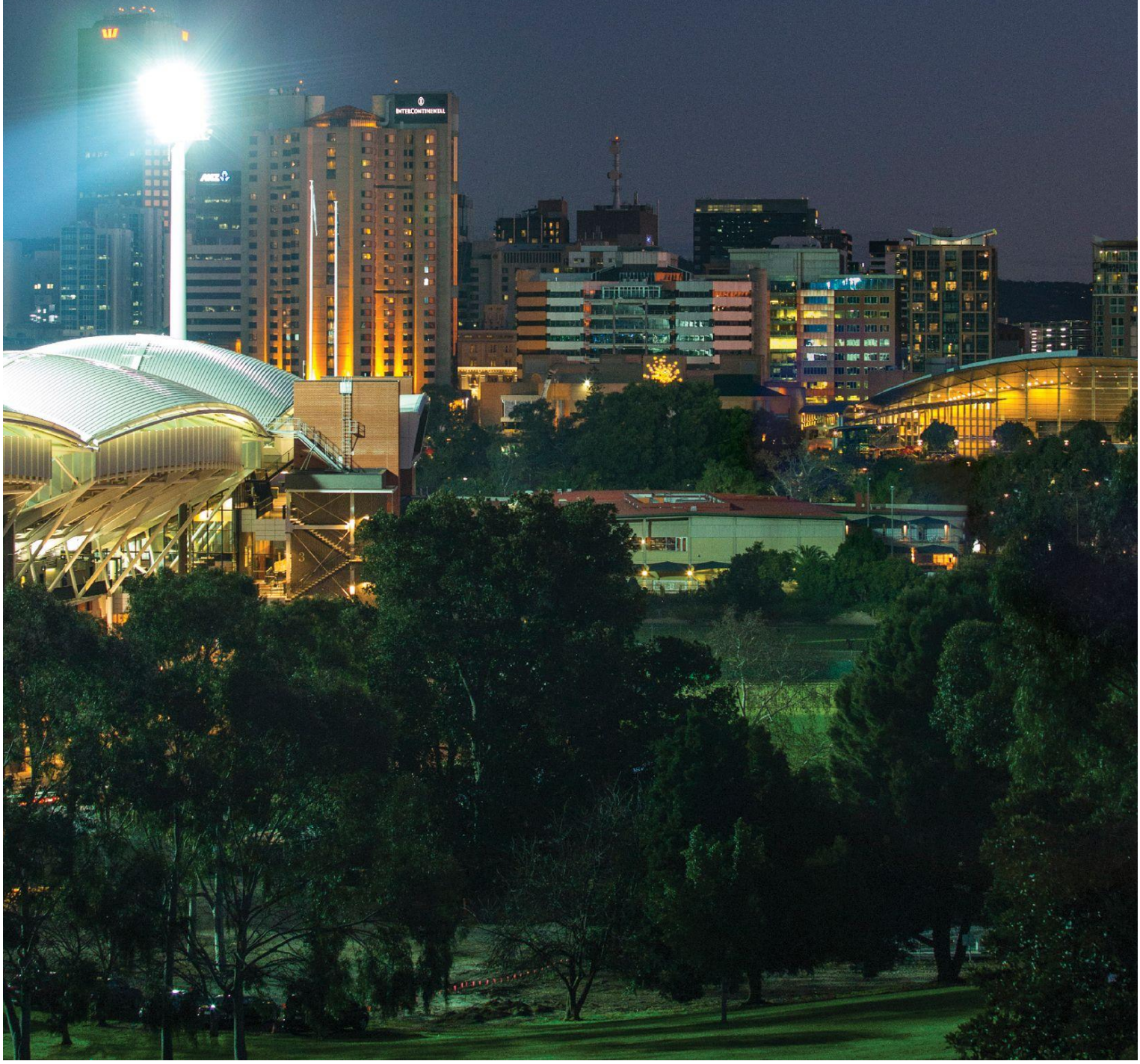
Attachment 20.37

SA Power Networks: Deloitte CIS and CRM Business Case - SAPN Review and Summary

October 2014



Business Case

Review and Summary of CIS CRM Business Case

Version 1.0

07/10/2014

SA Power Networks

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1. Executive Summary

1.1 Objective

In 2013 we engaged Deloitte to develop a business case for the replacement of our end of life billing and customer related systems to remove our technology & support risks. As part of the development of our Regulatory Submission in 2014 we identified this project for inclusion. There was thus a need to review and update this business case based on changes occurring in our operational environment.

This document is an update to the CIS & CRM Business Case V32 recommendations.

1.2 Background

Our vision is to progressively build on a solid foundation of systems to maintain services and functions that customers value, delivered in a consumer-friendly way. These services were confirmed via our TalkingPower™ stakeholder engagement program and defined in our Customer Service Strategy, and in the Tariff and Metering Business Case which aims to provide knowledge, incentives & tools to enable customers to optimise their own energy costs.

Both of these strategies rely on an accurate, secure and supported suite of billing and customer related systems that are flexible and responsive to change.

Our current billing and customer related systems are at end of life and technically obsolete and we are the only customer using the CIS OV product world wide. The risks associated with aging and disparate billing and customer related systems were identified during the 2005-2010 regulatory control period (RCP). The vendor indicated they would not support the product past 2016. We have been taking a cautious approach to managing this risk over the last 6 years and after negotiations with the new owner ([redacted]) we have established contractual obligations to maintain support of this legacy product until 2021. However this support is **conditional** with [redacted] assuming

> *" future enhancements to current CIS OV functionality will be within the scope and capabilities of the current technology stack and any single instance of the customer data set will not be materially larger than any of the current data sets…".*

This limits us implementing critical market modifications/changes.

CIS OV is built upon a number of technologies and products from different vendors with each component having differing end of support dates. These technologies and products comprise the 'technology stack'. This multi vendor technology stack creates a situation where a failure in one component can lead to a failure of the overall system. Different components have different end of life dates with most of these components going 'end of life' in the next Regulatory Control Period (RCP). Hence the risks for one component are magnified throughout system. Mitigation strategies have been initiated for some components of the stack and for the overall system support however these will only be maintained until 2021.

An independent risk assessment conducted by Ernst and Young identified interim controls for these risks, however the residual risk rating will continue to increase in scope and scale over time until these systems are replaced.

The drivers for the replacement of our current billing and customer related systems are:

- Remove the technology & support risks associated with our end of life billing and customer related systems;

- Ensure systems provide reliable and accurate data and information to the market resulting in obligation compliance and cash flow certainty;
- Provide an appropriate response to our Customers expectations;
- Enable Tariff reform;
- Position for changing market requirements:
    - Power of Choice
    - Metering Contestability

To ensure we have the associated systems to achieve the outcomes defined by our strategies and risk assessments, we undertook the development of a Customer Technology Plan and corresponding business cases. The plan supports our IT Strategy of consolidation and rationalisation and provides a roadmap of change. Subsequently we will update this plan as changes occur within our business and the national market.

We engaged Deloitte to develop CIS & CRM Business Case (BC01) and the costing analysis for the Tariff and Metering Business Case (BC20).

- Our CIS & CRM Business Case (BC01) describes the rationale for the replacement of our end of life Billing and customer related systems with a modern, flexible billing engine and customer management capability.
- Our Tariff and Metering Business Case (BC20) describes the need for tariff reform and improvements in distribution network operational needs. Any tariff reform requires a modern, flexible billing engine and customer management capability to enable cost-reflective network tariffs for small market customers.

Deloitte used their market knowledge and engaged with Victorian Distribution businesses to draw on experience from the Victorian AMI programme in the development of these business cases. The Tariff and Metering Business Case is dependent on foundational work defined in the CIS & CRM business case.

1.3 Analysis

We undertook a review of the CIS & CRM business case and the Tariff and Metering Business Case considering current operational initiatives, current risk mitigation requirements, current mitigation controls, the status of current related work, timings and dependencies, costs and benefits. (Refer Section 3 and Section 4 for details)

The business case is aligned to

- NER objective 6.5.7(a) (3) Maintain Reliability of Supply
- NER objective 6.5.7(a) (2) Compliance/Regulatory
- Business Driver Maintain current levels of service
- Regulatory driver Change in operating environment

We reviewed the following options defined in the CIS & CRM business case with the revised costs, risks and benefits:

Option 1 - Integrated CIS supplemented with CRM: We confirmed this approach does not align to our Architectural principals and applications rationalisation approach, had a higher implementation risk and higher cost. This is the least preferred option.

Option 2 – Modular implementation differentiated by the Hosting approach.
The implementation options were considered to identify any materiality in costs between:

- Option 2a: Modular Solutions with on Premise CRM is an On-Premise model where the customer operates and manages the systems.
- Option 2b: Cloud hosting refers to a model where by a third party provides a service and the customer pays a subscription fee.

We identified a small cost differential between the two options. We also reviewed the Cloud Services Strategy; which recommends a considered approach to the use of cloud services with a focus on non critical capabilities as we develop a better understanding of the associated service models and value proposition. As the CIS & CRM business capability is a critical business function it was seen as high risk to use this to trial a cloud solution. Thus option 2a is recommended until further work is conducted as part of an implementation project

Option 3, Do Nothing. A review of our risk assessment of CIS OV and our customer related systems has confirmed that our current mitigation controls are adequate, no additional controls are available, and that the residual risk ratings will continue to increase in scope and scale over time until these systems are replaced. CGI will provide support until 2021 but has identified areas where third party products may be out of support prior to 2021. They have identified this risk and will closely monitor. Thus this option is still not feasible based on the increasing residual risk ratings over time and the lack of ongoing vendor support for technically obsolete products.

The impact of the Tariff and Metering Business Case was considered. It includes costs in addition to those in the CIS & CRM business case specifically to support any new tariff, "….these costs assume that the CIS OV platform is upgraded as proposed, and are in additional to the costs in the CIS & CRM business case"[1]. This strategy will require the ability to handle both basic and interval metering due to the gradual rollout of interval meters and capacity tariffs. The Tariff and Metering Business Case assumes the customer related systems are replaced prior to implementation of the new tariff requirements to enable an increased volume of interval metering data and improved customer information for consumption monitoring. Thus there are no changes required of the CIS & CRM business case.

Our review of benefits identified that many of the benefits or aspects of the benefits outlined in the original business case are still applicable. However, a review of the ability to realise those benefits and/or the ability to reliably quantify them has resulted in either a reduction or removal of the financial impact. In addition some of the initial business case benefits have since been associated with the SA Power Networks Tariff and Metering business case and have therefore been removed for the purpose of the revised investment appraisal.

The key justification for this business case is to remove our risk associated with end of life systems. The aim is to maintain business operations with the capability to respond to market changes and the changing role of the DNSP.

1.4 Recommendation

In summary, we need to meet our distribution licence obligations and maintain our ability to:

- generate network bills;
- collect and process meter data;
- manage our service orders;
- manage our Meter Assets;
- manage our customer and property information
- analyse and reporting on our "interval" Meter Data

[1] Tariff and Metering Strategy - Sept

- support our current regulatory reporting
- conduct Network Load Analysis
- respond to market changes.

This requires us to replace our existing suite of systems with an accurate, secure and supported suite of billing and customer related systems that are flexible and responsive to change. Taking into consideration the revised costs, timing and benefits, the revised investment appraisal for the 11 year investment period between 2014/15 and 2024/25 is as follows:

Option	Description	Total Cost 2015/16-2019/20	Total Cost 2014/15-2024/25	NPV
1	Integrated CIS supplemented with CRM	65.687	101.343	-70.844
2a	Modular billing & markets supplemented with CRM	61.546	93.191	-64.585
2b	Modular billing and markets supplemented with cloud CRM	47.427	90.629	-59.974

Table 1 – Revised Investment Appraisal 2014/15 – 2024/25 (Real $ 2013/14)

The revised costs and benefits has not altered the relative comparison of options as presented in the business case and accordingly, the case for investment in CRM and CIS capabilities for option 2a remains strong as articulated in sections 11 and 12 of the business case.

2. Background

2.1 Billing

The risks associated with an aging and disparate billing and customer related systems were identified during the 2005-2010 RCP. The vendor indicated they were unable to support the systems past 2016 and we received an allowance to replace these systems in the 2010-2015 RCP. However, for reasons which are outlined in section 2.2, that allowance was redirected to new business-critical areas.

During the current RCP we commenced a replacement program which included the engagement of DB Results to develop a Replace/Retain Business Case; and Ernst and Young to conduct a Risk Assessment. The recommendation was to retain CIS OV and associated systems for a further RCP, if a number of controls were actioned to mitigate our risks. The key control was to extend the supported life until 2021 via a Vendor Support agreement and upgrade the technical stack.

As part of our governance processes we extended the life of our billing system, through negotiations with the vendor and a series of technical upgrades. The CIS OV system is 15 years old and is considered a legacy system and at end of life. Through prudent management over the past six years SA Power Networks has been able to defer the replacement until 2015-20 RCP which will enable us to address the risk of the current system and also consider emerging technologies and position us for the future. This future includes heightened customer and regulatory expectations.

As we were conducting our TalkingPower™ stakeholder engagement program and developing our Customer Service Strategy we engaged Deloitte to develop a Business Case for the Replacement of CIS and CRM. The drivers were to:

- Remove the technology & support risks associated with our end of life billing and customer related systems;
- Ensure systems provide reliable and accurate data and information to the market resulting in obligation compliance and cash flow certainty;
- Provide an appropriate response to our Customers expectations;
- Enable Tariff reform;
- Position for changing market requirements:
    - Power of Choice
    - Metering Contestability

Timeframe	Description	Consideration
2001-2004	Full Retail Contestability Implementation	Entry into the National Electricity Market
2010	FRC Related Systems Replacement Options Assessment	Age of Systems (NESS)
2011	FRC Related Systems Requirements	Review current business needs and customer requirements
2012	CIS OV Replace or Retain Business Case (DB Results)	Confirm current business needs and customer requirements Assessed technology and support risks
2012	Risk assessment of CIS OV (Ernst Young)	Business risk assessment of CIS OV and

Timeframe	Description	Consideration
		related systems
2012	Technical Review of CIS OV	Assessment of support of technical components and ability to retain until 2021
2013	CIS OV Technical Upgrade	Implement risk mitigation control by upgrading the technology platforms
2013-2014	CIS/CRM Business Case (Deloitte)	Recognised a Single View of Customer (SVOC) to manage customer information and network services. A stand alone customer information system and billing system is a pragmatic approach to replacing CIS OV and related systems
2013	Customer Strategy Customer Technology Plan	Response to customer engagement process Prudent adoption of new customer technology Relationship between customer information and service
2014-2015	Foundation projects	Risk mitigation of NESS and foundation for SVOC

2.2 Customer

Our focus during the current RCP has been on our service to customers. The TalkingPower™ stakeholder engagement program enhanced our current understanding of customer drivers. These drivers and our response has been defined within our Customer Service Strategy and a number of initiatives have been implemented to improve engagement with our customers.

As a result of deferring the CIS OV Replacement, funds were redirected to achieve the following outcomes:

- Regulatory Compliance : compliance with the National Energy Customer Framework (NECF) and improved collection, management and reporting of vegetation information;
- Meeting our customer service obligations and customer expectations: implementation of more timely service and outage related information through the implementation of new customer-facing systems, provision of more timely and up to date information to the call centre operators through the initial one way integration between the outage systems and the Interactive Voice Response(IVR) system, improving customers call centre experience by upgrading the IVR and provision of more timely and up to date information and services to customers;
- Improved efficiency of field work: enhancing field force mobility to cover more work types and work groups and to provide additional information for customers;
- Reduced business risks: additional and improved business continuity and disaster recovery capabilities for business critical applications.

Our customers expect us to be at the forefront of new and emerging customer service initiatives to continue satisfying their expectations. Mobile devices (eg smart phones, tablets) are becoming common place, and our customers now expect information 'twenty four-seven' across multiple channels - and increasingly want self-service and self-management options. We continue to retain our focus on high quality traditional contact centre services for the many customers who still prefer this channel for at least some of their interactions with us. We have also been increasing our digital presence communication channel for those who value it. Over the current RCP we have progressively introduced and improved self-service channels for our customers, and increased proactive communications based on customer preferences. We were the first Australian electricity distributor to offer online self-service fault reporting via internet and mobile devices. Our customers are now also able to report streetlight faults via a convenient online map. By extending our connectivity with customers, we have increased the two-way flow of information which benefits customers and SA Power Networks.

Customers can keep updated about power outages through our website, an interactive voice response (IVR), and via proactive updates specifically about their property via free SMS and email messages for which they can subscribe through our Power@MyPlace™ service and via Facebook and Twitter. The Power@MyPlace™ service also gives customers the option to receive reminders for their scheduled meter reading dates to ensure we have access to the meter, enabling customers to be accurately billed for electricity use.

In addition to our Customer Service Strategy we also developed a corresponding Customer Technology Plan and Customer Data Quality Plan.

Timeframe	Description	Consideration
2009	Customer Service Strategy	Commence responding to customer drivers
2011	Refresh Customer Service Strategy	Embed customer service through the organisation Commence proactive customer service initiatives
2011-2014	Service improvements	Proactive improvements to engaging with customers with new technology and information solutions
2012-2013	TalkingPower™ stakeholder engagement program	Understand our broader customer service base and their drivers
2013	Customer Service Strategy	Respond proactively to our customers expectations
2013-2014	Customer Technology plan Customer Data Quality plan	Define prudent technology solutions to meet customer expectations Identify areas to improve customer data management

2.3 Customer Technology Plan

To continue to deliver the services that customer's value and enable us to achieve the outcomes defined by our strategies and risk assessments, we undertook the development of a Customer Technology Plan. This plan was developed with a customer services focus and has been updated with our Demand Side Participation requirements. The plan is in line with customer preferences and requires an integrated approach to our systems development so that we have the capabilities to support evolving customer expectations.

The aim is to develop a long term integrated systems architecture which cost-efficiently meets the demands of our customers and stakeholders for information and services, just as we have always done for the electricity infrastructure.

The plan supports the consolidation and rationalise approach from our IT Strategy with an aim to avoid 'stranded assets' of stand alone systems which limit their functional value, increases the cost of support and timeliness of changes and reduces the ability to provide appropriate information to customers. This is further defined in Section 3.5 Implementation Approach.

The Customer Technology Plan defines the implementation of the following capabilities, as outlined in the Customer Service Strategy:

- Developing a longitudinal, single view of customers, including their call and outage history, and relevant network activity that impacts them (SVOC)
- Implementation of recommendations from the Customer Data Quality Plan 2014 - 2020 and alignment with asset data improvement projects
- Creating a repository that captures knowledge from local intelligence sources (customers, councils, business and state and federal Government)

It also addresses the following criteria from our IT Strategy and SA Power Networks Strategy:

- Maintaining an accurate, secure and supported billing system, that is flexible and responsive to change. This is a 'behind the scenes' system which customers do not see, however is critical to many stakeholder and market operations and must always provide strong customer confidence.
- Develops the concept of 'property' (not necessarily having electricity supply points) as a foundation on which we can provide value-added services to customers and to employees and contractors through improved understanding of access, hazards, and future connections.
- Progressively provide more information directly to customers, electricians, retailers and other relevant third parties through dedicated portals and integrated mobile applications. This supports customers' requests for more transparency about our operations as well as their desire for more self-service and self-management options to give them more control and to allow 24/7 access to information.
- Enable contractors undertaking outsourced work (i.e.; vegetation management to access relevant information to ensure a seamless customer experience across all interaction points.

3. So where are we and what's changed?

3.1 Change Drivers

We identified a number of key drivers for the replacement of our current billing and customer related systems, these drivers have not changed and thus there is no impact on the rationale for the CIS & CRM Business Case.

3.2 Risk Assessment

A review of these risks has confirmed that our current mitigation controls are adequate, no additional controls are available, and that the residual risk rating will continue to increase in scope and scale over time until these systems are replaced.

CIS OV is built upon a number of technologies and products from different vendors with each component having differing end of support dates. These technologies and products comprise the 'technology stack'. This multi vendor technology stack creates a situation where a failure in one component can lead to a failure of the overall system. Different components have different end of life dates with most of these components going 'end of life' in the next Regulatory Control Period (RCP). Hence the risks for one component are magnified throughout system. Mitigation strategies have been initiated for some components of the stack and for the overall system support however these will only be maintained until 2021.

One of the controls identified as part of our risk assessment of CIS OV was to refresh the technology stack. In 2014 [redacted] refreshed the technology stack to maintain third party components within support. However, not all components will be supported by third party vendors until 2021. [redacted]

[redacted]

[redacted] also indicated that the product has limited ability to handle material changes and have assumed " future enhancements to current CIS OV functionality will be within the scope and capabilities of the current technology stack and any single instance of the customer data set will not be materially larger than any of the current data sets…". This will limit our ability to respond to changing market expectations.

We also considered the risks which would impact our ability to meet market obligations. The key risk is "CIS OV production outage or CIS OV environment unable to implement critical modifications/changes". This risk describes a "portfolio of risks" as there are a number of components within the end to end environment that may affect the ability to meet our market obligations. However of these components, the CIS OV and NESS systems are the components that are at highest risk of failure due to their end of life. Our controls for other components were seen as adequate.

We have commenced working on our customer foundation technologies to enable us to mitigate the technology and support risks associated with our customer related systems including NESS (Network Sites Database).

An update to our risk assessment will be conducted in Qtr 4 2014 as part of our IT governance process.

3.3 Customer Feedback

Our TalkingPower™ stakeholder engagement program and Customer Service Strategy identified some immediate capabilities that our customers required. The improvements currently being implemented are:

- A redesign of our Web Site to provide more information for our customers
- Mobile application redesign to improve usability by our customers

We will continue to use our Customer Technology plan as a guide in providing new or improved capabilities to customers.

3.4 Regulatory Drivers

Anticipated industry and regulatory changes are in development. These include:

- Tariff Reform;
- Power of Choice;
- Metering contestability.

Our preliminary assessment has indicated that these changes will require a more accurate, secure and supported suite of billing and customer related systems that are flexible and responsive to change. High quality, timely and accurate data is required to develop and maintain customer trust in these initiatives as they are rolled out.

In August 2014 the Australian Energy Market Commission (AEMC) issued a draft determination on proposals to amend distribution network pricing arrangements. The paper on network pricing is aimed at;

" … Establishing the right regulatory regime for the future so everyone can make clearly informed decisions about their energy use as new technologies emerge"[2]. AEMC analysis indicates up to 81% of consumers would face lower network charges in the medium term under a cost-reflective capacity price and up to 69% would see lower charges under a critical peak price.

We will continue delivery as per our Customer Technology Plan with a focus on replacement of CIS OV and our customer related systems while we monitor developments with State Government Policy and the Market Rule changes.

3.5 Implementation Approach

The CIS & CRM business case was developed as part of the SA Power Networks' annual business planning cycle in accordance with SA Power Networks Capital Budgeting procedures. The business case implementation and costing approach was developed using a portfolio approach to remove duplications and obtain efficiencies.

Since that time some of the start dates of the projects within this business case have been moved based on dependencies identified within the overall SA Power Networks' portfolio of projects.

The guiding principals considered:

- Phased implementation approach not big bang;
    - Replace Customer related systems and NESS
    - Implement Tariffs & Metering or other compliance
    - Replace CIS OV
- Ensure application architecture is modular, integrated and flexible to accommodate changes to the DNSP's role in the market;
- Ensure master data integrity, security and other compliance requirements;
- Leverage existing application environment and rationalise our applications landscape;
- Ensure time to respond to any regulatory changes;
- Ensure the organisation can handle the change.

Considering work that has been commenced and other foundation work required to support the CIS & CRM scope of work, the portfolio timings have been updated and are described in the Project Timing section.

[2] Distribution Network Pricing - draft determination - fact pack

4. Financial Analysis

4.1 Revised Financial Modelling

Subsequent to the development of the CIS CRM Business Case and selection of this business case for inclusion into the 2015-2020 Regulatory Submission, the original cost estimates were reviewed and adjusted. The original business case has not been amended and reflects the costs and benefits modelled at the time; therefore this section outlines the amendments that have occurred and the resulting revised costs and benefits. The costs were reviewed and revised as follows:

- The recurrent capital costs for CRM and CIS were remodelled using the SA Power Networks standard forecasting methodology template to reflect a prudent approach to ongoing technical refreshes and upgrades across the CIS and CRM application stack. This resulted in a significant reduction in on-going capex from circa $32M over 10 years to $12M for the preferred option;
- The capital delivery costs for the in-flight CRM project were remodelled using the SA Power Networks standard forecast methodology template in order to align the timing of the CRM project costs with the most recent project forecasts. Capital Delivery costs for the projects within this business case other than CRM remain in the original Deloitte cost forecast;
- Costs in nominal terms in the Deloitte cost model were converted to 2013/14 real terms by removing the effect of CPI modelled by Deloitte;
- If the cost forecast was in calendar years, the estimates were converted to financial years to align with the Regulatory requirements;
- The labour costs were recalculated using the latest hourly rates. In some cases, this resulted in reduction of labour costs compared with the original estimates;
- Surplus labour above the level defined in the IT Sourcing and Resource Plan was transferred to Services, using the IT Services Panel rates;
- The proportion of work performed by supplementary labour was reduced in line with the new IT Operating model, which resulted in further reduction of labour costs;
- For projects in this business case other than CRM, the project management and business analysis costs were transferred from IT to the business owner's area. Note: The costs reflected in this document are the combined IT and non-IT cost;
- The costs were shifted in time corresponding to a portfolio dependency analysis to identify efficiencies and dependencies within the overall SA Power Networks' portfolio of projects;
- The original business case did not include the recurrent capex in the investment appraisal. The costs and investment appraisal are for 11 years and include all capital and operating costs over that period;
- The investment period is different to that presented in the business case to ensure consistency.

4.2 Revised Costs

The final cost estimates for this business case are provided below for both the 2015-2020 regulatory control period and the 11 year investment period (2014/15-2024/15). These costs include capital project delivery and on-going capex costs as well as the IT operational impact (opex step change) of the capital investment, and all the amendments and factors outlined above. The subsequent sections provide further detail on the capital and operating breakdown as well as individual project related capital costs and opex step change.

Option	Description	Cost 2015/16-2019/20	Cost 2014/15-2024/25
1	Integrated CIS supplemented with CRM	65.687	101.343
2a	Modular billing and markets supplemented with CRM	61.546	93.191
2b	Modular billing and markets supplemented with cloud CRM	47.427	90.629

Table 2 – Total Cost by Option (Real $ 2013/14)

4.3 Options Capital and Operating Summary (2013/14 $ Real)

4.3.1 Option 1 - Integrated CIS supplemented with CRM

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
Capex	6.957	7.624	1.270	5.178	26.338	15.027	**55.438**	2.236	3.782	0.643	1.849	3.234	**11.744**	**74.138**
Opex	0.640	1.450	1.600	1.721	2.038	3.440	**10.249**	3.440	3.440	3.440	3.440	2.556	**16.316**	**27.205**
TOTAL	**7.597**	**9.075**	**2.870**	**6.900**	**28.376**	**18.467**	**65.687**	**5.676**	**7.222**	**4.082**	**5.289**	**5.791**	**28.059**	**101.343**

4.3.2 Option 2a - Modular billing & markets supplemented with CRM

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
Capex	5.696	8.778	2.026	4.581	24.179	14.417	**53.981**	1.943	3.232	0.547	1.564	2.737	**10.023**	**69.700**
Opex	-	-	1.062	1.768	1.921	2.815	**7.565**	3.450	3.450	3.450	3.337	2.240	**15.926**	**23.491**
TOTAL	**5.696**	**8.778**	**3.088**	**6.349**	**26.100**	**17.232**	**61.546**	**5.393**	**6.682**	**3.996**	**4.901**	**4.977**	**25.949**	**93.191**

4.3.3 Option 2b - Modular billing and markets supplemented with cloud CRM

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
Capex	4.754	6.375	1.118	1.448	5.913	22.643	**37.496**	14.757	2.216	0.758	1.859	1.575	**21.165**	**63.415**
Opex	0.809	1.717	1.935	2.068	2.105	2.105	**9.931**	2.386	3.787	3.787	3.787	2.727	**16.475**	**27.214**
TOTAL	**5.563**	**8.092**	**3.053**	**3.516**	**8.018**	**24.748**	**47.427**	**17.143**	**6.004**	**4.545**	**5.646**	**4.301**	**37.639**	**90.629**

4.4 Options Capital and Operating Summary by Project (2013/14 $ Real)

4.4.1 Option 1 - Integrated CIS supplemented with CRM

Capital Investment Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC*	6.957	4.110	0.056	-	-	-	**4.165**	-	-	-	-	-	**-**	**11.122**
Service Order Management	-	0.856	0.275	0.018	-	-	**1.149**	-	-	-	-	-	**-**	**1.149**
Meter Asset Management	-	0.278	0.527	0.294	0.050	-	**1.149**	-	-	-	-	-	**-**	**1.149**
CIS (Billing) & Standing Data	-	-	-	4.185	23.725	14.376	**42.286**	0.387	0.238	0.022	-	-	**0.647**	**42.933**
Property	-	2.381	0.216	-	-	-	**2.597**	-	-	-	-	-	**-**	**2.597**
MDM	-	-	0.196	0.361	0.166	-	**0.723**	-	-	-	-	-	**-**	**0.723**
CRM Recurrent Capex	-	-	-	-	1.754	-	**1.754**	-	1.696	-	-	1.696	**3.392**	**5.145**
CIS Recurrent Capex	-	-	-	0.320	0.643	0.651	**1.615**	1.849	1.849	0.620	1.849	1.539	**7.705**	**9.320**
TOTAL CAPITAL	**6.957**	**7.624**	**1.270**	**5.178**	**26.338**	**15.027**	**55.438**	**2.236**	**3.782**	**0.643**	**1.849**	**3.234**	**11.744**	**74.138**

* Note: Approximately $1.5M in expenditure for CRM and SVOC in FY2013/14 incurred in addition to the costs depicted above.
CIS Recurrent Capex covers all in-scope systems/functions other than CRM

Capital Investment Opex Impact (Step Change) Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC	0.640	1.280	1.280	1.280	1.280	1.280	**6.402**	1.280	1.280	1.280	1.280	0.640	**5.762**	**12.804**
Service Order Management	-	-	0.134	0.146	0.146	0.146	**0.572**	0.146	0.146	0.146	0.146	0.012	**0.597**	**1.169**
Meter Asset Management	-	-	-	0.110	0.146	0.146	**0.402**	0.146	0.146	0.146	0.146	0.037	**0.621**	**1.023**
CIS (Billing)	-	-	-	-	0.280	1.682	**1.962**	1.682	1.682	1.682	1.682	1.682	**8.410**	**10.372**
Property	-	0.170	0.185	0.185	0.185	0.185	**0.911**	0.185	0.185	0.185	0.185	0.185	**0.926**	**1.837**
MDM	-	-	-	-	-	-	**-**	-	-	-	-	-	**-**	**-**
Standing Data														
TOTAL OPEX	**0.640**	**1.450**	**1.600**	**1.721**	**2.038**	**3.440**	**10.249**	**3.440**	**3.440**	**3.440**	**3.440**	**2.556**	**16.316**	**27.205**

4.4.2 Option 2a - Modular billing & markets supplemented with CRM

Capital Investment Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC*	5.696	5.187	0.835	-	-	-	**6.022**	-	-	-	-	-	**-**	**11.718**
Service Order Management	-	0.837	0.266	0.017	-	-	**1.121**	-	-	-	-	-	**-**	**1.121**
Meter Asset Management	-	0.685	0.384	0.052	-	-	**1.121**	-	-	-	-	-	**-**	**1.121**
CIS (Billing) & Standing Data	-	-	-	3.888	22.150	13.866	**39.905**	0.634			-	-	**0.633**	**40.538**
Property	-	2.069	0.188	-	-	-	**2.257**	-	-	-	-	-	**-**	**2.257**
MDM	-	-	0.353	0.353	-	-	**0.706**	-	-	-	-	-	**-**	**0.706**
CRM Recurrent Capex	-	-	-	-	1.484	-	**1.484**	-	1.435	-	-	1.435	**2.870**	**4.354**
CIS Recurrent Capex	-	-	-	0.271	0.544	0.551	**1.366**	1.564	1.564	0.525	1.564	1.302	**6.520**	**7.886**
TOTAL CAPITAL	**5.696**	**8.778**	**2.026**	**4.581**	**24.179**	**14.417**	**53.981**	**2.198**	**2.999**	**0.525**	**1.564**	**2.737**	**10.023**	**69.701**

* Note: Approximately $1.5M in expenditure for CRM and SVOC in FY2013/14 incurred in addition to the costs depicted above.
CIS Recurrent Capex covers all in-scope systems/functions other than CRM

Capital Investment Opex Impact (Step Change) Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC	-	-	0.640	1.280	1.280	1.280	4.482	1.280	1.280	1.280	1.280	0.640	5.762	10.244
Service Order Management	-	-	0.139	0.151	0.151	0.151	0.592	0.151	0.151	0.151	0.151	0.013	0.617	1.209
Meter Asset Management	-	-	0.113	0.151	0.151	0.151	0.567	0.151	0.151	0.151	0.038	-	0.491	1.058
CIS (Billing)	-	-	-	-	0.153	1.047	1.200	1.682	1.682	1.682	1.682	1.402	8.130	9.330
Property	-	-	0.170	0.185	0.185	0.185	0.725	0.185	0.185	0.185	0.185	0.185	0.926	1.651
MDM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standing Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL OPEX	**-**	**-**	**1.062**	**1.768**	**1.921**	**2.815**	**7.565**	**3.450**	**3.450**	**3.450**	**3.337**	**2.240**	**15.926**	**23.491**

4.4.3 Option 2b - Modular billing and markets supplemented with cloud CRM

Capital Investment Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC*	4.754	3.348	0.047	-	-	-	**3.395**	-	-	-	-	-	**-**	**8.149**
Service Order Management	-	0.926	0.186	0.009	-	-	**1.121**	-	-	-	-	-	**-**	**1.121**
Meter Asset Management	-	0.033	0.673	0.366	0.048	-	**1.121**	-	-	-	-	-	**-**	**1.121**
CIS (Billing)& Standing Data	-	-	-	0.176	4.717	22.092	**26.985**	13.553	-	-	-	-	**13.553**	**40.538**
Property	-	2.069	0.188	-	-	-	**2.257**	-	-	-	-	-	**-**	**2.257**
MDM	-	-	0.023	0.353	0.329	-	**0.706**	-	-	-	-	-	**-**	**0.706**
CRM Recurrent Capex	-	-	-	0.273	0.273	-	**0.546**	0.273	0.273	-	0.273	0.273	**1.092**	**1.638**
CIS Recurrent Capex	-	-	-	0.271	0.544	0.551	**1.366**	1.564	1.564	0.525	1.564	1.302	**6.520**	**7.886**
TOTAL CAPITAL	**4.754**	**6.375**	**1.118**	**1.448**	**5.913**	**22.643**	**37.497**	**15.39**	**2.216**	**0.758**	**1.859**	**1.575**	**21.165**	**63.416**

* Note: Approximately $1.5M in expenditure for CRM and SVOC in FY2013/14 incurred in addition to the costs depicted above.
CIS Recurrent Capex covers all in-scope systems/functions other than CRM

Capital Investment Opex Impact (Step Change) Summary

Project Name	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Capital 2015/16 - 2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Capital 2020/21 - 2024/25	Total Capital
CRM and SVOC	0.809	1.618	1.618	1.618	1.618	1.618	8.090	1.618	1.618	1.618	1.618	0.809	7.281	16.180
Service Order Management	-	-	0.139	0.151	0.151	0.151	0.592	0.151	0.151	0.151	0.151	0.013	0.617	1.209
Meter Asset Management	-	-	-	0.113	0.151	0.151	0.416	0.151	0.151	0.151	0.151	0.038	0.642	1.058
CIS (Billing)	-	-	-	-	-	-	-	0.280	1.682	1.682	1.682	1.682	7.008	7.008
Property	-	0.099	0.179	0.185	0.185	0.185	0.833	0.185	0.185	0.185	0.185	0.185	0.926	1.759
MDM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standing Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL OPEX	**0.809**	**1.717**	**1.935**	**2.068**	**2.105**	**2.105**	**9.931**	**2.386**	**3.787**	**3.787**	**3.787**	**2.727**	**16.475**	**27.214**

4.5 Revised Benefits

A detailed review of the benefits was conducted resulting in a reduction in claimable benefits for the business case investment period and 2015-2020 regulatory control period. Table 3 below shows the total benefits outlined in the original business case summarised by benefit type.

Initial Business Case Benefits			
Benefit Type	**Description**	**Benefits 2014/15-2019/20**	**Benefits 2014/15-2024/25**
Cost Recovery	Refer to CIS & CRM Business Case V0.32 FINAL pg 74	1.953	20.514
Revenue Enhancements	Refer to CIS & CRM Business Case V0.32 FINAL pg 74	22.725	54.225
Cost Avoidance	Refer to CIS & CRM Business Case V0.32 FINAL pg 74	3.270	9.410
Total		**27.949**	**84.149**

Table 3 – Total Initial Benefits by Benefit Type (Real $ 2013/14)

Table 4 below articulates the revised benefits that have been utilised within the revised investment appraisal of this business case summary. Many of the benefits or aspects of the benefits outlined in the original business case are still applicable. However, a review of the ability to realise those benefits and/or the ability to reliably quantify them has resulted in either a reduction or removal of the financial impact. In addition some of the initial business case benefits have since been associated with the SA Power Networks Tariff and Metering business case and have therefore been removed for the purpose of the revised investment appraisal.

Revised Business Case Benefits			
Benefit Type	**Description**	**Benefits (2014/15-2019/20)**	**Benefits (2014/15-2024/25)**
Cost Recovery	**Billing for Related Costs** An improved ability to bill for related costs. Better ability to recover costs from call outs to address outage or service issues which are not related to the meter through an improved ability to bill for related costs. This benefit would incorporate a significant administrative benefit, and reduce the amount of investigative re-work required in the business.	.300	1.300

Revised Business Case Benefits			
Cost Recovery	**Billing for Multiple Customers** Better ability to recover costs from multiple customers when they begin to utilise a newly constructed infrastructure asset which is currently billed to the inaugural customer. CRM will support the ability to manage additional customers that the capex cost needs to be distributed to. (Capital works are billed from SAP and this will continue)	.135	.285
Cost Recovery	**More Accurate Pricing** Revenue retention arising from more accurate pricing of alternate control services.	.481	2.087
Cost Avoidance	**Improved Channel Efficiency** Improved channel efficiency - meaning that as the workload is expected to increase with the number of calls related to the market place changes then the effort to service customers is contained due to improved channel efficiency, better data and a greater understanding of the customer.	.585	1.235
Cost Avoidance	**Dispute Management** Less spend on end-to-end dispute management. There is a risk that the number of disputes will increase with the introduction of more complex tariffs, plans and contestable services. In the absence of improved CRM and CIS systems the manual effort required to administer the dispute management process, and collect data and supporting evidence to contest the dispute will increase.	1.350	2.850
Total		**2.852**	**7.756**

Table 4 – Total Revised Benefits by Benefit Type (Real $ 2013/14)

The key focus for this business case is to remove our risk associated with our end of life systems. The focus is to replace end of life systems with an accurate, secure and supported suite of billing and customer related systems that are flexible and responsive to change. The aim is like for like with capability to respond to market changes and the changing role of the DNSP. Thus there are minimal additional benefits over risk mitigation.

4.6 Revised Investment Appraisal

Taking into consideration the revised costs, timing and benefits, the revised investment appraisal for the 11 year investment period between 2014/15 and 2024/25 is as follows:

Option	Description	Total Cost 2015/16-2019/20	Total Cost 2014/15-2024/25	NPV
1	Integrated CIS supplemented with CRM	65.687	101.343	-70.844
2a	Modular billing & markets supplemented with CRM	61.546	93.191	-64.585
2b	Modular billing and markets supplemented with cloud CRM	47.427	90.629	-59.974

Table 5 – Revised Investment Appraisal 2014/15 – 2024/25 (Real $ 2013/14)

4.7 Options Review

The approach by Deloitte to the options assessment was to first consider the question:

> "Do we need to replace CIS OV and the related end of life systems?"

And if so then consider:

> "How would we replace and what is the most efficient replacement method?"

We reviewed the options within the BC01 CIS & CRM Business Case based on implementation of risk mitigation controls and other related work and the revised costs and benefits.

4.7.1 Option 3 - Do Nothing "Do we need to replace CIS OV and the related end of life systems?"

Our current billing and customer suite of systems is aging and at end of life

- CIS OV is over 15 years old
- CIS OV is a retail billing system from the UK that has been modified to support distribution with multiple enhancements to meet market compliance requirements
- Technical architecture is highly coupled and in an old 3gl development language (Cobol) with minimal skills world wide for support
- Non relational database which is inflexible and difficult to modify when new data is required
- Other customer systems including NESS are built in Delphi which has no upgrade path and minimal support skills world wide
- No user front end capability
- Enhancements are becoming more complex to implement and as a result more costly and taking longer
- Vendor recruitment of support personnel will be more challenging
- Vendor's ability to provide enhancements in a timely fashion will be reduced
- No market enhancements available

A review of our risk assessment of CIS OV and our customer related systems has confirmed that our current mitigation controls are adequate, no additional controls are available, and that the residual risk rating will continue to increase in scope and scale over time until these systems are replaced.

We conclude that the Do Nothing option is still not feasible and high risk based on the high residual risk ratings and lack of ongoing vendor support for technically obsolete products.

4.7.2 Option1 – Integrated CIS supplemented with CRM

Option 1 is similar to our current architecture. We confirmed that our approach to modular solutions and consolidating functionality into existing systems including our SAP ERP was appropriate and aligned with our Architectural principals and Applications Rationalisation approach. This and the higher cost confirmed this as the least preferred option.

4.7.3 Option2 – Modular Solutions with On Premise or Cloud CRM

Option 2 was differentiated by the Hosting approach. The traditional model (2a) is an On-Premise model where the customer operates and manages the systems. Cloud hosting (2b) refers to a model where by a third party provides a service and the customer pays a subscription fee.
It should be noted that we have very limited formalised skills or knowledge related to cloud based solutions. We reviewed our cloud services strategy and confirmed the approach is to trial cloud solutions with non critical capabilities as we develop a better understanding of the associated service models and value proposition. As the CIS CRM business capability is a critical business function it was seen as high risk to use this to trial a cloud solution. The costing analysis for this option was limited but was included to identify any materiality in costs. The costs of 2a and 2b are deemed as similar, and option 2a is recommended until further work is conducted as part of an implementation project.

4.8 Revised Project Timeframe

The business case implementation and costing approach was developed using a portfolio approach to remove duplications and obtain efficiencies and the start dates of the projects within this business case have been moved based on dependencies identified within the overall SA Power Networks' portfolio of projects.

Project ID	Project Name	Start date
BC01_1	CRM and SVOC	Jan 2014
BC01_2	Service Order Management	Aug 2015
BC01_3	Meter Asset Management	Oct 2015
BC01_4	CIS (Billing)	May 2018
BC01_5	Property	Aug 2015
BC01_6	MDM	Jan 2017
BC01_7	Standing Data	Nov 2020
BC01_1_CRM_ Recurrent	CRM recurrent	Jul 2018
BC01_2-8_Recurrent	CIS recurrent	Jan 2018

5. Document References

5.1 Template

This document is based on template **PMM_T_009** issued January 2013.

5.2 References

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5.3 Acronyms and Abbreviations

These are the key acronyms of relevance to this business case summary. For a complete list of acronyms relevant to the wider CIS CRM Business Case, refer to section 13.3 of the Business Case.

Acronym / Abbreviation	Definition
CIS OV	Customer Information System Open - Vision
CIS	Customer Information System
CTS	Customer Technology Plan
CP /PAL	CitiPower Pty and Powercor Australia Ltd
CRM	Customer Relationship Management
NECF	National Energy Customer Framework
NEM	National Energy Market
NPV	Net Present Value
SVOC	Single View of Customer