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INFORMATION AND COMMUNICATIONS TECHNOLOGY

ERP & BILLING SYSTEM UPGRADE

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1.   Overview

As the joint owner and operator of three major electricity distribution networks we deliver electricity to nearly two million Victorian households and businesses. While our physical networks are separate, many of our IT systems are shared to provide long-term capital and operating expenditure efficiencies to our customers.

The IT systems that underpin our networks are managed through updates or upgrades to maintain their stability, performance and security. This business case relates to generational upgrades of two major core systems; our enterprise resourcing planning (ERP) systems and our network billing systems for CitiPower (CP), Powercor (PAL) and United Energy (UE).

Our ERP systems are used to run our core payroll, HR, finance and network organisational asset management systems. It is a crucial component of our IT architecture and interacts with a variety of other systems.

All networks have been utilising the SAP product suite as their ERP since the late 1990s. As an ERP solution, SAP has been proven to be both reliable and efficient. Its processes are integrated into all areas of the business, and our employees have an extensive working knowledge of the product and how it intersects with critical business activities.

Our network billing system is a core part of our market systems that manage tariff revenue, connections and metering, and is connected to broader set of systems responsible for communicating with AEMO, energy retailers and other market participants.

As confirmed by the vendor, SAP will discontinue any product support for the current SAP version at the end of 2030. SAP S/4HANA is the next available version and will become the only supported version from this date. In light of this upcoming change, we must plan ahead to ensure that our systems remain stable, compliant and fit-for-purpose. Similarly, CP/PAL's network billing system is built on a legacy platform and must also be upgraded to ensure ongoing reliability and compatibility with future industry demand.

In response to the challenges outlined above, the following four options were assessed to identify the recommended approach for the next regulatory period:

1. **No upgrade, maintain current systems –** under this option we continue to use our current ERP and billing system on legacy technology, with associated support of these systems ceasing during the period.

2. **Base upgrade** – upgrades CP/PAL's shared ERP system and UE's ERP system but these remain separate, with no convergence of processes or systems. This includes the replacement of CP/PALs shared billing system from CIS OV to SAP ISU, but it remains separate from UE's billing system.

3. **Technical convergence upgrade** – consolidates CP/PAL and UE billing functions into SAP and simplifies revenue management business processes. Also converges both ERP systems into the single SAP instance, focusing on IT platform unification without further business process convergence. This simplifies the IT architecture but enables UE to maintain separate business processes.

4. **Full convergence upgrade** – consolidates both ERP systems into a single SAP S/4HANA instance, including business process standardisation. All business processes across CP/PAL and UE are combined for maximum operational efficiencies over the long-term. This includes the convergence of billing systems into SAP.

Option three above is our recommended option as it strikes the optimal balance between risk mitigation, cost efficiency, and long-term scalability. These benefits will flow through to customers.

TABLE 1   OPTION SUMMARY ($M, 2026)

#	OPTION	CAPEX	OPEX	NPV
1	No upgrade	39.1	-	-
2	Base upgrade	136.9	44.5	445.7
3	Technical convergence upgrade	162.2	55.7	525.3
4	Business transformation (full convergence)	222.2	80.2	419.4

Note: This includes costs and benefits associated with CitiPower, Powercor and United Energy

2. Background

SAP is acknowledged as an industry standard within utility organisations and is used by many distributors in Victoria and Australia-wide. It was chosen due to its rich functionality, high reliability and compatibility with multiple platforms and operating systems (e.g. Microsoft Windows).

The SAP ERP system plays a key role in what we do and provides accurate and real time information to allow us to best serve our customers. It has proven to be a scalable platform that has developed alongside our evolving business needs. For UE, the SAP platform also manages network billing functions. For CP/PAL network billing functions are managed by a separate application, CIS OV.

Our network billing systems are a core part of our market systems that manage tariff revenue, connections and metering, and is connected to a broader set of systems responsible for communicating with AEMO, energy retailers and other market participants.

2.1 Current ERP configuration

The SAP ERP system underpins and knits together many critical functions of our business, supporting key capabilities across the organisation to assist in the successful operation of our network. This includes:

- asset management and maintenance supporting the lifecycle management of network assets: SAP is central to workflows responsible for scheduling and tracking of preventive, corrective, and predictive maintenance tasks, ensuring asset reliability. Integration with Geographic Information Systems (GIS) enhances efficiency by enabling field teams to locate and resolve asset issues effectively. Additionally, SAP captures asset performance data, providing valuable insights to guide repair or replacement decision

- field services: SAP manages work orders and dispatching crews to ensure timely responses to outages and maintenance tasks. Its mobile integration enables technicians to access job details, update progress, and complete service orders directly within the system. Additionally, SAP facilitates time tracking, material usage reporting, and compliance documentation, enhancing efficiency and accountability in field activities

- procurement and supply chain: handles procurement of materials and services needed for network construction and maintenance, tracks inventory levels of network components such as poles, transformers, and cables ensuring availability for projects and maintenance

- general corporate operations: finance, accounting, cost management, reporting, HR and payroll processes.

Figure 1 outlines the network capabilities we rely on the ERP to support.

FIGURE 1   BUSINESS CAPABILITIES SAP ERP SUPPORTS
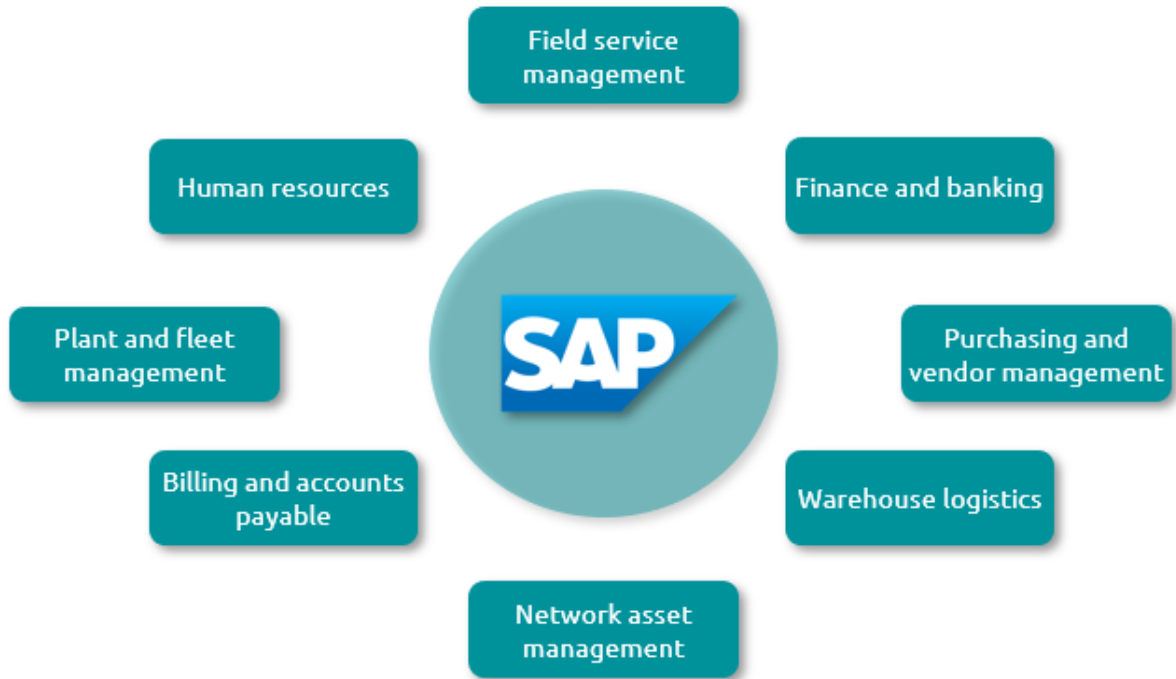
To enable numerous network and corporate functions, SAP is heavily integrated across multiple IT applications and sits at the core of our IT architecture. Figure 2 demonstrates the level of integration the SAP platform has with many other sets of IT applications, including market systems, customer relationship management, geospatial systems, and business intelligence and reporting functions. An issue within SAP has the potential to cause disruption to some or all of these applications connected or integrated into it, so it is one of our most critical platforms.

FIGURE 2   SAP INTERGRATION WITH OTHER IT APPLICATIONS
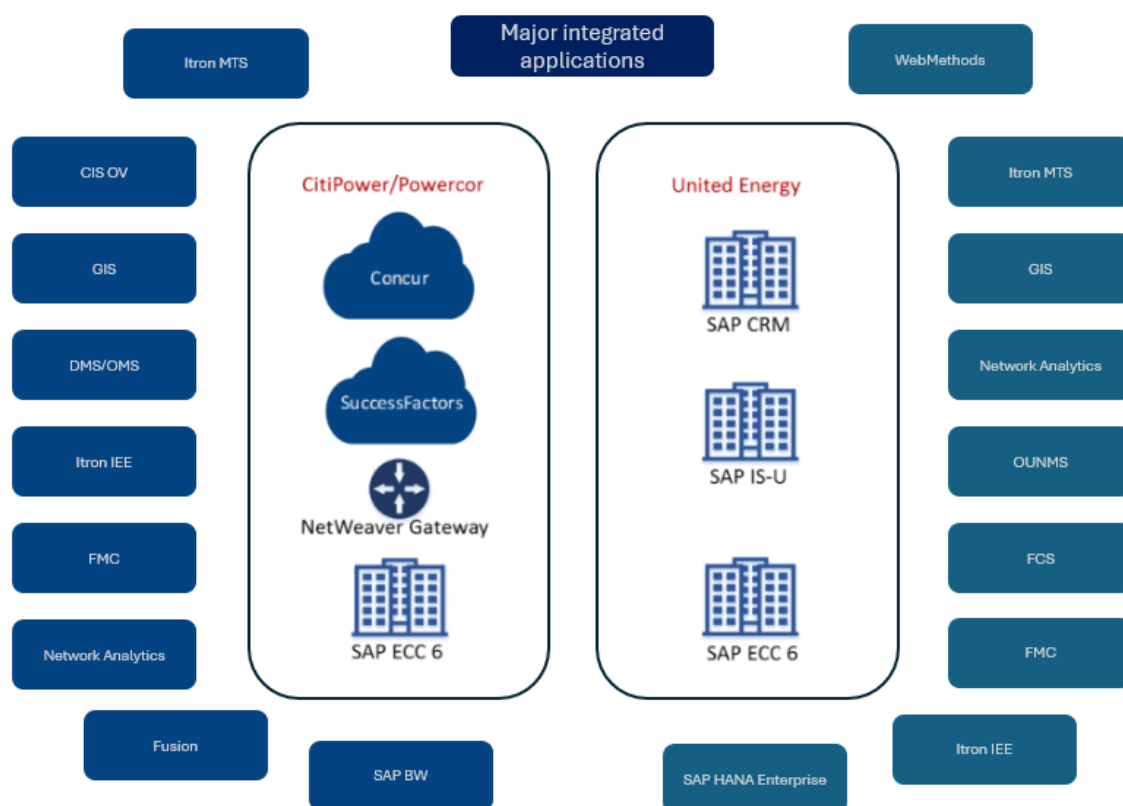
Our 2021-26 regulatory determination included expenditure related to upgrading our ERP system. Upgrading our ERP system was required in the 2021-26 regulatory period due to SAP's previously announced end of support timeline, with support scheduled to end in 2025. Following SAP's revised timeline that extended support out to 2030 we deferred the project to the 2026-31 regulatory period.[1]

2.2   Current network billing and market gateway configuration

The CP/PAL billing system is currently on a standalone product, CIS OV, and hosts a suite of broader functions that supports market processes:

•   networking billing, standing data, service orders and customer information. CIS OV processes ~$125 million in network billing per month

•   meter data, read schedules/read routes

•   AMI meter install and configuration details.

CP/PAL's market systems environment utilises a non-SAP product for billing. The CIS OV system requires heavier customisation and workarounds due to CIS OV being an older, larger legacy platform. The system sits separately from the ERP system.

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[1]   While we deferred the upgrade of our ERP system we undertook alternative IT investments during the 2021-26 regulatory period that were not included in our 2021-26 regulatory determination, such as investments to meet new obligations from AEMO relating to NEM reform.

CP/PAL's billing system structure is set out below in figure 3figure 3.

FIGURE 3   CP/PAL BILLING SYSTEM STRUCTURE
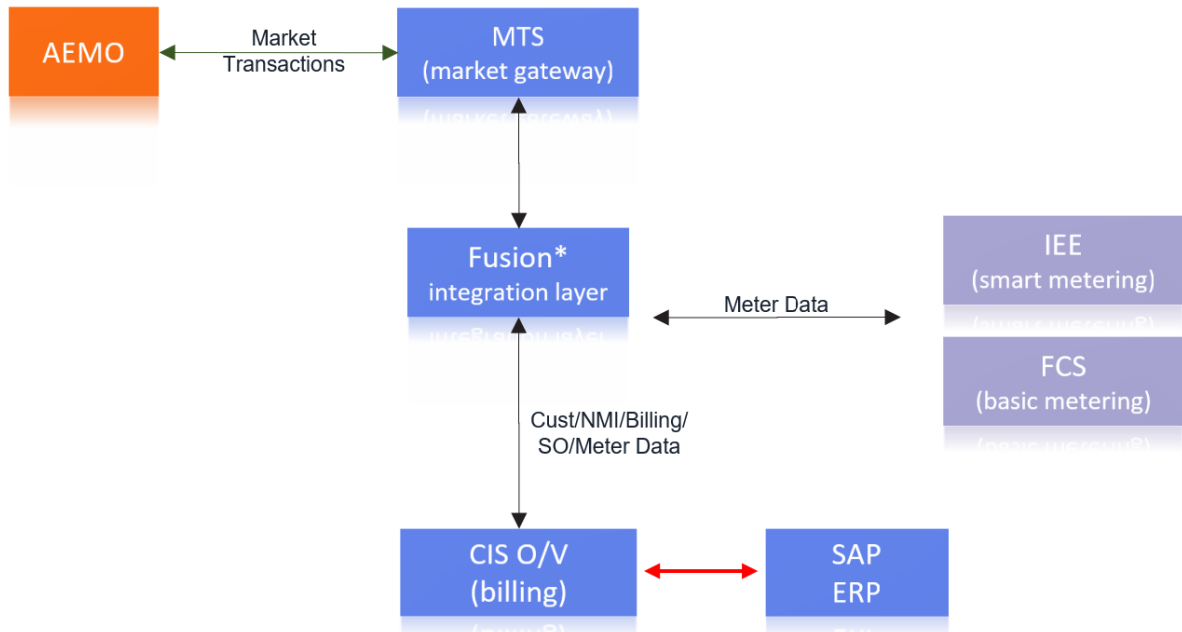
Unlike CP/PAL's billing system, which is completely separate from SAP, UE's billing system is already running on a SAP product (SAP ISU) and therefore forms part of UE's SAP ERP system. It is subject to the same vendor support agreement as the ERP system and it would be more effort (and therefore cost) to upgrade UE's ERP and not upgrade the billing system at the same time.

UE's ERP and billing system configuration is a simpler solution compared to the current CP/PAL configuration. UE's billing system structure is set out in Figure 4.

FIGURE 4   UE BILLING SYSTEM STRUCTURE
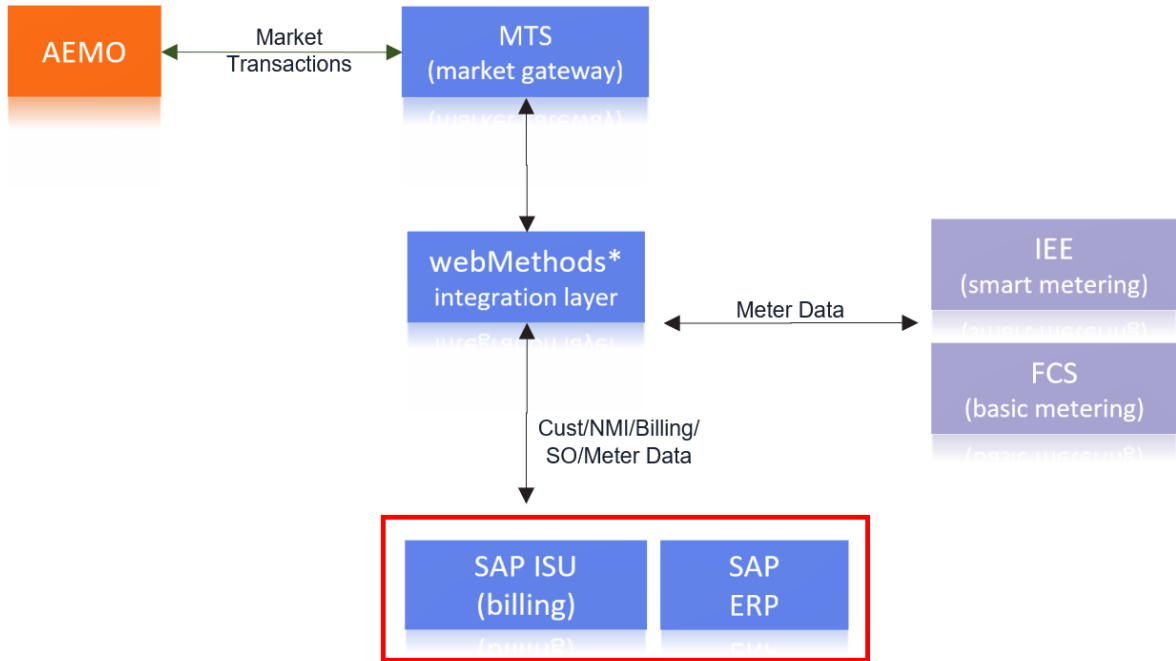
2.3   Industry trends

SAP is the most common ERP choice for Australian distributors due to its high functionality, standing as an industry-standard software choice and availably of resources to support and enhance the platform. Currently, at least 13 distributors across Australia rely on this product suite.

Further, most of these distributors have completed or are in the process of performing major lifecycle upgrades to S/4HANA, the latest version of SAP. More broadly, Gartner estimates 37 per cent of SAP ECC6 customers (our current version of SAP) started their transition to S/4HANA by the end of 2024.[2]

2.4   Shared IT systems

This business case covers IT expenditure related to CP, PAL and UE. Due to long term common ownership of CP and PAL, over time we have brought together their IT systems to enable the lowest cost delivery of our IT requirements. For example, when we are required to make changes to our systems we are only required to make these changes once, rather than having to make similar changes across two separate IT systems.

This business case considers options that would extend the shared systems to also encompass UE. We have therefore set out the business case for all three distribution businesses jointly.

The allocation of costs associated with shared systems, however, is split based on the relevant upgrades required for each network. For example, more of the billing system replacement costs are

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[2]   Gartner – SAP S/4HANA adoption levels for 2Q 2024

allocated to CP/PAL due to these networks needing to upgrade from a legacy system (CIS-OV), while UE is already using a SAP billing product.

3.   Identified need

The need for this business case is primarily being driven by the age of the ERP and billing systems within their product lifecycle and corresponding changes to the level of vendor support we expect to receive by the end of the 2026–31 regulatory period.

We outline the specific circumstances of each system below.

Figure 5 provides a general overview of the growing level of risk that is created when using a system without vendor support. Without support we are required to create our own custom code when changes to the system are needed; each change poses the risk of creating unintended breaks. Each customisation done outside vendor support changes the core 'DNA' of the software making upgrades in the future increasingly difficult to implement.

Additionally, without enhancement packs and patches regularly provided by the vendor, business operations and processes which underpin our distribution business could be exposed to software defects, increased security risks, compliance risks and loss of critical business data.

FIGURE 5   RISK WITH AND WITHOUT VENDOR SUPPORT
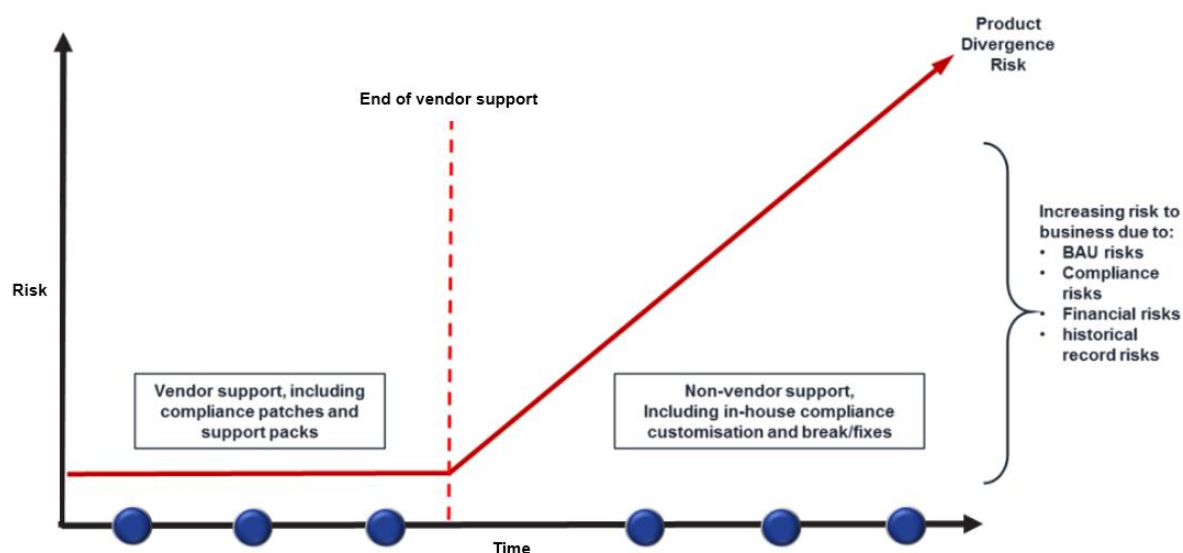
3.1   ERP system

As one of our largest core systems, it is essential we ensure our ERP systems remain up to date and fit for purpose. By the end of the 2026–31 regulatory period our current ECC6 version of SAP will be beyond the standard lifecycle of an ERP system.

SAP will commence a staged wind-down of support for the ECC6 version of their product. Mainstream support for our current SAP version will end on 31 December 2027. Following this date, limited extended support will be available until 31 December 2030, after which all vendor support will be withdrawn. As a result, should we wish to receive updates for new functionality or legislative requirements and continued vendor support, we must upgrade to the next available version of SAP, S/4HANA. The majority of other DNSPs also utilising SAP are in the process of making this transition.

3.2   Billing system

The CP/PAL billing system is a product that we have utilised since the 1990s, and while we still have a product support agreement in place with the vendor, we are one of the last remaining customers in the world who are still using the product. Current extended support is in place until the end of 2027.

As CIS OV is under extended support, the vendor no longer offers enhancements or new features. It is also challenging to find the technical resources with specific CIS OV knowledge, as these skills are scarce given the system is now largely redundant. Both of these constraints will further limit potential upgrades to our billing system will be unable to support new, more dynamic tariffs or provide a greater range of billing solutions that may arise during the energy transition.

We therefore need to consider the risks associated with our billing system in the 2026–31 regulatory period. We are considering the upgrading of our billing system in the same process as our ERP upgrade due to the interconnectedness of these systems.

UE's billing system already utilises SAP's billing module, SAP ISU, so it subject to alignment with SAP's support dates.

4. Options analysis

This section sets out our approach to developing options, as well as analysis of each credible option.

4.1 Approach for identifying options

As part of the assessment of potential upgrade requirements and optimal system configurations, we undertook a business process capability assessment that considered potential technical convergence and business process standardisation opportunities between our distribution businesses:

- technical convergence refers to the technical design of our systems, and involves upgrading our systems into a common, shared foundation between CP/PAL and UE across the infrastructure and application layers

- business process standardisation refers to reengineering operational processes between CP/PAL/UE to reduce time spent operating multiple systems that perform the same or similar functions, and potentially reduce long-term operating costs or cost to implement change.

The core systems included in this business case are some of the oldest systems in our network and only receive major upgrade once every 10-20 years. It presents a rare opportunity to optimise foundational IT capabilities and given the SAP upgrade timelines for both CP/PAL and UE, we investigated 'convergence' opportunities that could reduce inefficiencies and risks associated with separately managed systems that require separate underlying infrastructure and code.

This assessment determined what levels of convergence and business process standardisation between our systems would provide the highest operational benefits and business efficiencies, allowing us to develop options to take forward as part of our options analysis.

4.1.1 Technical considerations

The convergence assessment identified network revenue and market communications processes as having the highest benefit in converging between CP/PAL's and UE's systems. These processes are good candidates for convergence given the same internal team is responsible for all of CP, PAL and UE revenue management operations.

Prior to our cost-benefit analysis, we established a weighted technical evaluation framework to assess the ability of the upgrade options to align with our network's IT priorities. Options were considered against their total cost of ownership (TCO) over the system's lifecycle, rather than focusing solely on initial implementation costs. Equal consideration was given to the ability of each option to address operational risks and to meet the evolving needs of the organisation, ensuring that the upgrade would enable future capabilities. For a generational upgrade of this nature, reliability was weighted equally with future enablement to ensure a balanced approach to current and long-term requirements. The criteria used to assess potential configurations is included in figure 6.

FIGURE 6   TECHNICAL EVALUATION CRITERIA

ID	Criteria	Weighting
1	**Reduce Total Cost of Ownership (TCO)** Reducing the number and variety of supported applications and infrastructure technologies reduces the TCO of ICT assets, in particular licensing, support and integration costs.	10
2	**Reduce/minimise risk** Level of business disruption, implementation and compliance obligation risks.	8
3	**Simplify VPN/UE ICT landscape** Target architectures and solutions continually contribute to the simplification of VPN/UE ICT environment.	4
4	**Improve efficiency** Aligned processes across the business entities improve efficiency, reduce redundancy and inconsistency, enable better utilisation of resources and reduce time to market.	7
5	**Future capability** Modern solution architecture embraces scalability, flexibility and security by design which allows VPN/UE to improve performance, reduce operational overheads and respond to changes in market compliance and changing customer demands with agility.	8
6	**Aligned to technical performance requirements** The solution is aligned to and support business service performance requirements (e.g., criticality, continuity and service level requirements).	5

Each criteria was weighted as follows;

ID	Criteria
10	Most important (high)
9	Most important (low)
8	Very important (high)
7	Very important (low)
6	Important (high)
5	Important (low)
4	Less important (high)
3	Less important (low)
2	Minor importance (high)
1	Minor importance (low)

The options are assessed

ID	Criteria
1	Criteria not met
2	Criteria only partially met
3	Criteria generally met
4	Criteria mostly met
5	Criteria fully met

Given the increasing volume of IT changes that distributors are being required to deliver, particularly driven by market rule changes, it was critical to evaluate how the ERP and billing system configurations could support a higher flow-through of projects. A converged platform for our three distribution businesses was recognised as offering significant advantages in this regard, enabling streamlined delivery of market and regulatory changes as a single project. This approach contrasts with the current state, where such projects often need to be implemented separately for our businesses, resulting in duplication of effort and increased complexity.

Other factors were also considered, prior to defining options for detailed analysis.

• consideration of moving all in-scope upgrades to a non-SAP product would incur longer disruptions to business operations during transition, more change management, higher deliverability risk and higher project costs. We therefore have only considered implementation options from SAP's product suite, since VPN and UE's ERPs are with SAP already, as well as UE's billing system

• third-party SAP support is not appropriate for a critical infrastructure provider. UE was previously under a thirty-party support agreement for SAP and experienced higher frequency of reliability issues compared to CP/PAL's vendor support model, despite CP/PAL's ERP being materially larger and more complex than UE's ERP

• certain operational processes between CP, PAL and UE need to remain distinct, such as operational field services and financial reporting structures.

4.2   Options considered

Based on the above, we have identified and assessed the following four options:

1. **No upgrade, maintain current systems –** under this option we continue to use our current ERP and billing system on legacy technology, with associated support of these systems ceasing during the period.

2. **Base upgrade** – upgrades CP/PAL's shared ERP system and UE's ERP system but these remain separate, with no convergence of processes or systems. This includes the replacement of CP/PALs shared billing system from CIS OV to SAP ISU, but it remains separate from UE's billing system.

3. **Technical convergence upgrade** – consolidates CP/PAL and UE billing functions into SAP and simplifies revenue management business processes. Also converges both ERP systems into the single SAP instance, focusing on IT platform unification without further business process convergence. This simplifies the IT architecture but enables UE to maintain separate business processes.

4. **Full convergence upgrade** – consolidates both ERP systems into a single SAP S/4HANA instance, including business process standardisation. All business processes across CP/PAL and UE are combined for maximum operational efficiencies over the long-term. This includes the convergence of billing systems into SAP.

Figure 7 summarises each of these options.

FIGURE 7   OPTIONS SUMMARY

Option 1

No upgrade

Don't upgrade to S/4HANA, ERP and billing capabilities remain on legacy systems.

Option 2

Base upgrade

CP/PAL's ERP and billing systems remain separate from UE but CP/PAL's billing system is replaced with modern technology.

Option 3

Technical convergence

CP/PAL and UE billing platforms are converged on S/4HANA. Revenue management business processes are standardised. CP/PAL and UE ERP platforms are converged onto S/4HANA Separate business processes are retained.

Option 4

Full convergence (business transformation)

CP/PAL and UE ERP platforms are converged onto S/4HAHA. CP/PAL and UE billing platforms are converged onto S/4HANA. CP/PAL and UE business processes are standardised.

4.3 Risk monetisation framework

To assess our investment options, we worked with EY to develop an ICT risk monetisation framework. This provides a standardised approach for identifying, classifying, and quantifying risks associated with potential IT investments.

The framework aims to support value-based decision making by translating risks into monetised values, facilitating consistent evaluation of cost-benefit analyses across potential investment scenarios.

Figure 8 sets out the steps we have taken to quantify risks associated with this business case. Further information on each of these steps is included in the risk monetisation framework attachment. [3]

FIGURE 8   RISK MONETISATION STEPS
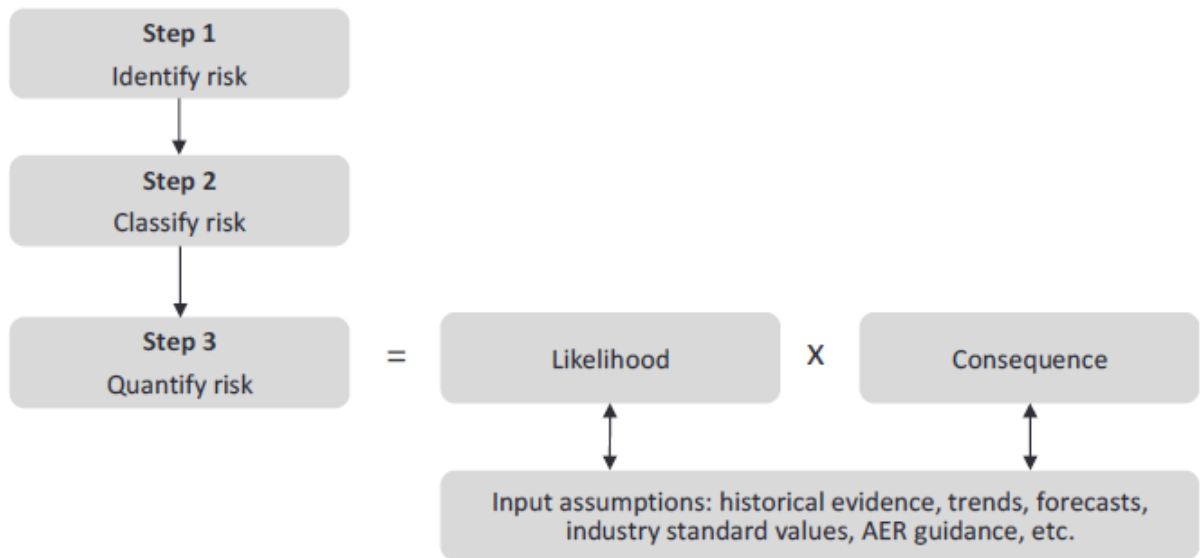
Table 2 provides a summary of each risk category included in our risk monetisation framework.

TABLE 2   RISK FRAMEWORK SUMMARY

CATEGORY	DESCRIPTION
Reliability	Risks related to events or failures that cause unforeseen impacts to electricity supply or export capability. For example, customer supply or solar export
Compliance	Risks of regulatory, legal, or financial penalties due to failure in meeting compliance obligations, such as delays in publishing key market data or unauthorised access to sensitive data
Bushfire	Risks that outages of critical operational systems may increase bushfire likelihood by impairing visibility of the network and timely decision-making

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[3]   UE ATT 7.02 - EY - IT risk monetisation framework - Jan 2025 – Public

Safety	Risks affecting public and staff safety, such as loss of supply impacting life-support customers or disruptions to protective systems
Customer experience	Risks where customer interactions are impacted, such as outages of customer-facing IT systems
IT outage	Risks of systems becoming unavailable due to poor infrastructure maintenance or resource constraints, resulting in prolonged downtimes or outages
IT suitability and sustainability	Risks arising from legacy systems that are prone to failures, inefficiencies, and incompatibilities. These systems may lead to increased maintenance costs, failures, and cyber vulnerabilities if not updated

For each risk identified in the table above we have developed a list of sub-category risks. Each of these sub-category risks is set out in our framework alongside methodologies explaining how each of these risks are quantified.

For this business case key quantified risks relate to:

•   reliability

•   compliance

•   IT outage

•   IT suitability and sustainability.

In addition to these risks we have also included benefits relating to improved efficiencies for both our ERP and billing systems, as well as future capital expenditure avoidance where we are able to converge systems and processes between our networks.

4.4   Option one: no upgrade

After SAP ceases mainstream support in 2027 and extended support in 2030, the system would operate without vendor-provided security patches, updates, or technical assistance. The current CIS OV support contract ends in 2027 after which a similar lack of vendor support would occur if there is no contract renewal.

This option would involve maintaining two separate instances of SAP ECC6 in-house alongside the existing CIS OV billing system. The ERP systems would remain in their current state, with no vendor-certified support, security patching, or capability for new functionality or enhanced reporting. This 'do nothing' option effectively commits to operating on unsupported platforms and relying on in-house support to manage the system when it requires fixing. We would depart from the vendor-supported framework, with exposure to heightened reliability risks. CIS OV, given its age would also experience increasing maintenance challenges and limited adaptability to emerging regulatory and operational requirements.

The risks associated with unsupported systems escalate each year, including heightened cybersecurity threats, operational inefficiencies, and compliance challenges. If the S/4HANA upgrade was performed later than 2030, SAP's support model generally imposes financial penalties that include arrears for the unsupported period.

The risks of operating a business critical system without vendor support would put the business at acute risk of being in breach of its licences, given distribution businesses are subject to minimum

reliability standards and additional legislative requirements such as the Security of Critical Infrastructure Act.

Table 3 sets out the application of our risk framework to option one.

TABLE 3   OPTION ONE RISK SUMMARY

#	RISK	DESCRIPTION
1	Reliability	High likelihood of an incident, which could cause a downstream issue with any IT system integrated with SAP or the billing system. This could result in heavy disruption to field maintenance and network rectification operations as SAP is part of field service management capabilities that help locate, prioritise and address network issues. This would lead to longer response times and inefficiencies in deploying crews for rectification.
2	Compliance	Without support and modernised systems, there is higher risk of inability to meet increasing volumes and new types of regulatory changes, leading to non-compliance and potential penalties. CP/PAL's billing system remains incompatible for dynamic tariff structures.
3	Bushfire	Not applicable
4	Safety	Increased likelihood of system failures jeopardising safety-critical operations. These core systems are integrated into field maintenance processes and are part of the ecosystem that manages network asset data, customer and NMI data. Outages or incidents could result in disruptions in sending critical data between systems that support network operations and outage management systems, increasing risk of injury.
5	Customer experience risk	Aging systems degrade the ability to provide timely and efficient customer services, risking dissatisfaction and reputational harm. Some customer and connection data would potentially become unavailable in the event of an SAP or CIS OV outage, preventing a customer service agent from being able to support a customer enquiry or connection request. Outdated systems may fail to support critical field operations, leading to longer restoration times and negative impacts to customers.
6	IT system outage	This option does not address end-of-life (EOL) risks. As SAP stops supporting our version of SAP in 2030, systems will become prone to failures and outages, directly impacting operational reliability and customer service. Risk will escalate from 2030 once SAP ceases extended support. CIS OV will also experience increasing reliability risks as the IT system surpasses 20 years in age. There is high likelihood of outages due to unsupported systems, lacking security patches and vendor support.
7	IT system suitability and system sustainability	Legacy systems require expensive customisations to maintain functionality, leading to escalating costs and technical debt. Likely to experience incompatibility issues with connection applications.

Table 4 sets out the capital and operating expenditure of option one, noting that as above, this option carries significant risk costs.

TABLE 4   OPTION ONE EXPENDITURE FORECAST ($M, 2026)

OPTION ONE		FY27	FY28	FY29	FY30	FY31	TOTAL
CitiPower	Capex	1.7	1.0	1.0	1.0	1.8	6.5
	Opex	-	-	-	-	-	-
Powercor	Capex	4.1	2.3	2.3	2.3	4.1	15.3
	Opex	-	-	-	-	-	-
United Energy	Capex	4.9	1.9	1.9	1.9	6.7	17.3
	Opex	-	-	-	-	-	-
Total		**10.7**	**5.2**	**5.2**	**5.2**	**12.6**	**39.1**

4.5   Option two: base upgrade

Option two involves upgrading the existing SAP ECC6 systems for both CP/PAL and UE to SAP S/4HANA without any convergence of processes or systems. This option is focused on addressing the end-of-life risks associated with operating unsupported systems, ensuring that the organisation's core ERP and billing functions continue to operate securely and reliably.

Generational ERP upgrades, which occur approximately every 15–20 years, are strategic opportunities to modernise and transform operations. Limiting the scope to a base upgrade may represent a missed opportunity to incorporate functionality that will assist the business through the energy transition. The base upgrade mitigates critical end-of-life risks by transitioning to SAP S/4HANA, maintaining ongoing availability of vendor support. However, it requires substantial investment without delivering efficiencies that could reduce total cost of ownership over the asset's lifecycle.

CP/PAL's billing system will also be replaced with a modern SAP product. As UE utilises SAP for billing functions, it is logical to move CP/PAL onto the same product so our internal IT and revenue management teams are using the same technology, but we will still operate and maintain separate billing systems for CP/PAL and UE.

This option focuses solely on lifecycle maintenance upgrades of these core systems.

Figure 9 sets out the structure of our systems under the base upgrade option, the blue represents the systems that will be upgraded as part of this option. CP/PAL and UE ERP and billing systems remain completely separate.

FIGURE 9   BASE UPGRADE
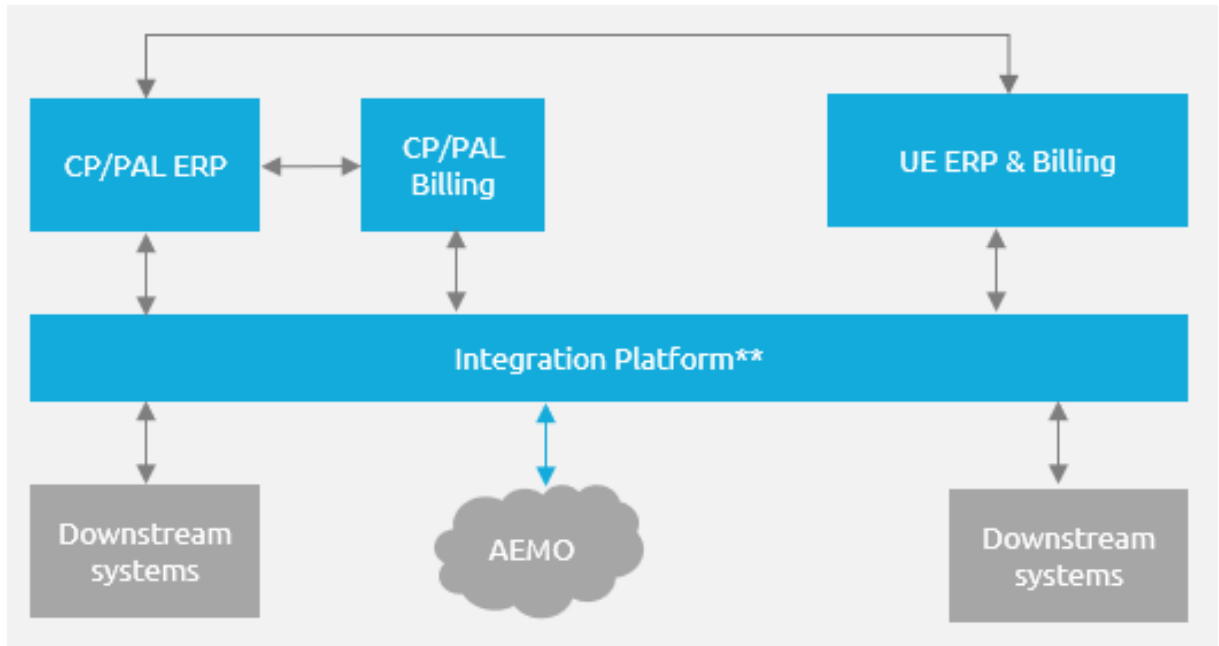
Figure 10 sets out the implementation timeline for option two. Under this option we will begin preparatory activities in 2025 with implementation completed by the June 2030, six months prior to our loss of extended support.

FIGURE 10   OPTION TWO IMPLEMENTATION PLAN

Table 5 sets out the application of our risk framework to option two. Compared to option one, the risks associated with end-of-life are reduced as we upgrade to modern ERP and billing systems.

TABLE 5   OPTION TWO RISK SUMMARY

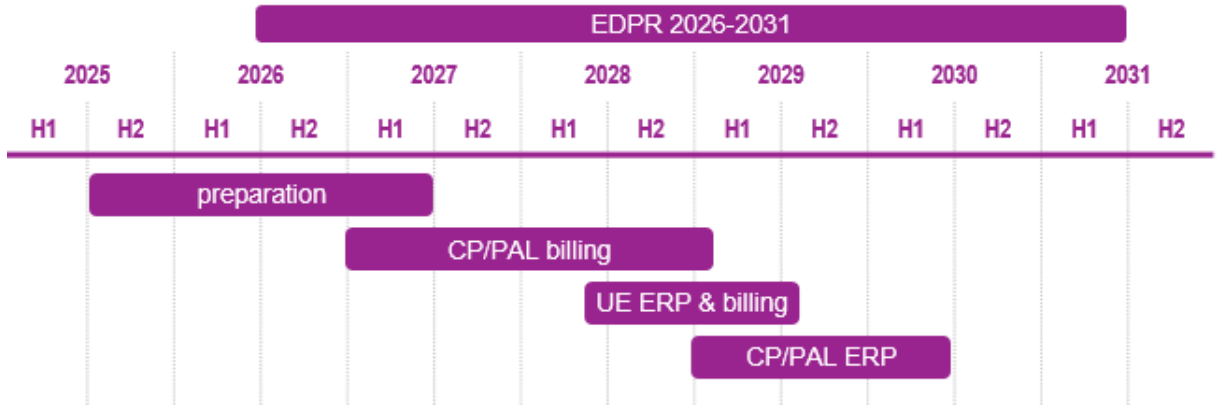| #	RISK	DESCRIPTION
1	Reliability	By upgrading our ERP system, the likelihood of an SAP issue causing disruption to field maintenance and network rectification operations is heavily reduced and potential system outage downtime is significantly lessened.
2	Compliance	Supported systems will ensure timely adaptation to regulatory changes, mitigating compliance risks. Up-to-date systems reduce exposure to potential system vulnerabilities and SAP patches and product updates remain available. Billing systems will have received major upgrades to retain ability to transmit required market data to AEMO, energy retailers and market participants and can enable new tariff types.
3	Bushfire	Not applicable
4	Safety	Upgrading our ERP system reduces risks of a system-derived disruption to safety and field processes. Modernised infrastructure enhances system reliability, reducing risks to safety-critical functions.
5	Customer experience risk	Decreased risk of an ERP incident causing a downstream issue for our customer and connections systems.
6	IT system outage	Addresses end-of-life risks by upgrading systems to supported systems, reducing the likelihood of outages and operational failures. Our core ERP systems are modernised to the current version and guaranteed vendor support for at least 10 years. CP/PAL's billing system is brought onto a modern system and while still implemented separately from UE, is on a common technology. S/4HANA will be hosted on SAP's RISE cloud service that offers 99.7% service availability, which should offer a more reliable infrastructure hosting solution compared to the current ECC6 on-premise infrastructure. There is a substantial outage risk reduction as SAP will be upgraded to the current vendor-supported version, remaining eligible for version upgrades and feature enhancements.
7	IT system suitability and system sustainability	By ensuring our ERP and billing capabilities are on the current product version, incompatibility issues are reduced and the ERP and billing systems will be hosted on a modern cloud platform. SAP support and enhancements for S/4HANA is guaranteed until at least 2040.

Table 6 sets out the capital and operating expenditure of option two.

OPTION TWO		FY27	FY28	FY29	FY30	FY31	TOTAL
CitiPower	Capex	4.3	8.2	6.6	5.5	2.2	26.9
	Opex	0.1	2.9	2.6	2.4	1.1	9.1
Powercor	Capex	10.0	19.2	15.3	12.9	5.2	62.7
	Opex	0.3	6.7	6.0	5.6	2.6	21.3
United Energy	Capex	5.7	4.1	20.3	13.5	3.5	47.3
	Opex	-2.7	0.2	8.5	6.1	1.9	14.1
Total		**17.9**	**41.5**	**59.3**	**46.2**	**16.5**	**181.4**

4.6   Option three: technical convergence

This option implements a converged technical environment, moving CP, PAL and UE onto a shared SAP core platform but is able to retain distinct processes to accommodate differences between networks. CP/PAL's and UE's ERP systems would be converged into a single SAP S/4HANA instance while able to retain separate processes for each entity.

This option does not propose a full convergence and the majority of the organisation will not need to make material changes to how operations are run, minimising business disruption. Instead, this approach focuses on standardising the technical infrastructure, such as shared code, configurations, and data models. The goal is to create a unified technical environment that reduces complexity, improves efficiency, and enables long-term cost savings through streamlined maintenance, but also reducing the need to implement upgrades or changes once for CP/PAL, then again for UE.

Unlike the ERP system, the billing system would converge processes between CP/PAL and UE. Since a centralised revenue management team already performs billing functions for all three networks, standardising business processes in this area will simplify the billing process, reducing the need for duplicated effort. Figure 11 sets out the structure of our systems under the technical convergence option, which now groups the ERP and billing systems for all three networks.
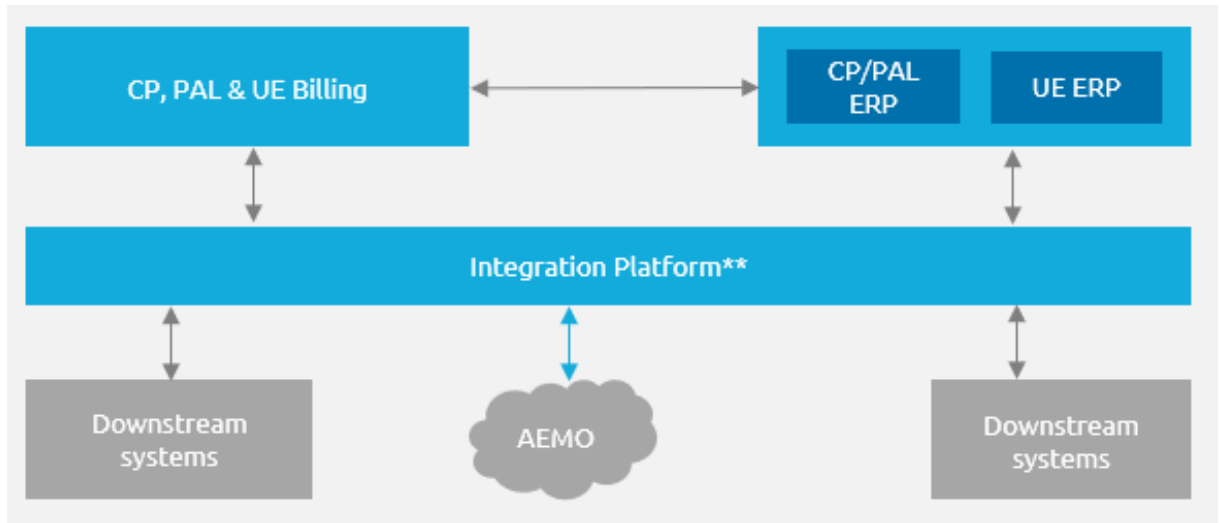
FIGURE 11   TECHNICAL CONVERGENCE

Figure 12 sets out the implementation timeline for option three. Under this option we will begin preparatory activities in 2025 with implementation completed by December 2030, prior to our loss of extended support.
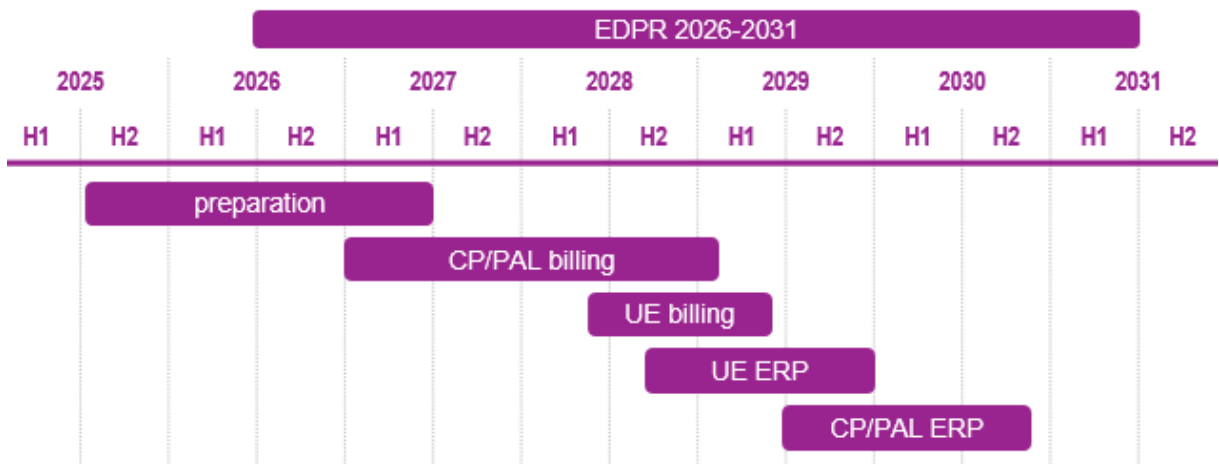
FIGURE 12   OPTION THREE IMPLEMENTATION PLAN

Table 7 sets out the application of our risk framework to option three.

TABLE 7   OPTION THREE RISK SUMMARY

#	RISK	DESCRIPTION
1	Reliability	Consolidates in-scope systems into a single instance, improving reliability through a converged IT solution. Option three's simplified technical environment will have less systems to operate, monitor and support reducing number of potential failure points. In the event of an incident, a converged SAP system will further improve recovery time as we only have to resolve one instance, versus option two's separate CP/PAL and UE SAP systems.
2	Compliance	Simplifies regulatory compliance across CP/PAL and UE by standardising IT operations for network billing changes, and removes the need to implement market changes in separate CP/PAL and UE systems. New market processes can be implemented via single deployment of required changes, rather than having to implement once for CP/PAL, then again for UE.
3	Bushfire	Not applicable
4	Safety	Field service management systems are dependent on SAP to plan field operations so ensuring SAP remains reliable minimises risks of a system-based disruption to safety and field processes. Modernised infrastructure enhances system reliability, reducing risks to safety-critical functions
5	Customer experience risk	Decreased risk of an ERP incident causing a downstream issue for our customer systems or portals, resulting in loss of online services.
6	IT system outage	In addition to the benefits stated in option two, we will also simplify our core ERP and billing systems to a shared instance between CP, PAL and UE. The risk of potential outage effectively halves, versus having to remain separate systems for CP/PAL and UE. Less support staff would be required to resolve an incident and therefore reduces potential downtime of the systems.
7	IT system suitability and system sustainability	As per option two

4.6.1   Other benefits

A key benefit of this option over option three relates to future cost efficiencies from only needing to perform changes and upgrades within a single system.

Due to the existence of two separate systems, there is significant duplication of cost and effort. Under a single billing system this duplication would be removed. Our existing revenue management team already works across the separate CP/PAL and UE billing systems, and many core operational staff need to log in to separate SAP instances to perform the same corporate processes but in two different systems.

Additionally, this option will reduce our overall IT application and infrastructure footprint, which means there are less operational patches and upgrades to perform over the life of the new converged system. This also reduces potential cyber security vulnerabilities since there are less logins, integrations and potential entry points that can be compromised by hackers and threat actors.

Table 8 sets out the capital and operating expenditure of option three.

OPTION THREE		FY27	FY28	FY29	FY30	FY31	TOTAL
CitiPower	Capex	4.7	9.6	6.4	6.1	2.5	29.3
	Opex	0.8	3.5	2.4	2.4	1.1	10.2
Powercor	Capex	11.0	22.5	14.9	14.3	5.8	68.5
	Opex	1.9	8.1	5.6	5.6	2.6	23.8
United Energy	Capex	5.8	4.8	21.3	24.3	8.2	64.4
	Opex	-1.0	0.5	9.2	10.6	4.0	21.7
Total		**23.2**	**49.0**	**59.2**	**62.6**	**23.9**	**218.0**

4.7   Option four: business transformation (full convergence)

This option assessed implementation of S/4HANA that could isolate CP, PAL and UE as separate entities but utilise standardised operational processes. Currently, most ERP processes that support CP and PAL are considered 'fully converged' as the business processes are largely the same between networks and exist on a single instance of SAP. This option considers extending the level of convergence further to align all three networks' processes as part of merging the ERP and billing systems.

This configuration would not be able to cater for unique network requirements but simplifies and fully standardises operations. As with option three, this option will technically converge the CP/PAL and UE ERP and billing system but goes a step further in standardising enterprise asset management (EAM) business processes to be the same between CP/PAL and UE.

The primary implementation differences between option three and four are that option four requires more complex change management to reengineer network processes and requires the project resources to remain engaged for a longer duration. This would extend timelines into the following regulatory period and beyond the point in time where any vendor support is available (2030).

This is also the highest cost implementation option and would create the biggest disruption to business areas.

Figure 13 sets out the structure of our systems under the technical convergence option, which now fully integrates CP/PAL and UE systems and business processes.

FIGURE 13 CONCEPTUAL ARCHITECTURE
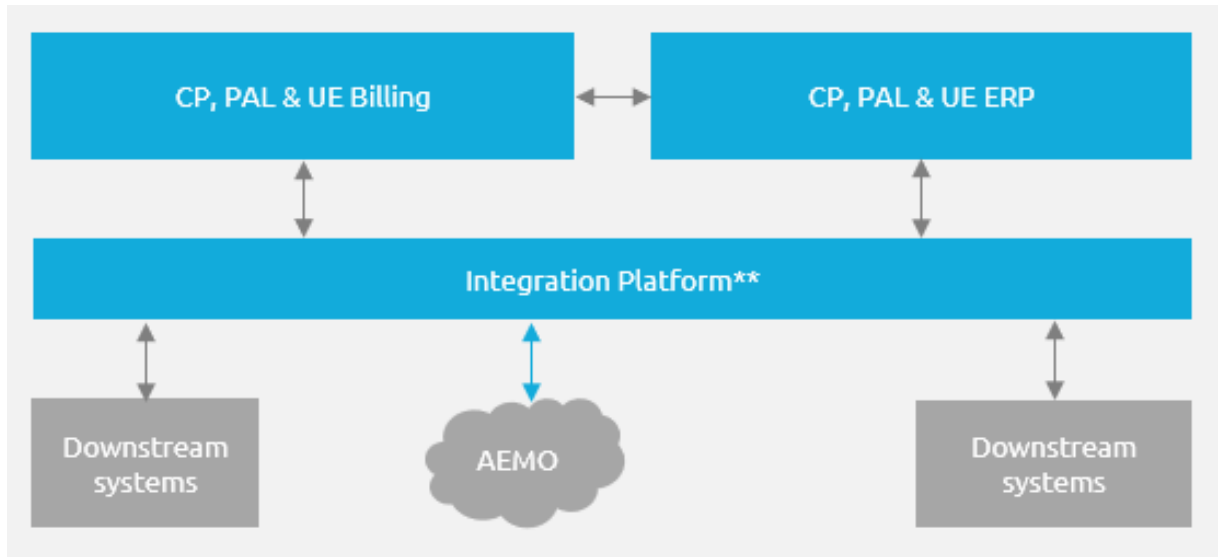
Figure 14 sets out the implementation timeline for option four. Under this option we will begin preparatory activities in 2025 with implementation only completed at the end of 2032. This is two years after our extended support would cease, which creates significant business risk, requiring us to remain on unsupported systems for two years until the upgrade of our ERP system is complete.

FIGURE 14   OPTION FOUR IMPLEMENTATION PLAN
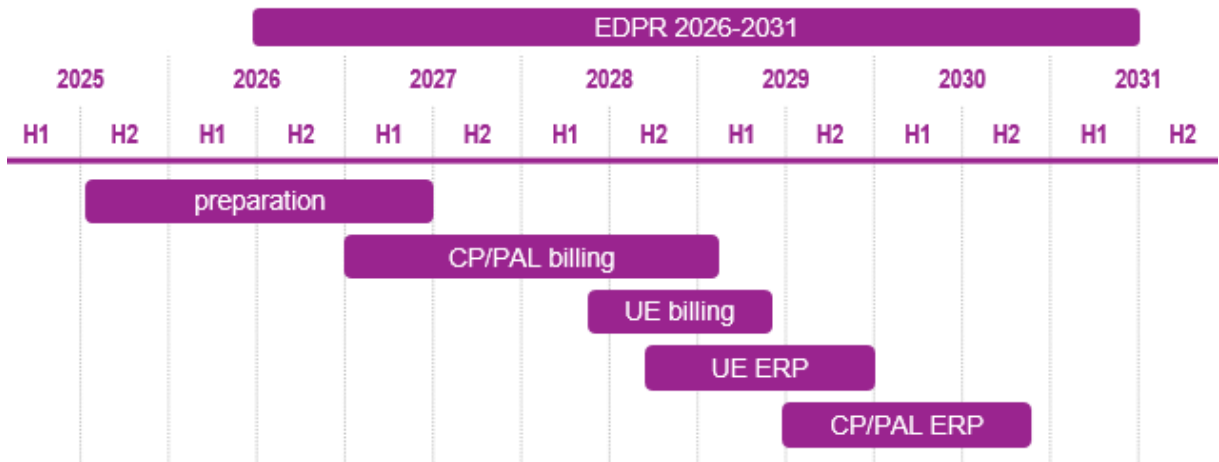
Table 9 sets out the application of our risk framework to option four. As per option three, option four is based on a similar technical solution to option three, however has a longer implementation timeline that would result in us needing to maintain our current ERP systems beyond SAP's support timelines (i.e. beyond 2030).

Given option four is a similar solution to option three, we don't consider option four will provide any further risk reductions. However, merging UE into a common IT system with CP/PAL while being a more complex solution, will likely generate a greater number of efficiencies compared to the other options.

For example, this option will create the largest lifecycle cost avoidance benefits through consolidation of systems. Full convergence minimises our IT footprint by removing network-specific processes and utilising a single combined system across our networks. This will lead to lower maintenance, mid-life upgrade and support costs, especially when compared to maintaining separate ERP and billing systems for CP/PAL and UE as per option two. It would also lead to Enterprise Asset Management

(EAM) efficiencies by reengineering UE business processes that manage work orders (which plan, schedule and monitor network activities such as asset maintenance and fault restoration) to align with CP/PAL processes.

TABLE 9   OPTION FOUR RISK SUMMARY

#	RISK	DESCRIPTION
1	Reliability	As per option three
2	Compliance	As per option three
3	Bushfire	As per option three
4	Safety	As per option three
5	Customer experience risk	As per option three
6	IT system outage	As per option three
7	IT system suitability and system sustainability	As per option three

Table 10 sets out the capital and operating expenditure of option four. The additional work required to standardise business processes across CP/PAL and UE leads to a material increase to implementation costs compared to option three due to both additional effort and a longer schedule.

TABLE 10   OPTION FOUR EXPENDITURE FORECAST ($M, 2026)

OPTION FOUR		FY27	FY28	FY29	FY30	FY31	FY32	FY33	TOTAL
CitiPower	Capex	3.6	9.5	6.1	7.4	5.7	3.3	1.3	36.9
	Opex	0.4	3.7	2.6	2.8	2.1	1.0	0.8	13.4
Powercor	Capex	8.3	22.2	14.3	17.3	13.3	7.8	3.0	86.2
	Opex	0.9	8.7	6.0	6.6	5.0	2.3	1.8	31.2
United Energy	Capex	6.4	5.0	21.2	34.4	17.8	9.8	4.4	99.1
	Opex	-0.9	0.5	8.8	14.1	7.3	3.2	2.6	35.6
Total		**18.7**	**49.6**	**59.0**	**82.7**	**51.2**	**27.3**	**13.8**	**302.3**

5.   Recommendation

The costs and associated net benefits of each of the options is presented in Table 11, and set out in further detail in our attached ERP and billing cost and risk models. [4]

TABLE 11   OPTION SUMMARY ($M, 2026)

#	OPTION	CAPEX	OPEX	NET BENEFITS
1	No upgrade	39.1	-	-
2	Base upgrade	136.9	44.5	445.7
3	Technical convergence upgrade	162.2	55.7	525.3
4	Business transformation (full convergence)	222.2	80.2	419.4

Note: This includes costs and benefits associated with CitiPower, Powercor and United Energy

After a detailed analysis of the options, option three is the recommended option for upgrading the ERP and billing systems of CP/PAL and UE. This option is preferred based on both our technical assessment and cost benefit analysis. It balances risk mitigation, operational efficiency, and long-term cost-effectiveness, providing a pragmatic and scalable approach to modernising the organisation's core systems.

Figure 15 sets out the summary of our technical assessment using the technical evaluation criteria set out in section 4.1.1. The technical convergence option is the highest ranked option for each of the criteria except in relation to simplifying the ICT landscape, where the full convergence option is preferred. Overall the technical convergence option received the highest score through our technical assessment.

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[4]   PAL MOD 7.01 - ERP and billing system cost - Jan 2025 - Public; PAL MOD 7.02 - ERP and billing system risk - Jan 2025 – Public

FIGURE 15 TECHNICAL ASSESSMENT OUTCOMES

		Option 2 Base Upgrade	Option 3 Technical Convergence	Option 4 Full Convergence
Base Upgrade 1.86 Technical Convergence 3.81 Full Convergence 2.81	Reduce TCO	Rank 2 Minimum upgrade doesn't offer any longer-term benefits to costs of ownership.	Rank 1 Optimal balance of incremental investment (to base upgrade) and potential cost efficiencies	Rank 3 Highest total cost of ownership
	Reduce/ Minimise Risk	Rank 2 Improved ability to meet changing industry demands (e.g. new tariffs) but market/regulatory changes are constrained by the two separate architectures and no process alignment between CP/PAL & UE.	Rank 1 More complex implementation that option 2 due to bringing together CP/PAL and UE into converged systems however reduces ongoing operational reliability risks and time to implement changes.	Rank 3 High risk solution due to dependencies on other non-converged downstream applications and high, extended period of business disruption during implementation.
	Simplify ICT Landscape	Rank 3 Does not simplify the current complex landscape. Disparate systems between VPN/UE remain, with the associated integration complexities.	Rank 2 Simplifies the landscape with unified technology stack, common licensing model and consolidated view of overall SAP systems.	Rank 1 Simplifies the landscape further due to more converged CP/PAL and UE business processes.
	Improve Efficiency	Rank 3 No efficiency as system changes have to be done twice and no ability to leverage common resource pool.	Rank 1= Effort to maintain and enhance a converged ERP and billing system is lessened compared to option 2.	Rank 1= While business processes would largely be standardised, CP/PAL/UE are distinct networks that must be able to be isolated, even in a fully converged system.
	Future Capability	Rank 3 Modern platform. However, agility to meet changing demands will continue to be hampered by disparate systems.	Rank 1= Modern platform with ease to meet market changes and customer demand.	Rank 1= Modern platform with ease to meet market changes and customer demand.
	Aligned to Technical Performance Requirements	Rank 3 Separate systems have proven capability to meet operational requirements however time to introduce enhancements will take longer than option 3 or 4.	Rank 1= Convergence will enable uniform compliance and meeting technical performance requirements with better insights at one platform	Rank 1= Convergence of more processes will benefit from common technical support processes and resourcing/skill sets to improve service performance.

By consolidating core systems of CP/PAL and UE, this option reduces technical complexity, lowers total cost of ownership and provides greater flexibility without requiring full business process standardisation, which can introduce greater disruption and costs. Technical convergence ensures that critical business risks such as reliability, compliance, and safety are addressed by upgrading to a supported version, while also creating efficiencies through shared infrastructure and unified system management.

Unlike the base upgrade option, technical convergence does more than just mitigate end-of-life risks. While the base upgrade ensures CP/PAL's and UE's ERP and billing systems remain supported, it still requires material investment, but fails to address duplication of development effort and operational silos that contribute to inefficiencies and higher ongoing costs. The base upgrade retains the utilisation of separate systems, requiring repeated efforts for compliance updates and system changes across CP/PAL and UE, and misses the opportunity to create a more scalable and streamlined IT environment. The short-term comparative cost savings of the base upgrade implementation are outweighed by the expected total cost of ownership.

Option four, which requires full convergence of core systems, while offering the most extensive process standardisation and operational benefits, comes with substantial upfront costs and deliverability risks that would impact the broader IT portfolio. Fully aligning processes across CP/PAL and UE requires extensive change management and reengineering, which introduces significant disruption during the transition phase. The complexity and resource demands of full convergence make it a less favourable choice for achieving the immediate goals of risk reduction and system modernisation. While it provides potential long-term benefits, it introduces significant risk, as delivery of this option would not be possible prior to the end of SAP extended support in 2030.

Through implementation of our recommend option, we will:

• deliver substantial benefits with manageable complexity and cost. By consolidating CP/PAL and UE systems into a single instance, it reduces licensing and maintenance expenses, simplifies compliance efforts and streamlines system management, while maintaining the distinct operational needs of CP/PAL and UE

- more efficiently implement regulatory updates and market changes to be implemented as single projects, significantly reducing duplication of effort

- have a scalable foundation for future enhancements, enabling the organisation to adopt new technologies and adapt to evolving business requirements.

Our recommendation also considered a number of general factors (e.g. project concurrency, resource availability) to ensure that the option selected and upgrade timing was pragmatic, actionable, and would have the highest probability of delivering a successful outcome.

Our proposed expenditure profile is provided in Table 12.

TABLE 12   RECOMMENDED OPTION EXPENDITURE FORECAST ($M, 2026)

| OPTION THREE		FY27	FY28	FY29	FY30	FY31	TOTAL
CitiPower	Capex	4.7	9.6	6.4	6.1	2.5	29.3
	Opex	0.8	3.5	2.4	2.4	1.1	10.2
Powercor	Capex	11.0	22.5	14.9	14.3	5.8	68.5
	Opex	1.9	8.1	5.6	5.6	2.6	23.8
United Energy	Capex	5.8	4.8	21.3	24.3	8.2	64.4
	Opex	-1.0	0.5	9.2	10.6	4.0	21.7
Total		**23.2**	**49.0**	**59.2**	**62.6**	**23.9**	**218.0**

5.1 Program sequencing

As part of technical assessments, the sequencing of the program was assessed and it is recommended to upgrade the billing systems first. The main driver of this is to manage the most complex scope of the project first, upgrading from CP/PAL's non-SAP billing system into a new SAP environment, then migrate UE billing functions into it.

The ERP upgrade is comparatively simpler, performing a more 'standard' lifecycle upgrade from ECC6 to S/4HANA. Since this option does not seek to materially reengineer business processes outside of billing revenue functions, the other processes and workflows should not be significantly disrupted (finance, procurement, asset management etc.).

UE's billing system and ERP are current coupled together in the proposed timeline. As UE's billing system is already on SAP it is practical to perform the upgrade of these systems simultaneously.

The timeline associated with the recommended option is set out in Figure 16.

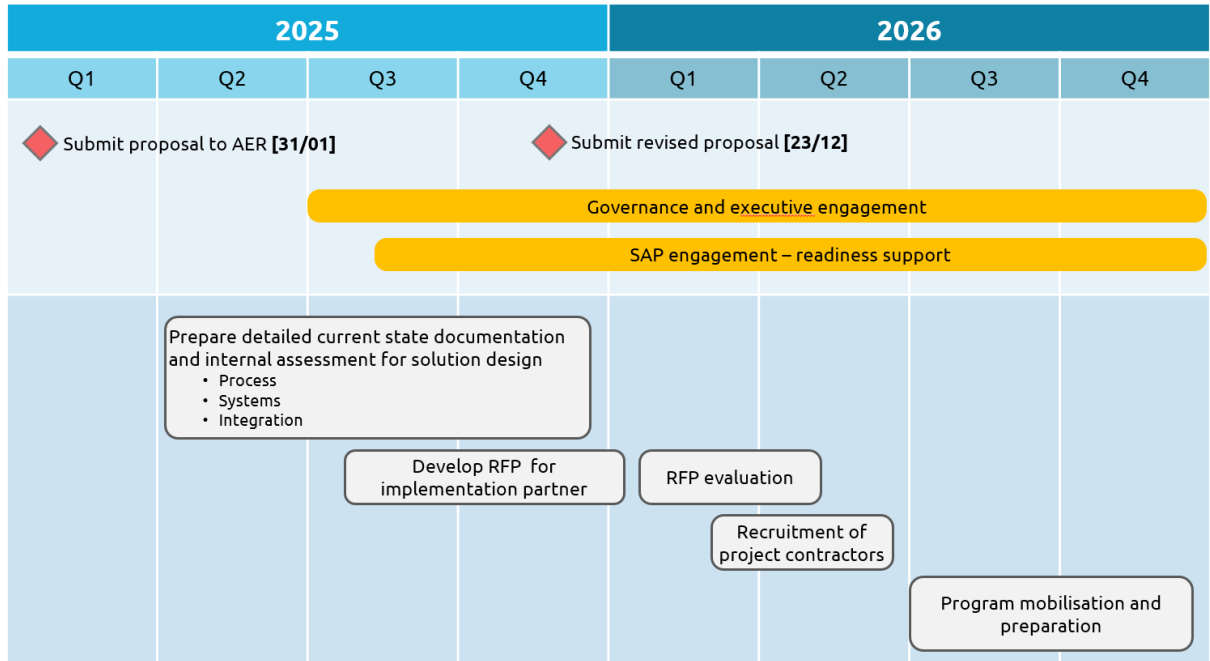FIGURE 16   RECOMMENDED OPTION IMPLEMENTATION PLAN
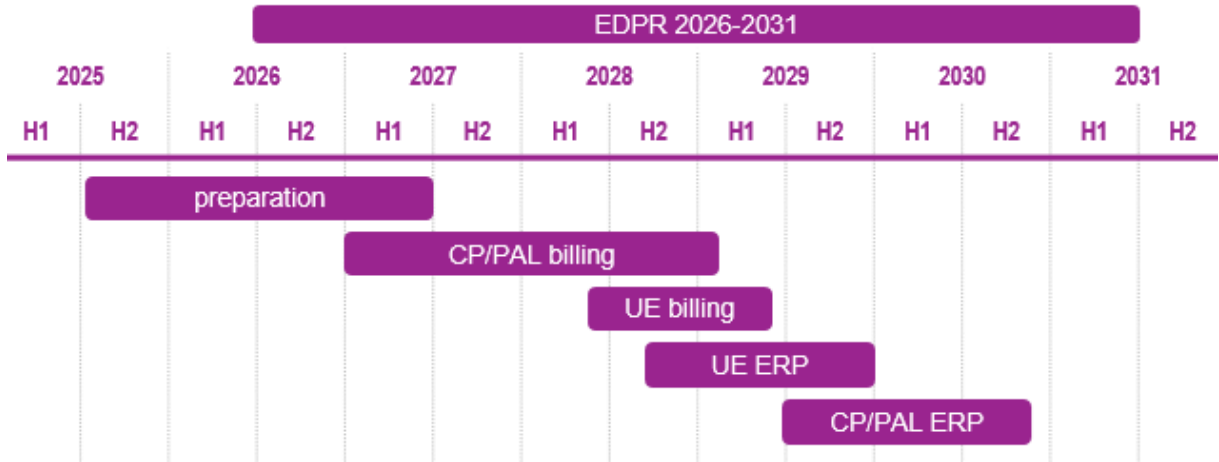
In anticipation of commencing implementation of the program in 2026, Figure 17 sets out the activities we plan to complete in FY26 to ensure a smooth transition to project delivery.

As this is a large program, we intend to perform significant preparation activities during the current regulatory period, in order to minimise potential delays in commencing the transition to S/4HANA. We intend to mobilise a small team to oversee set-up and execution of the tasks required to prepare for the major upgrade program. General accountabilities would include:

- definition of project goals and objectives

- definition of program governance structure, establish and initiate program steering function

- conducting steering and governance meetings, prepare supporting material

- detailed definition of preparation tasks and execution of them

- liaising with SAP, third parties and other vendors as required to initiate and conduct scoping and contractual discussions

- liaising with internal and external stakeholders to ensure buy-in and support for the project

- providing any other ad-hoc program support as required to keep the program momentum up and prepare for implementation.

By conducting these preparation activities we will reduce deliverability risk of the overall program.

FIGURE 17 PROGRAM PREPARATION ACTIVITIES

2025				2026			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

◆ Submit proposal to AER **[31/01]**

◆ Submit revised proposal **[23/12]**

Governance and executive engagement

SAP engagement – readiness support

Prepare detailed current state documentation and internal assessment for solution design
- Process
- Systems
- Integration

Develop RFP for implementation partner

RFP evaluation

Recruitment of project contractors

Program mobilisation and preparation

united
energy

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