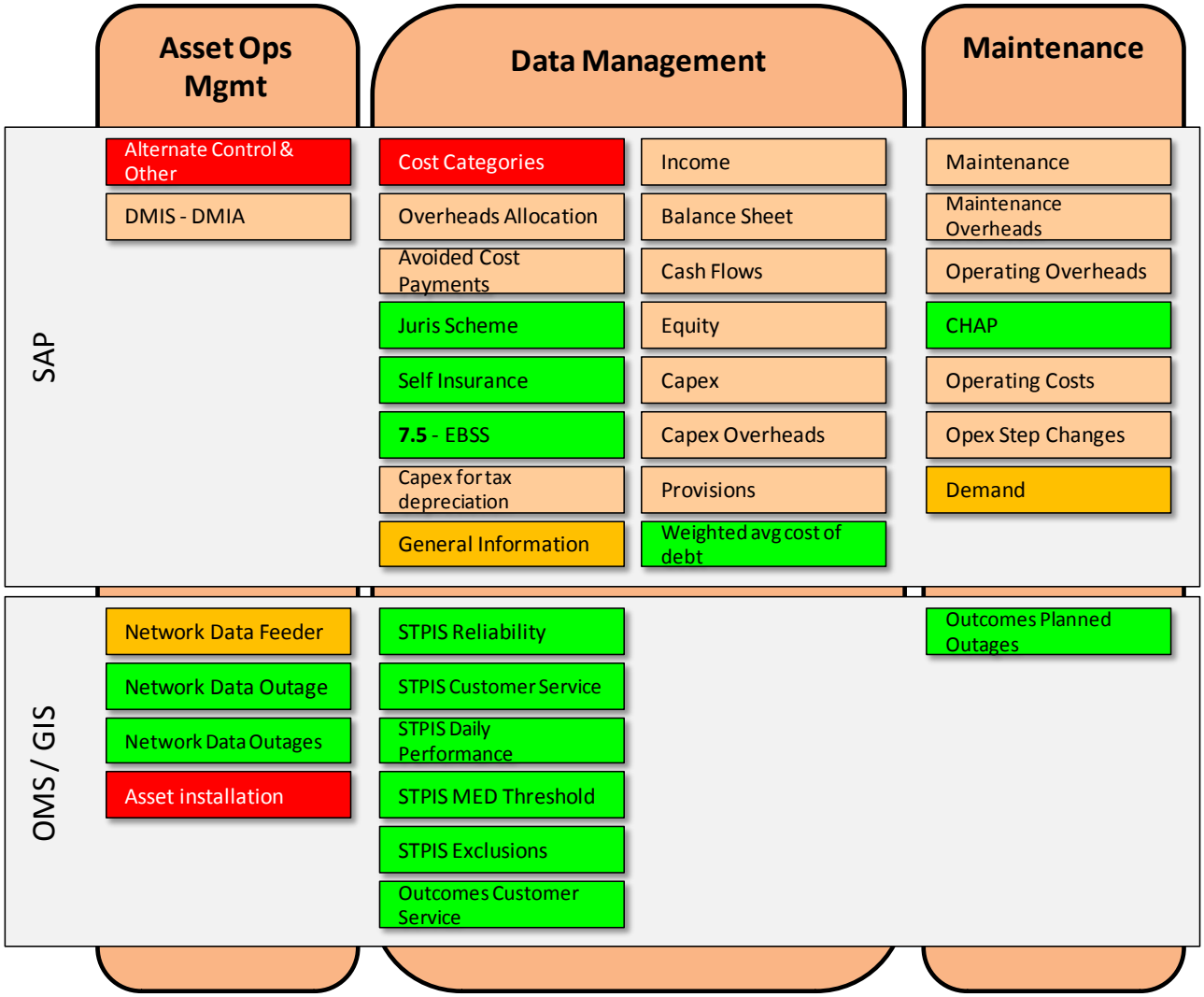
ECON RIN – Non-financial data

#	RIN data category	Data Source	Current State – SA Power Networks Economic Benchmarking RIN Reporting Process							Complex Factor	Change Factor	Explanatory Notes
			Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality					
				Meets RIN data reqs	System & Field avail / Process issue	System or Field NOT availabl e	Accuracy / integrity	Level of detail	AER categorisation issue			
	Assets (RAB)	SAP - EAM	Estimate		X			X		High	High	Classification and aging of network assets - level of detail required and date of commissioning lacking

			Current State – SA Power Networks Economic Benchmarking RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field NOT availabl e	Accuracy / integrity	Level of detail	AER categorisation issue			
	Operational data	NESS CIS/OV GIS OMS SCADA	Estimate			X		X	X	High	High	No SCADA monitor over SWER systems Energy delivery / received Grouping not separately record
	Physical Assets	GIS Spreadsheet SAP - EAM	Estimate			X		X	X	Med	Med	Distribution transfer Capacity & installed capacity not recorded or categorised per AER Cold capacity not recorded
	Quality of Services	CIS/OV OMS GIS	Actual			X			X	High	High	Data OK for SAIDI and SAIFI System losses not measured or recorded. Energy not supplied - Type 6 metering only read 1/4ly
	Operating Environment	BoM AWS GIS Veg. Contractors	Estimate			X		X		High	High	No. of poles not recorded Route Line length not recorded

7.2.3 Annual RIN

Leveraging the supporting Basis of preparation documentation developed to accompany the current RIN submission we have used this analysis to generate a high-level snapshot of the gaps in “actual information” and SA Power Networks systems and processes.



ANNUAL RIN – Financial Data

			Current State – SA Power Networks Annual RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Income	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Difference between accounting policy between regulatory and statutory reports
	Balance Sheet	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Difference between accounting policy between regulatory and statutory reports
	Cash flows	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Difference between accounting policy between regulatory and statutory reports
	Equity	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Difference between accounting policy between regulatory and statutory reports
	Capex	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Difference between accounting policy between regulatory and statutory reports
	Capex Overheads	SAP - GL	Actual		X	X			X	Med	Med	CAM classification of overheads
	Capex for tax depreciation	Spreadsheets	Actual			X			X	Med	Med	Tax Book for Assets managed on spreadsheet

			Current State – SA Power Networks Annual RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Maintenance	SAP - GL	Actual		X	X			X	Med	Med	CAM classification of maintenance expenditure. Categories exist in GL
	Maintenance Overheads	SAP - GL	Actual		X	X			X	Med	Med	CAM classification of overheads
	Operating Costs	BW	Actual		X	X			X	Med	Med	CAM used. Fin yr issue
	Operating Overheads	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue;
	Cost Categories	SAP - GL	Actual		X	X		X	X	High	High	Definitions differ between those adopted by SA Power Networks in regulatory sub forecasts and AER RIN
	Opex Step Change	SAP - GL	Actual		X	X			X	Med	Med	CAM would be used to allocate costs
	Provisions	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; manual calculations done
	Overheads Allocation	SAP - GL	Actual		X	X			X	Med	Med	CAM classification of overheads
	Avoided Cost Payments	SAP - GL	Actual		X	X			X	Med	Med	No payments made under clause 5.5(h) of NER. Systems not set up to capture
	Alternative Control & Other	SAP - GL	Actual		X	X		X	X	High	High	SA Power Networks systems do not capture financial Metering information to necessary detail

			Current State – SA Power Networks Annual RIN Reporting Process								
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	EBSS	Annual RIN	Actual	X						-	-	Sourced from other tables in Annual RIN
	Juris Scheme	SAP - GL	Actual	X						-	-	PV feed in Tariff
	DMIS - DMIA	SAP - GL	Actual		X	X			X	Med	Med	No DMIS or DMIA projects submitted. Systems not set up to capture
	Self Insurance	SAP - GL	Actual	X						-	-	
	CHAP	SAP - GL	Actual	X						-	-	Impact of changes in accounting policy (materiality applies)
	Weighted avg cost of debt	SAP	Actual	X						-	-	

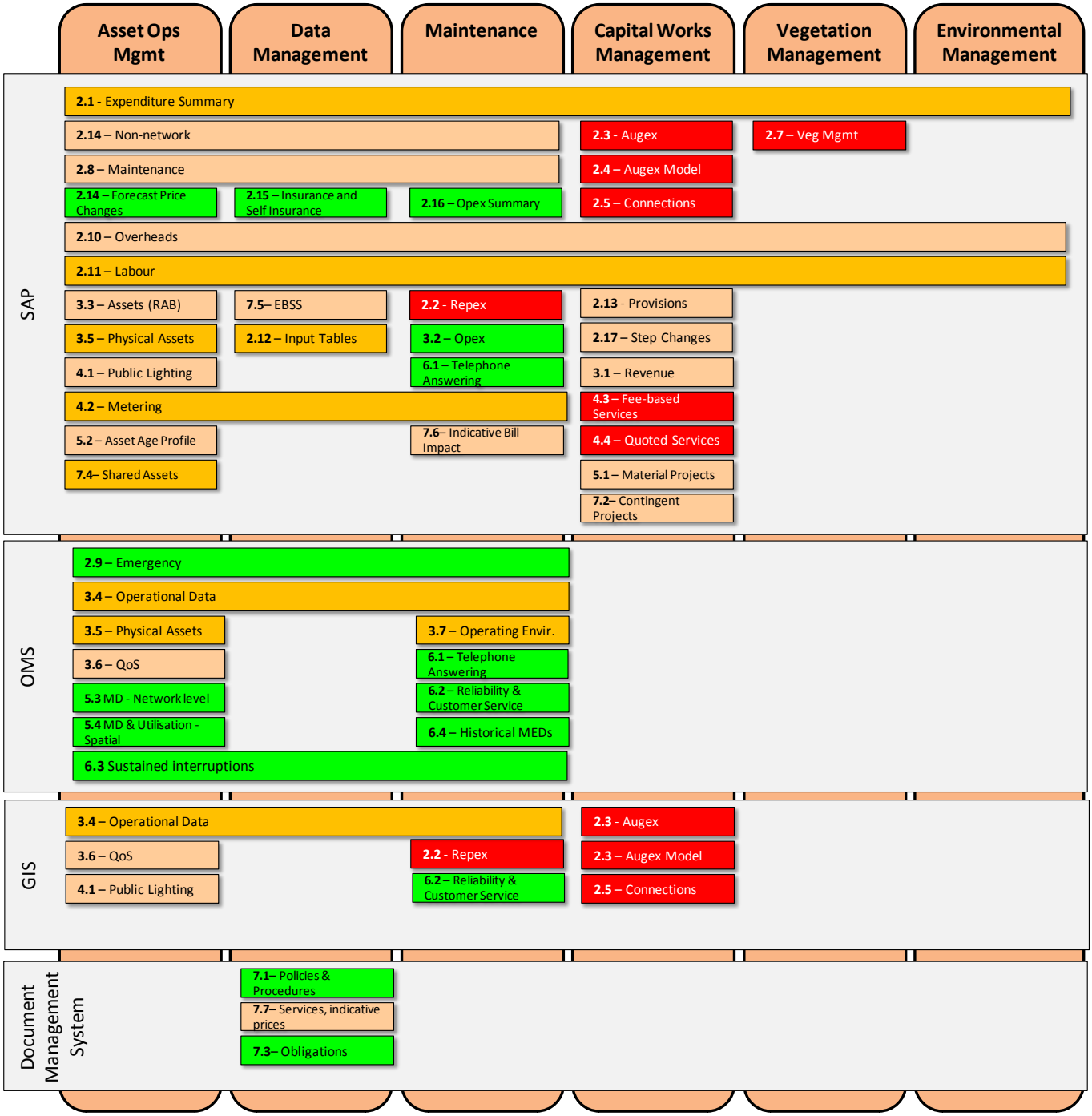
ANNUAL RIN – Non-financial data

			Current State – SA Power Networks Annual RIN Reporting Process								
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	STPIS Reliability	OMS GIS Customer Service data	Actual	X				X	X	Low	Low	Unplanned SAIDI & SAIFI captured - classification of CBD v Urban v Rural an issue plus link to customer

	STPIS Customer Service	SAP Care CIS OMS	Actual	X		X		X	X	Low	Low	Contact Centre has information but does not categorise by new connections and street light repair
	STPIS Daily Performance	OMS GIS Customer Service data	Actual	X				X	X	Low	Low	Unplanned SAIDI & SAIFI captured but classification of CBD v Urban v Rural an issue plus link to customer
	STPIS MED Threshold	OMS GIS Customer Service data	Actual	X						-	-	All fields populated
	STPIS Exclusions	OMS GIS Customer Service data	Actual	X						-	-	All fields populated
	STPIS GSL	OMS GIS Customer Service data	Actual	X						-	-	
	Demand	OMS GIS SCADA	Estimate		X	X		X		High	High	Weather normalised demand is not recorded at individual zone substation level.
	Outcomes Customer Service	OMS GIS Customer Service data	Actual	X						-	-	Quality of Supply not completed but detailed customer service info. available
	General Information	OMS GIS Customer Service data	Estimate		X	X		X	X	High	High	Transformers not captured at requisite level of detail. Metered supply points not mapped at detail level.
	Network data Outage	OMS GIS	Actual	X						-	-	

		Customer Service data										
	Network data feeder	OMS GIS Customer Service data	Actual		X	X		X	X	High	High	Classification of feeders and reading info differs
	Network data Outages	OMS GIS Customer Service data	Actual	X				X	X	Low	Low	Categorisation issue by SA Power Networks - Equipment Failure; Third party impacts
	Outcomes Planned Outages	OMS GIS Customer Service data	Actual	X						-	-	
	Asset Installation	OMS GIS Customer Service data	Estimate		X	X	X	X		V.High	High	Asset data capture and level of detail is lacking

7.2.4 Reset RIN



RESET RIN – Financial Data

			Current State – SA Power Networks Reset RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Expenditure Summary	SAP - GL	Actual		X	X		X	X	High	High	CAM used for categorisation/allocation
	REPEX	SAP - GL SAP - EAM HV Database	Estimate		X	X		X	X	High	High	Information not captured at detail level. Fin Yr issue applies.
	Augex	SAP - GL SAP - EAM spreadsheets	Estimate		X	X	X	X	X	V.High	High	Project expenditure not recorded at unit cost, data not well captured. Many Augex projects do not have dedicated project controls. Fin Yr issue has impact
	Connections	SAP- GL GIS SAP - EAM	Estimate		X	X	X	X	X	V.High	High	Information not captured in enough detail to fulfil AER requirements.
	Non-Network	SAP	Actual	X						-	-	
	Vegetation Management	SAP GL	Estimate			X	X	X		V.High	High	Reliant on third parties and accuracy of asset register
	Maintenance	SAP GL	Estimate		X			X		Med	Med	Inadequate record of assets owned, and maintenance data and job cards stored in SAP on limited basis and costs recorded at Feeder level only
	Emergency Response	OMS	Actual	X	X					Low	Low	Requires manual process. Capitalisation not in line with SA

			Current State – SA Power Networks Reset RIN Reporting Process								
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
												Power Networks Accounting Policy
	Overheads	SAP GL	Estimate		X			X	X	Med	Med	Cost centres capture some of the data, not all of it
	Labour	SAP	Estimate		X	X		X	X	High	High	Classification and grouping of labour issue
	Provisions	SAP - GL	Actual		X	X			X	Med	Med	CAM used. Fin yr issue; Need to manually allocate changes in provision to CAPEX or OPEX
	Forecast Price Changes	SAP GL SAP Asset Register	Estimate	X						-	-	By its nature, it's an estimate but to be reasonable, needs good level of detail in records kept
	Insurance and Self Insurance	SAP - GL	Actual	X						-	-	
	OPEX Summary	SAP - GL	Actual	X						-	-	Costs attributed using CAM
	Step Changes	SAP - GL	Actual		X	X			X	Med	Med	CAM would be used to allocate costs if they applied
	Revenue	SAP - GL ESCOSA Fin Reports	Estimate		X			X	X	Med	Med	Revenue not separately recorded by Incentive Scheme, Customer Type & chargeable qty
	Opex	SAP - GL	Actual	X						-	-	Costs attributed using CAM
	Assets (RAB)	SAP - EAM	Actual		X			X		Med	Med	Predominantly Roll forward calculations are estimates
	Public Lighting	SAP GL	Estimate			X				Med	Med	Currently a negotiated Service. This may change, currently no systems to support if it does

			Current State – SA Power Networks Reset RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Metering	SAP	Estimate		X		X	X		High	High	Data captured, process issue to break down costs
	Fee Based Services	SAP	Estimate		X		X	X		High	High	Data captured, process issue to break down costs
	Quoted Services		Estimate		X		X	X		High	High	Data captured, process issue to break down costs
	Material Projects	SAP Project Module	Estimate		X			X	X	Med	Med	Costs not accurately captured against projects
	Contingent Projects		Estimate			X				Med	Med	No means of logging (in SAP) contingent projects plus trigger events
	Shared Assets	SAP - GL Asset Register	Estimate		X	X		X	X	High	High	Revenue by shared asset not separately recorded
	EBSS	SAP	Actual					X		Med	Med	CAM used - fin yr issue; difference between accounting policy (capitalise or not) between regulatory and statutory reports
	Indicative Bill impact	Customer Relationship SAP GL	Estimate		X			X		Med	Med	Require Dist cost as % of electricity bill and split between residential and business
	Services, indicative prices		Estimate		X			X		Med	Med	Detail not captured at necessary level

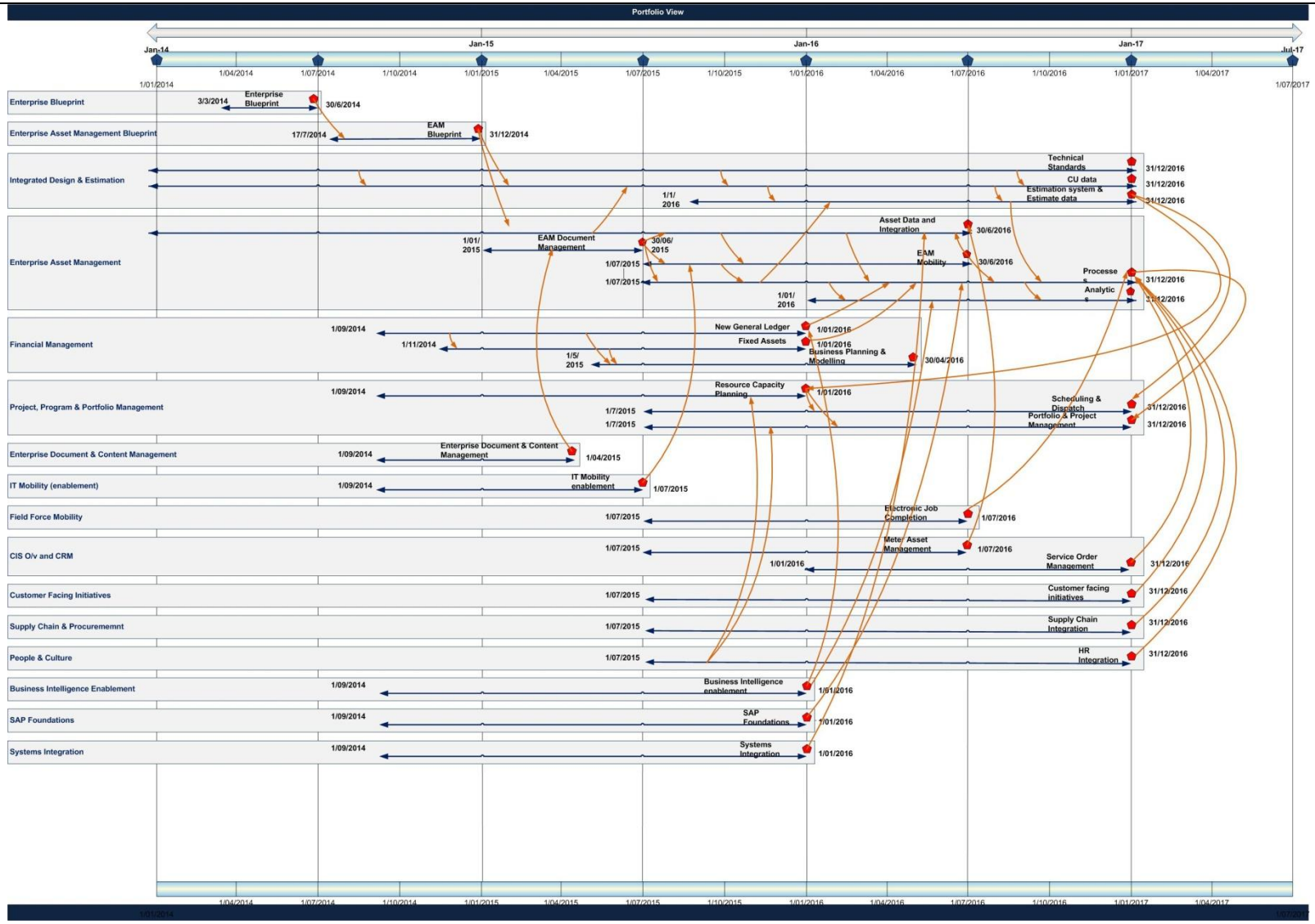
RESET RIN – Non-Financial Data

			Current State – SA Power Networks Reset RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	REPEX	GIS SAP - EAM	Estimate		X	X	X	X	X	V.High	High	Information not captured at detail level. Record of all assets owned is incomplete
	Augex	GIS SAP - EAM spreadsheets	Estimate		X	X	X	X	X	V.High	High	Information not captured at detail level. Record of all assets owned is incomplete
	Augex Model	GIS SAP - EAM spreadsheets	Estimate		X	X	X	X	X	V.High	High	Information not captured at detail level. Record of all assets owned is incomplete
	Connections	GIS SAP - EAM SAP CARE	Estimate		X	X	X	X	X	V.High	High	Manually selected SAP data
	Non-Network	SAP GL, Financial Asset Register	Estimate		X			X	X	Med	Med	Manually intensive to extract data in correct format and reconcile.
	Vegetation Management	SAP Asset Register	Estimate			X	X	X		V.High	High	Reliant on third parties and accuracy of asset register
	Maintenance	SAP Asset Register	Estimate		X			X		Med	Med	Inadequate record of assets owned, and maintenance data and job cards stored in SAP on limited basis, costs recorded at Feeder level only
	Labour	SAP	Actual	X						-	-	May be classification and grouping process issue

			Current State – SA Power Networks Reset RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Assets (RAB)	SAP - EAM	Estimate		X			X		Med	Med	Classification and aging of network assets - level of detail required and date of commissioning lacking *
	Operational data	NESS CIS/OV GIS OMS SCADA	Estimate			X		X	X	High	High	SWER - No SCADA monitor over SWER systems Energy delivery and received Grouping - information not separately record in AER category
	Physical Assets	GIS Spreadsheet SAP - EAM	Estimate			X		X	X	High	High	Distribution transformer Capacity & installed capacity not recorded or categorised per AER Cold capacity not recorded
	Quality of Services	CIS/OV OMS GIS	Actual			X			X	Med	Med	data OK for SAIDI and SAIFI System losses not measured or recorded Energy not supplied - Type 6 metering only read 1/4ly
	Operating Environment	BoM AWS GIS Veg. Contractors	Estimate			X		X		High	High	No. of poles not recorded Route Line length not recorded
	Public Lighting	SAP Asset Register GIS	Estimate			X				Med	Med	Currently a negotiated Service. This may change, currently no systems to support it
	Metering	Excel, Asset Management	Estimate		X		X	X		High	High	Data captured, process issue to capture detail at correct level

			Current State – SA Power Networks Reset RIN Reporting Process									
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
		System										
	Fee Based Services	Excel, Asset Management System	Estimate			X	X	X		V.High	High	Data captured, process issue to capture detail at correct level
	Quoted Services		Estimate			X	X	X		V.High	High	Data captured, process issue to capture detail at correct level
	Asset Age Profile	SAP Asset Register	Estimate		X			X		Med	Med	Data has not been captured or if captured, not at necessary level of detail
	MD - Network Level	OMS	Actual	X						-	-	
	MD & Utilisation - Spatial	OMS	Actual	X						-	-	
	Telephone Answering	SAP Care CIS OMS	Actual	X						-	-	
	Reliability and Customer Service	OMS GIS Customer Service data	Actual	X				X	X	Low	Low	Unplanned SAIDI & SAIFI captured - classification of CBD v Urban v Rural an issue plus link to Customer
	Sustained Interruptions	OMS	Actual	X						-	-	Classification of feeder is an issue
	Historical MEDs	OMS	Actual	X						-	-	All fields populated
	Policies and Procedures		Actual	X						-	-	Policies and Procedures relied up upon to complete RIN

			Current State – SA Power Networks Reset RIN Reporting Process								
#	RIN data category	Data Source	Nature of data (Actual/ estimate)	Data Captured	Technology or Process		Data Quality			Complex Factor	Change Factor	Explanatory Notes
				Meets RIN data reqs	System & Field avail / Process issue	System or Field not avail.	Accuracy / integrity	Level of detail	AER categorisation issue			
	Obligations		Actual	X						-	-	Obligations and requirements that have been relied upon for the RIN


Portfolio View
Jan-14
Jan-15
Jan-16
Jan-17
Jul-17
1/01/2014
1/04/2014
1/07/2014
1/10/2014
1/01/2015
1/04/2015
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1/07/2016
1/10/2016
1/01/2017
1/04/2017
1/07/2017
Enterprise Blueprint
3/3/2014
Enterprise Blueprint
30/6/2014
Enterprise Asset Management Blueprint
17/7/2014
EAM Blueprint
31/12/2014
Integrated Design & Estimation
Technical Standards
31/12/2016
CU data
31/12/2016
Estimation system & Estimate data
31/12/2016
1/1/2016
Enterprise Asset Management
1/01/2015
EAM Document Management
30/06/2015
Asset Data and Integration
30/6/2016
EAM Mobility
30/6/2016
1/07/2015
1/07/2015
Processes
31/12/2016
Analytics
31/12/2016
1/01/2016
Financial Management
1/09/2014
New General Ledger
1/01/2016
1/11/2014
Fixed Assets
1/01/2016
1/5/2015
Business Planning & Modelling
30/04/2016
Project, Program & Portfolio Management
1/09/2014
Resource Capacity Planning
1/01/2016
1/7/2015
Scheduling & Dispatch
31/12/2016
1/7/2015
Portfolio & Project Management
31/12/2016
Enterprise Document & Content Management
1/09/2014
Enterprise Document & Content Management
1/04/2015
IT Mobility (enablement)
1/09/2014
IT Mobility enablement
1/07/2015
Field Force Mobility
1/07/2015
Electronic Job Completion
1/07/2016
CIS O/v and CRM
1/07/2015
Mete Asset Management
1/07/2016
1/01/2016
Service Order Management
31/12/2016
Customer Facing Initiatives
1/07/2015
Customer facing initiatives
31/12/2016
Supply Chain & Procurememnt
1/07/2015
Supply Chain Integration
31/12/2016
People & Culture
1/07/2015
HR Integration
31/12/2016
Business Intelligence Enablement
1/09/2014
Business Intelligence enablement
1/01/2016
SAP Foundations
1/09/2014
SAP Foundations
1/01/2016
Systems Integration
1/09/2014
Systems Integration
1/01/2016

The SA Power Networks' risk management framework defines the following quantitative measures of likelihood and consequence that are in turn used to determine the risk rating. The detailed risk assessment instructions are available on the SA Power Networks Intranet site.

Risk Likelihood Rating

Rating	Descriptor	Description	Probability	Indicative Frequency
5	Almost Certain	Is expected to occur	96 – 100%	At least one event per year
4	Likely	It will probably occur	81 – 95 %	One event per year on average
3	Possible	May occur	21 – 80%	One event per 2 – 10 years
2	Unlikely	Not likely to occur	6 – 20%	One event per 11 – 50 years
1	Rare	Most unlikely to occur	0 – 5%	One event per 51 – 100 years

Risk Consequence Rating

Rating	1 Minimal	2 Minor	3 Moderate	4 Major	5 Catastrophic
Financial	Less than $100,000	$100,000 or more, but less than $1m	$1m or more, but less than $10m	$10m or more, but less than $100m	$100m or more
OH and S	Incident but no injury	Medical treatment only	Lost time injury	Death or Permanent Disability	Multiple Fatalities
Environment	Brief spill incident. No environmental damage.	Minor spill. Pollutant on site. No environmental damage.	Escape of pollutant causing environmental damage	Significant pollution on and off site < $0.5 m	Long term environmental damage
Reputation / Customer Service	Localised customer complaints	Widespread customer complaints or Complaints to Ombudsman or Regulator	Intervention by the Ombudsman or Regulator	Repeated intervention by the Ombudsman or Regulator	Loss of Distribution Licence
	Adverse regional media coverage	Adverse State media coverage	Adverse media campaigns by customers, media, industry groups	Severe negative impact on both regulated and un-regulated businesses	Loss of Distribution Licence
Legislative and Regulatory	Minor breaches by employees resulting in customer complaints or publicity	Act or Code infringements resulting in minor fines	Severe Company or Officer fines for Act or Code Breaches	Prison sentences for Directors or Officers	Loss of Distribution Licence
	ACCC require apology and / or corrective advertising	ACCC require special offer be made to all customers / suppliers	ACCC minimum level penalties	ACCC moderate level penalties	ACCC maximum level penalties
	Directors / Officers given minimum fines	Directors / Officers given moderate fines	Directors / Officers given severe fines	Directors / Officers given prison sentences	Loss of Distribution Licence

Rating	1 Minimal	2 Minor	3 Moderate	4 Major	5 Catastrophic
Organisational	Absorbed without additional management activity	Absorbed with minimal management activity	Significant event which requires specific management	Critical event which can be endured with targeted input	Disaster which can cause collapse of the business
Reliability	2000 customers without supply for a min. of 12 hours (i.e., a medium size urban feeder)	10,000 customers without supply for a min. of 24 hours (i.e., a major storm related outage or a major substation outage)	Up to 40,000 customers without supply for a min. of 48 hours (i.e., major multiple zone substation coincident outages)	Over 40,000 customers without supply for longer than 48 hours (i.e., major geographical areas off supply)	Adelaide CBD without supply for longer than 24 hours

Level of Risk Matrix

Likelihood (Probability)	Threat Consequences				
	Minimal (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Almost Certain (5)	Medium	High	High	Extreme	Extreme
Likely (4)	Low	Medium	High	High	Extreme
Possible (3)	Low	Low	Medium	High	High
Unlikely (2)	Negligible	Low	Low	Medium	High
Rare (1)	Negligible	Negligible	Low	Low	Medium