



# Jemena Electricity Networks (Vic) Ltd

## Technology Plan

IT Investment Brief - SAP Migration

Bridging paper between the Jemena business case and JEN submission



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## Glossary

Next regulatory period	The regulatory control period covering 1 Jul 2021 to 30 Jun 2026
AMI	Advanced Metering Infrastructure
BW/4HANA	Business Warehouse (software module from SAP)
Current regulatory period	The regulatory control period covering 1 Jan 2016 to 31 Dec 2020
ERP	Enterprise Resource Planning (software)
ICT	Information and Communications Technology
ISU	Industry Specific – Utilities (software module from SAP)
Jemena	Refers to the parent company of Jemena Gas Network
JEN	Jemena Electricity Network (Vic) Ltd.
NER	National Electricity Rules
RPA	Robotic Process Automation
RYxx	Regulatory year covering the 12 months to 30 June of year 20xx. For example, RY20 covers 1 July 2019 to 30 June 2020

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# 1. SAP Migration to S4

Introduction	<p>Jemena (being the parent entity to several energy infrastructure businesses—including Jemena Electricity Networks (Vic) Ltd (<b>JEN</b>))—uses SAP modules for these major functions:</p> <ul style="list-style-type: none"> <li>Enterprise Resource Planning (<b>ERP</b>) module covers corporate functions such as finance, HR, payroll, etc., and the Industry Specific – Utilities (<b>ISU</b>) module covers works &amp; asset management and billing which have functionality unique to the utility space.</li> <li>A separate instance of SAP's ISU module for JEN's Advanced Metering Infrastructure (<b>AMI</b>), specific to meeting the Victorian metering obligations.</li> <li>Business Warehouse BW/4HANA module used for data warehousing and reporting and unrelated to the core ERP/ISU transactional systems.</li> </ul> <p>Jemena uses a common IT eco-system for all its subsidiaries—including JEN—to leverage the cost and operational benefit of scale.</p>
Objective	<p>The objective of this investment brief is to illustrate the link between the attached SAP migration business case—which covers the provision of services to the whole of Jemena—and the projects included in the JEN 2021-26 regulatory proposal. The migration business case document contains the justification for the expenditure in the SAP domain for the whole of Jemena. This document specifies the costs from the more extensive program that is specifically applicable to JEN.</p>
Background	<p>SAP has recently released a significant upgrade of the ERP and IS-U platforms, which is referred to as “S/4”. This version of SAP has been designed to operate with SAP's “HANA” database platform for performance reasons. However, this means as Jemena upgrades its SAP systems, it will also have to upgrade the underlying database. This is because the current version of SAP (referred to as “ECC6”) is operating on a Microsoft database.</p> <p>SAP announced that it would only support the “ECC6” version until 2025.</p> <p>Jemena last went through this type of significant upgrade when it upgraded to the ECC6 version about a decade ago. All vendor systems, at some point, go through a major architecture change such as this.</p> <p>Large SAP platform changes such as ECC6 and S/4 occur less frequently than the 5-year regulatory cycle.</p>
Importance of SAP	<p>SAP is the backbone system of Jemena's, and therefore JEN's, ICT ecosystem. It processes the majority of the transactional activity of the network business. Without it, there is no payroll, payments, billing or asset management. SAP's criticality is such that JEN would fail its licence conditions and market obligations if the system became unavailable for an extended period.</p>
Strategic Approach	<p>SAP is critical to Jemena's business operations, and Jemena could not reasonably take the risk of continuing to use the ECC6 version when it is not supported by SAP. Our assessment outlines that it must be maintained within vendor supported versions to mitigate risks and costs.</p> <p>The Australian Signals' Directorate's <i>Essential 8 mitigations for cyber security</i> states that:</p> <p><i>“Applications that are no longer supported by vendors with patches or updates for security vulnerabilities are updated or replaced with vendor-supported versions.”</i></p> <p>Jemena has determined the following:</p> <ul style="list-style-type: none"> <li>Third-party support options, as a substitute mechanism beyond SAP's declared end-of-life, do not meet the standard necessary to maintain security.</li> <li>SAP's end-of-life date has been formally announced and basing strategic business decisions on the possibility of a potential future extension of that date is highly imprudent.</li> <li>The best case for SAP support can only be a deferral of the end-of-support date; support for ECC6 will cease at some point. An extension does not remove the eventual requirement to migrate, either to S/4HANA or entirely away from SAP.</li> <li>Delaying the migration of significant portions of the SAP functionality into the subsequent regulatory period is also not truly viable. Too much of the system would be left vulnerable to the absence of support.</li> </ul>

	<ul style="list-style-type: none"> <li>Customer (and AER) support for a full transformational piece that would enable the new S/4HANA platform to be used to its fullest extent and for removal of outdated processes and customisations is unlikely to be forthcoming. The cost of such an exercise is acknowledged as being too high to pass on to customers.</li> </ul> <p>Jemena has been left with one course of action, to perform a “technical” upgrade which migrates the current ways of working and the existing processes onto the new platform as they are but with no new functionality and no process improvement (other options have been assessed and dismissed in the Jemena SAP migration strategy). This approach is not aimed at providing new capability. Its sole goal is to move the current system to a supported platform.</p>
Options	<p>The options are presented in the attached SAP whole-of-business, business case.</p> <p>JEN also notes that, while the business case discusses the migration in enterprise-wide costs, these scale proportionally for JEN when considering the impact on JEN's capital expenditure plan. That is, all cost allocations are in the proportions outlined in the corporate cost allocation policy to all subsidiaries.</p> <p><b>Risks</b></p> <p>A technical migration comes with the lowest risk of all of the options discussed in the attached SAP migration business case as it involves no transformational program to re-engineer processes and revisit customisations. Automated tools will be used to assist with much of the process of migration.</p> <p>Risks are discussed in greater detail in the attached SAP migration business case.</p> <p><b>Benefits</b></p> <p>The option of a technical upgrade provides no benefits to JEN or customers. It does, however, deliver a fully vendor-supported platform for JEN's core systems with an operational live expected to be another 10-15 years.</p> <p><b>NPV Analysis</b></p> <p>The NPV for the options is discussed in the attached SAP migration Business case.</p>

Costs	<p>A reconciliation of the capital expenditure from the Jemena business case to the funds sought in this investment brief for JEN is outlined below.</p> <table><tr><th>Details</th><th>Allocation</th><th>Amount (\$2018)<sup>1</sup></th></tr><tr><td><b>Non-recurrent (three separate SAP environments, \$2018)</b></td><td></td><td></td></tr><tr><td>• ERP</td><td></td><td>15,000,000</td></tr><tr><td>• AMI IS-U (JEN only)</td><td></td><td>7,500,000</td></tr><tr><td><b>Total</b></td><td></td><td>22,500,000</td></tr><tr><td></td><td></td><td></td></tr><tr><td><b>Apportionment of costs to JEN by SAP environment (\$2018)</b></td><td></td><td></td></tr><tr><td>• ERP</td><td>35.1%</td><td>5,265,000</td></tr><tr><td>• AMI IS-U</td><td>100%</td><td>7,500,000</td></tr><tr><td><b>Total (June \$2018)</b></td><td></td><td><b>12,765,000</b></td></tr><tr><td></td><td></td><td></td></tr><tr><td><b>Apportionment of costs to JEN by SAP environment (\$2021)</b></td><td></td><td></td></tr><tr><td>• ERP</td><td>35.1%</td><td><b>5,683,416</b></td></tr><tr><td>• AMI IS-U</td><td>100%</td><td><b>8,106,160</b></td></tr><tr><td><b>Total June \$2021</b></td><td></td><td><b>13,789,575</b></td></tr></table> <p>JEN forecast a total of \$5,553,940 in mid-year \$2021 in the capital expenditure forecasts<sup>1</sup> for the partial migration of SAP to S/4. This forecast is represented as the sum of two projects with IDs ITSE12 and ITSE13.</p> <p>JEN did not include the AMI IS-U migration before the generation of the regulatory proposal numbers. JEN will raise the issue of a gap between the capital expenditure model and the SAP Migration Business Case with the AER throughout the Regulatory Proposal consultation phase and in our revised regulatory proposal.</p>	Details	Allocation	Amount (\$2018) <sup>1</sup>	<b>Non-recurrent (three separate SAP environments, \$2018)</b>			• ERP		15,000,000	• AMI IS-U (JEN only)		7,500,000	<b>Total</b>		22,500,000				<b>Apportionment of costs to JEN by SAP environment (\$2018)</b>			• ERP	35.1%	5,265,000	• AMI IS-U	100%	7,500,000	<b>Total (June \$2018)</b>		<b>12,765,000</b>				<b>Apportionment of costs to JEN by SAP environment (\$2021)</b>			• ERP	35.1%	<b>5,683,416</b>	• AMI IS-U	100%	<b>8,106,160</b>	<b>Total June \$2021</b>		<b>13,789,575</b>
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What We Are Recommending	Option 1a from the attached SAP Migration plan “JEN – RIN – Support – IT Business Case – SAP Migration – 20200131 – Confidential” is the preferred option. This option delivers a supported system before SAP’s declared end of life and secures Jemena’s—and therefore JEN’s—core systems for a further 10-15 years of operational life.																																													
Relationship to ICT Capital Expenditure Forecast	<p>The ICT capital expenditure forecast has 2 projects, ITSE12 and ITSE13, totalling \$5,553,940 which was originally planned to accomplish a partial migration in the next regulatory period.</p> <p>The preferred option for this business case is now to proceed with a full technical migration of SAP to S/4 in the next regulatory period at an estimated cost of \$13,789,575 which will be resubmitted as a single project with the revised proposal.</p>																																													

<sup>1</sup> JEN - Att 05-11 Capex model – 20200131.