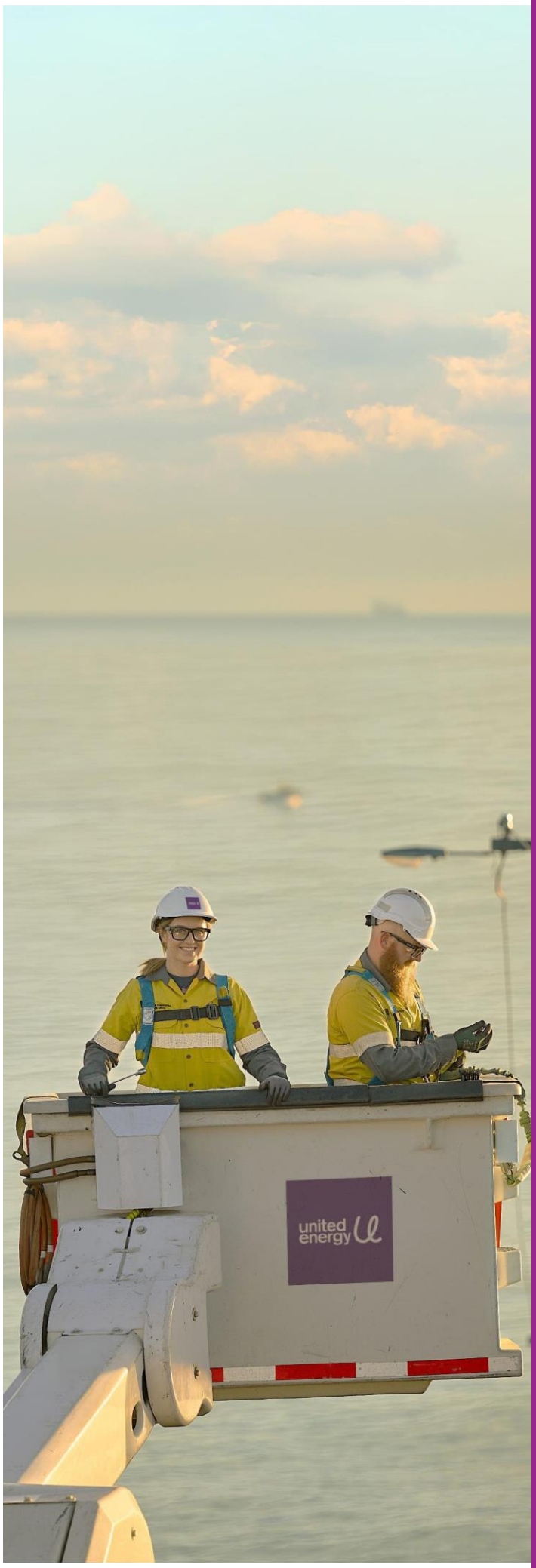

ELECTRIFICATION AND CER INTEGRATION

NETWORK DATA VISIBILITY

UE BUS 2.03 – PUBLIC

2026–31 REGULATORY PROPOSAL

Table of contents

1. Overview

The way customers are using and investing in electricity is rapidly changing and evolving, which is driving the energy transition. Distributed solar PV (or rooftop solar) uptake in Victoria has been increasing for over a decade and will continue to do so with capacity of rooftop solar forecast to double by the end of 2031. Further, we are seeing exponential increases in the electrification of transport with 26 per cent of our customers expected to have an EV by 2031.

Our overall CER integration strategy[1] ensures we maximise the value of CER on our network—to help reduce overall system costs, maintain reliability, and meet net-zero goals. To do so, the strategy aims to exhausts all possible low-cost solutions prior to investing in new and enhanced infrastructure. This business case is focused on a key component of our CER integration strategy which is the opportunity to improve the availability of network data to our customers and stakeholders to better empower their CER decision making.

We currently publish the distribution annual planning report constraint data through a platform which presents an annual static snapshot of the network. However, with the growth of CER on the network, customers and stakeholders have an increasing desire to access more information.

Two broad options were considered including continuing the status quo (static annual upgrades of data), or investment in a customer portal to improve data access for customers including timeliness, accessibility, ease of use, and contextualisation. The preferred option was to invest in a customer portal. A summary of these costs is set out in table 1.

TABLE 1 SUMMARY OF PREFERRED OPTION ($M, 2026)

OPTION TWO	FY27	FY28	FY29	FY30	FY31	TOTAL
Customer portal	0.7	0.9	0.4	0.4	0.4	2.7

[1] For more information, see part B of our regulatory proposal, at: United Energy, regulatory proposal - Part B, CER integration strategy, 2025, pg. 13.

2. Identified need

We currently publish distribution annual planning report constraint data through a platform which presents an annual static snapshot of the network. Further, there is significant 'raw' data associated with our network (particularly the low voltage network), but it is not in a format that is useful for users to consume or understand.

With the growing amount of CER on our network, customers and stakeholders have an increasing desire to access more information, to make more informed decisions regarding their energy supply. We are receiving growing data requests, received from many stakeholders including customers, councils, community groups and universities. Customers are wanting more information on a wide range of topics including requests for capacity and constraint information.

This sentiment has been reflected in recent regulatory reviews. In 2023 the Energy Security Board (ESB) Data Strategy tasked the Australian Energy Regulator (AER) to improve third party access to network data through the Low-voltage Network Visibility project. The aim of the project was to improve access to network data to support investors, planners and policy makers to make informed decisions for the connection of CER to distribution networks.

We were actively involved in the Victorian Government and AER network data trial and through it made many changes to improve the way we present data. This included improved spatial mapping, providing substation capacities, number of customers per distribution transformer, and solar generation per distribution transformer. There were many learnings from the trial and the AER identified eight key areas for improvements in its summary trial report.[2] Ultimately, the AER noted that the data available from the trial was not suitable to meet their needs, noting a balance is needed between additional cost and delivering value to customers.

We engaged with our customers on our CER integration program, and more specifically our proposed network visibility program. Through our engagement program, customers continuously advocated for the efficient and equitable integration of CER, to reduce bills and assist with the transition to net zero-emissions. When engaging with customers on network data more specifically, customers raised the following points:

- Practical and timely data: there was a strong desire for data that was not only accurate but also timely and relevant to different user groups, from individual customers to businesses and local councils.
- Accessible data: participants wanted accessible data in a clear form, noting their concerns about the complexity and nuances
- Equity in data access: participants called for equitable access to data, ensuring that all customers, regardless of location or size, could leverage this information

Further, we are seeing shifts in local and international utility sectors towards improved data for customer visibility and transparency. A case study from Water NSW is highlighted below.

[2] Australian Energy Regulator, Low-voltage Network Visibility – Summary of neighbourhood battery trials, October 2024.

WaterInsights (Water NSW)

WaterNSW is responsible for supplying the bulk water needs for approximately 7.5 million people. Managing 42 dams, WaterNSW supplies two-thirds of water used in NSW and operates the largest surface and groundwater monitoring network in the southern hemisphere.

With an ongoing and severe drought in eastern Australia, water users in NSW were becoming increasingly concerned regarding the allocation rules for sharing water. Following media revelations, a government commissioned inquiry called for increased transparency, to build confidence in the management and use of water. Like many water businesses, WaterNSW was required to improve transparency and access to water management decisions, and the data underlying them.

WaterNSW commissioned the design and build of a new digital experience that provides WaterNSW customers and other stakeholders with up-to-date hydrological and operational information presented in a way that was visually meaningful and easily understood for customers.

Data was integrated from a variety of internal operational systems; a web presentation layer was designed based on the latest user experience technology and an app was built that allowed key operational staff to publish commentary and upload documents. The system became known as WaterInsights.

Today, customers have comprehensive insight into the data and interpretive commentary underpinning WaterNSW resource planning processes and decision making. Data is targeted to a customers' location to ensure it is relevant and easily understood. The information is presented in a simple dashboard with the ability to click and drill down to further detail. Information includes daily flows into dams and in rivers and weirs, notifications and orders that determine water access, a breakdown of the availability to each category of water licence holder and charts of historical flows and volumes to help customers with long range planning.

3. Options analysis

To address the identified need, improving customer access to data, we considered two options of investing in a customer data portal. Option two is the preferred option, balancing cost and customer value.

TABLE 2 SUMMARY OF COSTS ($M, 2026)

OPTION		COST
1	Maintain status-quo: continue existing platform solution, but expand to include low voltage related data	0.2
2	Develop a customer data portal	2.7
3	Develop an 'advanced' customer data portal	3.8

We assessed our options against requirements customers have told us they care about, both gathered from our own stakeholder engagement as well as the AER's LV network visibility trial learnings, which include:

- Timeliness: how 'up to date' the published network data
- Ease of accessibility: how interactive, visual and clear the data portal is for customers to interact with and understand
- Data extraction: the ability for customers to download and copy data (as opposed to visualisation only)
- Ability for questions: the ability for customers to interact and provide feedback within the customer portal.

3.1 Option one: maintain status quo

The base case option involves very small capital investment. Under this option we will maintain the status quo by continuing to use the existing platform but expand to include LV related data. [3] However, under this option, our platform will continue to only be updated annually and be presented as a static 'snapshot' of our network. Table 3 outlines a high-level assessment of this option.

[3] The costs associated with creating the LV network constraint data set are included in the Flexible services business case and therefore no additional data set costs are included in this business case

TABLE 3 OPTION ONE QUALITATIVE ASSESSMENT

CRITERIA ASSESSMENT		COMMENT
Timeless	×	The data is only accurate at the time of publishing. CER will continue to grow across our network and annual data can become out-of-date quickly as new CER is installed
Ease of accessibility	✓	The view of information is based upon the electricity network view only. This means that the user needs to understand the geospatial aspect of the electricity network to find useful information (e.g. terms like distribution transformer, zone substation)
Extract data	×	The current solution is designed as a 'view only' portal, so the user cannot download or copy information to be used easily elsewhere
Ask questions	×	The current solution is simply presenting a static set of data so there is no ability to interact with the data set, provide feedback or ask questions with context

3.2 Option two: customer portal

Option two involves investing in a dedicated customer portal. This option enables improved customer access to contextualised information regarding constraints and spare capacity. Table 3 outlines a high-level assessment of this option.

TABLE 4 OPTION TWO QUALITATIVE ASSESSMENT

CRITERIA ASSESSMENT		COMMENT
Timeless	✓	The platform is designed to be able to be regularly updated to have reasonably current information (weekly updates) available on the network.
Ease of accessibility	✓✓	Information can be presented in a variety of formats and can include traditional geospatial views, dashboards, narratives (story boards) to help explain and contextualise the data. The platform also allows us to extend to new data sets that might be useful to the public but aren't strictly network constraint information and are otherwise difficult to understand for a non-technical audience
Extract data	✓	The portal allows for basic download capability for the user to store certain data sets.
Ask questions	✓	The portal would enable one-way feedback from community members. It has built-in feedback forms and drop-pin map feedback capability. This will allow us to build a better understanding of how our data is being used and what changes we need to make to improve the accessibility of our data.

3.3 Option three: advanced customer portal

Option three involves investing in an advanced customer portal. Table 6 outlines a high-level assessment of this option.

TABLE 5 OPTION THREE QUALITATIVE ASSESSMENT

CRITERIA ASSESSMENT		COMMENT
Timeless	✓✓	Data will be synchronised with the internal system so that information flows are up to date
Ease of accessibility	✓✓✓	Data will be able to be displayed in a variety of formats including geospatial, dashboards and interactive mapping. What makes this option 'advanced versus option 2, is that there is an 'intelligence' layer built into the solution. This can range from simple logic applied to network data (such as condition x criticality = risk), to more complex tasks
Extract data	✓✓	AI assisted data extraction that includes the ability for the user to query or interrogate the data sets rather than navigate to find information
Ask questions	✓✓	Interactive AI which will answer questions as well as find information. This will provide a customer interaction layer such as 'story maps' with the addition of AI to provide the ability to do specific queries with context to the data

4. Recommended option

Option two is the recommended option—investing in a customer data portal. This option balances value with cost and is well aligned to both our customer engagement findings and the AER network visibility trial learnings.

This option will allow for improved access for customers of our network, to enable more informed decision-making regarding their energy supply. Table 6 presents the cost.

TABLE 6 PREFERRED OPTION: CUSTOMER PORTAL ($M, 2026)

OPTION	FY26	FY27	FY28	FY29	FY30	FY31
Capital expenditure	0.4	0.6	-	-	-	1.0
Operating expenditure	0.3	0.4	0.4	0.4	0.4	1.7
TOTAL	**0.7**	**0.9**	**0.4**	**0.4**	**0.4**	**2.7**

Our recommended option has two core cost components, including:

- **cloud hosted portal platform:** license costs to use the platform, and the setup, configuration and on-going support
- **integration with core business systems:** an element of our solution is to automatically update data sets when changes occur (weekly). This way our customers are working more up to date information. This will require implementation work to integrate our core internal data stores to a secure repository that can be accessed by the customer portal

This business case does not consider the costs associated to create the LV network constraint data sets. This functionality and associated costs are within the flexible services business case[4].

[4] UE BUS 2.01 – Flexible services – Jan2025 – Public.

For further information visit:

Unitedenergy.com.au

United Energy

United Energy

United Energy