

Jemena Electricity Networks
People's Panel
Manual

Jemena
bringing energy to life



Acknowledgement of Country

Jemena acknowledges the Traditional Owners of the land on which we operate and recognises their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

Artwork is by Chern'ee Sutton a contemporary Indigenous artist from the Kalkadoon people from the Mount Isa area in Queensland.

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The **Jemena's People's Panel Manual is also available online** in 10 languages:

1. Arabic
2. Chinese (Simplified)
3. Malay
4. Nepali
5. Oromo
6. Somali
7. Tigrinya
8. Turkish
9. Urdu
10. Vietnamese

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Welcome to the People's Panel



It is a critical time for the energy industry as we increase our focus on the energy transition and a low-carbon future. We have an important role to play in providing electricity to Victorians now and in the system of the future.

As customers with lived experience, you bring a unique perspective on energy, electricity and the future of our network. This includes your experiences navigating your way through the energy system; from using electricity, finding information and paying your bill. We also want to understand your needs, hopes and aspirations as we move to a more sustainable future.

Your feedback will be incorporated into our 2026-31 price reset proposal. This proposal will be submitted to the Australian Energy Regulator for its approval.

We have developed this pack to give you a deeper understanding of the role we play as an electricity distribution business and the challenges we face.

I encourage you to get familiar with this content and write down any questions and thoughts that come up for you on the future of energy and the challenges we might face. There might be a topic that you'd like to explore deeply through your role as a panel member, or like to hear from a guest speaker.

Thank you for your participation and contributions.

David Gillespie
Managing Director
Jemena



It has been a real privilege to attend the first introductory People's Panel sessions and to meet many of you. I'm inspired by the commitment you have to shaping our electricity network and the spirit of curiosity you have as a group to understanding the energy supply chain and what we do.

Customers are the heart of our business, particularly when it comes to shaping our regulatory proposals and the future of our network.

As a panel you play a pivotal role in shaping our regulatory proposal and the recommendations you make will lead to initiatives across our network. Your ideas and insights will ultimately guide the services we provide and the prices we charge all of our residential customers.

I thank you for your involvement and unique perspectives you bring to the panel. I look forward to seeing you at the sessions and learning from you.

Shaun Reardon
Executive General Manager, Jemena Networks


Jemena

1. The brief

We're Jemena, your local electricity distributor, and we deliver electricity to homes and businesses in Melbourne's north-west. We manage the poles and wires that carry the electricity to your home.

As an electricity distribution network service provider, we are subject to economic regulation by the Australian Energy Regulator (AER), under the National Electricity Rules (NER).

Our revenue is approved in five-year cycles by the Australian Energy Regulator and, in the build-up to each new term, we submit a proposal to them which outlines our plans for the next regulatory period (the five years from 1 July 2026 to 30 June 2031) and how we expect to fund them. As a part of the development of our regulatory proposal, our engagement with you is integral to shaping our proposal and the services we provide. This collaboration has become all the more important than ever as we start to develop the prices we will charge customers for the next regulatory period.

Our challenge

With a changing environment and continuing increases in the cost of living, providing a fair energy future has never been more important than now. With increased customer uptake of renewables and other technologies, people are rapidly changing both how they use, and what they expect of the electricity network. This requires us to rethink the best way to plan for the future and charge for electricity in a way that is fair for everyone and meets different customer expectations.

Throughout the engagement process we will be asking Jemena's customers to think about and make suggestions and recommendations on the question:

How should Jemena prepare for a sustainable energy future while meeting customer and community needs today?

We have established key groups as part of our electricity network engagement process.

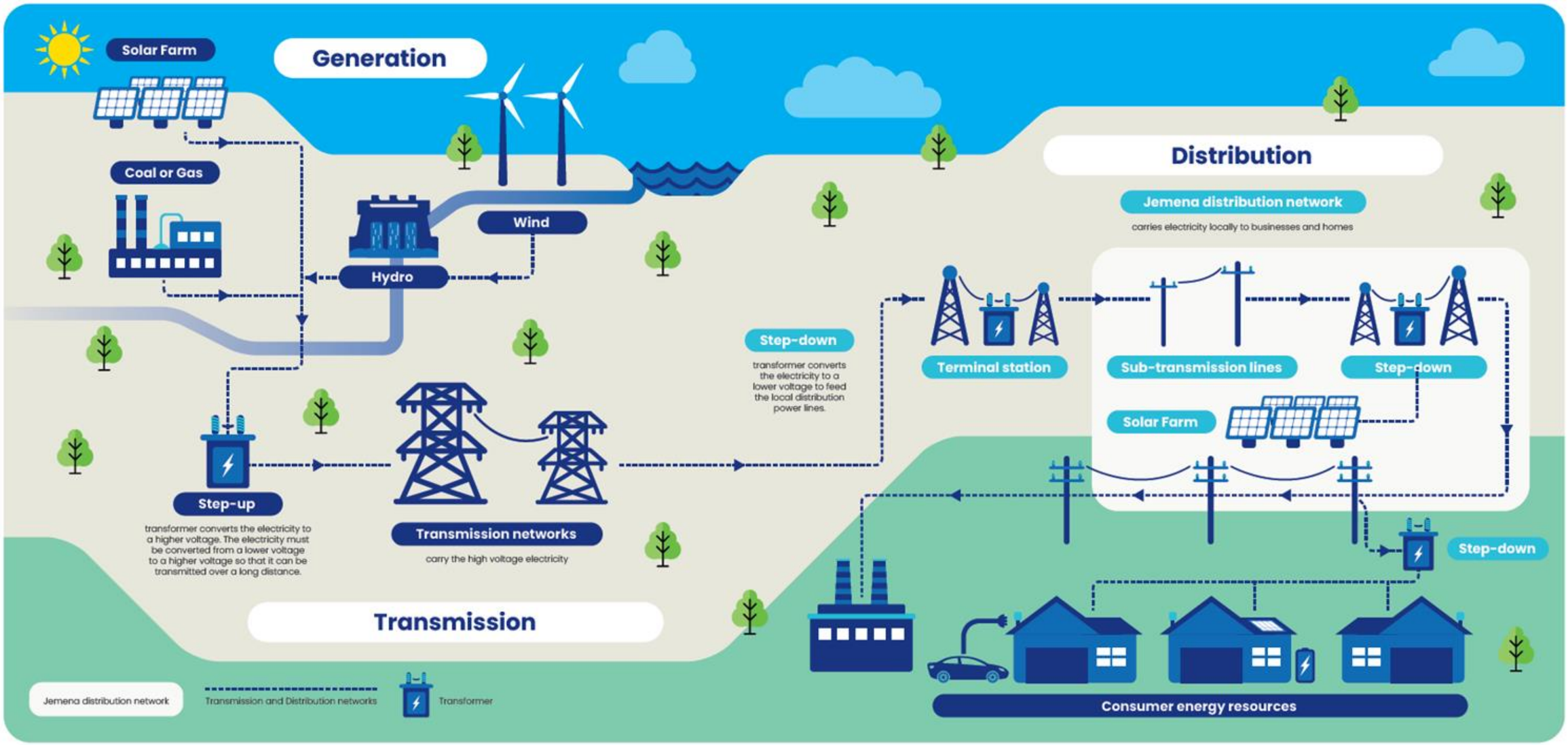
The groups will intertwine and information will be shared across each group to broaden thinking form a range of perspectives.

- **Customer Voice Groups** – six customer groups that include around 18 **customers with lived experience** in specific areas, including:
  - First Nations Customer Voice Group
  - Mental Health Customer Voice Group
  - Disability Customer Voice Group
  - Seniors Customer Voice Group
  - Young People Customer Voice Group
  - Multicultural Customer Voice Group.
- **Energy Reference Group** – an expert energy panel that can help discuss and deliberate on complex issues and provide clear, independent advice and recommendations that have the long-term interests of customers in mind.
- **People's Panel** – a group of community representatives comprising of 50 diverse customers who are statistically representative of residential customers in our electricity distribution network.

About this pack

Reading this pack will provide you an overview of our network and the process of how we will engage with you.

2. How the electricity supply chain works



The electricity market in Victoria was designed to transport electricity generated from coal, gas or hydro power, and distribute it to homes and businesses. Large-scale generators are often produce electricity a long distance from where electricity is needed. To move electricity over long distances, transmission companies use extra high voltage power lines. When the electricity is closer to where it is needed the voltage is reduced, and distribution networks deliver it to the homes and businesses that need it.

Jemena is an electricity distribution network business, so we manage the poles, wires and other infrastructure needed to take the electricity from the extra high voltage transmission networks, and deliver it safely to households and businesses in our network area in Melbourne.

This energy system is often referred to as ‘the grid’ and the grid is changing. More recently, we have seen the rise of solar generation, wind farms and other renewable energy sources playing a larger role in the energy supply, and sometimes this is connected directly to distribution electricity networks. Customers are also taking an active role in these markets. Households and businesses are increasingly generating and storing their own electricity through solar panels and batteries, taking less electricity from the distribution grid. In some cases, households are also selling their excess electricity, making the way we pay for electricity, and the flow of electricity, change.

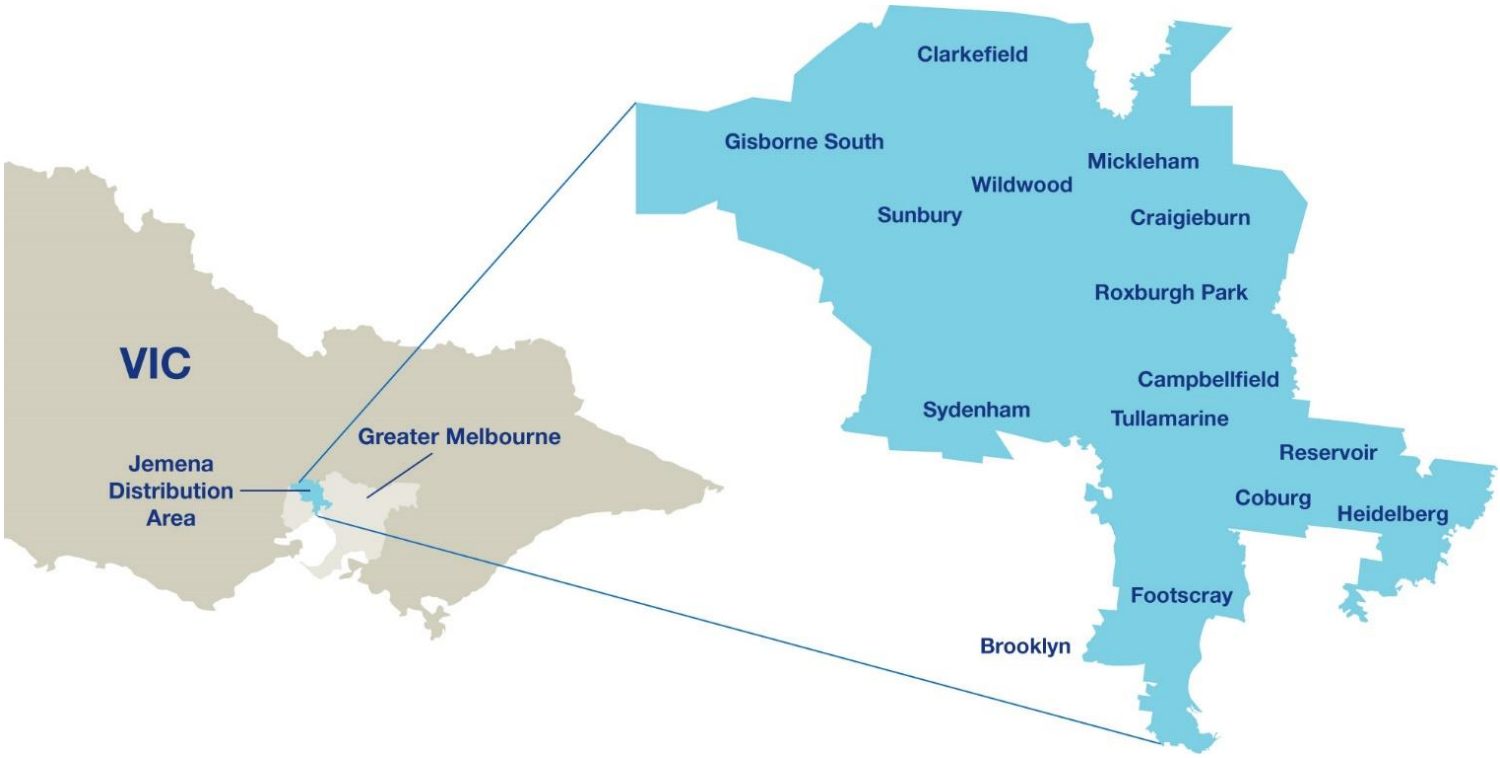


3. Jemena's electricity network

Our electricity network is one of five electricity distribution networks in Victoria. We are the sole distributor of electricity in north-west greater Melbourne. Every day we help deliver electricity to over 370,000 homes and businesses across north and western Melbourne.

Our role is to distribute electricity when and where our customers need it. We build and manage the infrastructure that transports electricity through more than 950 square kilometres of Melbourne's north-west suburbs and provides energy to support businesses and critical infrastructure such as Melbourne Airport, which sits in the middle of our distribution area.

Figure 3.1 - Jemena network map in Victoria



Operating environment

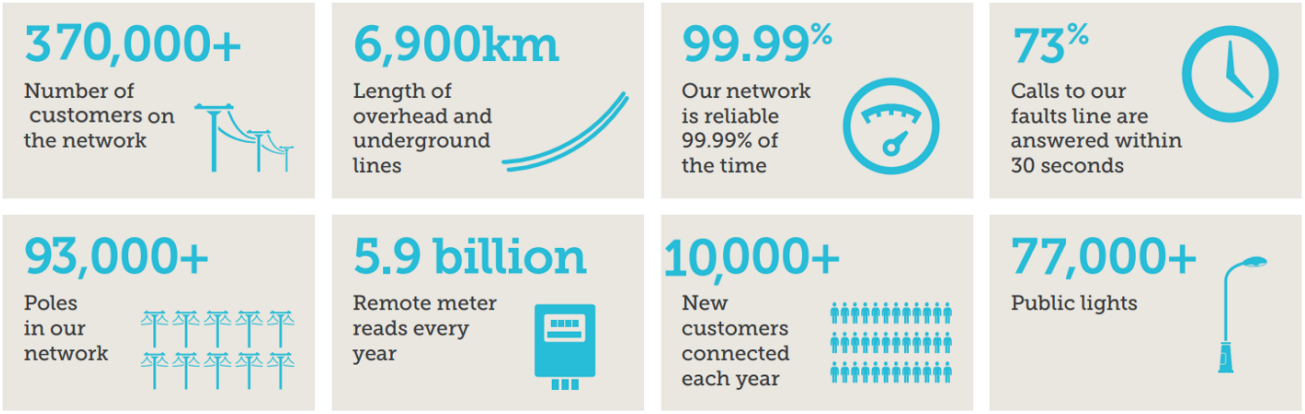
The distribution area covers a mix of industrial, commercial and residential customers, established inner suburbs, some major transport routes as well as the Melbourne International Airport. Semi-rural areas (though rapidly developing) exist around Sydenham, Sunbury and Coolaroo which have high bushfire risks.

Our network environment comprises of mainly flat land with exceptions such as Greenvale and Reservoir (though with minor undulations), and includes Maribyrnong River, Merri Creek, Darebin Creek and Steele Creek as waterways, and is bordered by the Yarra River in the east and Port Phillip Bay in the south.

Our distribution area, which is defined by the electricity distribution licence, covers the suburbs of Gisborne South, Clarkefield and Mickleham in the north to Williamstown and Footscray in the south, and from Hillside, Sydenham and Brooklyn in the west to Yallambie and Heidelberg in the east.

All in all, our distribution area covers approximately 12 per cent of the population of Victoria.

Figure 3.2 - Key characteristics of the electricity network



Asset overview

The sub transmission network consists of 46 lines (382 km) operating at 66 kV or 22 kV that transmit bulk electricity from the transmission terminal stations[1] to distribution zone substations. There are 30 zone substations, and these are connected to seven terminal stations.

Our High Voltage (HV) distribution network comprises 231 HV feeders made up of 1,700 km overhead conductor and 900 km of underground cable. In electrical engineering, a feeder line is a type of transmission line. In addition, Feeders are the power lines through which electricity is transmitted in power systems. Feeder transmits power from Generating station or substation to the distribution points.



The HV distribution network operates mainly at 22kV but also has a substantial amount of 11kV and a lesser amount of 6.6kV distribution circuits. The network configuration consists of a series of interconnected radial feeders to supply distribution substations that provide voltage transformation for local reticulation at Low Voltage (LV).

Our larger large commercial and industrial customers take supply at higher voltages and our largest customers connect directly at HV levels. At lower voltage levels, our 6,700 distribution substations convert HV to LV supply. A distribution substation can be indoors (located within a building), a kiosk substation, a ground substation or a pole substation.

The LV network delivers electrical energy at 415 or 230 volts from distribution substations into many of our household customer premises.

A service connection is from the LV network to the smaller customer premises. Sixty-five per cent of these types of connections are overhead, with the remainder (35 per cent) being connected to the underground LV network.

1 Transmission terminal stations are owned and operated by the electricity transmission operator.



4. The energy market

The current environment

The way the electricity market functions has a profound impact on customers' health, well-being and living standards, and even the viability of businesses and whole industries. In recent years, electricity prices have risen considerably because of rising costs in the wholesale market, environmental policy measures and, in some areas, rising network costs. In turn, this has slowed the growth in demand for electricity and, at the same time, fuelled an increase in the take-up of Consumer Energy Resources (CERs) (such as solar panels, batteries and electric vehicles) as customers take meeting their energy needs into their own hands.

Climate change, consumer choices, technology and policy changes have all accelerated the transformation of the energy market in Australia. This means electricity distribution businesses like ours constantly need to adapt and innovate in the ways in which we serve our customers, moving electricity to and from their homes and businesses. The ways in which the market will continue to evolve over the next two decades — including the costs of technology and fuel, the level of customer engagement, and the regulatory and policy response — remains a little unclear. What is clear is that, the energy system in the long term will be vastly different from that of today.

Despite the uncertainty, customers are being presented with more and more ways to take control of their own energy needs. They are increasingly shopping around for better retail offers and looking to new technologies like battery storage, electric vehicles and home energy management systems to manage their usage and lower their bills. With the cost of solar photovoltaic (PV) systems becoming cheaper all the time, it is becoming more and more common for energy consumers to generate their

own energy 'behind the meter'. This, in turn, has changed the way customers use the electricity network and, in response, we must continue to evolve. For the next regulatory period, we aim to continue providing reliable energy while developing a platform that will facilitate innovation and support customers' choices about managing their own energy supply.

Jemena's energy market in 2035

Several forces are impacting the future of our energy market and we preparing to proactively face these challenges, evolving customer needs and growing network demand as Victoria and Australia embark on our journey to net-zero energy targets. Early indicators sees:

Jemena's electricity network will have **fundamentally different energy needs by 2035**:

- Solar penetration in Jemena's electricity network will more than double, with 800MW+ (5x Tesla big batteries) of generation within its network
- The majority of new residential vehicles sold will be EVs, accounting for approximately 30 per cent of the car market (and rapidly growing) and many will be exporting back into the grid
- Over a third of customers will use the network for two-way electricity flows, optimising in real-time through digitally enabled data flows.

Jemena's electricity network will have **increased understanding of how we are tracking to achieve Net Zero** by 2035:

- Victoria will be well on the way to decarbonising its economy
- Residential gas use will reduce with households transitioning to electric appliances
- Overall CO2 emissions in the JEN distribution area will have reduced by approximately 50 per cent.

Jemena's **electricity network will be larger** by 2035:

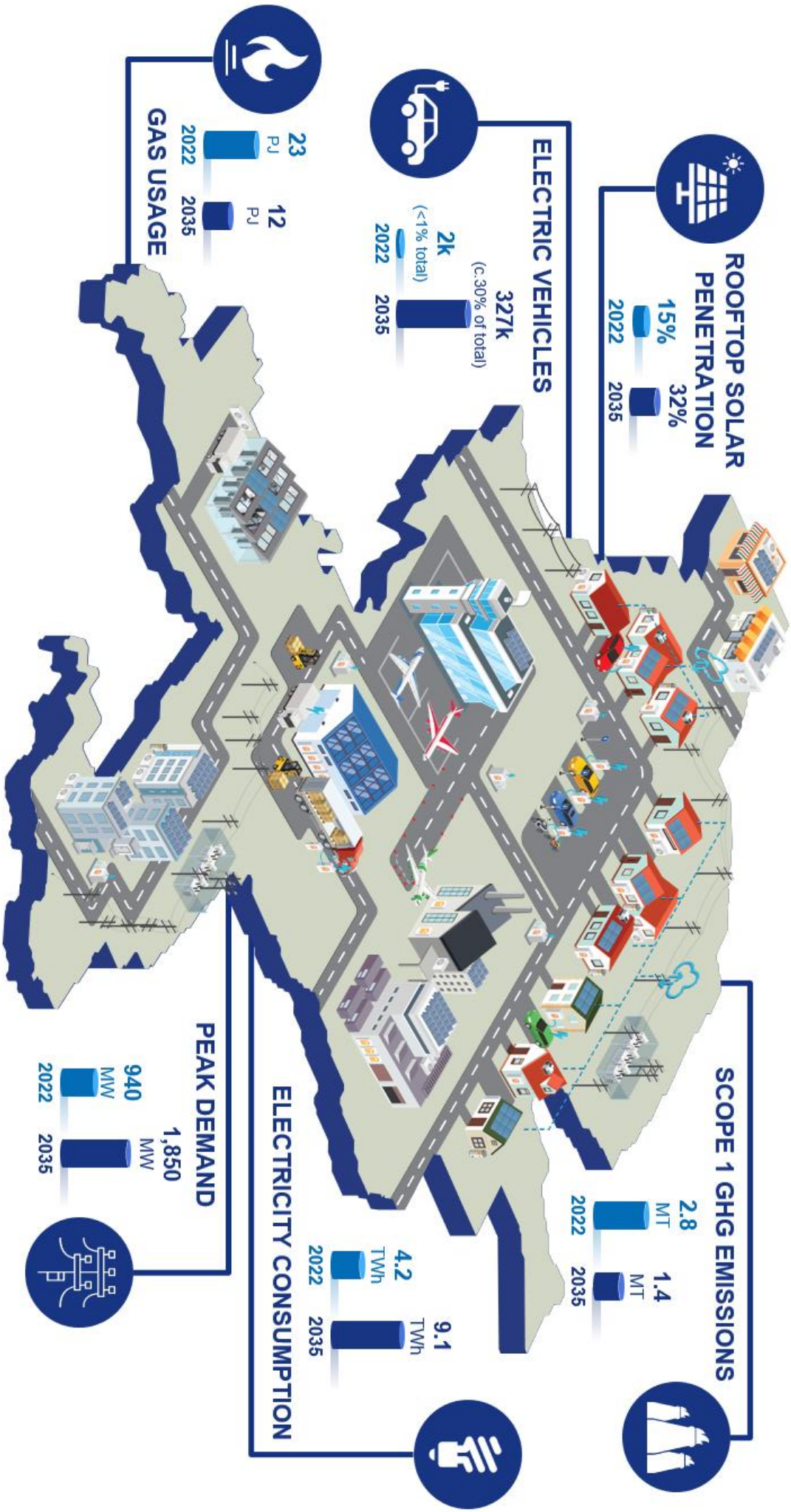
- Energy consumption on the network will grow from 4.2 TWh today to 9.1 TWh, and peak demand will also grow from approximately 940 MW to over 1,850 MW
- Minimum demand challenges[2] will be partially addressed with the uptake of EVs and timely charging, plus electrification of gas
- Overall storage in the JEN network could be 46GWh made up of EVs and home and community batteries.

Jemena will be **driven by customers by 2035**:

- Consumers will remain focused on energy costs and reliability of supply
- Customers will have increased choice over energy solutions, and JEN is one of many who can provide solutions for customers.

Figure 3 - 2035 Jemena's energy market 2035 (preliminary figures forecast as of April 2023)

2 Minimum demand challenges - Not utilising the grid enough can result to power system outages.


ROOFTOP SOLAR PENETRATION
15%
2022
32%
2035
ELECTRIC VEHICLES
2k
(<1% total)
2022
327k
(c.30% of total)
2035
GAS USAGE
23
PJ
2022
12
PJ
2035
SCOPE 1 GHG EMISSIONS
2.8
MT
2022
1.4
MT
2035
ELECTRICITY CONSUMPTION
4.2
TWh
2022
9.1
TWh
2035
PEAK DEMAND
940
MW
2022
1,850
MW
2035

Long-term megatrends

We consider there to be **five global megatrends** that drive electricity-sector transformation and are likely to fundamentally change the structure and function of the electricity system over the long term. These are the trends that we need to consider when developing our pricing and services plan and how we prepare for the future.

As People's Panel members it is important for you to be aware of these megatrends so when discussing a range of topics we have a good understanding of how trends are shaping our electricity network

Decentralisation

In the last decade, there has been a gradual decrease in demand for electricity from centralised sources like power stations. Conversely, generation from, and consumption of, electricity from Consumer Energy Resources (CER) and decentralised systems has increased.

This means that more energy is being created from a range of decentralised sources that put electricity back into the grid.

Digitisation

It is impossible to escape the digital revolution. In the electricity system, digital technologies have enabled devices across the electricity network to communicate and share data that might be useful for both customers and the management of the electricity distribution grid. These include smart meters, sensors, automation, machine learning, artificial intelligence and other digital network technologies. As well as the state-wide smart-meter rollout in Victoria, many networks are investigating—or have deployed—advanced metering infrastructure and smart grid technologies to digitise their networks as a way of reducing costs and realising financial savings.

With the move to cloud computing and increasing offerings of software as a service (SaaS) and IT asset co-location, we are witnessing the growth of large data centres, requiring high volume and reliable power supplies.

The growth of data centre represents an opportunity for Jemena to increase the electricity throughput of its distribution network, benefiting all customers through increased scale in the long-term.

Decarbonisation

The Paris Agreement entered into force on 4 November 2016. As of April 2018, 175 out of 197 countries (parties) had ratified the convention, including the Australian Government. In light of this, and the expected retirement of the coal generation fleet between now and 2050, it is likely that significant amounts of intermittent renewable generation—whether large-scale or CER—will enter the electricity system in its place.

From a network perspective, the more variable renewable generation sources that enter the system, the greater the need for flexible, dispatchable and coordination to maintain system reliability and security.

How are you planning to adapt your own energy usage in the future?

Electrification

As generation shifts to more renewable sources, electrification is likely to be recognised for its environmental benefits by shifting end uses of energy—including transport and heating—away from fossil-fuel sources such as oil, coal and natural gas. This shift is already happening in transport, where there has been a strong global increase in electric vehicles since 2010:

- **Electric Vehicles** – EVs present an opportunity to increase the utilisation of the electricity distribution network and more so if the additional electricity used in EV charging can be managed so it does not significantly add to the peak demand. With vehicle-to-grid technology, EV can behave like “battery-on-wheel” and becomes a valuable generating resource if coordinated properly.

- **Gas substitution** – The global energy sector is shifting away from the production and consumption of non-renewable fossil fuels and moving towards the use of low carbon and renewable energy solutions. The Victorian Government has also placed a ban on new gas connections from 2024.

For Jemena, this means our electricity network will be utilised more by delivering more electricity with the same or only small incremental investment, this will translate into lower prices for our customers in the long term. These benefits can only be achieved if the we work closely with customers, technology providers and regulators to orchestrate or coordinate how these changes operate in the electricity distribution system.

What uncertainty worries you in the energy transition?

The rise of energy storage

Energy storage is made possible by converting electricity into other forms of energy that can be stored. A growing form of energy storage is in batteries. The cost of battery energy storage is rapidly declining and likely to continue to decrease. Australia is one of 8 countries expected to see the highest battery storage uptake.

For Jemena, we need to work closely with customers, technology providers and other industry participants to coordinate the sharing and charging batteries at times that meet the network and electricity market needs.


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Our role as an electricity distribution network

As our society progresses towards a decarbonised future, the electricity system is changing and as it transforms, so too does our role as an electricity distribution network provider.

There are lots of ways that customers want to connect to, and interact with, the electricity system. This includes the use of electric vehicles, community batteries and solar. It also includes the generation of electricity back into the grid from rooftop solar. As we move to more electricity use and generation, we need to manage congestion of the network and the electricity that flows back up into the grid.

This is what we see as an increase in the take-up of Consumer Energy Resources (CERs) as customers take meeting their energy needs into their own hands.

The transition to this new role will be heavily influenced by customers, governments and regulators, as well as other changes in the external market environment. With a changing role, we need to pre-empt the transformation, minimise the impact, and embrace the opportunities it presents. We see that greater dependence on data and communications will be necessary, and our interactions with markets and customers will increase.

Network ‘hosting capacity’ for consumer energy resources

If the electricity network does not have the spare capacity to receive electricity that is being fed back into the grid from household solar systems, there are impacts to the reliability of power supply. The voltages start to increase and transformers can start to fail. This increases the pressure on the assets in the network and triggers increased costs to replace them.

The other impact is on customers themselves. If a solar PV system turns off, which can happen with increased voltage levels, the amount of electricity fed into the grid is less than it could have been and the customer loses money that they could otherwise have earned through feed-in tariffs (or in some cases caused customers to draw energy from the grid that they would otherwise have self-generated).

On top of this, customers may get even better value from their solar PV when complemented by battery energy storage. Apart from meeting their own electricity needs, the surplus can be traded in local or national electricity markets when CER markets are established. This, however, can only occur when the electricity network—for grid stability reasons—is not constraining CERs.

Over the next regulatory period, we need to consider whether investments need to be made into new technology that will allow us to better monitor, manage and plan the network, to deal with ever increasing levels of CER.

How do you think we could fairly share the cost of building network capacity to account for the increased use of CERs?

Better planning and management will allow us to quantify the levels of solar PV, storage and—over the long term—respond to the megatrends under different operating configurations with sufficient lead times, but not invest too early. Knowing this information will also allow us to invest in the right areas of the network to support the needs of our customers where they need it most.

As shown in Figure 10, the Australian Energy Market Operator (AEMO) is forecasting a significant increase in CER in the years to come. We are starting to see the impact of this across our network, particularly with high penetration of solar panels. We're expecting to see minimum demand caused by solar PV installations trigger either load-shedding or Victoria's emergency backstop mechanism within the next 5 years, which will mean us temporarily turning off solar exports in certain areas to preserve grid stability. Electric vehicles will add load to the network in peak times, and many of their owners are likely to plug in their vehicles as they get home and not consider peak charging times, increasing network demand in evenings.

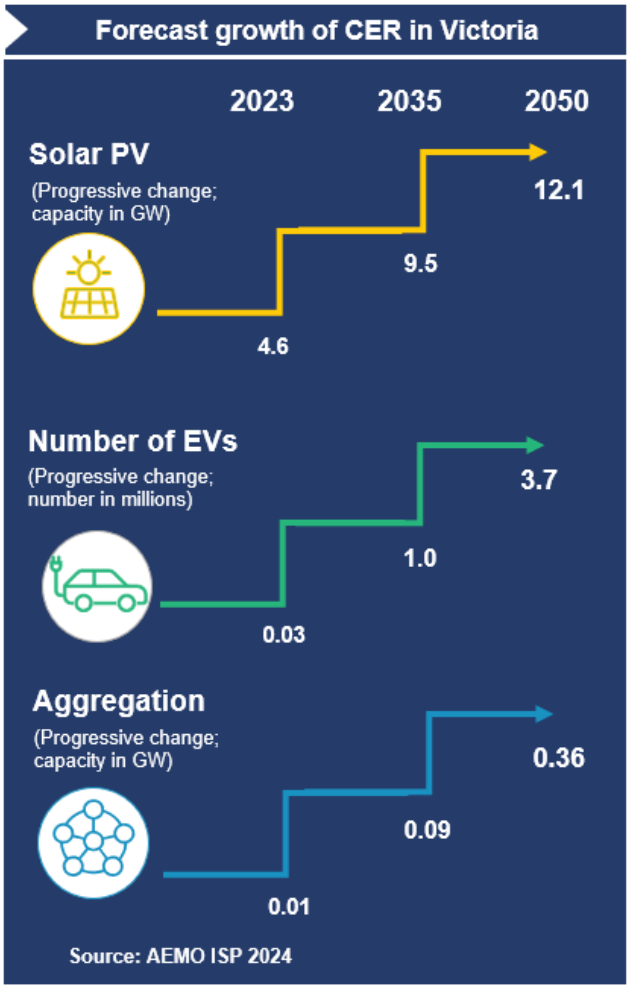


Figure 4.1 Projected growth of Consumer Energy Resources in Victoria

Knowing this, we can do something about it. We are taking steps to physically augment our network to meet the changes we're expecting in the coming years. However, augmentation of the grid raises costs for all customers, not just those who have access to CER.

We'd like to use tariffs as a tool to make some of this augmentation unnecessary by incentivising different customer behaviour, as well as ensuring that the customers causing the network to incur the costs are those paying for them through their tariffs.

How do you think we could fairly share the cost of building network capacity to account for the increased use of CERs?

Summary of the key challenges we face

Decentralisation

- This means that more energy is being created from a range of decentralised sources that put electricity back into the grid.

Digitisation

- The growth of data centre represents an opportunity for Jemena to increase the electricity throughput of its distribution network, benefiting all customers through increased scale in the long-term.

Decarbonisation

- From a network perspective, the more variable renewable generation sources that enter the system, the greater the need for flexible, dispatchable and coordination to maintain system reliability and security

Electrification

- For Jemena, this means our electricity network will be utilised more by delivering more electricity with the same or only small incremental investment, this will translate into lower prices for our customers in the long term. These benefits can only be achieved if the we work closely with customers, technology providers and regulators to orchestrate or coordinate how these changes operate in the electricity distribution system.

The rise of energy storage

- For Jemena, we need to work closely with customers, technology providers and other industry participants to coordinate the sharing and charging batteries at times that meet the network and electricity market needs.

Network hosting capacity for consumer energy resources

- Over the next regulatory period, we need to consider whether investments need to be made into new technology that will allow us to better monitor, manage and plan the network, to deal with ever increasing levels of CER.
- We'd like to use tariffs as a tool to make some of this augmentation unnecessary by incentivising different customer behaviour, as well as ensuring that the customers causing the network to incur the costs are those paying for them through their tariffs.

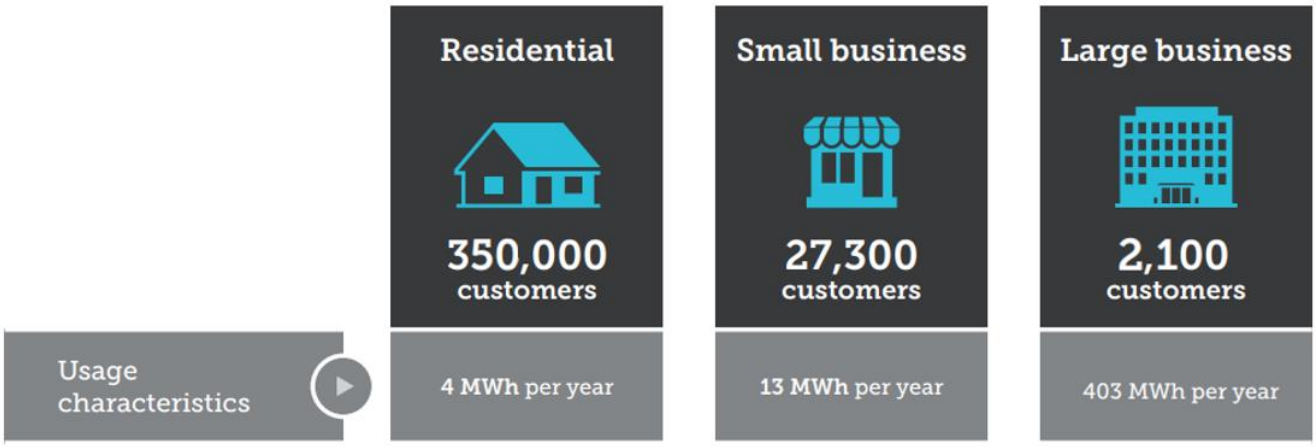


5. Our customers

As a provider of essential services we have an important relationship with our customers and local communities. Customers are at the heart of our commitment to deliver electricity safely, reliably and affordably.

Apart from a few very large customers, anyone who is currently connected to Jemena's electricity distribution network is a customer of ours. We also connect new customers and provide distribution services to other groups like property developers, landlords and businesses of all sizes, from sole traders through to large energy consumers such as Melbourne and Essendon airports, industrial customers and hospitals.

Figure 5.1 - Jemena customers and average usage characteristics



Residential customers

We are the sole distributor of electricity in north-west greater Melbourne, servicing more than 350,000 households. The residential customers and communities in our network are diverse, spanning across some of Victoria's fastest growing Local Government Areas including Hume, Merri-bek, Maribyrnong and Moonee Valley.

Our residential customers are made up of diverse households that include:

- households with solar (approximately 16 per cent)
- households with electric vehicles
- households with batteries
- dual fuel households with gas and electricity
- households with electricity only
- renters and homeowners
- households of different densities (low, med and high)
- households with different socio-economic status
- customers with lived experience of disability and mental health difficulties
- customers of different ages including young people and seniors
- culturally diverse households.



Large customers

Our large commercial and industrial customers consume more than 50 per cent of the electricity that flows through our network made up of over 2,100 customers in north and western Melbourne. (Large commercial and industrial businesses are classified as having 200+ employees.)

Large customers come from a range of industries including:

- aviation
- transport
- data centres and high-tech industries
- property development
- health and medical
- education
- local councils
- logistics
- food manufacturing
- telecommunications
- other utilities.

Each large customer has different energy priorities that reflect the realities of their industries and the customers they serve.



Small and medium business customers

Our small to medium sized business customers are made up of over 27,000 diverse customers across north and western Melbourne.

Small to medium businesses in our distribution network area a vital part of our rich and vibrant communities. (Small businesses are classified as having 5-9 employees, while a medium business is classified as having 10-199 employees.)

Each small and medium business has unique circumstances and ways of operating, including different working environments, retail spaces and office locations.

Small to medium businesses include a large mix of sectors and professions, for example:

- accommodation and hotels
- agriculture
- bars, clubs and breweries
- cafes, food stalls and restaurants
- clothing
- consultancies
- entertainment and music
- florists
- furniture building and restoration
- printing and design
- real estate
- retail
- small goods, delicatessens and butchers.

6. How we are regulated

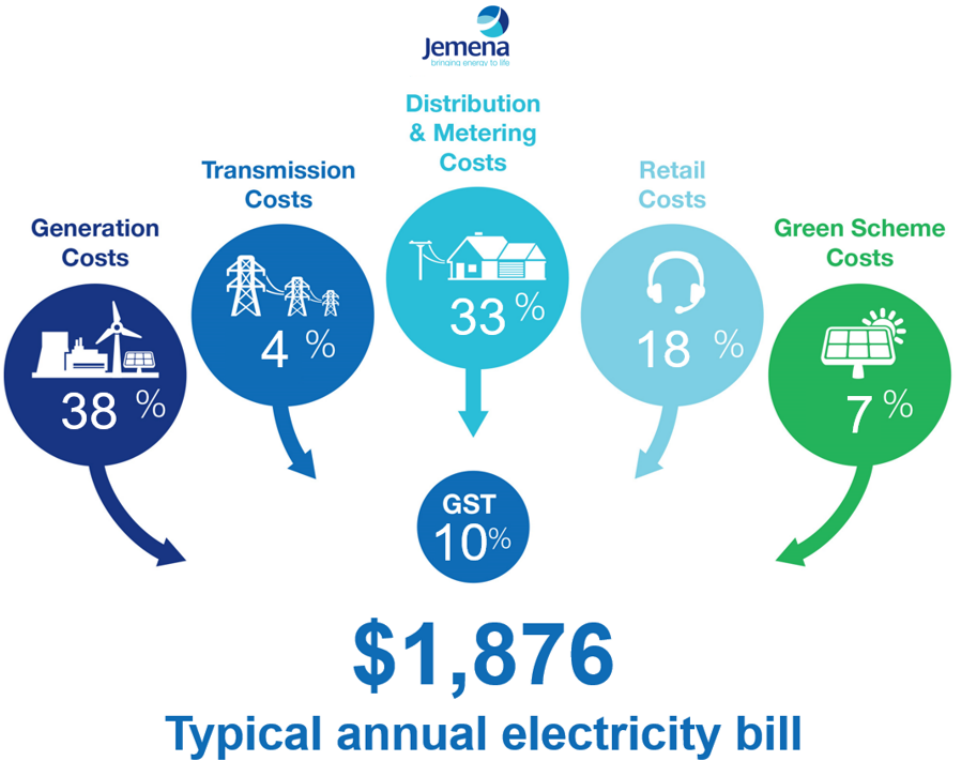
The ability to distribute electricity in Victoria is governed through state-based laws. The Essential Services Commission of Victoria is the authority that issues licences to businesses including Jemena to distribute electricity.

We are also subject to economic regulation by the Australian Energy Regulator under the National Electricity Rules. As an electricity distribution network business, the prices we charge customers are overseen by the Australian Energy Regulator who regulate all energy networks.

The cost of distributing energy across the electricity network is paid for through the network charges included in customers' electricity bills. Typically, network charges make up approximately 33 per cent of a household customer's total bill.

Figure 6.1 - Stages of charges of an electricity bill





Every five years we submit a Regulatory Proposal to the Australian Energy Regulator that must outline:

- the services we will offer
- the costs we are likely to incur in providing these services
- the prices we propose to charge during the next regulatory period.

The Australian Energy Regulator only approves the proposal if it complies with the National Electricity Rules and demonstrates that we've listened to customers and promote their long-term interests.

What our proposal will look like

The Regulatory Proposal for the 2026-31 period will include:

- our story and vision for the future
- the services we offer (and which services are regulated)
- an expenditure forecast
- incentive schemes
- how our costs are recovered (including recovery timeframes)
- a forecast of network usage
- prices, including their levels, structure and how they are adjusted.

To develop the five-year proposal over the coming two years we will:

- listen to and incorporate customer feedback
- consider the services we provide
- forecast the costs of providing our services
- calculate the prices required to recover the forecast costs.

Figure 6.2 – Example of the 2021-26 proposal



7. Regulatory methods to determine our revenue

Return on Capital

Our Regulatory Asset Base (RAB) is the value of all the assets we use in providing distribution services.

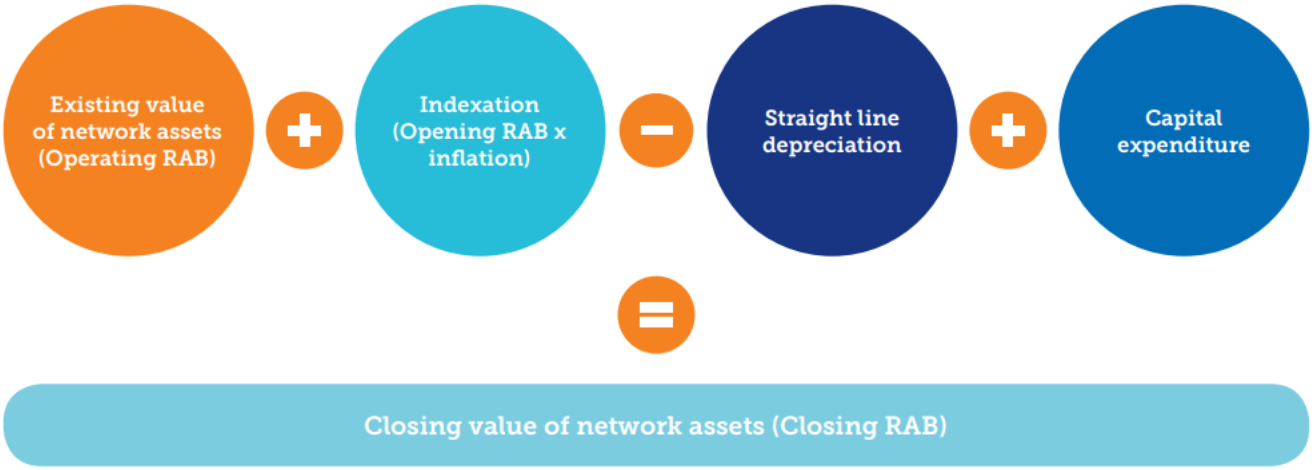
This value represents the—as yet—unrecovered capital investment we have made in the past, to provide services to our customers now and in the future.

The value of the RAB changes over time. It increases with every investment in new assets, and falls as we depreciate existing assets over time. We also index the RAB in accordance with regulatory processes. Finally, when customers make capital contributions to these assets, or we dispose of them, the proceeds are subtracted from the overall value.

To calculate the opening value of the RAB for the next regulatory period, we will use an approach that is consistent with the National Energy Rules (NER), and the Australian Energy Regulator's 'roll-forward' models. These models capture our actual and forecast net-capital expenditure and depreciation.

Our RAB as of 30 June 2023 is $1.72 billion (Nominal $).

Figure 0.1 – How the Regulatory Asset Base is calculated



Revenue Building Blocks

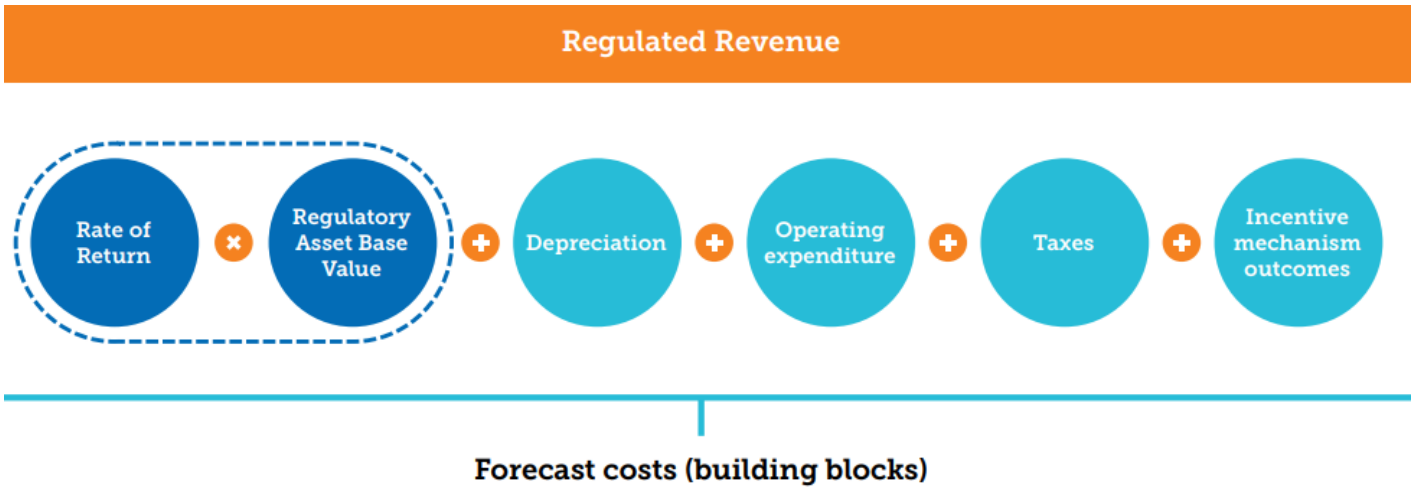
As we are a regulated business, through a Regulatory Proposal we are required to make an estimate of:

- how much revenue we will need to cover our costs
- how much we need to invest for the future and
- provide a return to our shareholders.

The Regulatory Proposal that we will develop for the 2026-31 period is calculated using the Australian Energy Regulator's Post-Tax Revenue Model. In this model, total revenue is estimated as the sum of a number of different types of costs we know as 'building blocks'

As we are a regulated business, we are required to make an estimate of how much revenue we will need to cover our costs, invest for the future and provide a return to our shareholders. The Regulatory Proposal will use the Australian Energy Regulator's Post-Tax Revenue Model. In this model, total revenue is estimated as the sum of a number of different types of costs we know as 'building blocks.'

Figure 0.2 – The revenue building blocks



Depreciation–return of capital

We do not recover our capital expenditure in the year we spend because of its lumpiness and its benefits are realised over many future years. For example, brand new step-down transformers might cost $100,000 and we recoup the costs for them over 40 years. Instead, we recover these costs over the economic life of these assets. This recovery of investment is referred to as return of investment. We calculated this allowance using an approach that is consistent with the National Energy Rules and also the Australian Energy Regulator's Post-Tax Revenue Model. In addition to depreciating assets due to ageing, the Australian Energy Regulator's Post-Tax Revenue Model also increases their value to account for the impact of inflation.

Operating expenditure

Operating expenditure is a significant part of our building block revenue and covers the costs associated with operating our electricity network. This includes operational staff, maintenance of equipment and investments.

Incentive scheme arrangements

The Australian Energy Regulator applies a range of incentive schemes to electricity distribution businesses. As a result of our performance against these incentives, we will either receive a reward or penalty in our revenue. For some schemes, the reward or penalty is received within a regulatory period, for other schemes, the rewards and penalties are recovered in the next regulatory period.

Corporate income tax

Corporate income tax represents what we forecast our income-tax liabilities to be over the next regulatory period. To calculate this allowance, we have used the value of imputation credits determined by the Australian Energy Regulator as a part of the rate of return guideline. The amount of corporate tax allowance is estimated by multiplying the corporate tax rate by taxable income.

Proposed shared-asset revenue reduction

A small number of assets we use to provide regulated services are also used to provide unregulated services. This includes renting out part of our poles to telecommunications providers. We reduce our revenue to reflect the portion of the telecommunications rental income, which benefits our customers.

Total revenue requirement

As a matter of process we bring these building block components together to determine our revenue requirement. At this point, the amounts can be quite varied from year to year and so, to avoid volatility, we undertake a process of smoothing to flatten out our revenues. To smooth revenues, we make adjustments to total revenues between years by taking into account the time value of money, but making sure the present value is unchanged.

Our operational expenditure in a snap shot

- **Replacement:** Replacing parts of the network that have reached the end of their technical life, in order to maintain service levels.
- **Connections:** Building or upgrading the network to connect new customers.
- **Augmentation:** Increasing the capacity of the network to meet customer demand. We consider augmentation in two parts:
  — Demand driven augmentation: more electricity is needed, so we need more network
  — Non-demand driven augmentation: where the electricity network has to respond to changes in technology and regulatory or legal requirements. Increasing the amount we can import into the grid is an example of this.
- **Non-network:** Information technology, property, fleet and other non-network assets which enable the delivery of services.

Picture below shows installation of an underground network in new housing estates.



8. Prices we charge customers through tariffs

What is a tariff?

A 'tariff' is how we charge a retailer for the services we provide our customers. The tariff can be made up of different charges such as a fixed charge, consumption/usage charge or demand charge.

The 'tariff structure' (or price structure) includes the tariff and tariff 'components', which together provide the additional information for retailers (and customers) to know how we will bill them for each customer.

The total network bill for a customer will depend on their network tariff and how the customer uses our network. The total bill the customer pays will be their *retail bill*, which will include the network bill, generation and transmission costs, jurisdictional costs (including any environmental levies), and the retailer's own portion of the bill. The retailer can choose to pass on the distributor tariff structure and components, or use their own.

Each year, we publish our tariff schedule and, before we set prices, we must determine how to structure our tariffs.

We provide our tariff structures by customer segment:

- residential
- small business
- large business (combined low voltage, high voltage and sub-transmission tariff classes).

For each customer segment we provide tariff structures and information on how we assign customers within that segment.

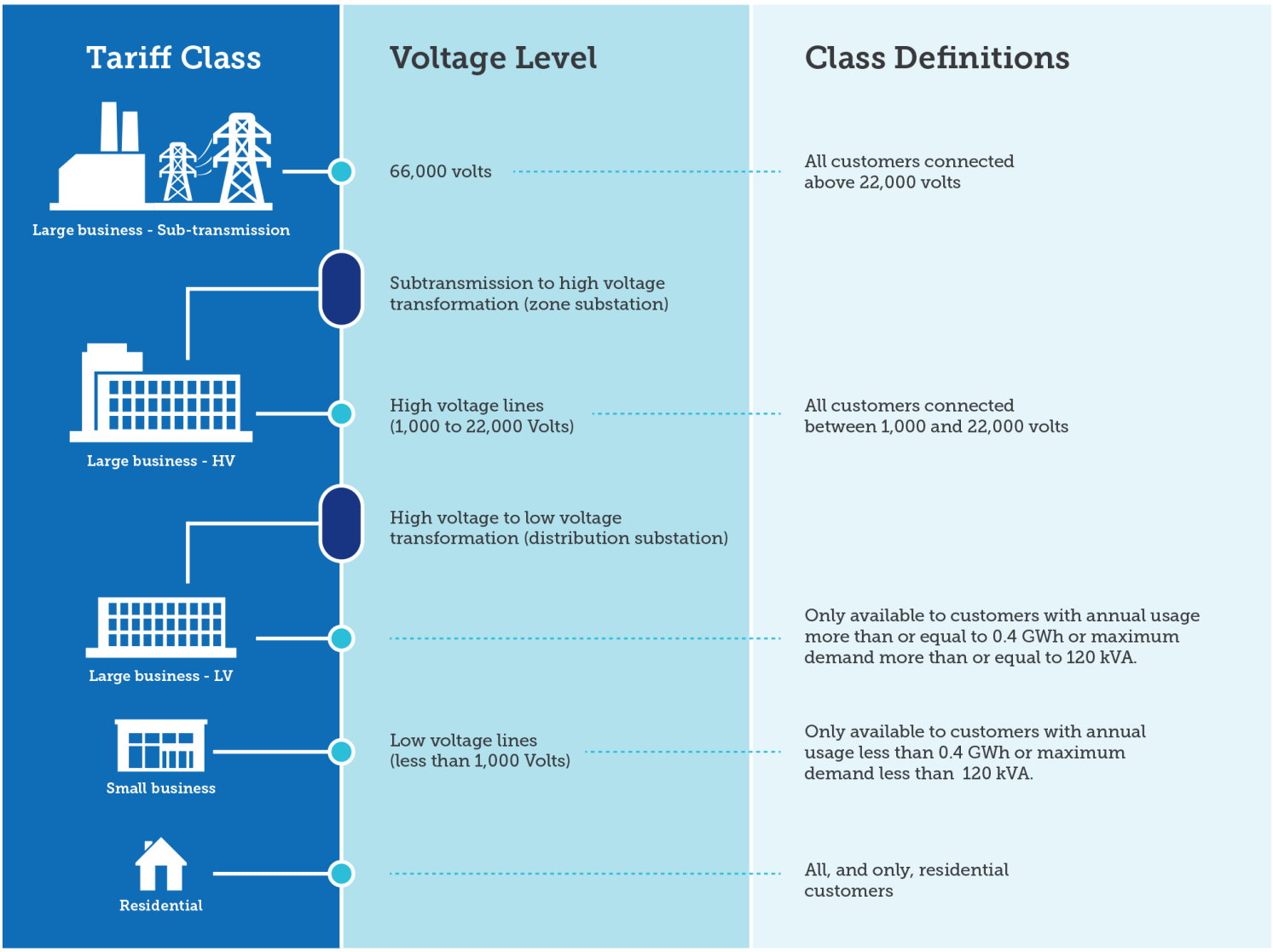
Typically, our tariff structures are made up of one or more of the following tariff components:

- A fixed (or 'standing') charge that applies to each premises that electricity is delivered to (in dollars per annum), and is charged on a pro-rata basis, depending on how frequently each customer is billed (usually monthly or quarterly).
- A consumption or usage charge tariff component – a charge that applies to the volume of electricity consumed (in cents per kilowatt hour (kWh)). For some customers, this charge may also depend on the time of the day the electricity is consumed.
- A demand charge tariff component – a charge that applies to either a customer's electricity capacity requirement (in dollars per kilovolt-ampere (kVA)) or their maximum demand level (in dollars per kilowatt (kW)) depending on the type of customer.

Tariff classes

In Figure 8.1 below, the five standard tariff classes in place for the 2021-26 regulatory period are shown on the right. Our five tariff classes correspond to our five major customer segments, which have materially different costs to connect and serve.

Figure 8.1 - Different tariff classes



Tariff structure statement

As part of the regulatory proposal, Jemena is required to submit a Tariff Structure Statement (TSS) to explain our pricing and plans for the next regulatory period.

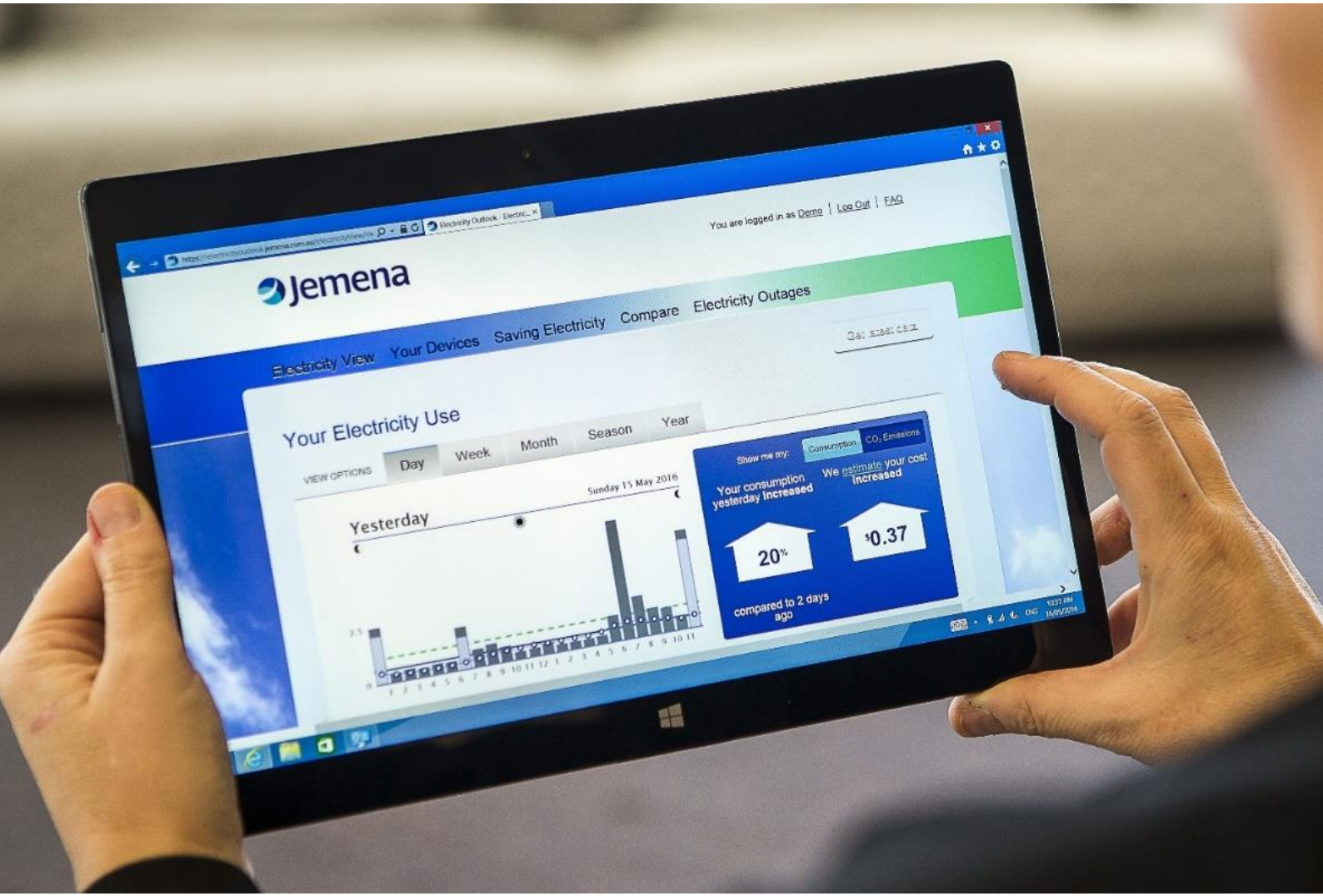
Our allowable revenue – established through the Australian Energy Regulator's regulatory determination – is recovered through network tariffs charged to each customer's electricity retailer.

The TSS sets out our applicable tariffs, expected price pathways and customer assignment policies over the course of the next regulatory period. It must also ensure that the proposed tariffs conform with pricing principles as outlined in the National Electricity Rules.

In addition to the TSS, Jemena is required submit an annual pricing proposal each year within the regulatory period to report on annual revenue recovery and the progress of tariff strategies.

This annual process is required to explain the actual annual revenue recovered from tariffs and account for differences from the charges outlined in the TSS (some of the differences include inflation, over/under-recoveries from prior years and incentive payments/rebates).

When we set pricing, we aim to meet the principles of cost-reflectivity, simplicity, economic efficiency, and adaptability. We also carefully consider the impacts of any changes on our customers.



How will tariffs change in the future?

Every price reset, we carefully consider the past, current and probable future circumstances of our network and our customers in establishing tariff structures. This is part of why our People's Panel is such a vital part of our price reset: we can't discover what our customers need without your help.

Our tariffs need to be fit for purpose, meaning that they meet the above pricing principles and don't have undue negative impacts on our customers or other stakeholders. Keeping these in mind, and knowing some of the changes our network is undergoing, these might play out in the following ways:

Principle	Examples
Cost-reflectivity	– Most residential customers are not assigned to cost-reflective tariffs, although all new customers are automatically assigned to one. All customers could be moved to cost-reflective tariffs, to ensure each customer is paying fairly.
Simplicity	– Customers were previously offered a demand tariff that aimed to recover most revenue from a tariff component that penalised not energy consumption, but the *rate* of energy consumption during peak times. This is our most cost-reflective tariff but also the least simple to understand and the least simple to implement. – Despite its cost-reflectivity, we could stop offering this tariff going forward, as it is very difficult for customers to respond to and retailers don't find it simple enough.
Economic efficiency	– The network is incurring small but increasing costs to transport exported solar energy. Customers could be offered an optional tariff that will reward solar exports when the network needs them, and penalise exports when they could destabilise the network or incur extra costs for all network users. This will ensure we're not accidentally sending incorrect pricing signals, e.g. by paying customers for electricity at a time when it costs us money for them to export this energy.
Adaptability	– We can't know for sure what technology our customers will have to store, produce or use electricity in the future. Our permanent tariffs are required to be technology-neutral, but we want to ensure that our tariffs remain appropriate for new technologies. – For this reason, we are currently running tariff trials for community batteries and considering a tariff trial next year for electric vehicles. If new technologies appear we will propose further trials. These will provide valuable information about how customers with these technologies react to tariffs, and let us continue to adapt our tariffs to apply to everyone in the future.

As can be gleaned from the above examples, the ongoing increase in Consumer Energy Resources (CER) is a key topic for the upcoming regulatory period.

We will act in the long-term economic interest of our customers, so we will never choose a path forward without consultation and careful consideration. We will discuss any potential changes to our tariffs with you throughout the course with you, including the above examples and any other ideas that may arise. We are open to new solutions, and want to make sure we're considering all of our options while choosing the right path forward for our customers.


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9. Customer engagement program

Throughout all stages of developing our regulatory proposal for the next regulatory period, we are engaging closely with our customers and other stakeholders to understand their views, needs and preferences about the services we provide.

We have a desire to continuously improve, with a focus centred around understanding our customers' needs and serving them better. We want our engagement program to position JEN at the forefront of delivering innovative customer engagement to a diverse spectrum of customers. The price reset is a platform to meaningfully engage with customers in our distribution area, including customers who experience vulnerability.

We seek to partner with a full range of our customers, including our energy savvy customers right through to customers who have low energy literacy or face barriers to engaging with energy.

Our engagement program aims to meet the specific needs of our electricity customers, taking into consideration:

- the rich diversity of our customers;
- learnings from previous price reset processes;
- the unique requirements, issues and challenges our customers face;
- our desire to engage with customers experiencing vulnerability; and
- dedicated opportunities to create synergies with the other Victorian electricity distribution businesses for joint engagement, enabling consistency and efficiency in our engagement approach across all Victorian networks.



Engagement groups

Our engagement streams are designed to enable us to deeply understand and engage with the full spectrum of customers.

Our core engagement groups include:

- **Energy Reference Group** – establishing an expert energy panel that can discuss complex issues and provide clear, independent advice and recommendations that have the long-term interests of customers in mind.
- **People's Panel** – establishing a People's Panel which includes 50 diverse customers who make up a statistical representation of customers in our network area to shape our 2026-31 regulatory proposal.
- **Customer Voice Groups** – establishing customer voice groups that include approximately 18 members, including customers with lived experience of disability, mental health, multicultural, young people, first nations and seniors. Each group will have a senior leader from Jemena to help champion the group to connect, listen and understand their needs. The groups will each provide advice and insights to the People's Panel for their consideration in making recommendations.
- **Customer service insights** – interviewing existing frontline customer service team members on the issues and pain points customers they are experiencing and investigating customer complaint information to build an understanding of customer experiences and opportunities for improvement. In addition to the existing Customer Service Satisfaction survey, we will be conducting a bespoke survey for JEN customers for the price reset to gain a broad spectrum of views and data points.
- **Joint engagement by Victorian electricity distribution businesses** – joint engagement sessions with Victorian electricity distribution businesses across the topics of framework and approach, affordability and equity, reliability and resilience, energy transformation, customer experience and customers experiencing vulnerability.
- **Small to medium business engagement** – small business forums, surveys and in-depth interviews/meetings with diverse small to medium businesses across our network.
- **Large/commercial customer engagement** – surveys, large user forum and in-depth interviews/meetings to engage with large commercial customers.
- **Electricity retailer engagement** – bespoke engagement with electricity retailers and retailer bodies, including retailer forums, surveys, in-depth interviews/meetings and engagement with customers affected by family violence.
- **Local council engagement** - surveys, in-depth interviews/meetings and Local Council Forums to understand the needs of local councils and the local communities they service.


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Glossary

AER	Australian Energy Regulator
AIC	Average incremental cost
AMI	Advanced metering infrastructure
API	Application Programming Interface
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Capex	Capital expenditure
CER	Consumer Energy Resources
DNSP	Distribution Network Service Providers
DUoS	Distribution Use of System
EV	Electric Vehicle
HV	High voltage
ICT	Information and Communication Technology
JEN	Jemena Electricity Networks
kVA	Kilo-volt-ampere
kW	Kilowatt
kWh	Kilowatt hour
LRMC	Long run marginal cost
LV	Low voltage
MD	Maximum demand
NEO	National Electricity Objective
NER	National Electricity Rules
NER	National Electricity Rules, or Rules
NMI	National Metering Identifier
NUoS	Network use of System
OM&R	Operation, maintenance and replacement
Opex	Operating expenditure
PV	Photovoltaic
RAB	Regulatory asset base
SaaS	Software as Service
ToU	Time of Use
TSS	Tariff Structure Statement
TUoS	Transmission Use of System
UFLS	Under Frequency Load Shedding

The **Jemena's People's Panel Manual is also available online** at **GridTalk.com.au** members only section of the People's Panel page – please enter Password: **Jemena2023$ to** enter.

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