Attachment G.21

SAPN__PUBLIC IT CISOV CRM Opex Step Change

03 July, 2015

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Rule Requirement

The AER Expenditure Assessment Forecast Guideline - Distribution, November 2013 details the assessment process for determining whether a proposed opex step change is warranted, prudent and efficient. This approach is further explained in the AER's Preliminary Determination.[1] A step change needs to meet a number of criteria including:

1. not being part of the base year opex allocation; and
2. not being covered by the Rate of Change allocation.

Beyond this, step changes:

- should generally relate to a new obligation or some changes in the service provider's operating environment beyond its control[2];
- should not be related to implementing efficiency improvements; and
- could be related to capex/opex offset for selection of an operating solution to replace a capital one.

The process for reaching the conclusion that an opex step change is required needs to have considered:

- other options to respond to the change in circumstances;
- selection of the most efficient option;
- appropriately quantified costs and benefits; and
- the timing of the change event and whether it can be completed over the regulatory period[3].

Original Proposal

The CIS CRM business case[4] detailed the financial justification for replacing the existing ageing and disparate enterprise billing and customer systems (CISOV[5] and customer related systems). The number of customer systems has grown over time in response to rapidly changing customer and National market requirements.

The primary drivers for the need to replace CISOV and related systems are:

1. The technologies underlying the systems are at the end of their technical life and have already run out of support or will do so over the next few years. CISOV extended support ends in January 2021. This creates a significant and increasing level of risk over time for our customer and regulatory obligations.[6]
2. The current technical architecture also creates an environment which is difficult to maintain and change and therefore impedes the organisation's ability to respond to regulatory changes.

[1] Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 7 – Operating Expenditure, Appendix C, Step Changes, p 7-68 ff.
[2] Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 7 – Operating Expenditure, p 7-72
[3] Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 7 – Operating Expenditure, p 7-72
[4] (SA Power Networks 2015-2020 Submission Attachments 20.37a Deloitte CIS CRM Business Case & 20.37b Deloitte SAPN CIS and CRM Business Case Review and Summary)
[5] Customer Information System Open Vision
[6] SA Power Networks Corporate Risk Register, Risk no. R-000753.

After reviewing a number of options for managing the system risk and responding to the regulatory changes, the recommended prudent approach is to replace the existing disparate customer systems with a single Customer Information System (**CIS**)/ Customer Relationship Management System (**CRM**), and a modular billing system.

Implementation of these systems was expected to be undertaken in a staged fashion starting with the implementation of the new CIS/CRM in 2015/16 followed by the implementation of a new billing system.

The net result of these planned changes was an estimated $53.981 (Dec 2013, $ million) of capex and an opex increase of $7.565 (Dec 2013, $ million) over the 2015-20 RCP as detailed in Table 1.

Table 1: Original Proposal Business Case Estimates (Dec 2013, $ million)

Cost Type	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015 - 2020
Capex	8.778	2.026	4.581	24.179	14.417	**53.981**
Opex	-	1.062	1.768	1.921	2.815	**7.565**
TOTAL	**8.778**	**3.088**	**6.349**	**26.100**	**17.232**	**61.546**

Table 2: Original Proposal n**et** o**pex** b**reakdown (Dec 2013, $ million)**

Cost category	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015-2020
Support	-	0.549	0.864	0.957	1.405	3.773
Hardware Maintenance	-	0.054	0.063	0.069	0.189	0.386
Software Maintenance	-	0.458	0.840	0.883	1.222	3.405
TOTAL	**-**	**1.061**	**1.767**	**1.921**	**2.814**	**7.565**

Table 2 breaks down the opex component of the business case estimates. The opex costs were related to:

1. Additional Support resources ($3.77m) for the implementation of the CIS/CRM from 2016/17 onwards and then the new Billing system from 2019/20.
2. Additional hardware maintenance costs ($0.386m) for the new hardware implemented for CIS/CRM.
3. Additional software maintenance costs ($3.405m) associated with the new licences for CIS/CRM and then the new billing system.

These costs reflected the ongoing maintenance and support for the new systems as well as the additional resources that were needed to support duplicate systems for the long period of transition.

AER Preliminary Determination

In the Preliminary Determination the AER recognised the 'key, non discretionary CIS replacement project' (page 6-122)[7] in the capex allowance in the 2015-20 RCP but did not include any step changes in its alternative opex forecast.

[7] Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 6 – Capital Expenditure, p. 6-122

The AER provided the following reasons for its decision:[8]

> *'Several proposals were related to replacement systems and/or software. We are not satisfied that these proposals would require an increase in total opex.*
>
> *SA Power Networks cited lifecycle replacement of software and systems as justification for several step changes including:*
>
> - *Customer Information System and Customer Relationship Management System*
>
> *We recognise that periodically a service provider will need to replace systems and/or its software. However, we do not consider a step change in total opex is needed where this is the case.*
>
> *As with many IT initiatives, upgrades in software and/or systems are only undertaken if the benefits of doing so would lower the costs that a service provider would otherwise face. In many cases, we would expect upgrades to lower the costs of doing business. As outlined above, total opex should not increase for efficiency improvements.*
>
> *From time to time, replacement of some systems and/or software may lead to higher opex. However, our role is to provide sufficient funding in total to achieve regulatory obligations. Where there is no new regulatory obligation total opex must:*
>
> *to the relevant extent:*
> *(3)(iii) maintain the quality, reliability and security of supply of standard control services; and*
> *(3)(iv) maintain the reliability and security of the distribution system through the supply of standard control services; and*
> *(4) maintain the safety of the distribution system through the supply of standard control services.*
>
> *Therefore, when considering the cost of replacement of software and systems, we would expect that incremental increase in the cost of particular systems would reflect the cost to achieve the same level of quality, reliability and security of service. In isolation, there may be programs or projects that cost more from one year to the next. However, when forecasting opex, we do not aggregate the forecast cost associated with individual projects and projects. We forecast total opex. We are not convinced that the total opex of an efficient business in providing the same quality, reliability and security of service would be much different in the 2015–20 regulatory control period to the base year, 2013–14.'*

[8] Preliminary decision: SA Power Networks determination 2015-16 to 2019-20 ,Attachment 7 – Operating Expenditure, pp. 91-92

Our Response to the AER's Preliminary Determination

SA Power Networks agrees with the AER statement that the CIS CRM Replacement is the key non-discretionary project for the 2015-20 RCP. However, we do not accept the AER Preliminary Determination with regard to the opex step change and submit our Revised Proposal for the opex step change.

SA Power Networks is obliged to maintain the agreed levels of customer service and meet our compliance obligations. CISOV and related customer systems provide the core functionality for customer and billing services with ageing and unsupported technology. These technologies have been identified as posing a high risk to business operations and in addition will not effectively meet the requirements for new national market models and Distribution Network Service Provider (DNSP) obligations. CISOV and customer related systems need to be replaced.

In a situation of 'like for like' upgrades, significant increases in operating expenditure would not be expected. However, in this instance, current and planned regulatory changes (including the AEMC's Distribution Network Pricing Arrangements Rule change and the AEMC's Expanding Competition in Metering and Related Services Rule change) are driving requirements for new capabilities. To respond to these changes efficiently, SA Power Networks requires a new technical foundation capability in order for it to comply with its regulatory obligations and interact with more complex business and market environments. This requires a step change in operating expenditure.

In responding to the AER's Preliminary Determination, SA Power Networks has considered the criteria under which opex uplifts are assessed.

External Drivers: Aged Technology

SA Power Networks' current CIS and CRM technology architecture comprises technology that is no longer available for purchase and is out of support. As part of the development of the CIS CRM business case numerous technologies were considered. All of these new technologies require opex uplift.[9]

External Drivers: A Step Change in Required Capability

SA Power Networks agrees that in a situation of 'like-for-like' upgrade there should be little reason to increase opex. However in this instance SA Power Networks contends that the current and planned regulatory and national market changes are also driving the requirement for new customer capability. These changes entail significant new DNSP obligations including:

- **The Power of Choice: Customer Access to Data**
  Based on the AEMC Rule changes of November 2014[10], as a DNSP, SA Power Networks is required to provide customers with access to their consumption history data by March 2016. Our current systems can only do this with manual report production by internal staff.

- **The Power of Choice: Meter Contestability**
  The Meter Contestability draft Rule changes[11] due to come into effect in July 2015 propose a number of significant changes to our existing business processes or new ones

[9] SA Power Networks 2015-2020 Submission Attachments 20.37a Deloitte CIS CRM Business Case
[10] AEMC Rule Change: Customer access to information about their energy consumption, Nov 2014
[11] AEMC Draft Rule Determination, Expanding competition in metering and related services, March 2015

which will need to be in place by the end of 2017. SA Power Networks will not be able to respond to these changes within the constraints of the current technology. These changes include:

- new roles in the marketplace including metering coordinators, meter providers, meter data providers and embedded network managers, all of which need to be associated with a customer record. The customer record must include information on who a customer is, the communications with the customer and tracking of interactions and evidence of information provided to customers;

- enormous increases in data volumes as more customers transition to interval meters. As a DNSP, SA Power Networks will be required to store and handle all of the additional new interval meter consumption data in order to create the appropriate bill. This will happen irrespective of any other roles SA Power Networks may have in the future market place;

- customer 'opt-out' capabilities for customers who do not wish to have new interval meters. These customers will also need different tariff and billing schedules;

- more complex business processes involving multiple parties related to meter installation, disconnection and reconnection. This has significant safety and network management implications and hence will need more effective management of customer records than is currently available;

- given the larger number of parties in the marketplace there are additional obligations around the management and sharing of information related to critical and life-support customers; and

- more complex and multiple tariff arrangements for customers require an increased effort associated with the management of customer records.[12]

- **The Power of Choice: Multiple Trading Relationships**
  Although the proposed market changes for Multiple Trading Relationships are still 'a work in progress' and not due to be required until 2018, our analysis indicates that our current systems will not be able to deliver these requirements and will need to be replaced.

Based on the market changes that are currently in progress, and also those that are planned, there is a requirement for a technical foundation capable of enabling our future operating environment. This technical foundation will require the ability to interact with more complex business and market environments and will require additional support and maintenance over the current base year 2013/14. This contributes to the need for an uplift in opex for the CIS CRM.

Opex Increases Driven by Historical Development Approaches

The other key driver of an opex increase is the nature of how the current environment has been developed. Our customer systems have grown over a large number of years in response to the changing customer market place. They are generally in-house developed solutions implemented cost effectively in response to a specific need. The customer technical environment now involves ten interlinked but standalone database systems. A key feature of these systems is that they were developed in-house with little or no licensing

[12] AEMC Final Decision: 'Distribution Network Pricing Arrangements', Nov 2014

obligations. While having been cost effective to create, the current environment is not sustainable.

Base Operating Expenditure

The base efficient operating expenditure (2013/14) for SA Power Networks includes operating expenditure for our current environment and does not cover the increase in licence costs for new technology or for related systems that currently do not have licence and support agreements. There is little opportunity to offset cost factors such as licensing because minimal or no licences are currently paid. Moving to a newer, more centralised and sustainable platform requires an increase in licence costs and in the yearly maintenance and support associated with it.

Rate of Change Allowances

The Rate of Change allowance was considered in calculating the costs of this opex uplift. However, the costs are beyond the forecast network growth, price increases for current materials or labour due to CPI. The cost equivalent of the 0.57% Rate of Change allowance provided by the AER in its Preliminary Determination has been removed from the proposed step change.

The Most Cost Effective Base Technology

SA Power Networks has carefully considered many technology options[13] to determine the most prudent path forward. We have looked at options which will allow us to implement systems on a modular basis – starting small and then increasing in capability as the market changes are implemented.

We have also focused on what is minimum functionality that will be required to operate as a DNSP in the new customer market environment but, in general, not including the costs of specific future regulatory or market changes. For example, a new CIS and billing system will enable the Power of Choice changes but the costs of implementing and supporting these individual initiatives are considered in other business cases (eg Tariffs and Metering, Enterprise Asset Management). All of these considerations were taken into account when developing the CIS CRM business case.

A Prudent Staged Replacement Approach

After reviewing a number of implementation options in the CIS CRM business case, the most prudent and minimum risk approach was judged to be the step-by-step replacement of these systems over a number of years. Given these are large systems critical to customer services and billing, a relatively conservative approach was deemed appropriate. However, a result of this approach is that both old and new systems will be in existence at the same time and both will require support and maintenance (including license maintenance) for the period until the old system can be decommissioned. Hence some of our operating capabilities and costs will be duplicated until the old system is decommissioned. We are absorbing these costs as part of the transition process and these costs have not been included in the opex step change.

[13] SA Power Networks 2015-2020 Submission Attachment 20.37a Deloitte CIS CRM Business Case

Revised Proposal

Since this business case was submitted to the AER as part of our Original Proposal, we have commenced planning for the CIS CRM replacement. As part of our planning analysis, we have reviewed the options, risks and costs. We have confirmed the need to continue with the implementation of CIS CRM. We have also reviewed the timelines and although the project has started as planned the ramp up to the first implementation will be slightly slower than originally intended.

Our review also considered the AER Preliminary Determination resulting in a reduction in the opex uplift requested. Specifically, we will absorb the transition costs through greater efficiencies during the transition process and shift some of the additional licence costs into the following (2020-25) RCP due to the slower implementation ramp up. However, we consider that there is still a material difference to the efficient base year 2013/14 requiring an opex uplift to enable us to maintain and meet our current compliance obligations. The uplift is required to cover:

- licensing associated with a new CIS and CRM because the current systems have minimal or no current licence obligations associated with them; and
- an uplift in CIS and CRM labour support costs to enable and support market changes (specifically, the obligations of a DNSP under the AEMC Rule change of November 2014 for customer access to energy consumption information) and support the new technology which requires increased maintenance and monitoring over current technologies which are not maintained.

The revised opex uplift requested for the 2015-20 RCP is $3.452 (Dec 2013, $ million)[14] and comprises:

- Software Maintenance Costs $2.156 million
- Labour Support Costs $1.296 million

Cost Breakdown of the CIS CRM Opex Step Change

Three key changes have been made to the original submission:

1. The opex estimates in our Original Proposal contained costs related to the support and maintenance of the systems and hardware during the long period of transition and hence constituted temporary opex uplift. In preparing the revised submission, SA Power Networks removed this from the Step Change request and only focused on those costs that are expected to be ongoing once the new systems are fully implemented and the older systems are decommissioned. We will seek to manage the additional transition costs through greater efficiencies during the overall transition process and offsetting these costs with benefits gained elsewhere in the program. This has reduced the opex step change by $2.6 (Dec 2013, $ million).
2. The additional costs of the license maintenance for the billing component of CIS CRM will be considered in the following RCP as the first year of operating costs are capitalised. This has reduced the opex step change request by approximately $0.4 (Dec 2013, $ million)
3. An initial CRM ramp up that is slightly slower than initially planned – hence delaying the start of the opex by 12 months and reducing it by approximately $1.0 million (Dec 2013, $ million) for the period.

The total opex uplift required has been reduced from $7.565 (Dec 2013, $ million)[15,16] to $3.452 (Dec 2013, $ million)[15,16].

[14] Resubmission opex step change in $ June 2015 is $3.6M net of benefits.
[15] Exclusive of benefit offsets
[16] Reduction in $ June 2015 and net of benefits is $6.873 to $3.6M.

The focus of the revised submission is predominantly associated with the implementation of the CRM capabilities of the CIS CRM in particular the licensing. Table 3 provides the breakdown of costs for Software Maintenance and Support.

Table 3: Resubmission Opex Step Change (Dec 2013, $ million)

Cost category	2015/16	2016/17	2017/18	2018/19	2019/20	Total 2015-20	Notes
Software Maintenance (CRM)	-	-	0.700	0.725	0.730	**2.156**	1
Support	-	-	0.432	0.432	0.432	**1.296**	
TOTAL	**-**	**-**	**1.132**	**1.157**	**1.163**	**3.452**	

Notes:

1. Software Maintenance

Software maintenance is the largest component of this resubmission. These additional costs are associated with software maintenance for a consolidated new system to replace a number of older systems which currently have no licensing obligations (i.e. no opex obligations) associated with them. Table 4 presents the current license costs and the estimated future license costs for the systems.

Note that the new licence costs will not be offset by the current licence costs until CISOV has been decommissioned in 2021. Hence SA Power Networks is absorbing the full $1.26 (Dec 2013, $ million) additional per annum costs for the new system/s until then. We are not asking for this full additional cost – only for the final per annum residual (i.e. total per annum costs – current per annum costs = $730K p.a.) which commences in 2017/18.

Table 4: CIS CRM Software Maintenance Costs (Dec 2013, $ million)

Current Systems	Current Software License Maintenance Costs (p.a.)	Software License Cost Estimates for New System/s (p.a.)	Residual Additional Software Licence Cost Estimates (p.a.)
Billing and residential customer identifiers (CISOV)	0.530	1.260	0.730
Life Support and Critical Customer Register	0		
Complaints Register	0		
Tariff & Revenue Analysis and Reporting System	0		
Meter Asset Data Management System	0		
Meter Reading Reporting System	0		
Business Customer Management System	0		
DUOS Rebates and Network Charges System	0		
Customer Load Profile Analysis System	0		
Property Management System	0		
Total	**0.530**	**1.260**	**0.730**

Consequently, we are seeking software maintenance uplift of $2.156 million for the 2015-20 RCP.

2. Support

The additional support uplift requested is based on the minimum effort required to support our customer systems during and after the technology transition and the market changes. With the implementation of a new system there is an initial uplift. Over the five year period the older systems will be transitioned into the new system and this will offset some of the costs of supporting the new system. We have taken these into account by absorbing these costs as part of the transition process.

There still remains a requirement for increased support resources. The existing 0.5 FTE support for systems other than CISOV provides reactive rather than proactive support. A more centralised and critical business system requires a more proactive approach to maintain currency through regular patching and upgrades.

The existing CISOV support will be transitioned across to the new billing system once that is implemented (2019-2020) and hence must remain the same for the period.

The net effect of the market changes taking place is that business processes become more complex. Even if SA Power Networks is not in the metering market we still have obligations to the remaining regulated meter market as well as the obligations to interact with the new national market environment. We need to work with more parties in the national market place as well as new business processes. Technology will be fundamental to the new customer market processes and we therefore require the appropriate levels of additional resources to manage the business processes and the technology.

Table 5 provides a breakdown of the additional support resource requirements which commences in 2017/18. Consequently, we are seeking an uplift of $1.296 (Dec 2013, $ million) in support costs for the 2015-20 RCP.

Table 5: CIS CRM Additional Support Costs (Dec 2013, $ million)

Function	Description	FTE Estimates	Costs p.a
CRM – Applications Support	Technical support and maintenance for the new CRM. This is a new business critical system. Total estimated support is 1.5 FTE. The 0.5 FTE that support the current multiple applications will move across.	1.0	0.144
Service Order Management	Business resources to manage workflow and reporting for more complex service order processes with more market participants.	0.5	0.072
Analytics and Reporting	Additional resources to monitor and report on more data and manage data quality for compliance reporting.	0.5	0.072
Access and Security Management	Technical security resources to support additional customer access to data.	0.5	0.072
Infrastructure Support	Provide additional network and technical resources to ensure systems availability.	0.5	0.072
	Total	**3.0**	**0.432**

These resources are additional to those detailed in SA Power Networks Revised Proposal, Attachment H.8 (Competition in Metering Rule Change) which is focused on handling the additional interval data volumes and associated metering services. The focus of the CIS and CRM additional costs is the changing customer management and customer access to data requirements.

References

Ref	Document Name	Date	Author
	AEMC Draft Rule Determination, Expanding competition in metering and related services	March 2015	AEMC
	AEMC Rule Change: Customer access to information about their energy consumption	Nov 2014	AEMC
	AER Expenditure Assessment Forecast Guideline – Distribution- November 2013	November 2013	Australian Energy Regulator
	Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 6 – Capital Expenditure	April 2015	Australian Energy Regulator
	Preliminary Decision: SA Power Networks determination 2015-16 to 2019-20. Attachment 7 – Operating Expenditure	April 2015	Australian Energy Regulator
	Revised Submission 2015-2020: Competition in Metering Rule Changes	June 2015	SA Power Networks
	SA Power Networks 2015-2020 Submission Attachment 20.37a Deloitte CIS CRM Business Case	October 2014	SA Power Networks
	SA Power Networks 2015-2020 Submission Attachment 20.37b Deloitte SAPN CIS and CRM Business Case Review and Summary	October 2014	SA Power Networks