APPENDIX 37

ICT Services Expenditure

Information and communications technology services

1.1 Overview

This appendix provides information on Energex's proposed ICT expenditure for the 2015-20 regulatory control period.

This appendix includes the following sections:

- Section 2 – provides an overview of Energex's ICT arrangements
- Section 3 – details the ICT services fees charged to Energex
- Section 4 – details the proposed key ICT program and initiatives

1.2 Introduction

SPARQ Solutions (SPARQ) is a jointly owned subsidiary of Energex and Ergon Energy (Ergon), with each business holding a 50 per cent share. Energex and Ergon have positioned their Chief Information Officer functions in SPARQ. SPARQ provides ICT services to both businesses with the view to deliver greater efficiencies through economies of scale, and integration and co-ordination of ICT services to both distribution businesses. SPARQ is considered a related party under the National Electricity Law (NEL). SPARQ's Constitution requires that it operate on a not-for-profit basis.

ICT expenditure incurred by SPARQ comprises expenditure directly attributable to ICT assets, including replacement, installation, operation, maintenance, licensing and leasing costs. SPARQ in consultation with Energex has developed an ICT Plan 2015-16 to 2019-20 (ICT Plan) which sets out the strategic objectives and principles underpinning Energex's proposed ICT program of work for the 2015-20 regulatory control period. The ICT Plan is provided as Appendix 32.

SPARQ's operating and capital expenditure for the provision of ICT services is charged to Energex in the form of ICT services fees. The total ICT expenditure incurred by SPARQ associated with the provision of ICT services to Energex is treated as indirect operating expenditure and allocated to services consistent with Energex's approved CAM.

1.3 ICT services fees

The ICT expenditure recovered from Energex comprises the following components:

- Asset service fee for investments capitalised in SPARQ's asset base
- Operational support relating to support services

- Telecommunications pass through
- Non capital project costs.

The proposed ICT fees charged to Energex for the 2015-20 regulatory control period are summarised in Table 1 below.

Table 1 – Proposed ICT forecast fees for the 2015-20 regulatory control period

	2015-16	2016-17	2017-18	2018-19	2019-20
Asset service fee	52.7	47.4	43.5	48.8	50.5
Operational support	46.4	45.9	45.7	46.3	46.0
Telecommunications pass through	7.4	7.4	7.4	7.4	7.4
Non capital project costs	4.4	7.8	7.3	5.0	1.8
Total	**110.9**	**108.5**	**104.0**	**107.6**	**105.7**

Notes:
1 All figures are $m, 2014-15
2 Value may not add due to rounding

Asset service fee

The asset service fee charged to Energex relates to the costs of ICT assets capitalised within SPARQ and comprises the following components:

- Depreciation of tangible ICT assets held
- Amortisation of intangible ICT assets
- Costs of borrowing to fund these assets.

The nature of capital replacement and upgrade expenditure explains the variability in SPARQ's asset usage fee, making it unsuitable to Base Step Trend. The proposed asset usage fee has therefore been developed using a bottom-up approach.

Operational support costs

Operational support costs is recurrent expenditure that is required to operate, support and maintain ICT, and provide services defined in the Service Level Agreement (SLA) between Energex and SPARQ. The agreed SLA between Energex and SPARQ covers all non-project related expenses incurred by SPARQ in support of Energex's ICT requirements, including:

- End-user services such as Help Desk and desktop services
- Hardware and software licence, and maintenance

- Business application support
- Infrastructure and telecommunications support.

The operational support cost element comprises operational staffing (internal and external), software and hardware licence and maintenance, SPARQ property, and SPARQ's overhead costs (HR, finance, contracts and office of the CEO).

As the operational support expenditure is recurrent in nature it is considered suitable to be forecast using the Base Step Trend approach as applied by SPARQ.

Telecommunications pass through

SPARQ also manages telecommunications services on behalf of Energex which include carrier, mobile, data, voice, video and device management. The charges relating to these services are treated as pass through costs which means that they do not incur any overheads.

Due to the recurrent nature of telecommunications costs, it is considered suitable to formulate the forecast using Base Step Trend.

Non capital project costs

These project costs include project planning and estimation which, due to Australian tax and accounting standards, are not capitalised. These non-capital costs are incurred by SPARQ and charged to Energex. Non capital project costs are not recurrent in nature and are therefore unsuitable for a Base Step Trend forecast approach. The forecast for non-capital costs have been prepared using a bottom-up approach.

1.4 Key ICT program and initiatives

The ICT Plan is developed to support Energex to meet the objectives of the NER, along with Energex's business strategy and the ICT strategy. The ICT strategic vision is to create an information enabled enterprise that will efficiently support, through prudent ICT investment, the business transformation to a sustainable and intelligent distribution network.

The significant drivers that underpin the ICT strategy and supporting ICT Plan are:

- To support Energex in meeting its regulatory and commercial obligations[1]
- To address the business risk arising from legacy systems that are approaching obsolescence during the next regulatory control period
- To manage and optimise the value of ICT assets throughout their lifecycles based on industry information and published vendor data

[1] Refer clause 6.5.6, Chapter 6 of the National Electricity Rules.

- To ensure that ICT investments are prudent through the adoption of utility industry best practice
- To leverage emerging technologies where appropriate.

The proposed ICT program of work includes projects categorised into six investment streams:

Network asset management

Energex's Enterprise Asset Management (EAM) functions[2] are currently supported by two major systems: Ellipse 5 and the highly complex bespoke application suite Network Facilities Management (NFM). Ellipse 5 will reach financial and technical obsolescence in 2015, leading to growing ICT risks and inability for the business to fully implement ISO 55000 (asset management practices). Accordingly, aligning with its ICT Asset Management Guidelines, Energex intends to replace its legacy EAM systems with a contemporary EAM system. This will provide an opportunity to consolidate asset registers and satellite applications, and minimise expenditure in customisations and vendor support costs.

Furthermore, NFM, along with a legacy GIS and two complex bespoke applications, support Energex's network modelling, forecasting and planning capability. In response to increased reporting requirements, Energex has started to renew its spatial and modelling capability. Energex plans to replace the bespoke applications with commercial-off-the-shelf products and reuse the existing enterprise information management platform for advanced analytical and reporting functionality. The selection of the replacement solution will be subject to cost benefit analysis of the available options.

Network operations

As part of the Advanced Distribution Management Program[3], Energex plans to upgrade to the next major version of its Distribution Management System (DMS) as part of its asset management lifecycle and in response to the vendor's announcement that support of the current version will end in 2018. The proposed DMS upgrade will provide the opportunity to further the adoption of additional ADMS modules where deemed to be prudent in future business case and cost benefit analysis.

This initiative will deliver financial benefits to Energex in terms of sustained reduction in operational expenditure. Energex also expects non-financial benefits including improved network safety, security and reliability.

[2] Enterprise Asset Management solutions provide support to Energex in managing its large asset base through all stages of the asset life cycle including design, construction, commissioning, operations, maintenance and decommissioning or replacement of the assets.

[3] Advanced Distribution Management System (ADMS) is a support system used by control room and field operating personnel in monitoring and controlling the electric distribution network effectively having regard to safety, reliability, asset protection and quality of service. ADMS is an integrated system that combines distribution management (DMS), outage management (OMS) and supervisory control and data acquisition (SCADA) systems.

Whilst Energex is not expecting an increase of demand management activity until 2020 that would warrant major ICT investments, it anticipates significant uptake of demand management in the subsequent regulatory control period. It has therefore included some preparatory steps in its proposal to ensure that demand management contract and network related data are managed and available to the relevant ICT systems.

Finally, as part of the Distributed Automation Program, Energex plans to include a minor upgrade of the Field Force Automation system in conjunction with Ergon. This initiative aligns with Energex's ICT Asset Management Guidelines, ensuring the platform remains current and operational disruptions are minimised.

Corporate services

The Administrative Enterprise Resource Planning (ERP)[4] system is currently provided by the legacy Ellipse 5 platform that will reach both financial and technical obsolescence in late 2015. Thereafter, sustainment support for the application will end. Failure to address this situation will increase risks to the business, namely:

- Failure to process financial transactions
- Failure to perform statutory and regulatory reporting
- Failure to perform payroll functions and potential Industrial Relations implications
- Increased audit costs.

Energex considered it more efficient to defer the planned upgrades of the ERP during the current regulatory control period and, instead, plans to replace it with a contemporary Administrative ERP system during the 2015-20 regulatory control period. This will also provide Energex with the opportunity to consolidate a number of satellite applications and migrate administrative business processes to contemporary industry standards.

Customer services

The customer and market systems are legacy applications Energex uses to interact with the market, ensuring that Energex delivers on its compliance obligations as a network service provider, and metering and meter data provider in the NEM. These applications will become obsolete early in the forthcoming regulatory control period. Failure to respond to this issue will result in risks such as:

- Impairment of network billing resulting in potential loss of revenue and increase in disputes
- Compliance risk resulting in penalties and reputational damage
- Failure to receive and complete customer and retailer service requests.

[4] Enterprise resource planning is an integrated system that allows different businesses within Energex to exchange data and information including financial data management, business asset management and personnel management.

Energex's market systems are planned to be replaced with commercial-off-the-shelf contemporary solutions where cost benefit analysis is revealed to be prudent. Renewal of these market systems will provide Energex with the opportunity to consolidate applications and implement a platform that is more adaptable to industry change.

Enterprise services

Energex's Information Infrastructure provides the delivery of quality, integrated and contextualised information to the workforce, consumers and other industry participants. Underpinning it are core platforms such as Business Analytics and Integration which will be due for renewal during the 2015-20 regulatory control period in line with Energex's ICT Application Asset Management Guidelines. This work will provide Energex with the opportunity to consolidate some satellite applications and maintain capability across the entire ICT architecture. Furthermore, Energex plans to enhance its information security systems as a result of increasing information volumes, cyber threats and increasing use of mobile devices.

ICT infrastructure

The purpose of this program is to renew ICT infrastructure assets in accordance with the ICT infrastructure Asset Renewal Guidelines. Assets covered by the program include Windows and Unix server equipment, corporate data network equipment, server storage infrastructure renewal and growth, asset renewal of ICT peripheral equipment including printers and mobile phones. Infrastructure software renewal of ICT technologies such as Exchange email, integration technologies, database environments is also required to maintain ICT technologies at a level that delivers the lowest total cost of ownership and acceptable risk profiles. The benefits from this program include:

- Reduction in maintenance on legacy infrastructure outside of warranty
- Impact to business operations as a result of unreliable infrastructure
- Reduction of energy consumption (disk storage technologies consumption being 40 percent lower than legacy storage).

1.5 Efficiency of proposed ICT program

Energex is of the view that the proposed ICT program for the 2015-20 regulatory control period will allow Energex to deliver a structured ICT renewal program, sustain prudent ICT asset management and mitigate all high to extreme ICT and related business risks. The proposed projects have been endorsed by Energex's Investment Review Committee in accordance with the governance arrangements that are in place between Energex and SPARQ. Preliminary business cases have been developed. However, progression of any initiative is subject to further business case analysis and investment assessment by the Investment Review Committee, with formal financial approval at the time of the investment.