



# Jemena Electricity Networks (Vic) Ltd

## Technology Plan

IT Investment Brief - System Management

Non-Recurrent - Maintain



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## Glossary

Current regulatory period	The period covering 1 Jan 2016 to 31 Dec 2020
Intervening period	The period covering 1 Jan 2021 to 30 Jun 2021 includes the time between the current regulatory period and the next regulatory period. The Intervening period arises with the move from a calendar year regulatory year to financial
Next regulatory period	The period covering 1 Jul 2021 to 30 Jun 2026
RYxx	Regulatory year covering the 12 months to 30 June of year 20xx for years in the Next Regulatory Period and the 12 months to 31 December of year 20xx for years in the Current Regulatory Period. For example, RY20 covers 1 January 2019 to 31 December 2020 and RY22 covers 1 July 2021 to 30 June 2022.
CYxx	The calendar year which covers the 12 months to 31 December of year 20xx. For the current regulatory period, this is equivalent to RYxx
AER	Australian Energy Regulator
JEN	Jemena Electricity Network (Vic) Ltd.
ICT	Information and Communications Technology
Jemena	Refers to the parent company of Jemena Electricity Network

## System Management – Non-Recurrent

Objective	To ensure that Jemena Electricity Network ( <b>JEN</b> ) has appropriate tools to manage and patch its information technology systems.
Background	<p>System management tools are critical parts of the IT ecosystems as they monitor and control the health of the systems; they are, in effect, the software that manages systems.</p> <p>Sometimes IT systems—including system management tools—reach a point where replacement with a new approach is required rather than an upgrade of the existing system. Reasons for this include:</p> <ul style="list-style-type: none"> <li>• The requirements of the business evolve, and new products are a better fit for the requirements</li> <li>• Different products or approaches produce a lower long-term cost of ownership</li> <li>• Transaction volumes outgrow a system's capability</li> <li>• The software undergoes a rebuild of the architecture in a significant way which requires a reimplementation rather than an in-situ upgrade</li> <li>• The vendor decides to end support for the product and upgrades cease.</li> </ul> <p>These triggers lead to the replacement of a product rather than an upgrade, and because they are less common than the normal cycle of major and minor upgrades and patch releases that vendors regularly issue, have cycle times that are generally longer than five years and often in the range of ten to fifteen years.</p> <p>These long-cycle architecture replacements by vendors are seen with almost all software products. Vendors are themselves driven by long-cycle changes in development tools, processing equipment and data storage capability and find new ways of delivering functionality. Other drivers for product replacement include a need to rearchitect to build in cyber-security resilience throughout the entire information technology stack and the move towards cloud computing.</p> <p>When this occurs, Jemena must replace a system and, within the definitions the AER uses, classify that activity as Non-recurrent.</p> <p>Jemena has 3 System Management tools that monitor and control our server platforms that will require replacement in the next regulatory period. these include:</p> <ul style="list-style-type: none"> <li>• CAPTEL Capacity Management</li> <li>• Microsoft System Centre <u>Configuration</u> Manager</li> <li>• Microsoft System Centre <u>Operations</u> Manager.</li> </ul>
Customer Importance	The tools described in this Investment Brief are necessary for the efficient operation of the infrastructure platforms used by Jemena. Without these system management tools in place and operating effectively, significantly higher manual activity would be required at higher cost and instability in the application environment could lead to impacts on the delivery of services to customers.
Strategic Approach	Jemena expects to replace these system management tools in the next regulatory period rather than upgrade them in-situ. The business requirement for their functionality does not change, so the need to provide that functionality through an ongoing, supported tool remains also.
Options	JEN has considered two options to deal with these system management tools, these include 1) do nothing and continue using the old ones, and 2) investment in replacement tools to provide the required functionality.

**Option 1: Do nothing****Description**

This option requires that no action is taken and no changes are made to these systems. As the tools are not expected to be supported in their current forms, it is unlikely that further updates will be made available.

**Risks**

The tools are likely to degrade in their functionality as other products in the ecosystem evolve and are updated, and so the management tools may not be able to monitor or control those updated systems. Patches to the tools for security vulnerabilities will cease to be produced. Eventually, the tools will stop working altogether. Without their functions, inefficiencies in the smooth running of the infrastructure platforms are likely to occur, and security patching of the platforms could be delayed or compromised. Manual workarounds could be difficult to implement as these platforms are remote-controlled now rather than attended to in person.

**Benefits**

These tools provide substantial efficiencies in managing platforms for monitoring, remote control, patching and capacity management.

**Summary**

This option is not considered viable. Tools such as these are fundamental to the smooth running of the ICT environment.

**Option 2: Replace the management tools with contemporary products that are supported by their respective vendor****Description**

Jemena will update the system management tools with suitable replacements that match the operational requirements of the business and integrate within the Jemena ICT ecosystem.

**Direct Escalated Costs (mid-year 2021)**

JEN's portion of costs for this option is outlined in the table below.

\$2021	Project ID	RY22	RY23	RY24	RY25	RY26
CAPTEL Capacity Management Lifecycle Replacement	ITSD18	250,603				
Microsoft SCCM Migration to Cloud Solution	ITSD40	177,701				
Microsoft SCOM Migration to Cloud Solution	ITSD41	113,911				
<b>Total</b>		<b>542,214</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

This option will incur *Non-recurrent - maintain* capital costs of \$542k for the replacement of existing systems.

**Capitel** – A capacity management tool which monitors running systems and is used to predict where capacity needs to be increased, or can be reduced, to maintain application performance. It covers processing, memory and storage requirements of systems and monitors the over 1500 servers in Jemena's datacentres. This product will be at the end-of-life, and a new capacity management tool is required. This will involve a market search process with a preference for tools that integrate with other existing management tools within Jemena's ICT ecosystem. Based on the requirements and scope, Jemena estimates that this will require a medium-sized project of fewer than three months and moderate complexity.

**Microsoft SCCM** – System Centre Configuration Manager is a tool for managing large groups of computers providing remote control, patch management, software distribution, operating system deployment, network access protection and hardware and software inventory. SCCM is used when making changes to the configuration of a system and is key to the timely implementation of security patches. The vendor roadmap shows a rearchitected solution being provided as a cloud service. Jemena is making growing use of cloud services, especially when deploying new applications systems which are increasingly cloud-only, and it is appropriate that management tools are capable of handling cloud solutions as well as on-premise systems. Based on the requirements and scope, Jemena estimates that this will require a medium-sized capex migration project of fewer than nine months and significant complexity. The project is forecast to begin this period and extend into RY22.

**Microsoft SCOM** – System Centre Operations Manager is a separate tool to SCCM for operating large groups of computers showing state, health and performance information of computer systems and alerting operators if that state becomes abnormal. SCOM is used as a daily operational tool in the monitoring and control of systems. The vendor roadmap shows a rearchitected solution being provided as a cloud service. Jemena is making growing use of cloud services, especially when deploying new applications systems which are increasingly cloud-only, and it is appropriate that management tools are capable of handling cloud solutions as well as on-premise systems. Based on the requirements and scope, Jemena estimates that this will require a small to medium-sized capex migration project of fewer than three months and low complexity.

### Risks

The risks of these projects are managed within Jemena's governance and project management framework; the risks are not considered material for these projects.

### Benefits

There are no specific additional benefits associated with this option; the functionality is being maintained through system replacement.

### Summary

This option will replace the existing systems at low cost. However, it will materially impact on the operations of the entire ICT ecosystem if the projects are not undertaken.

Options Summary	The table below summarises the quantitative and qualitative differences between the analysed options.			
		Capex \$2021	Qualitative Risks	Qualitative Benefits
	Option 1	N/A	High	Negative in the long term
	Option 2	-542,214	Low	Low
What We Are Recommending	JEN proposes to proceed with option 2. The investments are necessary to maintain the ability to monitor and control Jemena's processing platforms proactively and continue to provide network services to customers.			
Relationship to ICT Capital Forecast	The proposed option for this business case is contained in the ICT investment plan as non-recurrent Project IDs: ITSD18, ITSD40 & ITSD41.			