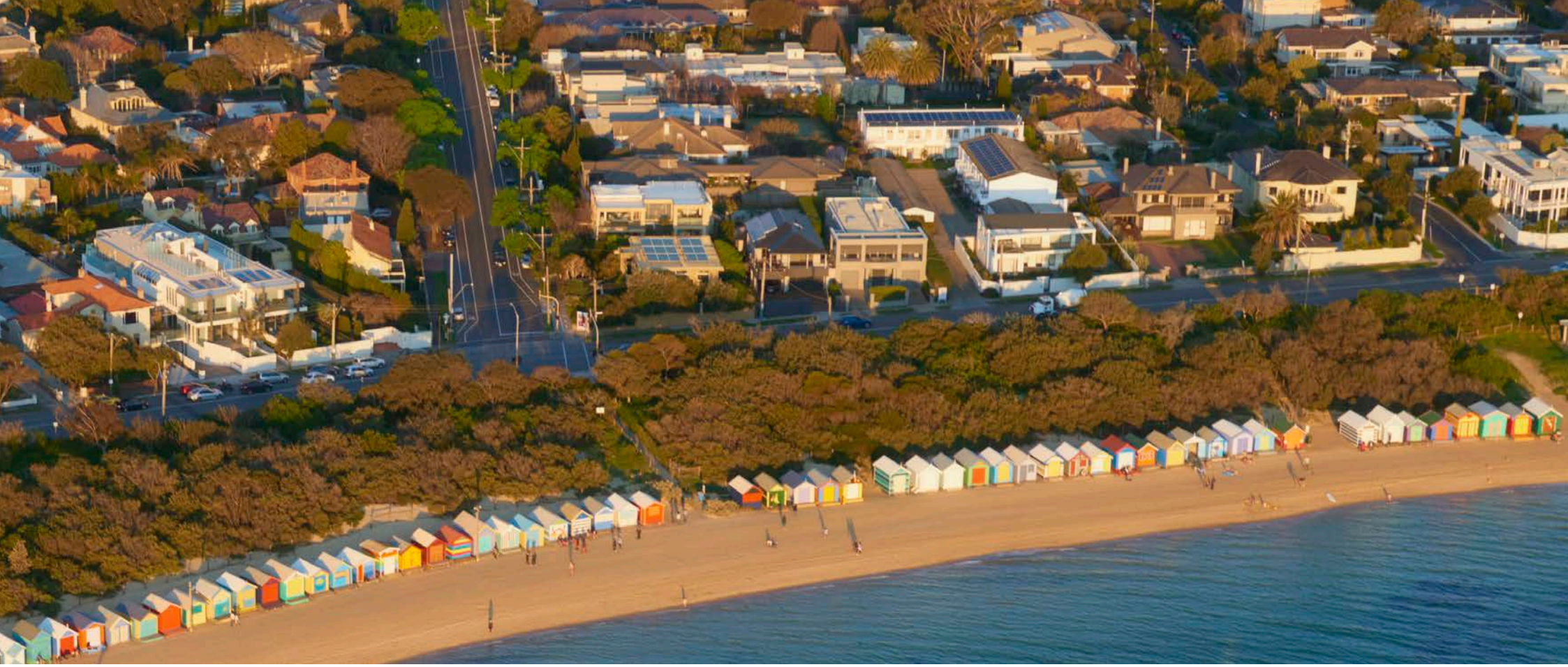
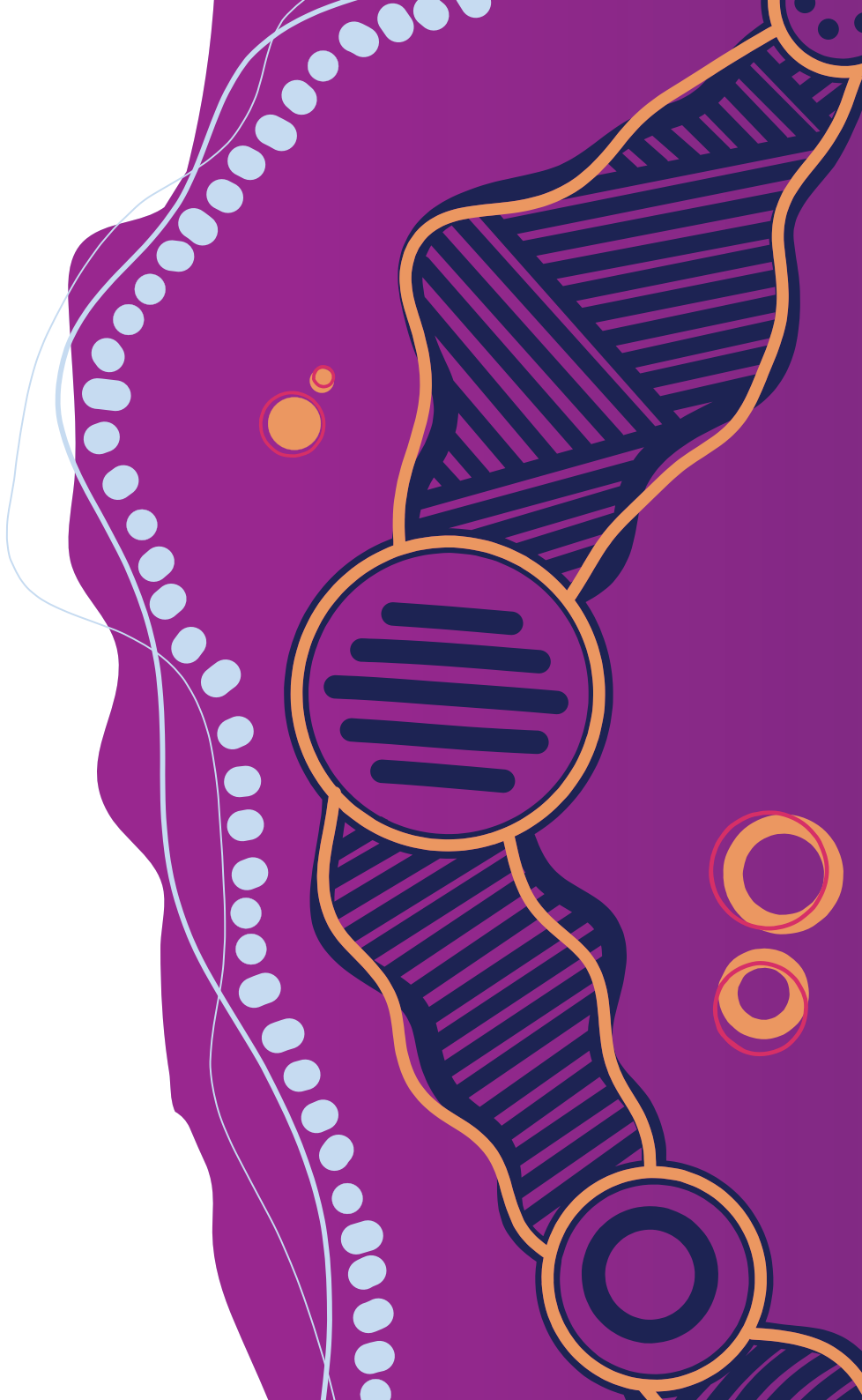


DSO vision

Acknowledgement of Country

United Energy acknowledges and respects the Bunurong and Wurundjeri People as the original Custodians of the lands and waters our network covers; lands First Peoples have occupied for tens of thousands of years.

United Energy pays our respects to Elders past and present and acknowledge their ancient and continuing connection to Country.



Our role is evolving to meet the changing needs of our customers

With growing electrification, customers are installing solar panels and batteries, purchasing electric vehicles (EVs) and switching to electric appliances. As this continues, the way energy is produced, shared and used across our networks is transforming.

Historically, we have operated as a passive poles and wires business within the electricity supply chain, acting as a Distribution Network Service Provider (DNSP), with electricity flowing one way through our network to customers. Our mission was to deliver power safely and reliably through this largely static system. Today, as more customers generate and export their own energy, electricity can move in multiple directions across the network. This shift requires us to evolve into a Distribution System Operator (DSO) where we actively manage and coordinate energy flows to ensure the network remains safe, secure and efficient and able to support Consumer Energy Resources (CER) and new technologies.

We already undertake many DSO functions such as using smart meter data and advanced network capabilities developed over the past 15 years. These tools help us operate one of the most highly optimised networks in Australia, delivering high-quality service levels and strong reliability performance.

Over the coming decade we will continue to strengthen these capabilities and this vision will guide the prudent and customer-centric investments required to scale our DSO functions, supporting more renewable energy, growing electrification and offering greater customer choice.

We will remain focused on listening, learning and adapting to our customers' changing needs. We look forward to working with you as we transition to the future energy system.

Help shape our DSO journey

Our commitment is to continue to engage with our customers on our collective DSO journey.

We want to be a DSO that delivers for our customers and this means our vision will continue to be refined over time.

Your feedback is an important part of this journey and will help inform our approach across our current regulatory period and beyond.

We welcome any feedback on our vision by 30 April 2026 and look forward to sharing our updated plans.

Renate Vogt
General Manager Regulation

Glen Thomson
General Manager Electricity Networks

Contents

Our DSO vision

How the DSO will deliver a flexible two-way system.

Customers needs are changing

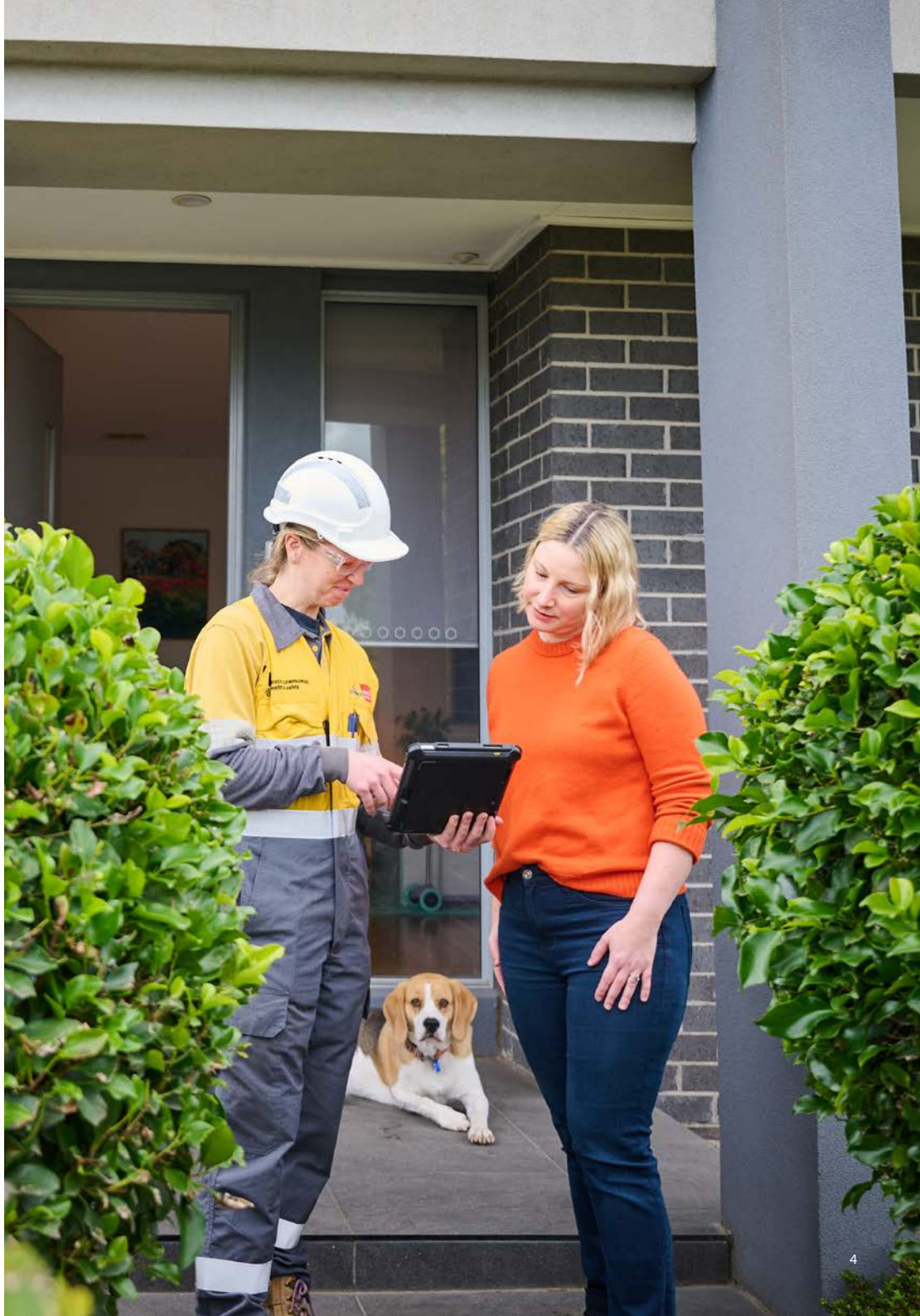
Different customers want different services from their electricity network.

Enabling actions

Next steps to progress our DSO journey.

Ongoing evolution and engagement

Our DSO vision will be a living document and evolve with customers' expectations.



Our vision for a DSO: poles and wires with smart energy integration

Enabled by smart technology, future networks will take a more active role in coordinating energy flows as customers interact with the system and the market. This is the role of a distribution system operator.

Our traditional network functions of providing a safe, reliable, resilient and affordable supply will remain critical. Equally important is our role in supporting mass customer electrification in a more dynamic system. Together these needs are complementary and will unlock value for all customers as millions of new consumer energy resources connect to the network.

We are already on this journey trialling flexibility services, publishing active constraints on our non-network services marketplace, and making sure customer assets interact with our network safely and efficiently for everyone.

By performing critical DSO functions today, we are responding to the rapid uptake of electrification currently underway. With Victoria moving away from its historical dependence on gas and universal coverage from smart meters, we are at the frontier of the energy transition.

We will continue to strengthen our DSO capabilities to unlock more customer value, enable greater market participation and deliver world-class reliability and safety, all while becoming a renewable-powered network.

Our vision outlines the actions that are essential to delivering the services our customers need to enable better market outcomes, improved choice and greater customer value.

Our DSO vision will deliver value for all customers

Unlocking customer value

We will enable customers to electrify their homes and businesses, connect more CER and be rewarded for the system support their CER provides.

Enabling market participation

We will deliver the network capability and data for customers and aggregators to seamlessly participate in electricity markets, with the benefits of market development, increased consumption and network utilisation benefitting all.

Delivering world-class reliability and safety

We will ensure a safe, reliable and affordable network that continues to deliver high quality services for our customers, even as the energy system and network demands become increasingly more complex through the energy transition.

Our enabling actions will be delivered through targeted initiatives to strengthen and scale our foundational DSO capabilities

	Today	2026–31: strengthen our DSO functions	2031–36: scale our DSO programs
Pricing for CER and electrification	▪ Cost reflective network tariffs including residential daytime saver ▪ Innovative tariff trials including our generator and storage tariff	▪ Simplified dynamic network pricing trial for aggregators and large commercial and industrial customers with CER ▪ EV-friendly network pricing	▪ Enhanced dynamic network pricing extended as opt-in for households
Export maximisation	▪ Victorian emergency backstop mechanism ▪ Low voltage (LV) and high voltage (HV) distributed energy resource management systems (DERMS) ▪ Flexible exports trial	▪ Introduce flexible export offerings for all customers ▪ Improve network management (DERMS) systems to minimise customer impacts	▪ Scale and enhance network management systems (DERMS and others) to coordinate flexible resources at scale
Preparing for flexible load	▪ Dynamic operating envelope (DOE) trials based on real-time smart meter data ▪ Dynamic voltage management system (DVMS)	▪ Trialling flexible load offerings for residential and commercial EV charging ▪ Adding scalable smart load management capabilities to our flexible export system	▪ Implement flexible load offerings for CER as business as usual that manage peak demand for both the distribution network and wider system
Better data sharing and visibility	▪ Static annual provision of some data ▪ LV forecasting tool ▪ Voluntarily publishing LV constraints	▪ Customer data portal to share weekly information ▪ CER data exchange to streamline industry data sharing	▪ Real-time data access through cloud and direct interfaces
Developing a flexibility marketplace	▪ Non-network marketplace trial for flexible services ▪ Voluntarily publishing LV constraints	▪ Foster development of a non-network (flexibility) marketplace	▪ Enhanced DOEs, forecasts and non-network data exchange to maximise opportunities for market participation and optimise utilisation
Strengthening our LV network	▪ LV tapping and balancing works ▪ Reactively addressing customer complaints	▪ Proactively addressing poor performing areas of our network with high electrification ▪ Removing network barriers that are blocking market participation	▪ Enhanced Transmission-Distribution interface to enable CER visibility and predictability for market and system security orchestration

The pace and scale of electrification is a paradigm shift that is here and now

Victoria is uniquely positioned at the frontier of electrification, particularly given our existing reliance on residential gas use for hot water and space heating.

Our established network of smart meters is also providing critical insights to the changes underway.

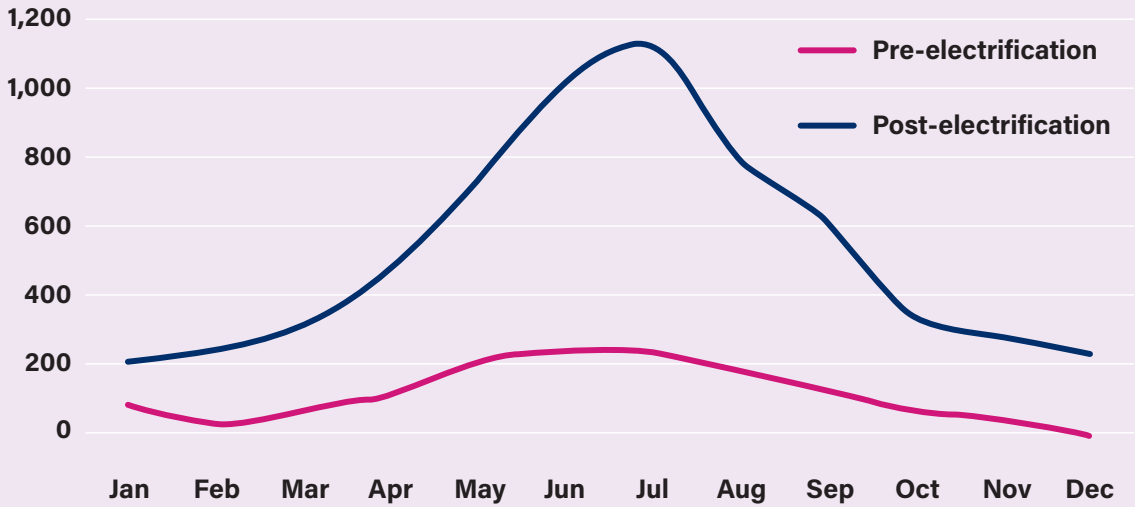
Analysis of network-wide consumption shows we are observing rapid growth today, particularly with usage in colder weather.

Individual customer data corroborates this growth, with post-electrification usage doubling in summer and jumping by almost 400 per cent throughout winter. The changes in winter point to the impacts of the electrification of gas, where Victorian households currently consume triple the amount of gas as customers in New South Wales and South Australia.

As the scale of customers who electrify their household load grows, enabled by ongoing government policy support and direction, the challenge of managing a safe and reliable supply will further materialise.

But this change also creates enormous opportunities to better understand what customers want from a DSO and how we can unlock this value.

Monthly average consumption of the same residential customers pre and post-electrification, n>1000



Key regulatory reforms supporting electrification

Victorian reforms

- **Gas Substitution Roadmap:** bans on new residential gas connections and new gas hot water systems.
- **Zero Emissions Vehicle Roadmap:** sets a target of 50 per cent of new light vehicle sales to be zero-emissions by 2030.
- **Renewable Energy Targets:** 65 per cent of Victoria's electricity from renewables by 2030 and 95 per cent by 2035.
- **Solar Victoria:** rebates of up to $1,400 for the installation of solar systems on top of other national subsidies.

National reforms

- **Consumer Energy Resources (CER) Roadmap:** reforms to modernise industry roles to enable an effective high-CER system.
- **Cheaper Home Batteries:** discounts of around 30 per cent on the upfront cost of household batteries.
- **Integrating Price Responsive Resources:** to allow CER aggregators to bid CER into the electricity markets.
- **Solar Sharer Offer:** three 'free' hours of electricity to reward electrification and shift energy use to match solar generation times.

Journeys of a DSO customer

More than 730,000 customers rely on our network for their electricity supply. Each has different needs and expectations.
While every customer is unique, many share similar situations or technology choices. To help tell their stories we have developed a set of customer archetypes.

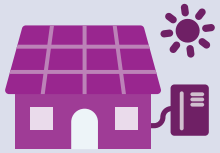
Customers also range from passive users to those who are highly engaged in managing their energy. This level of engagement shapes the value they seek from the network and what they consider a meaningful electricity service to be.

Across these archetypes we examine what customers value, the pain points they experience and what they need from their distribution system operator. These insights have helped shape our journey toward becoming a DSO.

These archetypes are not perfect and do not capture the full diversity of our customers or their requirements. They simply provide a useful way to understand the common themes and expectations that appear across groups with similar technologies or circumstances.

Customers without CER

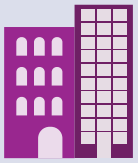
Customers with solar



Customers with batteries

Customers with electric vehicles

Small and medium business



Commercial and industrial

Regional and rural customers

Vulnerable customers

Customers without CER

Homeowners or renters who have inflexible loads and a one-way network connection without solar, batteries or EVs. These customers may also have an existing gas connection.

What you value

- Simple and low-cost tariff options
- Education and awareness about energy-saving opportunities
- Support for upgrading to energy-efficient electric appliances
- Options to reduce bills such as installing solar or electrifying

Pain points

- Rising power bills
- High cost of electrification
- Complexity of retail tariffs and limited ability to save money from them
- Limited flexibility to control bills

What you need from your DSO

- Simple and fair network pricing
- Lower electricity prices driven by CER uptake and the electrification of others across the energy system
- DSO developments to be low-cost
- Access to cheap retail offers, such as low-cost offers in the middle-of-the-day
- Benefits from upgrading to energy-efficient appliances
- Available capacity supporting the option to electrify

Customers with solar

Homeowners who have invested in rooftop solar and self-generate to lower emissions and bills.

What you value

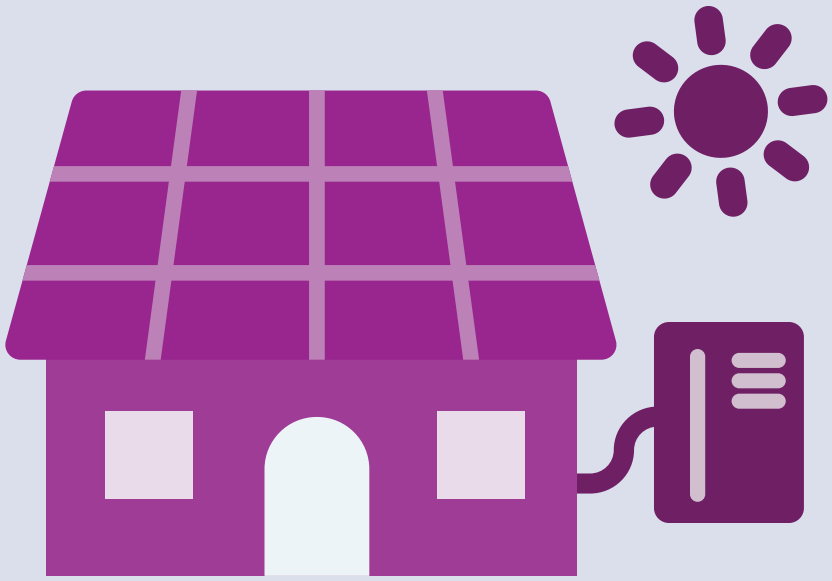
- Two-way network access: import power when you need it; ability to export when you have excess
- Using your solar to keep bills low

Pain points

- Low static export limits that block everyday solar exports
- Confusing retail tariff arrangements

What you need from your DSO

- Fair pricing to help you save and earn
- Minimise export restrictions
- Ability to share excess electricity with your community
- Easy upgrades for solar, batteries and other smart technology
- Automation that works for you – but only with your consent



Customers with batteries

Homeowners with battery storage who want to reduce bills and become more self-sufficient.

What you value

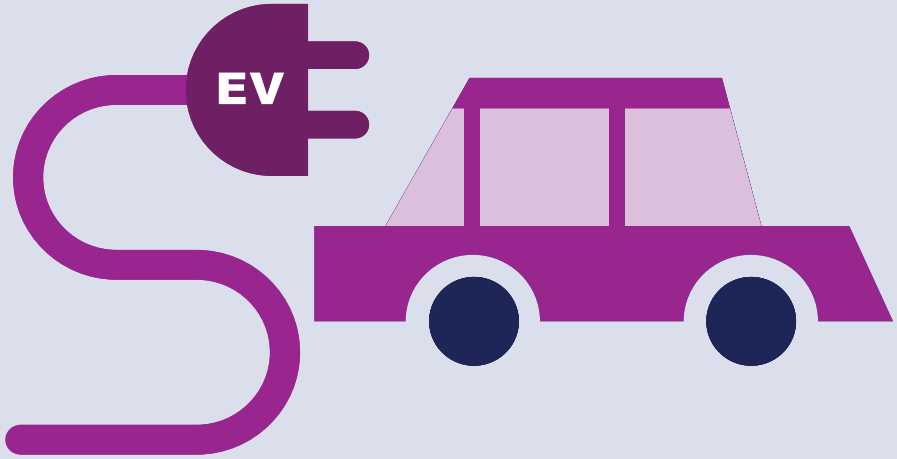
- Using your battery to keep bills low
- Charging and using your battery when you want to
- Cheap off-peak power prices to charge the battery when you need it

Pain points

- Confusing tariff arrangements
- Export limits blocking high-value export to the network
- Interrupted charging

What you need from your DSO

- Access to cheap energy such as midday solar
- Ability to participate in electricity markets or provide local network support
- Fair pricing to help you save and earn
- Automation with your consent – can set and forget the battery's schedule
- Easy upgrades for solar and other smart tech



Customers with electric vehicles

Homeowners or renters who have purchased an EV and rely on electricity consumption for transport.

What you value

- Ability to seamlessly connect a home charger
- Agency over your charging preferences
- Options for smart charging solutions that save money while ensuring your EV is charged when you need it

Pain points

- Capacity restrictions on home charging or necessary three-phase upgrades
- Limited availability of vehicle-to-grid (V2G) and vehicle-to-home (V2H) technology
- Complexity of EV charging retail tariffs
- Limited public fast-charging access

What you need from your DSO

- Seamless connection of home EV charging
- Clear network pricing signals to enable cheap and convenient EV charging products
- Ability to charge EVs from own solar to reduce charging cost
- Ability to utilise new V2G and V2H technology, enabling EVs to participate in energy markets like a battery on wheels

Small and medium business customers

Businesses such as cafes, trades and local services that need high reliability and affordable power to stay competitive. Some will have CER, but many will not.

What you value

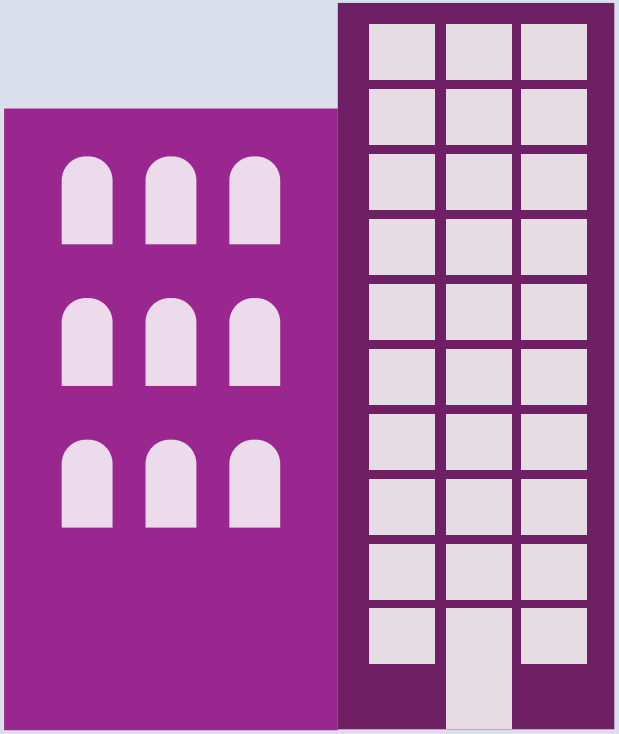
- Simple and predictable power prices to focus on core business
- Optional tariffs such as time-of-use pricing that can align with business operations
- Reliable energy supply to support the business

Pain points

- Limited time to engage with complex energy products
- Limited awareness of energy-saving opportunities
- High energy costs during peak times

What you need from your DSO

- Ability to save from solar – yours or others in the local area
- Simple power pricing options that can work for the business
- Smart metering that can help enable smart energy management tools



Commercial and industrial customers

Large businesses and facilities with high energy needs.

What you value

- Uninterrupted power supply or early notice of outages
- Use of onsite solar and energy efficiency to reduce bills
- Access to electricity market opportunities
- Ability to lower emissions to meet shareholder environmental commitments

Pain points

- Demand tariffs that minimise saving potential
- Unplanned outages or poor power quality that causes major disruption
- Network constraints limiting business expansion, automation or electrification smart energy optimisation

What you need from your DSO

- Ability to connect solar, batteries, energy efficient appliances and energy management technologies
- Low-cost and quick network connections
- Sufficient network capacity to electrify
- Clear pricing signals to optionally benefit from adjusting operations
- Flexible network access and rewards for providing electricity market and local network services

Regional and rural customers

Customers who live outside major urban centres in less densely populated areas, often supplied by lower capacity power lines.

What you value

- Improving reliability and power quality
- Avoiding extended network outages that impact communities
- Safe electricity supply and minimising bushfire risk
- Bridging the service level gap relative to urban customers

Pain points

- Frequent power outages
- Barriers to fully electrify, limiting benefits from new technologies
- Limited access to energy-saving technologies and services

What you need from your DSO

While these customers want to engage with DSO services, they are more concerned with access to typical network services including:

- connecting new electrified load such as heating or transport
- connecting more local renewables and CER to share with communities, particularly during network outages
- building resilience to long duration outages and consideration of stand-alone power systems (SAPS) or microgrids

Vulnerable customers

Customers who may experience financial hardship, health challenges or social disadvantage.

What you value

- Affordable and predictable energy bills
- Support to understand and benefit from energy-saving opportunities
- Reliable energy access, particularly for life-saving equipment

Pain points

- Rising power bills
- Barriers to fully electrify, limiting benefits from new technologies
- Limited options to take advantage of complex time-varying prices

What you need from your DSO

- Lower or manageable network prices
- Lower network and market costs through general CER participation
- Opportunities to benefit from a smarter energy system
- Assistance to support adoption of energy efficiency initiatives
- Simple and fair network pricing, including options to access cheap energy such as midday solar

Our destination will deliver long-term customer outcomes through holistic enabling actions

Our enabling actions will work together with customers who opt-in to deliver overall outcomes for everyone. For example, a strong and robust LV network is an enabler of pricing or flexible load initiatives, not a substitute.

Enabling actions	Unlocking customer value	Enabling market participation	Delivering world-class reliability and safety
Pricing for CER and electrification	Your tariffs provide you with a window of low-cost electricity to manage your electricity costs.	Your tariffs encourage electricity usage outside peak periods and to the middle of the day to deliver market-wide benefits.	Your tariffs encourage more customers to connect more CER to improve system outcomes.
Export maximisation	Flexible export options would allow, on an opt-in basis, access to greater export capacity when it's available and minimise static export limits.	Enabling more solar generation will lower prices and increase access to renewable generation. Flexible Exports will also reduce augmentation needs.	Exports will be maximised within safe network limits to reduce unintended appliance impacts from voltage levels that are above industry standards.
Preparing for flexible load	Flexible load options would allow you to be rewarded for using less electricity during peak periods.	Flexible loads would improve network utilisation and avoid more expensive network augmentation that would only be required for short timeframes.	Flexible services will smooth demand peaks to improve power quality on local networks and broader system stability.
Better data sharing and visibility	Better visibility will support customer planning and usage decisions, including for new connections and CER upgrades.	Better data will improve the optimisation and utilisation of existing infrastructure, leading to a smarter and more efficient system while also reducing broader costs.	Our cyber security and data protection systems and process will maintain the security and safety of both yours and our data.
Developing a flexibility marketplace	A flexibility marketplace will allow you to be rewarded for using your energy assets to participate in resolving network constraints.	Everyone will benefit through lower network costs as network augmentation can be deferred through efficient non-network solutions.	A mature flexibility market will provide greater confidence that non-network solutions will perform as expected, when required.
Strengthening our LV network	A strong LV network will support your increased capacity requirements through your electrification journey, enabling you to use your CER as intended.	A strong LV network will enable access to low-cost renewable generation when it is cheap and abundant, lowering wholesale market prices for everyone (all else equal).	A strong LV network will ensure other households are not adversely impacted by increased electrification, such as appliance malfunction or degradation.

Pricing for CER and electrification

Our network tariffs will support a range of retail products and encourage more efficient use of the network.

What our customers want

- Retail tariffs that enable electrification, EV charging and better use of solar exports
- Affordable electricity
- A simple, understandable retail product
- Opportunities to realise value from their investments
- Ability to electrify transport and heating

> *I would like to have a display on the wall here showing what fraction of my daily energy consumption was green, was generated without harming the atmosphere... that would be a very nice thing to have, and I would be prepared to change my habits to try and get the needle to point in the right direction.*

Initiatives to strengthen our DSO functions

CER tariff

Rewards customers for exporting energy during the evening peak when the network needs it most and applies a small charge for exporting during the day when there is excess solar.

This encourages network-friendly use of home CER (battery and EV) systems.

Flexible connection tariff

A battery or stand-alone generation connection will be deemed to be a flexible connection and will have an agreement with us that gives us a level of control over where they connect.

These customers will only be charged for energy use during peak periods.

EV-friendly network pricing

For customers with an EV, they can save a significant portion on charging costs if they choose to move to our new time-of-use tariffs.

We are also supporting the rollout of new public EV fast-charging stations – by allowing them to opt out of peak demand charges.

Energy education programs

We will run energy advisory campaigns to help households and businesses understand their options and make the most of our new tariff opportunities.

Future considerations

- Our proposal to mandatorily transition all residential customers to Time-of-Use tariffs was not supported, with current rules meaning adoption of our innovative DSO-enabling tariffs will remain voluntary and gradual.
- Many customers are unfamiliar with time-based pricing and find it complicated. Price signals alone do not always lead to significant shifts in energy use; these could be supported by complementary measures like further customer engagement and enabling technology such as automation.

Export maximisation

Making better use of existing network capacity and maximising exports and options for our customers.

What our customers want

- Allow more solar energy exports
- Improve emissions reduction
- Transparency and fairness, with a focus on equal allocation rather than 'pay for more' models
- To remove zero export limits

> *If we had excess solar, it wouldn't worry me much where that went to... if that was charging a community battery or something, well great, [I'd] be more than happy for something like that.*

Initiatives to strengthen our DSO functions

Introduce flexible export offerings for all customers

All new customers and existing customers who upgrade their network connection will be able to choose between a static export limit (1.5kW) or a flexible export limit (up to 10kW per phase, depending on network conditions).

Flexible exports mean your export limit can go up or down during the day based on how much capacity is available.

We expect that almost all customers will be better off because they will be able to export more on flexible products. This is particularly the case during periods where solar output is typically lower, such as early or late in the day when the sun is low or in winter.

Flexible support for larger solar customers

We will also be able to offer tailored solutions for our large customers to allow their larger solar systems (200kw to 1MW) to export more, without costly upgrades.

We will do this through lower cost solutions by offering flexible connections to large customers on a bespoke basis considering the customer's specific size, location and energy requirements.

Distributed Energy Resource Management System

Our DERMS allows us to safely and reliably manage solar export limits down to the LV network at the customer connection point.

With ~300MW of solar expected to connect to our network (as the amount of CER continues to grow), we must scale our systems and capabilities as well.

We plan to add functional capabilities such as operational forecasting, DOE generation, constraint management and develop granular controls that minimise the amount of export curtailment during minimum system demand periods.

Future considerations

- Managing flexible exports for thousands of customers requires new systems and smarter forecasting which is a significant change to how we have traditionally managed our network.
- We will seek to coordinate with other distributors and Australian Energy Market Operator (AEMO) for standardisation so that customers and third parties across the country have a consistent and streamlined experience.

Preparing for flexible load

Allowing our customers to utilise and test flexible load opportunities and save.

What our customers want

- Use of appliances as autonomously as possible
- Access to rewards for varying electricity usage at certain times
- Choice over how and when their devices are managed
- Assurance that flexible load programs are voluntary and easy to override
- Trust that the energy industry is working in their best interests

> *I would like to get an EV for my next car as well. And ideally one that can be a bi-directional sort of battery so that I could use that also as more backup for the house too. ... I could see myself in a situation where if there's a storm weather forecast, that I would make sure both the home battery and the car battery were charged up so that they would be my two sorts of backups for the rest of the house.*

Initiatives to strengthen our DSO functions

Trialling flexible load offerings for residential and commercial EV charging

We are running trials of flexible load offerings to test the new technical capabilities of our systems and identify the level of customer demand for different types of flexible EV charging products.

The trial is an important step to test that our systems work and interact with each other and customer sites the way we expect them to. Testing the platform will prepare us for scale flexible load products in the future.

It will also help us learn how to use DOEs most efficiently to monitor events, set the right network limits and optimise performance outcomes for customers.

Adding scalable load management capabilities to our flexible export systems

We can currently communicate with customer connection points to set solar export limits, but do not have the capability to set export limits for other CER (like batteries) and cannot set import limits at all.

We are currently working with industry to develop the standards that will support more advanced communication with customer connection points that will enable us to set dynamic limits that CER and flexible loads can operate within.

Our dynamic limits will change over time to maximise electricity use and export for customers while maintaining safe network operation.

Future considerations

- Ensuring flexible load programs benefit all customers, not just those who can afford new technology. We want to avoid creating an unequal 'two-speed' energy system where vulnerable customers and customers who do not have access to flexible loads can still benefit from lower energy system costs without directly participating.
- Giving participating customers the right amount of information so they can be comfortable they are saving money while still getting the services they need.

Better data sharing and visibility

Making network data more accessible and useful for all our stakeholders.

What our customers want

- Access to current, practical, and simple to understand network data
- More network information to support better decision making
- Simpler ways to find out about network constraints and available capacity

> *If we're going to make informed decisions about renewable energy investments, we need timely, transparent data from the network. Right now, the lag is costing us opportunities.*

> *The network holds a wealth of data that could empower local initiatives, but long lead times in accessing it mean we miss critical windows for project submissions and funding applications.*

Initiatives to strengthen our DSO functions

Customer data portal to share weekly information

We are building a new online portal where customers and stakeholders can:

- view information about network constraints and spare capacity
- access data in easy-to-understand formats, including maps and dashboards
- download certain data sets for their own use
- give feedback or ask questions through built-in forms and interactive maps

The portal will be designed so that it can be used by anyone aiming to make complex network data simple and relevant. The portal will be updated weekly and will draw on the same data that we use internally, so stakeholders always have access to the latest information. We will share more of the right information with AEMO, retailers and virtual power plants to support better system-level decision making, with privacy and security built-in.

CER data exchange to streamline industry data sharing

We are working with industry and AEMO to co-design a platform that effectively shares information between industry participants related to CER, operations, flexible limits and forecast network impacts. This is known as the CER data exchange.

Technical design elements are currently being worked through by industry, and once agreed, we expect to build the capabilities for our systems to communicate with AEMO, retailers, aggregators, customers and others to share CER-related information.

Integration with other industry participants is crucial to ensuring that our customers receive high quality services at the lowest possible prices.

Future considerations

- Legacy digital infrastructure lacks the capability to capture and integrate customer-level data.
- Ensuring technical protocols are agreed to facilitate appropriate data sharing.
- Designing the timeliness of data updates and provision to customers and the market.

Developing a flexibility marketplace

Building an automated, transparent marketplace that can manage constraints and defer network investment without impacting services.

What our customers want

- Lower energy bills
- A clear path to net zero emissions
- Simple ways to get the most benefit from their CER assets, for example through a retail aggregation product

> *If you've got genuine constraints, there is potential for us to move load to avoid building more network capacity.*

> *It's essential that the network demonstrates it is doing everything possible to address issues before committing to further investments.*

Initiatives to strengthen our DSO functions

Foster development of a non-network (flexibility) marketplace

We're introducing a secure, online platform that makes it simple to find, review, and join opportunities to bid to support the electricity network. This is an opportunity for flexible service providers, retailers and customers to put forward solutions to tackle network constraints. Alongside regulatory change, similar platforms have proven successful in the United Kingdom and will clearly show network constraints, contract terms, payments, and procurement rules – making it easy for customers and businesses to find opportunities and participate with confidence.

Connected to this, our service platform will provide visibility of operations, track performance and manage payments. Through this, we would deliver life-cycle management of non-network solutions and support you throughout your journey with streamlined processes to make participation hassle-free.

Future considerations

- The flexible energy market in Australia is still new and needs time to grow. Building a mature marketplace will take commitment and patience.
- Non-network providers are interested, but the market is immature; transparent constraint data and pragmatic contracts and processes will help build participation.

Strengthening our LV network

Delivering value for customers by investing in the last mile of our network and complementing our other core DSO initiatives.

What our customers want

- The ability to electrify and take advantage of lower energy prices
- To contribute to emissions reduction
- Use of appliances as autonomously as possible
- A reliable, high-quality and stable electricity supply
- Opportunities to realise value from their investments
- Us to manage additional capacity requirements to support electrification at lowest long-term cost

> *"I'm not a fan of the electric stoves to be honest. I feel like they take longer to heat up food, but if it will help the environment a bit more, then I'd make that change to you know, help out as much as I can... because most of the things I use already are electric, it's kind of leaning more towards that way now."*

Initiatives to strengthen our DSO functions

Maintaining our strong service level performance

The unique Victorian challenge of rapid electrification and consequential increases in load mean that our LV network is not currently fit-for-purpose to meet the capacity needs of our customers or emissions reduction requirements.

We are leveraging industry-leading forecasting capabilities underpinned by unrivalled data to target network upgrades in high-value areas that maximise benefits for customers, in line with their preferences for maintaining our current strong service level performance.

Proactively addressing poor performing areas of our network with high electrification

Many of our customers are already experiencing poor power quality, both in urban and regional areas and across all customer types. We must remediate poor power quality if it is causing issues for customers who then complain to us.

Power quality impacts can extend for over 12 months after a customer complains to investigate, design, procure, plan, and deliver an efficient solution, all the while customers may be experiencing flickering lights, malfunctioning appliances and inability to charge EVs or batteries.

Our proactive approach to strengthening the LV network can avoid complaints entirely and improve customer outcomes before they experience any poor performance.

Future considerations

- The scale of electrification means that remediating undervoltage issues is a multi-period challenge; ensuring an efficient balance between proactive and reactive investment is critical.
- There is no value framework to assign a quantitative risk value (and therefore remediation benefit) for undervoltage.
- Other risks we consider are not meeting net-zero targets, or customers being 'forced' to electrify but they have a poor experience because capacity is not sufficient.

LV networks are emerging as a barrier to market participation

Our network relies on diversified customer load to operate effectively. Shifting electricity usage to the middle-of-the-day provides wholesale market benefits and supports renewable generation when it is abundant, but removes diversification on the areas of our network that depend on it.

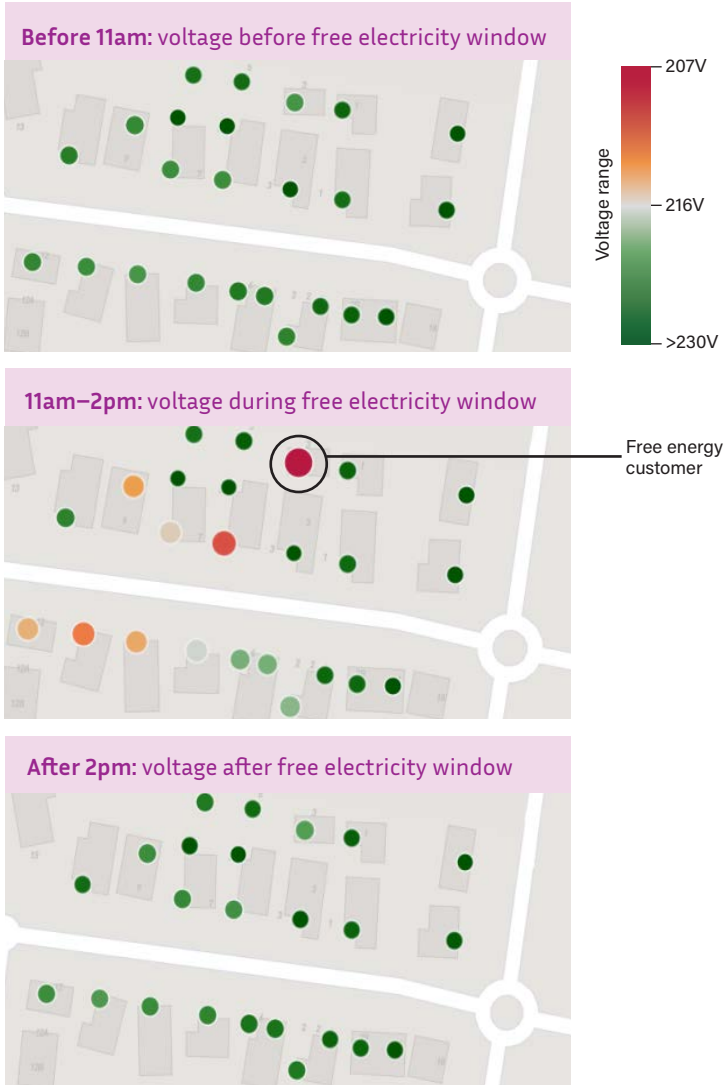
Using our smart meter analytics, we are seeing the voltage impacts on all customers on a single circuit from the action of just one customer on a street before, during and after the 'free' electricity windows being offered by some retailers. For example, before and after the free electricity window, all sites on the circuit shown are receiving voltage levels within standard operating ranges. However, when the highlighted customer increases their consumption between 11am and 2pm (i.e. during the window when their electricity is free), their supply voltage and that of several of their neighbours, drops below compliant levels.

At these voltage levels, these customers cannot take advantage of the low-price periods because their electric appliances will trip, forcing consumption back to other periods.

Lower usage during these periods also means that cheap renewable electricity will not flow through to deliver the intended electricity market and environmental benefits.

This example shows the impact of a single electrified customer on our network responding to market signals. Victoria's legislated emissions reduction objectives will require a material proportion of the state to electrify. This challenge is a uniquely Victorian issue as electrification materially increases customer consumption requirements, particularly in winter to support water and space heating, which coincides when solar production is also at its lowest.

The prevalence of low-cost retail offers during the solar production window is expected to increase in the future, such as under the Federal Government's Solar Sharer initiative.



Navigating regulatory and market challenges requires ongoing engagement

While we are making significant progress in our DSO journey, and working together with industry and policy makers, further regulatory and market challenges will need to be resolved to ensure the best outcomes for customers. Coordinating CER in rooftop solar, home batteries and EVs, as well as getting the right protections in place, for CER and non-CER customers, will bring prices down and allow everyone to share in the value of the energy transition.

Modernised regulations will support efficient DSO services

- **Electrification:** we need strategic network upgrades to address outdated network areas designed to legacy standards to support the mass electrification that Victoria will require.
- **Role clarity:** formally recognising the DSO role and clarifying who does what in market rules will unlock sustainable CER growth and maximise CER potential at lowest cost.
- **National consistency:** standardising DSO roles on a consistent state or national basis will accelerate market maturity and support customers and network users with similar experiences across DNSPs.
- **Fit-for-purpose incentives:** a framework that provides clear incentives for networks to develop and deliver DSO functions and the services customers value will fast-track delivery of those services.
- **Five-year reset cadence:** rethinking the appropriateness of the current five-year regulatory reset for a rapidly evolving DSO space with undefined regulatory frameworks is likely required.
- **Connections:** we need a new, standardised approach to connections that balances speed and cost of connection with reliability and system security.
- **Regional and rural equity:** energy equity should be incorporated into the regulatory framework to provide more options for network upgrades to support customers outside metropolitan areas to electrify and lower carbon emissions.

Market maturity should be supported by technical initiatives

- **OEM / aggregator compliance:** we need industry collaboration to establish consistent rules for third-party providers and escalation mechanisms to deal with non-compliance.
- **Installation compliance and customer protections:** further guidance and support is needed to strengthen enforcement of non-compliant installations to protect customers.
- **Interoperability standards, certification and listing:** we need industry collaboration and alignment to develop standardised technical elements to support CER, electrification and interoperability.
- **Consistent data submission:** standardisation across different CER technologies is needed to continue developing new customer services and to support market participation.
- **Connection point management:** industry engagement is required to broaden data capture and management across all CER types, beyond just solar installations.
- **Data sharing between AEMO, DSO and aggregators:** industry collaboration should define the needs and timing for sharing DOEs, VPP membership, operational and CER data.

For further information

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