2026-2031 Regulatory Reset Engagement: Synthesis

Current as of 3 December 2024

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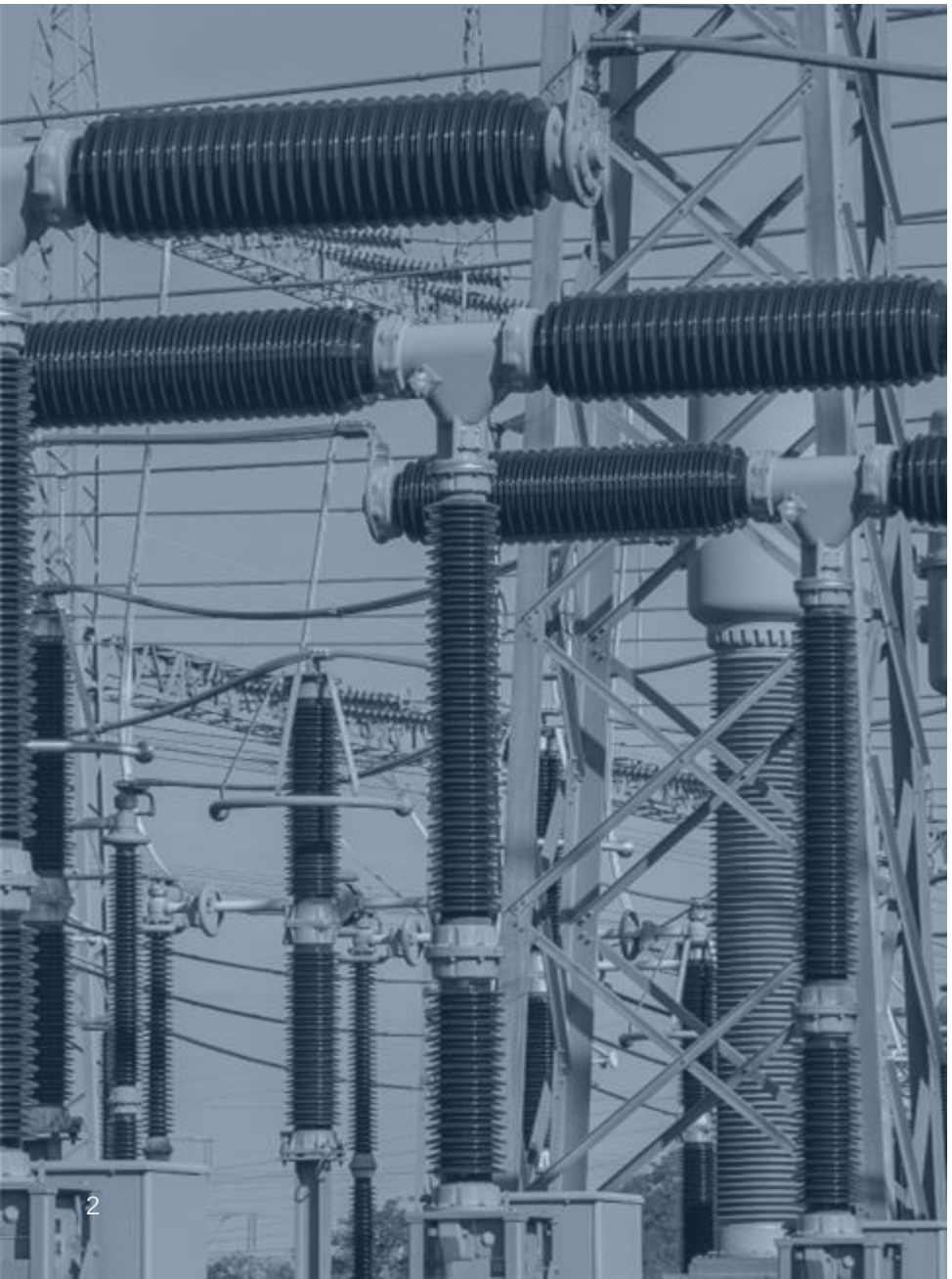


Contents

Background and introduction

CitiPower, Powercor, and United Energy have conducted extensive research on various topics, encompassing global and national trends, brand and communications, customer experience, and customer priorities.

Forethought has conducted a review and synthesis of all research and engagement work over this reset and relevant previous resets to pinpoint areas of alignment and document a comprehensive evaluation of customer perspectives for the Regulatory Reset Proposal submission (2026-2031).

This Synthesis serves four key purposes:

1. To provide holistic and **objective insight into customers' perspectives to date;**
2. To provide a **directory** or **reference document** for internal stakeholders to identify relevant customer insights for integration into business cases;
3. To identify whether **any gaps in knowledge** exist and prioritise these for future engagement activity;
4. To **inform the development of the Regulatory Reset Proposal (2026-2031)** submission, by leveraging and building upon relevant existing knowledge.

Considerations when reading

1. Each network (CitiPower, Powercor and United Energy) serves distinct areas.
2. When reviewing this synthesis, it's crucial to consider the project's specific objectives and the phase / context in which it was undertaken.
3. The whole engagement program has three phases to inform Regulatory Reset Proposal (see Strategic Roadmap in Appendix for more detail).
4. As these phases progress, the research and engagements become increasingly focused. They transition from broad exploration to prioritisation and testing of proposed outcomes.
5. Refer to the appendix for more detailed information about how the synthesis was created, including what studies were included.

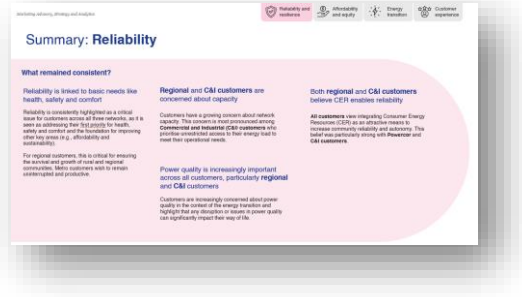
How to read this Synthesis

This Synthesis acts as a directory of insights, from broad themes to specific findings. Further details include summaries of individual reports that can be found within the Customer Insights Hub. The purpose of this Synthesis is to provide several layers of insight for relevant use and is not intended to be read from the first page to the last, but as a directory for finer insight as required.

1. Executive summary

Provides an insights summary by network across each of the four key themes from customers' perspective. The themes include Reliability and Resilience; Affordability and Equity; Energy Transition; Customer Service.

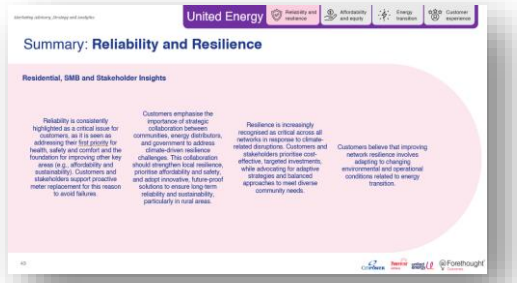
Each section offers several overarching customer insights within key topic areas, derived from customer feedback and refined was as the community engagement program progressed.



2. Key findings (data tables)

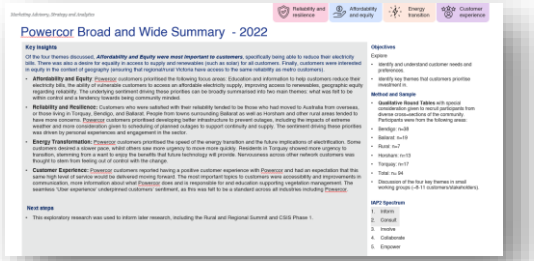
This section provides data points that defines precise customer wants and needs for different cohorts and communities.

These data points have been collated to deliver the overarching customer insight.



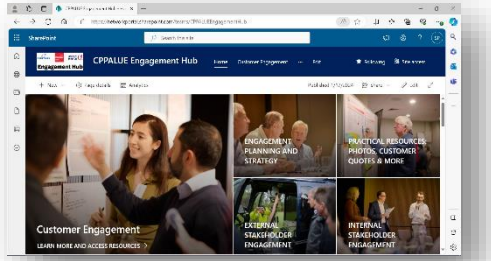
3. Individual report summaries

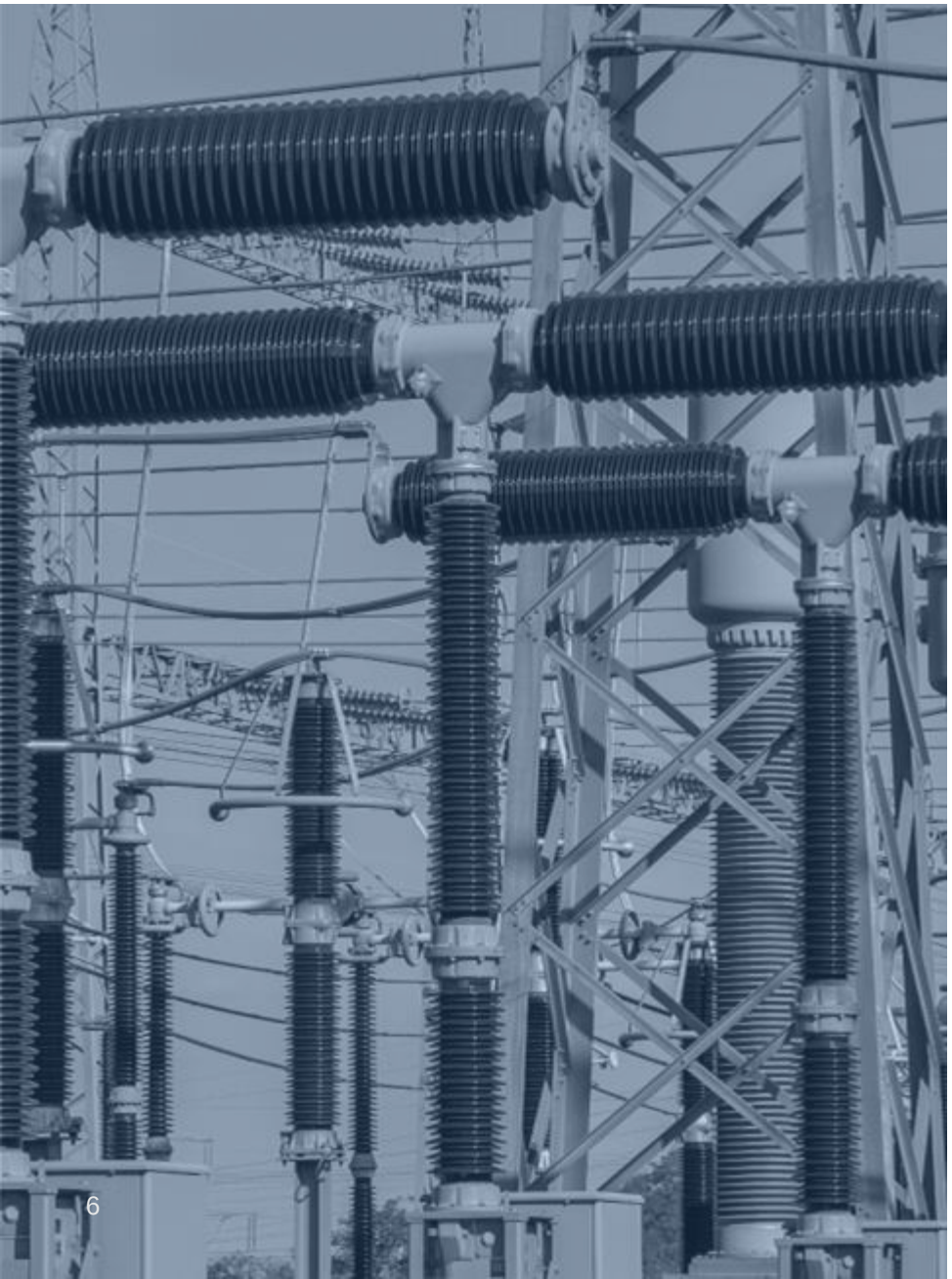
This section provides a high-level summary of each report / engagement conducted to date.



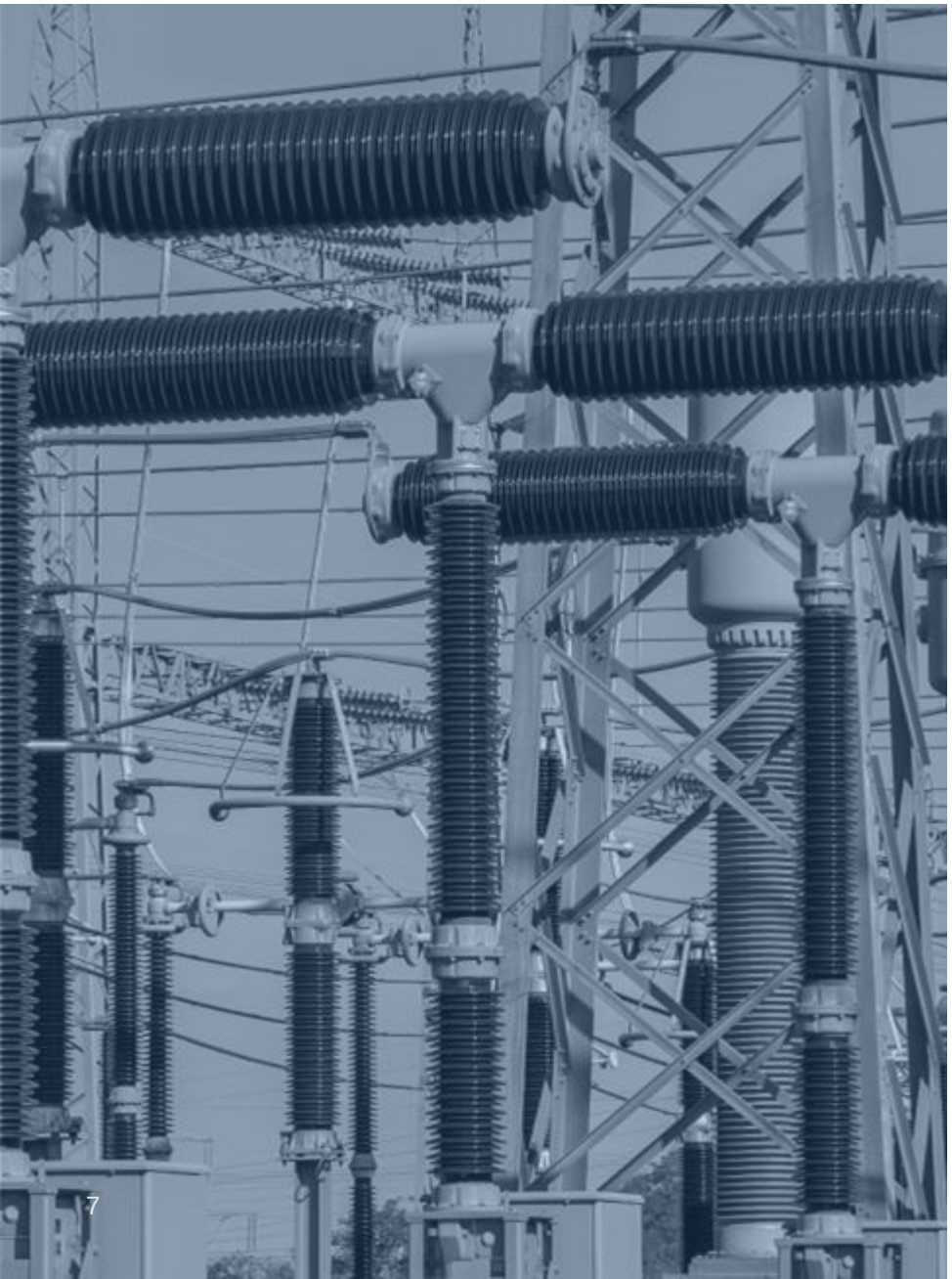
4. Customer Insights Hub of full reports

Sitting beneath all of this information is the bank of research and reports to date. These have been compiled in one location for ease of reference.





Executive Summaries By Network



CitiPower Executive Summary

Reliability and Resilience

How the business frames Reliability and Resilience:

"We need to focus on managing the network to maintain network safety and reliability; work to future proof our network and communities to minimise disaster impacts and support them to respond appropriately to disaster events."
(CitiPower, Powercor and United Energy's Customer Narrative)

What reliability means to customers

- Customers perceive **reliability** as a consistent and uninterrupted supply of electricity.
- When discussing impacts of reliability, power quality or capacity, most customers do not clearly delineate between the three.
- As a result, conversations with customers about one of these topics, typically includes the others.

What resilience means to customers

- Customers view resilience as the energy system's capacity to endure disruptions and swiftly restore dependable energy supply in adverse conditions.
- Resilience is often thought of as the proactive and reactive mitigation of climate-related weather extremes.

Context

- **Reliability vs. Resilience:** This research examines customers' immediate concerns about energy supply (reliability) and their forward-looking apprehensions related to network management in the face of rising energy demand, population growth, and extreme weather events (resilience). Customers acknowledge the connection between investing in resilience for the long term and improving reliability in the short term.
- **Evolving Energy Landscape:** Customers find themselves navigating a changing energy environment shaped by the energy transition, climate change, and extreme weather events. This dynamic backdrop underscores the heightened importance of both reliability and resilience.
- **Crucial Considerations:** In underserved areas who are at high risk to the impacts of climate change, reliability and resilience have risen to the forefront of customer concerns. These factors are especially critical as communities adapt to the evolving energy landscape.
- **Climate Change**: Customers consistently recognised the link between extreme weather events and climate change without expressing any dissenting opinions on this matter.

Summary: **Reliability and Resilience**

Residential, SMB and Stakeholders Insights

Reliability was consistently highlighted as a critical issue for customers, as it is seen as addressing their first priority for health, safety, comfort and the foundation for improving other key areas (e.g., affordability and sustainability).

Customers and stakeholders supported the initiative for a proactive meter replacement for this reason to avoid failures.

Customers believed that improving network resilience requires adapting to the challenges of the energy transition and electrification, including increased demand from renewable integration, electrification of appliances, and grid stability concerns.

Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also includes pre-emptive communication of contingency plans for when crises occur.

Resilience is recognised as a vital element of energy systems, particularly in light of rising climate-related disruptions.

Customers preferred cost-effective solutions.

Summary: **Reliability and Resilience**

Commercial and Industrial Customer Insights

Commercial and Industrial (C&I) customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management, technological advancements, and targeted investments to ensure resilience and minimise operational losses.

Power quality was a growing concern for C&I customers with disruption impacting local industries and communities. They support proactive measures that will improve voltage stability and power quality, such as augmenting the network to support their own CER investments.

Affordability and Equity

How the business frames Affordability and Equity:

"We need to ensure we support customers experiencing vulnerability due to loss of supply or difficulty accessing our services; we need to manage a just transition to ensure that no one is left behind in the transition; improve regional and rural equity and also ensure we continue to deliver value for money to customers." (CitiPower, Powercor and United Energy's Customer Narrative)

What affordability means to customers

- Customers perceive affordability as: ensuring that the cost of energy services and tariffs is reasonable and manageable for all customers.
- Critically, affordability for most customers does not equate to the **amount** they pay for electricity, rather the perception that they are receiving **value** for their money (e.g., reliable supply).

What equity means to customers

- Customers associate equity with guaranteeing equal access to dependable and resilient energy services for all customers and communities, especially during crises and amidst changing energy environments.
- The aspiration for equitable access also encompasses consumer energy resources (CER).

Context

Customers find themselves in a challenging environment marked by a national energy market crisis, rising electricity and gas bills, and economic pressures.

Unprecedented events such as cyber-attacks, severe weather, and global conflicts impact affordability and equity concerns, as inflation rates rise and living costs increase. These factors set the backdrop for customers' heightened needs and preferences in the energy sector, driving requests for assistance and emphasising the importance of addressing affordability and equity in this complex context.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholders Insights

Customers were forward-thinking while considering network improvements, preferring that if there were any necessary costs, for them to be gradual; ensuring affordability into the future.

In the face of rising energy costs, customers prioritise affordability, value for money, and transparency in their electricity service. They seek clearer communication on cost allocation and measurable outcomes of investments to ensure that spending is perceived as meaningful and aligned with their needs.

Customers, especially those experiencing vulnerability, wanted educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.

Affordability drove customers to reduce bills through behaviour changes associated with financial benefits, solar adoption, and electrifying appliances. This was particularly acute for customers experiencing vulnerability who also desire government incentives for solar and electrification. Residential customers show more willingness to shift energy usage than SMBs, though barriers like time constraint activities.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholders Insights

Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations and renters. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.

In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability.

Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers find current pricing strategies confusing and seek clearer information for better bill management.

Summary: **Affordability and Equity**

Commercial and Industrial Customers Insights

C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but seek a better understanding to utilise this capability

Energy Transition

How the business frames Energy Transition:

"Our key focus areas include developing our capabilities to support our evolving role in the changing energy eco-system; continuing to evolve and deliver holistic network plans that are robust yet adaptable; better enable customers to maximise the value that they can create from CER (customer energy resources) and improve our own sustainability" (CitiPower, Powercor and United Energy's Customer Narrative)

What the Energy Transition means to customers

- Customers perceive energy transition as a dynamic shift toward cleaner and more sustainable energy sources and practices, driven by the need to combat climate change.

Context

- Customers find themselves in the midst of an evolving energy landscape, marked by a shift towards cleaner, more sustainable energy sources driven by climate change concerns.
- The adoption of renewable technologies and reduced reliance on fossil fuels are recognised by customers as an imperative, though they acknowledge the associated challenges, including affordability and equity for all, particularly vulnerable and low-income communities.
- This energy transition is anticipated to have wide-ranging impacts on their lives, encompassing energy consumption patterns, interactions with energy providers, and regulatory expectations.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Customers recognised the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.

As customers increasingly moved towards becoming “prosumers” of energy and shifted away from traditional models of energy generation, they believed new approaches to grid management and tariff structures were necessary.

Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.

Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers did not rank the ability to export highly and strongly opposed export tariffs as they perceived them as additional costs.

Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Customers generally viewed electric vehicles favourably, recognising their potential to support rapid decarbonisation. But some stakeholders recommended time-of-use tariffs and collaborating with retailers to manage EV uptake effectively.

Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanded clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience factors, preferences for cost-efficiency and convenience, and charging location. Stakeholders also raised concerns about privacy and EV ownership data visibility.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Stakeholders emphasised the importance of effective demand management, transparent communication, and financial incentives. SMBs showed greater willingness than Residential customers to allow external control of appliances, and highlighted grid reliability as a key driver. Stakeholders advocated for practical pilot programs for Piclo, improved data visibility, and targeted support to overcome operational and cost barriers, ensuring demand management initiatives aligned with community and business needs.

Customers and stakeholders shared concerns about electrification from gas. SMB customers demonstrated a stronger willingness than Residential customers to electrify gas appliances, with a greater proportion planning near-term replacements, but significant financial and logistical barriers persist for both groups.

Summary: **Energy Transition**

Commercial and Industrial Customer Insights

C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.

C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts.

Customer Experience

How does the business frame Customer Experience:

"We need to help improve customers' energy literacy to optimise their network use and future energy use; provide more effective and efficient communication, including during outages; and digitalise and modernise our operations and streamlining the customer connections process." (CitiPower, Powercor and United Energy's Customer Narrative)

What Customer Experience means to customers

- Customers see a positive customer experience in electricity distribution as an interaction characterised by transparency, empowerment, and a customer-centric approach.
- They consider communication, technology, community engagement, and support programs as pivotal elements shaping their experiences with distributors.
- The distributor's ability to meet commitments, fulfill their needs, and address their concerns is of paramount importance in shaping this customer experience.

Context

Customers find themselves in a rapidly changing energy landscape where their experiences and interactions with energy providers are evolving. Additionally, their expectations for a 'customer-centric' and tailored experience are increasing. In the context of energy consumption one example of this is increasing access to real-time data about their energy usage, allowing customers to monitor and manage their consumption. The digital transformation in the energy sector, characterised by innovations like smart meters, online account management, and energy-efficient technologies, is welcomed by customers as it offers convenience and control.

Summary: **Customer Experience**

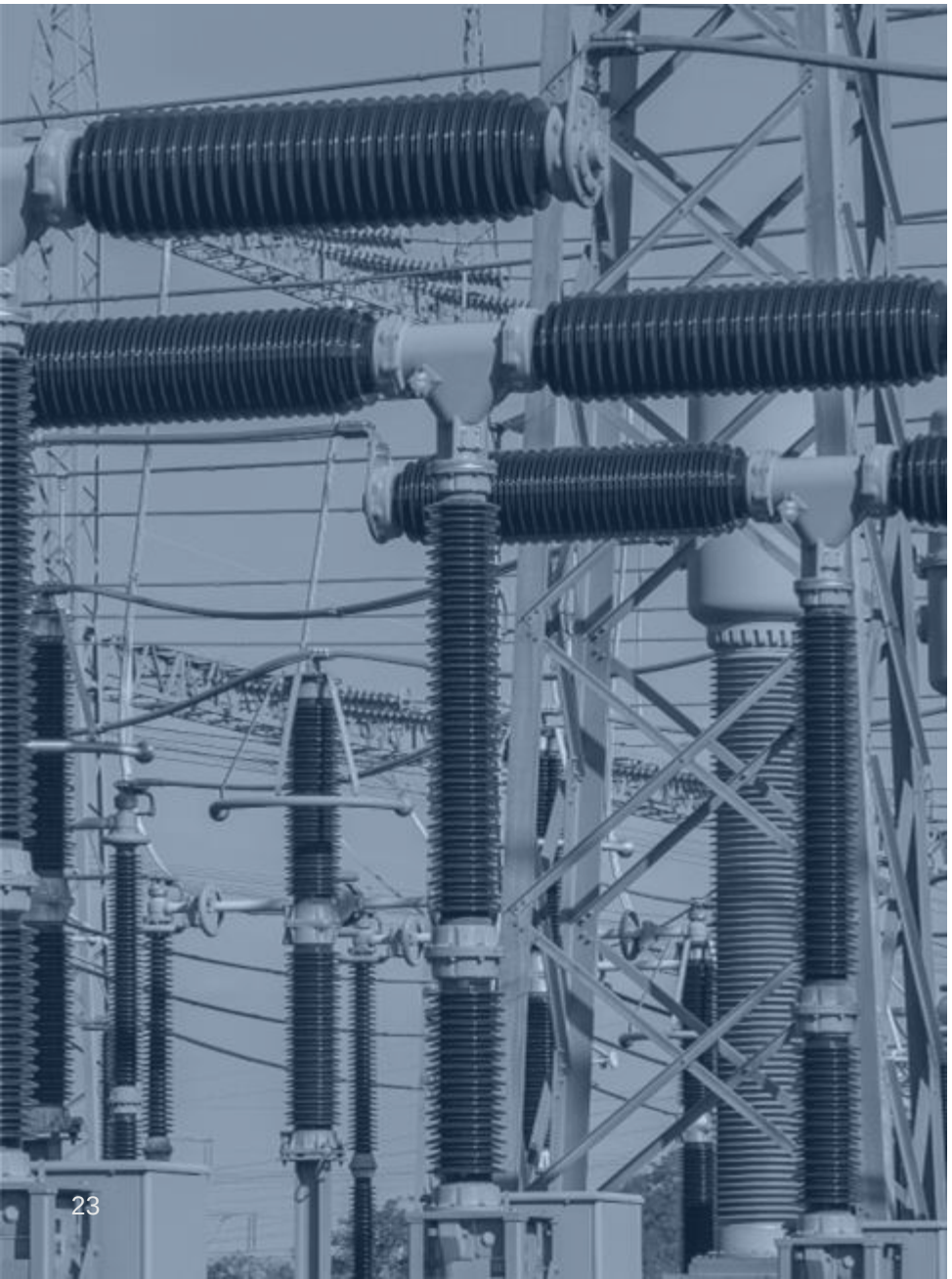
Residential, SMB and Stakeholder Insights

Effective education and tailored communication were essential to empower customers. Particularly for vulnerable and CALD communities to navigate the energy transition, manage consumption, and understand tariffs. Collaborative initiatives like community funding and culturally aligned programs were highlighted by stakeholders as vital to ensuring equitable access and practical support, with a strong focus on clarity and simplicity in communication from retailers and distributors.	Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while prioritising privacy and cost-effective rollouts	Customers had varyied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.	Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.

Summary: **Customer Experience**

Commercial and Industrial Customer Insights

C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.



Powercor Executive Summary

Reliability and Resilience

How the business frames Reliability and Resilience:

"We need to focus on managing the network to maintain network safety and reliability; work to future proof our network and communities to minimise disaster impacts and support them to respond appropriately to disaster events."
(CitiPower, Powercor and United Energy's Customer Narrative)

What reliability means to customers

- Customers perceive **reliability** as a consistent and uninterrupted supply of electricity.
- When discussing impacts of reliability, power quality or capacity, most customers do not clearly delineate between the three.
- As a result, conversations with customers about one of these topics, typically includes the others.

What resilience means to customers

- Customers view resilience as the energy system's capacity to endure disruptions and swiftly restore dependable energy supply in adverse conditions.
- Resilience is often thought as the proactive and reactive mitigation of climate-related weather extremes.

Context

- **Reliability vs. Resilience:** This research examines customers' immediate concerns about energy supply (reliability) and their forward-looking apprehensions related to network management in the face of rising energy demand, population growth, and extreme weather events (resilience). Customers acknowledge the connection between investing in resilience for the long term and improving reliability in the short and long term.
- **Evolving Energy Landscape:** Customers find themselves navigating a changing energy environment shaped by the energy transition, climate change, and extreme weather events. This dynamic backdrop underscores the heightened importance of both reliability and resilience.
- **Rural and Regional Disparities:** Rural and regional areas who are often lacking reliable energy services, face unique challenges. They must ensure dependable electricity supply during extreme weather events while transitioning to cleaner and more sustainable energy sources.
- **Crucial Considerations:** In underserved areas where they are at high risk to the impacts of climate change, reliability and resilience have risen to the forefront of customer concerns. These factors are especially critical as communities adapt to the evolving energy landscape.
- **Climate Change**: Customers consistently recognised the link between extreme weather events and climate change without expressing any dissenting opinions on this matter.

Summary: **Reliability and Resilience**

Residential, SMB and Stakeholder Insights

Reliability remained a critical issue for Powercor customers, prioritised as essential for health, safety, comfort, and as a foundation for addressing affordability and sustainability. Customers increasingly support proactive reliability improvements, including replacing ageing infrastructure, replacing aging meters proactively and exploring innovative solutions to reduce risks and support reliability.

Customers emphasised the importance of strategic collaboration between communities, energy distributors, and government to address climate-driven resilience challenges. This collaboration should strengthen local resilience, prioritise affordability, safety, and adopt innovative, future-proof solutions to ensure long-term reliability and sustainability, particularly in regional and rural areas.

Customers across the Powercor patch saw integrating consumer energy resources (CER) as an attractive means to increase community reliability and autonomy.

Resilience was a critical priority due to rising climate-related disruptions. Stakeholders and customers supported region-specific solutions like Stand-Alone Power Systems (SAPS) and infrastructure hardening for high-risk areas. Although they also desired large-scale investments such as SWER line upgrades they also wanted to pressure test that these types of solutions were cost-effective. A balanced approach combining targeted infrastructure improvements with community-focused initiatives, such as Community Support Officers (CSOs), was preferred.

Summary: **Reliability and Resilience**

Residential, SMB and Stakeholder Insights

Regional customers expected distributors to play a critical role in proactive and reactive disaster management with communities. It was expected that a prudent future plan was developed and tailored to communities for climate-related extreme events.

In times of emergency, customers expected to be able to rely on their distributor, in conjunction with other stakeholders like the government, to play a vital role in restoring power to regional communities, with special attention given to the needs of vulnerable customers.

Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also included pre-emptive communication of contingency plans for when crises occur.

Customers believed that improving network resilience involves adapting to changing environmental and operational conditions related to energy transition.

Summary: **Reliability and Resilience**

Commercial and Industrial Customer Insights

C&I customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management of the network, technological advancements, and targeted investments to ensure resilience and minimise operational losses.

C&I customers and stakeholders highlighted that the lack of reliability prevented competitiveness and growth for regions; and had caused flow on economic impacts for end customers.

Power quality was a growing concern for C&I customers with disruption impacting local industries and communities. They support proactive measures that will improve voltage stability and power quality, such as augmenting the network for their own CER investments.

Affordability and Equity

How the business frames Affordability and Equity:

"We need to ensure we support customers experiencing vulnerability due to loss of supply or difficulty accessing our services; we need to manage a just transition to ensure that no one is left behind in the transition; improve regional and rural equity and also ensure we continue to deliver value for money to customers" (CitiPower, Powercor and United Energy's Customer Narrative)

What affordability means to customers

- Customers perceive affordability as ensuring that the cost of energy services and tariffs is reasonable and manageable for all customers.
- Critically, affordability for most customers does not equate to the **amount** they pay for electricity, rather the perception that they are receiving **value** for their money (e.g., reliable supply).

What equity means to customers

- Customers associate equity with the idea of guaranteeing equal access to dependable and resilient energy services for all customers and communities, especially during crises and amidst changing energy environments.
- This aspiration for equitable access also encompasses consumer energy resources (CER).

Context

Customers find themselves in a challenging environment marked by a national energy market crisis, rising electricity and gas bills, and economic pressures.

Unprecedented events such as cyber-attacks, severe weather, and global conflicts impact affordability and equity concerns, as inflation rates rise and living costs increase. These factors set the backdrop for customers' heightened needs and preferences in the energy sector, driving requests for assistance and emphasising the importance of addressing affordability and equity in this complex context.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Customers prioritised affordability when considering network improvements, favouring gradual, targeted upgrades that balance reliability with cost-effectiveness, particularly in light of rising energy costs.

Amid rising living costs, customers emphasised affordability and clarity in electricity services, expressing scepticism over cost-effectiveness and a desire for transparent, measurable investments that demonstrate tangible value.

Customers, especially those experiencing vulnerability, wanted educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.

Affordability remained a priority across all customers, with motivations and challenges varying by segment. Residential customers aim to lower bills through behaviour changes combined with financial incentives, solar adoption, and appliance electrification. Customers experiencing vulnerability seek tailored support, including government incentives and education, to manage costs and adopt renewables.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations and rural communities. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.

In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability.

Customers expected grid resilience improvements to be equitable, with particular focus on customers experiencing vulnerability including those living rurally or regionally.

Generally, regional customers believed that their levels of service, particularly reliability were far lower than their metro counterparts, holding a desire to establish a basic minimum standard across networks.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Customers considered reliability and essential access as fundamental services, setting a basic minimum standard with an emphasis on affordability. While services like EV access and solar exports were important, they were not yet considered basic essentials.

Stakeholders expressed mixed views on defining and implementing minimum service levels, citing challenges in addressing diverse community needs and ensuring equitable outcomes. The Government was highlighted as being responsible in establishing a minimum service level.

Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers found current pricing strategies confusing and sought clearer information for better bill management

Summary: **Affordability and Equity**

Commercial and Industrial Insights

C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but sought a better understanding to utilise this capability.

Energy Transition

How does the business frame Energy Transition:

"Our key focus areas include developing our capabilities to support our evolving role in the changing energy eco-system; continuing to evolve and deliver holistic network plans that are robust yet adaptable; better enable customers to maximise the value that they can create from CER (customer energy resources) and improve our own sustainability" (CitiPower, Powercor and United Energy's Customer Narrative)

What the Energy Transition means to customers

- Customers perceive energy transition as a dynamic shift toward cleaner and more sustainable energy sources and practices, driven by the need to combat climate change.

Context

- Customers find themselves in the midst of an evolving energy landscape, marked by a shift towards cleaner, more sustainable energy sources driven by climate change concerns.
- The adoption of renewable technologies and reduced reliance on fossil fuels are recognised by customers as an imperative, though they acknowledge the associated challenges, including affordability and equity for all, particularly vulnerable and low-income communities.
- This energy transition is anticipated to have wide-ranging impacts on their lives, encompassing energy consumption patterns, interactions with energy providers, and regulatory expectations.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Customers recognised the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.

As customers increasingly moved towards becoming “prosumers” of energy and shifted away from traditional models of energy generation, they believed new approaches to grid management and tariff structures are necessary.

Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.

Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers did not rank the ability to export highly and strongly opposed export tariffs as they perceived them as additional costs.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience, cost-efficiency, convenience, and charging location. Rural and regional considerations, including tourism and agricultural needs, further emphasised the importance of tailored infrastructure development to address diverse priorities and practical challenges.

Affordability and practicality were key considerations for EV adoption, with customers favouring at-home charging and government incentives to offset costs. However, rural and agricultural needs remained under-addressed, and concerns persisted about the network's capacity to support EV growth alongside reliability and operational challenges.

Regional and rural regions generate renewable energy for metro areas but feel underserved, citing a lack of access to their own clean energy resources. They advocated for fair compensation, infrastructure investments, and alignment with regional productivity to equitably support decarbonisation.

Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanded clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

Summary: **Energy Transition**

Residential, SMB and Stakeholder Insights

Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.

Stakeholders emphasised the critical role of demand management, with a focus on platforms like Piclo for data sharing and tailored solutions. Ensuring equity between urban and rural communities in energy management, improving data visibility to support community-level initiatives, and fostering transparent communication were essential to optimise grid operation and build trust.

Customers and stakeholders were apprehensive about electrification from gas, citing concerns such as achieving the 2050 net-zero target, grid stability during extreme weather, high retrofitting costs for homes, grid capacity issues, and rural electrician shortages. SMB customers showed a higher likelihood than Residential customers to consider replacing gas appliances in the near future, with both groups seeking proactive communication and policy support to address these challenges effectively.

Summary: **Energy Transition**

Commercial and Industrial Insights

C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.

Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanded clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts.

Customer Experience

How does the business frame Customer Experience:

"We need to help improve customers' energy literacy to optimise their network use and future energy use; provide more effective and efficient communication, including during outages; and digitalise and modernise our operations and streamlining the customer connections process." (CitiPower, Powercor and United Energy's Customer Narrative)

What Customer Experience means to customers

- Customers see a positive customer experience in electricity distribution as an interaction characterised by transparency, empowerment, and a customer-centric approach.
- They consider communication, technology, community engagement, and support programs as pivotal elements shaping their experiences with distributors.
- The distributor's ability to meet commitments, fulfill their needs, and address their concerns is of paramount importance in shaping this customer experience.

Context

Customers find themselves in a rapidly changing energy landscape where their experiences and interactions with energy providers are evolving. Additionally, their expectations for a 'customer-centric' and tailored experience are increasing. In the context of energy consumption one example of this is increasing access to real-time data about their energy usage, allowing customers to monitor and manage their consumption. The digital transformation in the energy sector, characterised by innovations like smart meters, online account management, and energy-efficient technologies, is welcomed by customers as it offers convenience and control.

Summary: **Customer Experience**

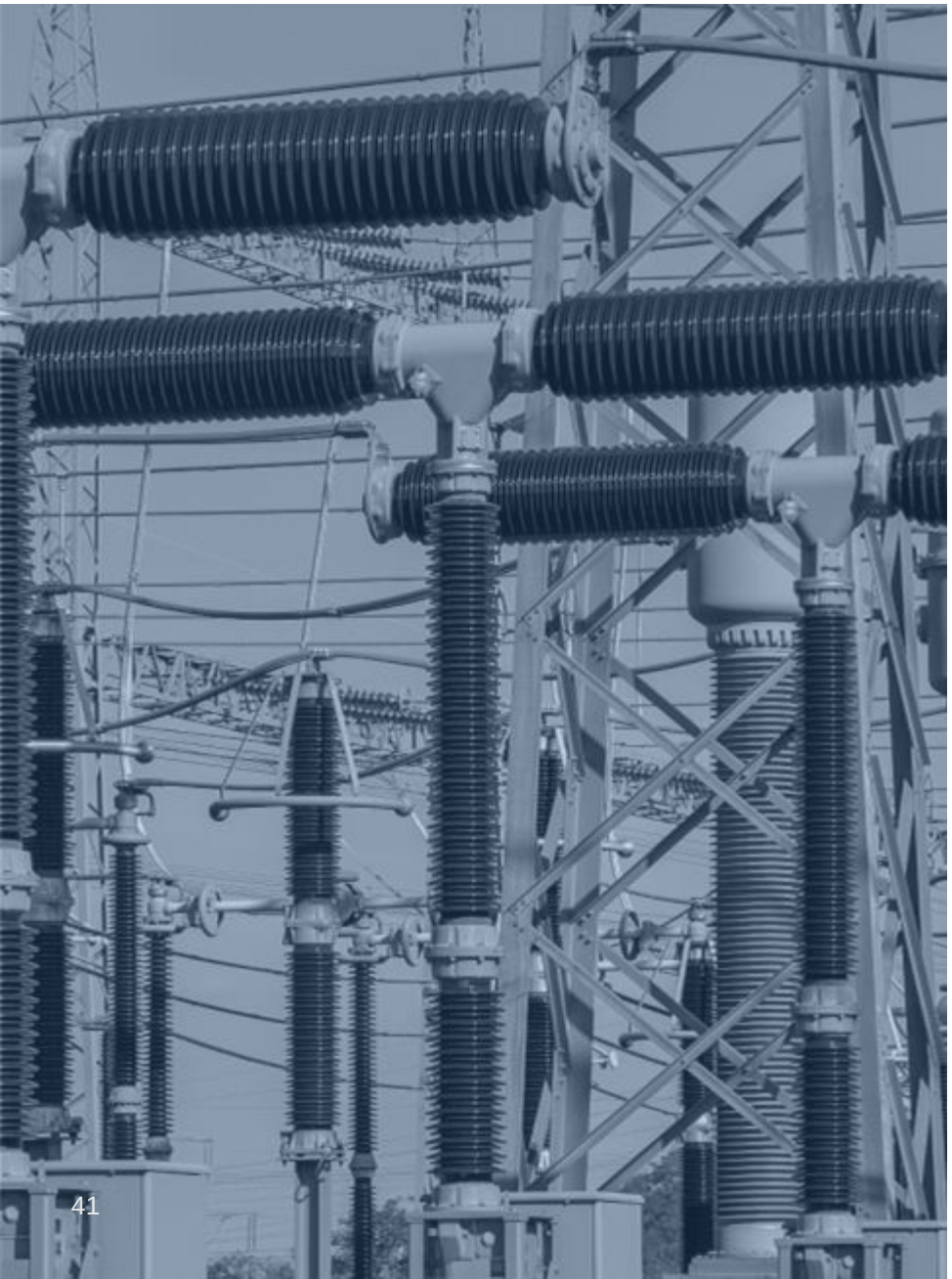
Residential, SMB and Stakeholder Insights

Effective education and tailored communication were crucial in empowering customers, particularly vulnerable and CALD communities, to navigate the energy transition, manage energy consumption, and understand tariff structures. Support from stakeholders for targeted initiatives like Energy Care and Community Energy Fund further highlighted the importance of equitable, accessible resources and long-term collaboration for rural and underrepresented groups.	Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while they prioritised privacy and cost-effective rollouts.	Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.	Customers had varied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.	Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.

Summary: **Customer Experience**

Commercial and Industrial Insights

C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.



United Energy Executive Summary

Reliability and Resilience

How the business frames Reliability and Resilience:

"We need to focus on managing the network to maintain network safety and reliability; work to future proof our network and communities to minimise disaster impacts and support them to respond appropriately to disaster events."
(CitiPower, Powercor and United Energy's Customer Narrative)

What reliability means to customers

- Customers perceive **reliability** as a consistent and uninterrupted supply of electricity.
- When discussing impacts of reliability, power quality or capacity, most customers do not clearly delineate between the three.
- As a result, conversations with customers about one of these topics, typically includes the others.

What resilience means to customers

- Customers view resilience as the energy system's capacity to endure disruptions and swiftly restore dependable energy supply in adverse conditions.
- Resilience is often thought of as the proactive and reactive mitigation of climate-related weather extremes.

Context

- **Reliability vs. Resilience:** This research examines customers' immediate concerns about energy supply (reliability) and their forward-looking apprehensions related to network management in the face of rising energy demand, population growth, and extreme weather events (resilience). Customers acknowledged the connection between investing in resilience for the long term and improving reliability in the short term.
- **Evolving Energy Landscape:** Customers find themselves navigating a changing energy environment shaped by the energy transition, climate change, and extreme weather events. This dynamic backdrop underscores the heightened importance of both reliability and resilience.
- **Rural and Regional Disparities:** Rural and regional areas that are often lacking reliable energy services, face unique challenges. They must ensure dependable electricity supply during extreme weather events while transitioning to cleaner and more sustainable energy sources.
- **Crucial Considerations:** In underserved areas who are at high risk to the impacts of climate change, reliability and resilience have risen to the forefront of customer concerns. These factors are especially critical as communities adapt to the evolving energy landscape.
- **Climate Change**: Customers consistently recognised the link between extreme weather events and climate change without expressing any dissenting opinions on this matter.

Summary: **Reliability and Resilience**

Residential, SMB and Stakeholder Insights

Reliability was consistently highlighted as a critical issue for customers, as it was seen as addressing their first priority for health, safety and comfort and the foundation for improving other key areas (e.g., affordability and sustainability). Customers and stakeholders were highly supportive of proactive meter replacement for this reason to avoid failures.

Customers emphasised the importance of strategic collaboration between communities, energy distributors, and government to address climate-driven resilience challenges. This collaboration should strengthen local resilience, prioritise affordability and safety, and adopt innovative, future-proof solutions to ensure long-term reliability and sustainability, particularly in rural areas.

Resilience was regularly recognised as a vital element of energy systems, particularly in light of rising climate-related disruptions. However, they preferred cost-effective solutions and were hesitant to bear the costs of expensive infrastructure upgrades. A balanced approach combining targeted infrastructure improvements with community-focused initiatives, such as Community Support Officers (CSOs), was preferred.

Customers believed that improving network resilience involves adapting to changing environmental and operational conditions related to energy transition.

Summary: **Reliability and Resilience**

Residential, SMB and Stakeholder Insights

Regional customers expected distributors to play a critical role in proactive and reactive disaster management with communities and develop a prudent future plan tailored to communities for climate-related extremes.

Customers saw integrating Consumer Energy Resources (CER) as an attractive means to increase community resilience and improve the rationale for larger resilience measures like microgrids.

In times of emergency, customers expected to be able to rely on their distributor, in conjunction with other stakeholders like the government, to play a vital role in restoring power to regional communities, with special attention given to the needs of vulnerable customers.

Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also included pre-emptive communication of contingency plans for when crises occurred.

Summary: **Reliability and Resilience**

Commercial and Industrial Customer Insights

C&I customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management, technological advancements, and targeted investments to ensure resilience and minimise operational losses.

Power quality was a growing concern for Commercial and Industrial customers with disruption impacting local industries and communities. They supported proactive measures that will improve voltage stability and power quality, such as augmenting the network for their own CER investments.

Affordability and Equity

How the business frames Affordability and Equity:

"We need to ensure we support customers experiencing vulnerability due to loss of supply or difficulty accessing our services; manage a just transition to ensure that no one is left behind in the transition; improve regional and rural equity and also ensure we continue to deliver value for money to customers." (CitiPower, Powercor and United Energy's Customer Narrative)

What affordability means to customers

- Customers perceived affordability as ensuring that the cost of energy services and tariffs is reasonable and manageable for all customers.
- Critically, affordability for most customers does not equate to the **amount** they pay for electricity, rather the perception that they are receiving **value** for their money (e.g., reliable supply).

What equity means to customers

- Customers associate equity with the idea of guaranteeing equal access to dependable and resilient energy services for all customers and communities, especially during crises and amidst changing energy environments.
- This aspiration for equitable access also encompasses consumer energy resources (CER).

Context

Customers find themselves in a challenging environment marked by a national energy market crisis, rising electricity and gas bills, and economic pressures. Unprecedented events such as cyber-attacks, severe weather, and global conflicts impact affordability and equity concerns, as inflation rates rise and living costs increase. These factors set the backdrop for customers' heightened needs and preferences in the energy sector, driving requests for assistance and emphasising the importance of addressing affordability and equity in this complex context.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Customers prioritised affordability when considering network improvements, favouring gradual, targeted upgrades that balance reliability with cost-effectiveness, particularly in light of rising energy costs.

In the face of escalating living costs, customers prioritised affordability and value for money in their electricity service. They strongly emphasised transparent communication about investments and pricing to ensure costs are perceived as a meaningful and equitable benefit. Businesses, particularly SMBs, show higher cost sensitivity and prioritise clear, direct benefits from energy initiatives.

Customers, especially those experiencing vulnerability, wanted educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Affordability remained a priority for customers, with preferences varying based on individual circumstances. Customers aim to lower bills through behaviour changes combined with financial incentives, solar adoption, and electrification, with government incentives for solar and efficient appliances playing a crucial role, particularly for vulnerable groups. Residential and SMB customers exhibit similar motivations but differ in barriers to shifting usage patterns, such as time constraints and appliance-specific flexibility

Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations, rural communities, and renters. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.

In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability

Summary: **Affordability and Equity**

Residential, SMB and Stakeholder Insights

Customers expected grid resilience improvements to be equitable, with particular focus on customers experiencing vulnerability including those living rurally or regionally.

Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers found current pricing strategies confusing and were seeking clearer information for better bill management.

Summary: **Affordability and Equity**

Commercial and Industrial Insights

C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but were seeking a better understanding to utilise this capability.

Energy Transition

How does the business frame Energy Transition:

"Our key focus areas include developing our capabilities to support our evolving role in the changing energy eco-system; continuing to evolve and deliver holistic network plans that are robust yet adaptable; better enable customers to maximise the value that they can create from CER (customer energy resources) and improve our own sustainability" (CitiPower, Powercor and United Energy's Customer Narrative)

What the Energy Transition means to customers

- Customers perceive energy transition as a dynamic shift toward cleaner and more sustainable energy sources and practices, driven by the need to combat climate change.

Context

- Customers find themselves in the midst of an evolving energy landscape, marked by a shift towards cleaner, more sustainable energy sources driven by climate change concerns.
- The adoption of renewable technologies and reduced reliance on fossil fuels are recognised by customers as an imperative, though they acknowledge the associated challenges, including affordability and equity for all, particularly vulnerable and low-income communities.
- This energy transition is anticipated to have wide-ranging impacts on their lives, encompassing energy consumption patterns, interactions with energy providers, and regulatory expectations.

Summary: **Energy Transition**

Residential, SMB, Stakeholder Insights

Customers recognised the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.

As customers increasingly move towards becoming “prosumers” of energy and shift away from traditional models of energy generation, they believed new approaches to grid management and tariff structures were necessary.

Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.

Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers did not rank the ability to export highly and strongly oppose export tariffs as they perceived them as additional costs.

Summary: **Energy Transition**

Residential, SMB, Stakeholder Insights

Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.

Customers generally viewed electric vehicles favourably, recognising their potential to support rapid decarbonisation. However, specific customer groups did not focus strongly on EVs due to concerns about reliability, affordability, equity, and the need for strategic infrastructure planning to support growing demand.

Regional and rural customers produce renewable energy for metro areas but questioned the fairness of supporting their decarbonisation efforts when they couldn't access their own local renewables and meet their decarbonisation needs.

Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanding clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

Summary: **Energy Transition**

Residential, SMB, Stakeholder Insights

Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience factors, preferences for cost-efficiency and convenience, and charging location. Perception of rapid EV adoption underscored the critical need for strategic infrastructure planning to manage peak consumption and ensure equitable access.

Stakeholders emphasised the important of effective demand management, improved data visibility and transparent communication to ensure efficient grid operation. Platforms like Piclo were seen as useful tools for data sharing and supported renewable energy adoption.

Customers and stakeholders were apprehensive of electrification from gas due to several concerns. These included doubts about achieving the 2050 net-zero target, grid stability challenges during extreme weather, and high retrofitting costs for homes. Additionally, there were disparities in willingness to electrify between customer segments, with SMBs demonstrating higher interest and plans for transition compared to residential customers.

Summary: **Energy Transition**

Commercial and Industrial Insights

Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritising reliability and demanded clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.

C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts.

Customer Experience

How does the business frame Customer Experience:

"We need to help improve customers' energy literacy to optimise their network use and future energy use; provide more effective and efficient communication, including during outages; and digitalise and modernise our operations and streamlining the customer connections process." (CitiPower, Powercor and United Energy's Customer Narrative)

What Customer Experience means to customers

- Customers see a positive customer experience in electricity distribution as an interaction characterised by transparency, empowerment, and a customer-centric approach.
- They consider communication, technology, community engagement, and support programs as pivotal elements shaping their experiences with distributors.
- The distributor's ability to meet commitments, fulfill their needs, and address their concerns is of paramount importance in shaping this customer experience.

Context

Customers find themselves in a rapidly changing energy landscape where their experiences and interactions with energy providers are evolving. Additionally, their expectations for a 'customer-centric' and tailored experience are increasing. In the context of energy consumption one example of this is increasing access to real-time data about their energy usage, allowing customers to monitor and manage their consumption. The digital transformation in the energy sector, characterised by innovations like smart meters, online account management, and energy-efficient technologies, is welcomed by customers as it offers convenience and control.

Summary: **Customer Experience**

Residential, SMB and Stakeholder Insights

Effective education and tailored communication, supported by targeted community programs and technology, were seen by stakeholders as crucial in empowering customers, particularly vulnerable, CALD, and diverse community groups, to navigate the energy transition. Stakeholders believed emphasis should be placed on simplicity, clarity, equitable resource distribution, and culturally aligned initiatives to foster agency and participation in the transition.	Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while prioritising privacy and cost-effective rollouts.	Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.	Customers had varied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.	Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.

Summary: **Customer Experience**

Commercial and Industrial Insights

C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.

Detailed findings

Reliability and Resilience

How does the business frame Reliability and Resilience:

"We need to focus on managing the network to maintain network safety and reliability; work to future proof our network and communities to minimise disaster impacts and support them to respond appropriately to disaster events"
(CitiPower, Powercor and United Energy's Customer Narrative)

What reliability means to customers

- Customers perceive **reliability** as a consistent and uninterrupted supply of electricity.
- When discussing impacts of reliability, power quality or capacity on their lives, most customers do not clearly delineate between the three.
- As a result, conversations with customers about one of these topics, typically includes the others.

What resilience means to customers

- Customers view resilience as the energy system's capacity to endure disruptions and swiftly restore dependable energy supply in adverse conditions.
- Resilience is often thought of by customers as the proactive and reactive mitigation of climate-related weather extremes.

Context

- **Reliability vs. Resilience:** This research examines customers' immediate concerns about energy supply (reliability) and their forward-looking apprehensions related to network management in the face of rising energy demand, population growth, and extreme weather events (resilience). Customers acknowledge the connection between investing in resilience for the long term and improving reliability in the short term.
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- **Crucial Considerations:** In underserved areas high risk to the impacts of climate change, reliability and resilience have risen to the forefront of customer concerns. These factors are especially critical as communities adapt to the evolving energy landscape.
- **Climate Change**: Customers consistently recognised the link between extreme weather events and climate change without expressing any dissenting opinions on this matter.

Summary insights: **Reliability**

Pre-Test and Validate Broad Customer Insight
Reliability is consistently highlighted as a critical issue for customers across all three networks, as it is seen as addressing their first priority for health, safety and comfort and the foundation for improving other key areas (e.g., affordability and sustainability).

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Reliability was consistently highlighted as a critical issue for customers, as it was seen as addressing their first priority for health, safety, comfort and the foundation for improving other key areas (e.g., affordability and sustainability). **Customers and stakeholders supported the initiative for a proactive meter replacement for this reason to avoid failures.**	**Reliability remained a critical issue for Powercor customers, prioritised as essential for health, safety, comfort, and as a foundation for addressing affordability and sustainability. Customers increasingly support proactive reliability improvements, including replacing ageing infrastructure, replacing aging meters proactively and exploring innovative solutions to reduce risks and support reliability.**	**Reliability was consistently highlighted as a critical issue for customers, as it is seen as addressing their first priority for health, safety and comfort and the foundation for improving other key areas (e.g., affordability and sustainability). Customers and stakeholders were highly supportive of proactive meter replacement for this reason to avoid failures.**

Customer feedback used to develop insights located below

Summary insights: **Reliability**

	What we heard from customers
All customers	• Customers see the energy network as a shared resource and are willing to invest more into resilient infrastructure solutions to improve reliability, particularly for underserved and extreme-weather-prone regions (CPPALUE Ideation Workshop, 2023). • Customers had mixed experiences with reliability, and their priority was to proactively mitigate the impact of outages with forward-thinking and informed communication and repair (Youth Broad and Wide, 2022). • Customer values related to comfort, health, and safety extend to the community, emphasising the importance of preventing outages and protecting customers experiencing vulnerability in demand management efforts (Future Home Demand, 2023). • "Comfort, health, and safety" was the top-rated household value amongst customers, followed by "affordability and cost-effectiveness" and "sustainability". This underscores the importance of these values in shaping consumer preferences and decisions regarding energy-related matters (Future Home Demand, 2023). • Stakeholders felt the interrelationship between the electrification of various appliances and equipment on the electricity network necessitates a holistic approach to address increased network demand, including considerations for solar and batteries, that may cause reliability issues (Energy Transition Summit, 2023). • Home consumption habits show cooking, heating, and cooling as the least flexible activities, posing challenges in altering customer consumption times for usage associated with these household tasks (Customer Values Analysis, 2024).
Powercor	• Customers in rural and regional areas prioritise improving reliability, network capacity, and power quality, as they view addressing reliability as essential for their community to participate in the clean energy transition and critical for their communities to survive and grow (Powercor Rural and Regional Summit, 2023). • Powercor customers prioritised developing better infrastructure to prevent outages, including the impacts of extreme weather and more consideration given to scheduling of planned outages to support continuity and supply (Powercor Broad and Wide, 2022). • According to rural and regional customers, who faced greater vulnerability to extreme weather and reliability challenges, there was a strong emphasis on the need for clear, timely communication from CPPALUE about outages (Customers experiencing vulnerable circumstances, 2023). • Improving reliability for 'worst-served' areas ranked second (20.4% importance) (Customer Values Analysis, 2024). • Secondary TURF (total unduplicated reach and frequency) analysis indicates that improving reliability for worst served areas is consistently grouped with improvements to network resilience in the top responses for Powercor residential customers (Customer Values Analysis, 2024). • These preferences may be attributed, in part, to Powercor residential customers experiencing lower levels of reliability and reporting a higher frequency of interruptions due to climate events compared to metro networks (Customer Values Analysis, 2024). • The relatively low rating of the value 'improving carbon emissions reduction' further supports this trend, suggesting that for Powercor residential customers, addressing basic needs such as reliability and resilience are prioritised above environmental sustainability initiatives (Customer Values Analysis, 2024). • Powercor SMB customers were asked about reliability for everyone in their network. The majority preferred to pay the same for no change in their network reliability (Customer Values Analysis, 2024). • Stakeholders showed strong support for improving services for worst-served customers, with emphasis on prioritising those facing energy poverty and reliability challenges. Participants highlighted the need for feeder ties to improve reliability and resilience, particularly in high-risk, rural areas (Community Workshops, 2024). • Majority of customers are satisfied with current reliability levels and are not inclined to pay for significant improvements, viewing it as already adequate.(Trade-Off Evaluations Powercor, 2024) • Over two thirds of Residential and SMB customers preferred Powercor to start proactively replacing meters to prevent failures despite the proposed price of $5 per month (70.2% vs 68.5%) (Test and Validate, 2024). • Stakeholders supported proactive upgrades to enhance reliability and provide long-term visibility benefits. Suggestions included targeted rollouts to manage costs effectively. (CitiPower, Powercor, and United Energy Roundtables, 2024) • There was strong support from stakeholders for upgrading SWER lines, with participants citing economic and operational benefits for agriculture. Concerns were raised about the limited scope of proposed investments. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders and customers broadly supported investments but raised concerns about whether the $45 million SWER line upgrade proposal was sufficient and efficient. (Rural and Regional Summit Report, 2024) • Stand-Alone Power Systems (SAPS) were recommended by stakeholders and customers as an alternative to SWER lines, offering improved reliability and reduced fire risks. (Rural and Regional Summit Report, 2024)

Data table continued on next page

Summary insights: **Reliability**

	What we heard from customers
CitiPower	• CitiPower are more likely than other networks to be willing to pay more in the short term to facilitate energy upgrades to improve long-term reliability (Customer Values Analysis, 2024). • Small and medium-sized businesses (SMBs) were less willing to invest in reliability improvements compared to residential customers, favoring minimal service level improvements due to cost concerns.(Trade-Off Evaluations, 2024). • 33.9% of customers were willing to pay for improvements in reliability, indicating a strong preference for maintaining current levels without additional costs.(Trade-Off Evaluations, 2024). • Both Residential and SMB customers supported CitiPower to proactively replacing meters to avoid failures (72.6% vs 70.5%) (Test and Validate, 2024). • Stakeholders showed medium support for proactive meter replacements, citing immediate reliability benefits and improved network visibility. A targeted rollout approach and clear communication were recommended. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders supported proactive asset replacement to future-proof the network while avoiding overinvestment. Minimising community disruption by coordinating upgrades with other utilities was recommended. (CitiPower, Powercor, and United Energy Roundtables, 2024)
United Energy	• 33% of customers were willing to invest in improving reliability, as most were satisfied with the current levels and viewed reliability as a core responsibility of the network rather than an area needing additional investment. (Trade-Off Evaluations United Energy, 2024). • Both Residential and SMB customers preferred United Energy to start proactively replacing meters to avoid failures, similar to other networks (76.7% vs 72.6%) (Test and Validate, 2024). • Strong support was shown for a proactive metering approach due to immediate benefits such as reliability and enhanced energy usage visibility. Participants stressed the importance of transparent communication regarding rollout benefits and privacy assurances. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Commercial and Industrial	• Business customers were hesitant to pay more for service given their current financial constraints; however, they did cite reliability as something they would be prepared to pay for. An outage could impact their entire supply chain and could significantly suspend operations (e.g., need to send staff home) (Customer Valuation Of Service Improvements, 2021) • Energy reliability and power quality were critical concerns across industries, with disruptions leading to operational and financial losses (Commercial and Industrial Customers Report, 2024). • Momentary outages (e.g., voltage sags) were highly disruptive, causing costly resets and downtime (Commercial and Industrial Customers Report, 2024). • Sector-specific challenges highlighted included manufacturing delays, agricultural irrigation losses, and sensitive research disruptions at universities (Commercial and Industrial Customers Report, 2024).
Customers experiencing vulnerability	• When asked what customers' priority areas were regarding electricity, timely outage awareness messages during unplanned outages and accurate outage restoration times were typically in the top two priorities (Customers Experiencing Vulnerable Circumstances, 2023). • Customers understood that outages would happen from time to time and that, when they did occur, trusted CPPALUE to resolve them as quickly as possible to maintain reliability (Customers Experiencing Vulnerable Circumstances, 2023). • CPPALUE were perceived to respond quickly to outages and maintenance issues, and provide proactive and clear communication, with most customers reflecting high satisfaction with their distributor (Customers Experiencing Vulnerable Circumstances, 2023). • Rural and regional customers expected outages to sometimes occur, but wanted to receive proactive and transparent communication. Notification letters were preferred for initial notice of planned outages, but emails and SMS were preferred for reminders and notification of unplanned outages (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Reliability**

Pre-Test and Validate Broad Customer Insight
Customers have a growing concern about network capacity as demand increases. This concern is most pronounced among Commercial and Industrial (C&I) customers who prioritise unrestricted access to their energy load to meet their operational needs.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Commercial and Industrial (C&I) customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management, technological advancements, and targeted investments to ensure resilience and minimise operational losses.	**C&I customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management of the network, technological advancements, and targeted investments to ensure resilience and minimise operational losses.** **C&I customers and stakeholders highlighted that the lack of reliability prevented competitiveness and growth for regions; and had caused flow on economic impacts for end customers.**	**C&I customers faced growing concerns about network capacity and power quality, emphasising the need for unrestricted and reliable energy access to meet operational demands. Disruptions, such as voltage sags, have highlighted sector-specific vulnerabilities, prompting calls for proactive management, technological advancements, and targeted investments to ensure resilience and minimise operational losses.**

Customer feedback used to develop insights located below

Summary insights: **Reliability**

	What we heard from customers
United Energy	• United Energy Rosebud customers were particularly interested in how they might use less electricity, especially during peak times to reduce disruptions – particularly during summer periods when outages more frequently occurred (United Energy Broad and Wide, 2022).
Powercor	• Certain Commercial and Industrial (C&I) customers prioritise unrestricted access to their energy load, emphasising the critical need for uninterrupted access to meet their operational demands without constraints, viewing any potential load restrictions as a significant concern with potentially severe consequences for their business activities (Economic Growth Engagement, 2023). • High levels of disruption from voltage sags and harmonics were reported, impacting critical industries like dairy and irrigation. (Rural and Regional Summit Report, 2024) • Customers and stakeholders supported proactive leadership from Powercor in educating and guiding on managing power quality issues. (Rural and Regional Summit Report, 2024) • Participants proposed incorporating SAPS and microgrids to improve network stability and resilience. (Rural and Regional Summit Report, 2024) • Regular technology audits and tighter voltage regulatory standards were suggested to ensure alignment with evolving energy demands. (Rural and Regional Summit Report, 2024)
CitiPower	• Customers expressed some concern about 'supply and demand' as they felt it was possible to 'run out' of electricity at certain times if the network was affected by high demand (CitiPower Broad and Wide, 2022).
Commercial and Industrial	• Certain Commercial and Industrial (C&I) customers place immense importance on having unrestricted access to their energy load, specifically the capacity to draw maximum energy whenever required. They express deep concerns about potential load constraints imposed based on historical usage patterns, fearing that any limitations on energy availability could have severe consequences for their operations (Economic Growth Engagement, 2023). • Uninterrupted access to their energy load is considered fundamental to the smooth functioning of their business activities. These customers rely on the flexibility to draw on maximum energy levels at any given moment to meet their operational demands, highlighting the critical nature of maintaining operational vitality (Economic Growth Engagement, 2023). • Energy reliability and power quality were critical concerns across industries, with disruptions leading to operational and financial losses (Commercial and Industrial Customers Report, 2024). • Momentary outages (e.g., voltage sags) were highly disruptive, causing costly resets and downtime (Commercial and Industrial Customers Report, 2024). • Sector-specific challenges highlighted included manufacturing delays, agricultural irrigation losses, and sensitive research disruptions at universities (Commercial and Industrial Customers Report, 2024). • Customers appreciated efforts to address grid reliability and voltage management but requested more detail on how investments would lead to tangible benefits (Commercial and Industrial Customers Report, 2024). • Concerns were raised about the prioritisation of investment in areas like network congestion and extreme weather resilience (Commercial and Industrial Customers Report, 2024).

Summary insights: **Reliability**

Pre-Test and Validate Broad Customer Insight
Customers across all networks see integrating Consumer Energy Resources (CER) as an attractive means to increase community reliability and autonomy.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable.	**Customers across the Powercor patch saw integrating consumer energy resources (CER) as an attractive means to increase community reliability and autonomy.**	**Customers saw integrating Consumer Energy Resources (CER) as an attractive means to increase community resilience and improve the rationale for larger resilience measures like microgrids.**

Customer feedback used to develop insights located below

Summary insights: **Reliability**

	What we heard from customers
All customers	• Consumers are supportive of the transition to renewables, although some are concerned about reliability issues and costs (Energy consumers sentiment research, 2023). • Customers believed the integration of Consumer Energy Resources (CER) and Distributed Energy Resources (DERs), such as solar panels, energy storage, and batteries, is crucial for enhancing system resilience and reliability. DERs can contribute to grid stability during disruptions and outages (Climate Change and Network Resilience Commitments, 2021). • For communities that had not experienced an extreme weather event, their resilience goals were more preventative, including planning for a future where energy could be sourced sustainably and working towards energy independence (e.g. microgrids and community batteries) (Community roundtables, 2023) • There was a common misconception amongst customers that batteries provided only two key benefits: saving money and combatting climate change. Whilst they believed that both were potentially true, SIG stakeholders contended there needed to be more education regarding reasons to adopt. The primary reason being the ability to improve reliability of electricity supply (Future Energy Network Forum, 2023). • Stakeholders highlighted the need for backup measures before, during, and after power outages. They suggested deploying backup batteries and deployable generators in vulnerable communities, addressing road closure concerns, and prioritising community relief hubs for enhanced resilience (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Customers highlight the potential benefits of hybrid power supplies, combining islanding with traditional mains connection, and advocate for universal three-phase power connections in rural and regional areas to enhance reliability, disaster recovery, and storage for excess solar generation, addressing various energy-related issues (Powercor Rural and Regional Summit, 2023). • For those that had experienced an extreme event, investment in non-network solutions were prioritised. This included prioritising options such as SAPS (standalone power systems) and microgrids. Customers believed investing in these kinds of measures would mitigate reliance on the network in the long term (Powercor Rural and Regional Summit, 2023). • Mid-scale generation (e.g. community solar farm) was seen as a holistic avenue to encourage community engagement, particularly in rural areas (Energy Transition Summit, 2023). • Mid-scale generation was proposed as a solution for inclusive participation in the energy transition, especially for renters and those unable to install rooftop solar (Energy Transition Summit, 2023).
United Energy	• Batteries were discussed as potential resilience measures, but stakeholders expressed concerns about their economic viability. They highlighted issues such as the lifespan of batteries and their potential redundancy as solar technology advances or personal batteries become more common. (Community Workshops, 2024). • Stakeholders recognised the increasing solar uptake as a driver for changes in energy solutions. For instance, the growth of household solar installations was acknowledged as a factor that might affect the rationale for certain resilience measures, like micro-grids. (Community Workshops, 2024). • Solar energy was seen by stakeholders as complementary to community batteries and micro-grids. It was suggested that the success of such solutions depends on the secure integration of solar into the grid. (Community Workshops, 2024). • Batteries were viewed by stakeholders as a possible supplement to other resilience solutions like undergrounding or micro-grids. However, stakeholders believed that batteries alone would not suffice and were "only a piece of the puzzle". (Community Workshops, 2024).
Commercial and Industrial	• C&I customers believe that investing in energy storage (e.g., batteries) presents a potential solution to enhance power quality and reliability, however, few were reluctant to accept sole responsibility for the management of the storage (Economic Growth Engagements, 2023). • Many C&I customers have invested in backup solutions, such as generators and battery storage, to mitigate the impact of short-term outages. These systems are seen as temporary measures and insufficient for addressing prolonged outages or power quality issues (Commercial and Industrial Customers Report, 2024).

Summary insights: **Reliability**

Pre-Test and Validate Broad Customer Insight
Customers are increasingly concerned about power quality and highlight that any disruption or issues can significantly impact their way of life.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Power quality was a growing concern for C&I customers with disruption impacting local industries and communities. They support proactive measures that will improve voltage stability and power quality, such as augmenting the network to support their own CER investments.	**Power quality was a growing concern for C&I customers with disruption impacting local industries and communities. They support proactive measures that will improve voltage stability and power quality, such as augmenting the network for their own CER investments.**	**Power quality was a growing concern for Commercial and Industrial customers with disruption impacting local industries and communities. They supported proactive measures that will improve voltage stability and power quality, such as augmenting the network for their own CER investments.**

Customer feedback used to develop insights located below

Summary insights: **Reliability**

	What we heard from customers
All customers	• Power quality has increased in priority across all customers, especially for Powercor and United Energy. Qualitative research with Rural and Regional customers suggests the increasing prioritisation of power quality was being driven by multiple factors, such as increased reliance on electricity supply since COVID has uplifted people to working remotely, a desire for greater equity between rural/regional metro, and an ability to participate in the energy transition (Customer Service Incentive Scheme, 2023). • Power quality emerged as a higher priority for improvement over other service areas across United Energy and Powercor business customers (when compared with residential customers) (Customer Service Incentive Scheme, 2023). • Stakeholders highlighted the need for backup measures before, during, and after power outages. They suggested deploying backup batteries and deployable generators in vulnerable communities, addressing road closure concerns, and prioritising community relief hubs for enhanced resilience (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Dairy farming plants and other agricultural or manufacturing production processes can be particularly sensitive to power quality disruptions. These disruptions may result in system re-starts with production delays and spoilt product (Powercor Rural and Regional Summit, 2023) • For customers, poor power quality can result in appliances or equipment not functioning as intended or prematurely failing. Most commonly, this could be flickering lights or appliances. (Powercor Rural and Regional Summit, 2023) • Improving reliability for 'worst-served' areas ranked second for residential customers (20.4% importance) amongst a possible 6 customer values (Customer Values Analysis, 2024). • High levels of disruption from voltage sags and harmonics were reported, impacting critical industries like dairy and irrigation. (Rural and Regional Summit Report, 2024) • Customers supported proactive leadership from Powercor in educating and guiding on managing power quality issues. (Rural and Regional Summit Report, 2024) • Customers and stakeholders proposed incorporating SAPS and microgrids to improve network stability and resilience. (Rural and Regional Summit Report, 2024) • Regular technology audits and tighter voltage regulatory standards were suggested to ensure alignment with evolving energy demands. (Rural and Regional Summit Report, 2024)
United Energy	• For customers who had experienced significant outages, the reliability of electricity was top of mind. However, for other customers who had experienced fewer outages (e.g., Rosebud) or no outages (e.g., Sandringham) reliability about electricity today was not a concern (United Energy Broad and Wide, 2022). • Power quality was a top-ranked priority for customers, particularly business customers (CSIS phase 1, 2023)
Customers experiencing vulnerability	• Customers understood that outages would happen from time to time and that, when they did occur, trusted CPPALUE to resolve them as quickly as possible to maintain reliability (Customers experiencing vulnerable circumstances, 2023). • CPPALUE were perceived to respond quickly to outages and maintenance issues, and provide proactive and clear communication, with most customers rating satisfaction with their distributor highly (Customers experiencing vulnerable circumstances, 2023).

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Summary insights: **Reliability**

	What we heard from customers
Commercial and Industrial	• The distinction between power quality and reliability isn't always clear to customers, as both aspects are vital in ensuring the uninterrupted and efficient functioning of their operations (Economic Growth Engagement, 2023). • Commercial and Industrial (C&I) customers are increasingly concerned about power quality. They view power quality as critical to their operations, as any disruptions or issues can significantly impact business productivity and equipment performance, leading to instantaneous loss of revenue and increased operating costs (Economic Growth Engagement, 2023). • Power quality is a critical concern for diverse customers, including dairy farmers, dairy processing facilities, and machinery manufacturing facilities across Victoria. Voltage sags, surges, and interruptions disrupt operations and pose financial and animal welfare risks in dairy farming and processing. Dairy processing facilities face significant losses during precise processes like cheese-making, while machinery manufacturing facilities require stable power to prevent defects and waste. (Economic Growth Engagement, 2023). • Backup solutions like generators and uninterruptible power supplies are costly barriers for both large and small farms and facilities. (Economic Growth Engagement, 2023). • Customers broadly supported asset replacement, harmonics management, and vegetation control as critical measures to maintain power quality. (Commercial and Industrial Customers Report, 2024). • Respondents stressed the importance of addressing voltage stability, particularly for businesses reliant on sensitive equipment. (Commercial and Industrial Customers Report, 2024). • Stakeholders sought more specific goals and metrics for proposed power quality initiatives, including harmonics management and regional augmentation. (Commercial and Industrial Customers Report, 2024). • Energy reliability and power quality were critical concerns across industries, with disruptions leading to operational and financial losses. (Commercial and Industrial Customers Report, 2024). • Momentary outages (e.g., voltage sags) were highly disruptive, causing costly resets and downtime (Commercial and Industrial Customers Report, 2024). • Sector-specific challenges highlighted included manufacturing delays, agricultural irrigation losses, and sensitive research disruptions at universities. (Commercial and Industrial Customers Report, 2024). • Customers welcome investment in augmenting the grid for greater renewable energy generation, but they want this coupled with the capacity for more of their own CER which they see as improve power reliability and quality. (Commercial and Industrial Customers Report, 2024) • In general, C&I customers find the concept of Distribution REZs highly appealing. However, it is important to acknowledge the key risk associated with this approach. There exists a possibility that the planned renewable energy generation may not materialize as expected, leading to unreliable supply or underutilised capacity (Economic growth forum, 2023).

Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
Resilience is regularly recognised across all three networks as a vital element of energy systems, particularly in light of rising climate-related disruptions. However, they prefer cost-effective solutions and are hesitant to bear the costs of expensive infrastructure upgrades.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Resilience was recognised as a vital element of energy systems, particularly in light of rising climate-related disruptions. **Customers preferred cost-effective solutions.**	**Resilience was a critical priority due to rising climate-related disruptions. Stakeholders and customers supported region-specific solutions like Stand-Alone Power Systems (SAPS) and infrastructure hardening for high-risk areas. Although they also desired large-scale investments such as SWER line upgrades they also wanted to pressure test that these types of solutions were cost-effective. A balanced approach combining targeted infrastructure improvements with community-focused initiatives, such as Community Support Officers (CSOs), was preferred.**	**Resilience was regularly recognised as a vital element of energy systems, particularly in light of rising climate-related disruptions. However, they preferred cost-effective solutions and were hesitant to bear the costs of expensive infrastructure upgrades. A balanced approach combining targeted infrastructure improvements with community-focused initiatives, such as Community Support Officers (CSOs), was preferred.**

Customer feedback used to develop insights located below

Summary insights: **Resilience**

What we heard from customers

All customers	• Stakeholders highlighted the vulnerability of electricity infrastructure and other critical utilities during extreme events and outages. Recommendations include prioritising the protection and restoration of critical infrastructure, increasing proactive measures, collaborating with other service providers, adjusting vegetation clearance practices, and exploring the undergrounding of powerlines for enhanced resilience and additional benefits such asa reduced urban heat island effect (JDB Resilience Framework and approach workshop, 2023). • Stakeholders proposed various proactive and reactive measures to enhance community resilience, emphasising the need for preparedness, connectedness, customer engagement, and support for vulnerable communities amidst increasing climate impacts. Recommendations include implementing community education and preparation, supporting renewable technologies, addressing the impact of large outages on community health, enhancing community connectedness, ensuring availability of Mobile Emergency Response Vehicles (MERVs) during outages, and transitioning to decentralised systems to improve resilience (JDB Resilience Framework and approach workshop, 2023).
United Energy	• Stakeholders generally supported resilience investments aimed at mitigating risks in high-risk areas like the Mornington Peninsula. There was consensus that these measures were critical for reducing the impact of extreme weather events, particularly in areas prone to bushfires and strong winds (Community Workshops, 2024). • Aerial Bundled Cabling was seen as a more cost-effective solution compared to undergrounding. Stakeholders recognised its potential for reducing the risk of outages caused by falling branches and vegetation interference. However, concerns were raised about whether ABC alone would suffice for high-risk areas that face prolonged outages or more severe weather-related events (Community Workshops, 2024). • Undergrounding was acknowledged as a more robust and permanent solution that would significantly enhance infrastructure resilience by eliminating overhead risks entirely. Stakeholders recognised the high upfront cost as a major barrier, particularly in rural or semi-rural areas where the infrastructure upgrade might not serve a large customer base (Community Workshops, 2024). • Stakeholders supported the use of MERVs during emergencies for communication and support, with recommendations for this role to include proactive community education and strategic deployment during crises (Community Workshops, 2024). • Stakeholders valued the role of officers in engaging with local communities and improving resilience planning. Suggestions included increasing the number of officers and ensuring they have strong liaison skills, particularly in high-risk areas like the Mornington Peninsula. (Community Workshops, 2024). • United Energy customers hold a consensus that extreme weather events will increase in the future and seek structurally sound infrastructure to withstand these events. Without information or well-informed ideas, underground assets and community batteries were suggested solutions to minimise disruptions; however, customers did not want to pay for what would likely be an expensive solution (United Energy Broad and Wide, 2022). • When asked to prioritise investment into improvements, residential customers prioritised improving network resilience (to reduce long-duration outages) (54.6% importance across five values tested) (Customer Values Analysis, 2024). • When asked to prioritise investment into improvements, United Energy SMB customers placed 53.4% importance on improving network resilience (to reduce long-duration outages from extreme weather events) (Customer Values Analysis, 2024). • Whilst United Energy SMB customers (5.18) see improving network resilience as being important, they are less willing than SMB customers in Powercor (5.43) and CitiPower (6.16) to share this cost (Customer Values Analysis, 2024). • Stakeholders recognised the need for targeted undergrounding infrastructure investment in high-risk areas, but there were discussions on the cost-effectiveness of aerial bundling versus undergrounding and considerations for vegetation management to also build community resilience (Community Workshops, 2024). • Single Pane of Glass was supported for its potential to improve communication and decision-making during emergencies. Participants suggested making the information accessible to the public and local authorities to enhance community resilience (Community Workshops, 2024). • Network resilience was the top priority for customers, with 79.7% willing to invest in improving service levels. This initiative was seen as critical for "future-proofing" the network against increasing extreme weather events. (Trade-Off Evaluations United Energy, 2024) • Though ranked lower than other initiatives, 67.6% of customers were willing to invest in improving community resilience, with a focus on supporting high-risk communities during and after extreme weather events. (Trade-Off Evaluations United Energy, 2024)

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Summary insights: **Resilience**

	What we heard from customers
Powercor	• Powercor customers have particular concerns about extreme weather events and expect Powercor to make targeted investments aligning with community feedback and providing cost-effective solutions. The topic was given higher priority by those who have personally experienced such events, and research to date suggests that it is hard for individuals to fully understand this topic unless they have personally experienced an extreme weather event (Powercor Rural and Regional Summit, 2023). • Powercor customer who has experienced the impacts of extreme weather events had a more precise opinion of where targeted investments could have an efficient effect (Powercor Rural and Regional Summit, 2023). • When asked to prioritise investment into improvements, residential customers prioritised improving network resilience (to reduce long-duration outages) (41.9% importance across six values tested) (Customer Values Analysis, 2024). • The relatively low rating of improving carbon emissions reduction further supports this trend, suggesting that for Powercor residential customers, addressing basic needs such as reliability and resilience are prioritised above environmental sustainability initiatives (Customer Values Analysis, 2024). • When asked to prioritise improvements Powercor SMB customers saw improving network resilience as the area of improvement that was most important at 35.6%. The second most important to Powercor SMB customers was Improving reliability for worst-served areas at 20.1% (Customer Values Analysis, 2024). • Rapid Earth Fault Current Limiters (REFCLs) were seen by stakeholders as critical for bushfire safety, but discussions focused on the necessity for flexibility of operating modes and the need for data analysis to optimise their use without compromising reliability. (Community Workshops, 2024). • Stakeholders appreciated the transparency and empowerment offered by the Single Pane of Glass, which consolidates information for better decision-making during wide-scale outages. Concerns were raised about ease of implementation, integration with existing systems, and data quality. (Community Workshops, 2024). • Support for micro-grids in specific areas like Trentham, Ballan, and Lancefield to provide reliable, independent energy supply during extreme weather events. Considerations included economic viability, integration with existing infrastructure, and expanding the program to other high-risk areas like Apollo Bay. (Community Workshops, 2024). • Customers gave high support for investment in network hardening to protect high-risk townships from extended outages, especially in the face of increasing extreme weather events. (Trade-Of Evaluations Powercor, 2024). • Hardening against extreme weather: Prioritisation was recommended by stakeholders for regions prone to bushfires and flooding, such as Northern and Western Victoria. Participants questioned the adequacy of the proposed budget. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders and customers expressed scepticism over cost-effectiveness and sought evidence of exploration into all viable alternatives before committing resources. (Rural and Regional Summit Report, 2024) • Stakeholders and customers supported resilience measures but stressed the need for clear definitions, balanced investments, and a proactive approach to future challenges. Community empowerment and ongoing engagement were seen as crucial for success. (Rural and Regional Summit Report, 2024) • Stakeholders and customers broadly supported investments but raised concerns about whether the $45 million SWER line upgrade proposal was sufficient and efficient. (Rural and Regional Summit Report, 2024) • Stand-Alone Power Systems (SAPS) were strongly recommended by stakeholders and customers as an alternative to SWER lines, offering improved reliability and reduced fire risks. (Rural and Regional Summit Report, 2024) • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions. (Rural and Regional Summit Report, 2024) • Stakeholders and customers advocated for adaptive, future-proof resilience strategies to address long-term challenges like climate change and rising energy demand. (Rural and Regional Summit Report, 2024) • Mixed reactions to "minimum service levels" highlighted concerns about the feasibility of uniform standards across diverse communities. (Rural and Regional Summit Report, 2024) • A balanced approach combining infrastructure hardening and community support initiatives was recommended. (Rural and Regional Summit Report, 2024)

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Summary insights: **Resilience**

	What we heard from customers
CitiPower	• Storms and heatwaves were a concern for customers, and they were aware that these events could lead to, or be compounded by, floods or bushfires, posing a significant ongoing threat to the resilience of power supply, even for areas not directly impacted. For this reason, customers prioritise taking preventative measures against vulnerable assets and electricity supply chains to ensure there are sufficient contingency plans (CitiPower Broad and Wide, 2022).
Commercial and Industrial customers	• Prolonged outages due to extreme weather events were a growing concern, highlighting the need for resilience-focused investments (Commercial and Industrial Customers Report, 2024).

Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
Customers believe that improving network resilience involves adapting to changing environmental and operational conditions related to energy transition.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers believed that improving network resilience requires adapting to the challenges of the energy transition and electrification, including increased demand from renewable integration, electrification of appliances, and grid stability concerns.	**Customers believed that improving network resilience involves adapting to changing environmental and operational conditions related to energy transition.**	**Customers believed that improving network resilience involves adapting to changing environmental and operational conditions related to energy transition.**

Customer feedback used to develop insights located below

Summary insights: **Resilience**

	What we heard from customers
All customers	• All communities tended to agree that climate change was driving events that impacted resilience, and the network had a very important role to play in achieving future resilience (Community Roundtables Resilience, 2022). • The DEF future scenarios consider the prediction of an increased frequency of extreme weather events based on climate models, regardless of emissions pathways, suggesting that individuals will emphasise using automated technologies to provide individuals greater control during extreme weather conditions. Additionally, this scenario aligns renewable resource availability with daily life and emphasises community resilience (Digital Energy Futures, 2023). • SIG stakeholders were conscious of the impact electrification may have on the stability of the grid. It was anticipated that peaks during extreme weather may be heightened, in particular, during winter where heating has predominantly been powered by gas. Similarly, cooktops were a large topic of conversation where demand was concerned, given their use by all customers within a similar time period. Gas stove replaced by induction cooktops were expected to place heavy demand on the grid during dinner time each day (Future Energy Network Forum, 2023). • Stakeholders highlighted the vulnerability of electricity infrastructure and other critical utilities during extreme events and outages. Recommendations include prioritising the protection and restoration of critical infrastructure, increasing proactive measures, collaborating with other service providers, adjusting vegetation clearance practices, and exploring the undergrounding of powerlines for enhanced resilience and additional benefits such as a reduced urban heat island effect (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Powercor customers sought better infrastructure to withstand extreme weather, raising the following ideas of undergrounding infrastructure, establishing community batteries and microgrids, the formation of a disaster recovery team and a support hub for customers to access basic needs during restoration (Powercor Broad and Wide, 2022). • Both residential and SMB customers shared mixed feelings towards proactive investments in EV infrastructure, with skepticism about subsidising EV owners because many did not own EVs and this initiative appeared to mainly benefit more affluent people despite the recognition of the need to future-proof the grid for growing EV adoption. (Trade-Off Evaluations, 2024). • Alternative supply sources: The Apollo Bay microgrid was praised, but stakeholders suggested optimising feeder connections to maximise impact. Microgrids and standalone systems were seen as critical for the worst-served areas (CitiPower, Powercor, and United Energy Roundtables, 2024). • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions (Rural and Regional Summit Report, 2024). • Stakeholders and customers advocated for adaptive, future-proof resilience strategies to address long-term challenges like climate change and rising energy demand. (Rural and Regional Summit Report, 2024). • Mixed reactions from stakeholders and customers to "minimum service levels" highlighted concerns about the feasibility of uniform standards across diverse communities (Rural and Regional Summit Report, 2024). • A balanced approach combining infrastructure hardening and community support initiatives was recommended (Rural and Regional Summit Report, 2024). • Stakeholders and customers supported resilience measures but stressed the need for clear definitions, balanced investments, and a proactive approach to future challenges. Community empowerment and ongoing engagement were seen as crucial for success (Rural and Regional Summit Report, 2024).
CitiPower	• CitiPower customers emphasise the importance of future-proofing the network to ensure resilience against extreme weather events and potential disruptions resulting from the increased use of renewables (particularly greater rooftop solar). For this reason, they wanted prioritisation of a reliable supply during the transition to renewable energy (CitiPower Broad and Wide, 2022). • Customers expressed interest in several measures to ensure the reliability of electricity supply at times of peak demand, such as localised storage solutions like batteries, better engineering responses to network strain, and changing usage behaviour at times of high demand (CitiPower Broad and Wide, 2022). • Stakeholders supported proactive asset replacement to future-proof the network while avoiding overinvestment. Minimising community disruption by coordinating upgrades with other utilities was recommended (CitiPower, Powercor, and United Energy Roundtables, 2024).
United Energy	• Customers expect United Energy to proactively address future electricity demand due to electrification, increased populations, and extreme weather events. They want assurance that the network can endure these challenges and provide continuous supply. Undergrounding assets and community batteries are considered potential solutions, but customers seek more information and cost considerations (United Energy Broad and Wide, 2022). • 72.5% of customers were willing to invest in electrification initiatives to prepare the network for increased electric vehicle (EV) adoption. However, there were concerns about equity, with many customers perceiving that paying more to accommodate additional EVs on the network would mean subsidising EV owners. (Trade-off Evaluations, 2024)

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Summary insights: **Resilience**

	What we heard from customers
Commercial and Industrial	• Industrial organisations accounted for approximately 30% of gas usage. Furthermore, it was noted that boilers (owned by many industrial organisations) needed to heat at a high temperature, one that electricity could not facilitate. Due to these requirements, industrial organisations had made significant investment in gas which led SIG stakeholders to question how these companies would be compensated for the transition (Future Energy Network Forum, 2023). • Prolonged outages due to extreme weather events were a growing concern, highlighting the need for resilience-focused investments (Commercial and Industrial Customers Report, 2024).

Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
Regional Customers expect distributors to play a critical role in proactive and reactive disaster management with communities and develop a prudent future plan tailored to communities for climate-related extremes.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**Rural and regional customers expected distributors to play a critical role in proactive and reactive disaster management with communities. It was expected that a prudent future plan was developed and tailored to communities for climate-related extreme events.**	**Rural and regional customers expected distributors to play a critical role in proactive and reactive disaster management with communities and develop a prudent future plan tailored to communities for climate-related extremes.**

Customer feedback used to develop insights located below

Summary insights: **Resilience**

	What we heard from customers
All customers	• Stakeholders stressed the importance of communication for resilience, suggesting proactive and reactive strategies.They recommended improving pre-emptive communication, engaging with diverse communities, and collaborating with other service providers for better communication during and after events, enhanced Estimated Time to Recovery accuracy, and sharing real-time data (JDB Resilience Framework and approach workshop, 2023). • Stakeholders highlighted the need for backup measures before, during, and after power outages. They suggested deploying backup batteries and deployable generators in vulnerable communities, addressing road closure concerns, and prioritising community relief hubs for enhanced resilience (JDB Resilience Framework and approach workshop, 2023). • Stakeholders expressed concerns about networks being repeatedly rebuilt due to increasing extreme weather events. Participants overwhelmingly support both proactive and reactive resilience investment (JDB Resilience Framework and approach workshop, 2023). • Stakeholders highlighted the vulnerability of electricity infrastructure and other critical utilities during extreme events and outages. Recommendations include prioritising the protection and restoration of critical infrastructure, increasing proactive measures, collaborating with other service providers, adjusting vegetation clearance practices, and exploring the undergrounding of powerlines for enhanced resilience and additional benefits such as reduced urban heat island effect (JDB Resilience Framework and approach workshop, 2023). • Stakeholders proposed various proactive and reactive measures to enhance community resilience, emphasising the need for preparedness, connectedness, customer engagement, and support for vulnerable communities amidst increasing climate impacts. Recommendations include implementing community education and preparation, supporting renewable technologies, addressing the impact of large outages on community health, enhancing community connectedness, ensuring availability of Mobile Emergency Response Vehicles (MERVs) during outages, and transitioning to decentralised systems to improve resilience (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Customers express a desire for Powercor to adopt a measured and strategic approach to disaster preparedness and recovery rather than resorting to excessive investment measures, emphasising the importance of aligning with community feedback and needs that would yield the greatest impact (Powercor Rural and Regional Summit, 2023). • For customers who have experienced an extreme weather event, investment in non-network solutions was prioritised, such as SAPS (Standalone power systems) and microgrids. Additionally, mobile emergency response vehicles (MERVs) are seen to play a critical role in supporting both practical and psychological needs during disaster recovery and response (Powercor Rural and Regional Summit, 2023). • Customers felt that any response by Powercor should be in collaboration with the community and finely tuned to their specific needs. Any rebuild approach must adopt a holistic approach that matches the community they are engaging with to ensure other areas of infrastructure do not face more difficulty (Powercor Rural and Regional Summit, 2023). • Support for micro-grids in specific areas like Trentham, Ballan, and Lancefield to provide reliable, independent energy supply during extreme weather events. Considerations included economic viability, integration with existing infrastructure, and expanding the program to other high-risk areas like Apollo Bay (Community Workshops, 2024). • Community Liason officers were seen as vital for building local knowledge and improving communication and collaboration with communities during emergencies. Suggestions included increasing the number of officers to better serve diverse regions and vulnerable communities. (Community Workshops, 2024). • The rural and regional roadmap was viewed by stakeholders and customers positively as a strategic step but required clarity on timelines and town-level impacts to build community confidence (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders supported investments in mobile emergency response vehicles and liaison officers, recommending prioritisation of vulnerable populations (CitiPower, Powercor, and United Energy Roundtables, 2024). • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions (Rural and Regional Summit Report, 2024) • Stakeholders and customers advocated for adaptive, future-proof resilience strategies to address long-term challenges like climate change and rising energy demand (Rural and Regional Summit Report, 2024). • Mixed reactions from stakeholders and customers to "minimum service levels" highlighted concerns about the feasibility of uniform standards across diverse communities (Rural and Regional Summit Report, 2024). • A balanced approach combining infrastructure hardening and community support initiatives was recommended (Rural and Regional Summit Report, 2024).

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Summary insights: **Resilience**

	What we heard from customers
United Energy	• Stakeholders supported the use of MERVs during emergencies for communication and support, with recommendations for this role to include proactive community education and strategic deployment during crises (Community Workshops, 2024). • Stakeholders valued the role of officers in engaging with local communities and improving resilience planning. Suggestions included increasing the number of officers and ensuring they have strong liaison skills, particularly in high-risk areas like the Mornington Peninsula. (Community Workshops, 2024).

Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
Customers see a necessity of collaboration between communities, energy distributors, and government, to tackle climate-driven resilience challenges. This collaboration should prioritise affordability and safety for all customers, while ensuring long-term reliability and sustainability, especially in rural areas.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**Customers emphasised the importance of strategic collaboration between communities, energy distributors, and government to address climate-driven resilience challenges. This collaboration should strengthen local resilience, prioritise affordability, safety, and adopt innovative, future-proof solutions to ensure long-term reliability and sustainability, particularly in regional and rural areas.**	**Customers emphasised the importance of strategic collaboration between communities, energy distributors, and government to address climate-driven resilience challenges. This collaboration should strengthen local resilience, prioritise affordability and safety, and adopt innovative, future-proof solutions to ensure long-term reliability and sustainability, particularly in rural areas.**

Customer feedback used to develop insights located below

Summary insights: **Reliability**

	What we heard from customers
All customers	• Communities express the importance of a collaborative partnership with both the distributor and governments to address climate-driven resilience challenges and suggest the need for a community leadership manager to provide expertise and support in achieving a resilient future (Community Roundtables Resilience, 2022) • 24% of customers surveyed ranked 'Affordability and cost-effectiveness' as a top value, 52% of customers ranked 'Comfort, health and safety" as a top value. These must be considered for all customers, including vulnerable customers when considering sustainability and environmental improvement measures. (Future Home Demand, 2023) • Residential customers were neutral on their willingness to invest in energy infrastructure to ensure long term reliability, sustainability and affordability, which may be influenced by concerns regarding cost-of-living (Customer Values Analysis, 2024). • Stakeholders strongly supported incorporating community vulnerability into site selection for proactive investment, stressing the need for consultation with vulnerable communities and First Nations groups. They recommended standardised climate modeling for consistency and advocated for a comprehensive understanding of vulnerability, including socio-economic factors (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Improving reliability for 'worst-served' areas ranked second (20.4% importance) by residential customers (Customer Values Analysis, 2024). • Secondary TURF (total unduplicated reach and frequency) analysis indicates that improving reliability for *worst served customers* is consistently grouped with improvements to network resilience in the top responses for Powercor residential customers (Customer Values Analysis, 2024). • These preferences may be attributed, in part, to Powercor residential customers experiencing lower levels of reliability and reporting a higher frequency of interruptions due to climate events compared to metro networks (Customer Values Analysis, 2024). • Powercor SMB customers were asked about reliability for everyone in their network. The majority preferred to pay the same for no change in their network reliability (Customer Values Analysis, 2024). • Rapid Earth Fault Current Limiters (REFCLs) were seen by stakeholders as critical for bushfire safety, but discussions focused on the necessity for flexibility of operating modes and the need for data analysis to optimise their use without compromising reliability. (Community Workshops, 2024). • Stakeholders appreciated the transparency and empowerment offered by the Single Pane of Glass, which consolidates information for better decision-making during wide-scale outages. Concerns were raised about ease of implementation, integration with existing systems, and data quality. (Community Workshops, 2024). • Support for micro-grids in specific areas like Trentham, Ballan, and Lancefield to provide reliable, independent energy supply during extreme weather events. Considerations included economic viability, integration with existing infrastructure, and expanding the program to other high-risk areas like Apollo Bay. (Community Workshops, 2024). • Community Liaison officers were seen as vital for building local knowledge and improving communication and collaboration with communities during emergencies. Suggestions included increasing the number of officers to better serve diverse regions and vulnerable communities. (Community Workshops, 2024). • Stakeholders supported investments in mobile emergency response vehicles and liaison officers, recommending prioritisation of vulnerable populations. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions. (Rural and Regional Summit Report, 2024) • Strengthening community bonds through energy initiatives was seen as essential for enhancing local resilience during crises (Rural and Regional Summit Report, 2024). • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions (Rural and Regional Summit Report, 2024). • Stakeholders and customers advocated for adaptive, future-proof resilience strategies to address long-term challenges like climate change and rising energy demand (Rural and Regional Summit Report, 2024). • A balanced approach combining infrastructure hardening and community support initiatives was recommended (Rural and Regional Summit Report, 2024).
CitiPower	• CitiPower are more likely than other networks to be willing to pay more in the short term to facilitate energy upgrades to improve long-term reliability (Customer Values Analysis, 2024). • CitiPower SMB customers were more inclined to pay for improvements in others' supply and to ensure everyone gets a reasonable standard of reliability than SMB customers in other networks. (Customer Values Analysis, 2024).

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Summary insights: **Reliability**

	What we heard from customers
Commercial and Industrial	• Some C&I customers believed energy storage posed a viable option to support improvements to power quality and reliability (Economic Growth Engagement, 2023). • Most C&I customers discussed the importance of taking a longer-term perspective, recognising the broader implications of inefficiencies, including loss of economic production. This was particularly acute for rural and regional C&I customers (Economic Growth Engagement, 2023). • Customers expressed a desire for distributors to move beyond transactional relationships and adopt a more strategic and collaborative approach. They emphasised the importance of joint planning for infrastructure upgrades, renewable energy integration, and long-term energy reliability (Commercial and Industrial Customers Report, 2024). • Customers saw potential for collaboration in piloting new technologies, such as smart grids and energy storage solutions, to future-proof their operations while enhancing network resilience. (Commercial and Industrial Customers Report, 2024).
United Energy	• United Energy residential customers wanted to proactively address future electricity; however, they wanted assurance that the network could endure demand challenges and provide continuous supply (United energy broad and wide, 2022). • Stakeholders generally supported resilience investments aimed at mitigating risks in high-risk areas like the Mornington Peninsula. There was consensus that these measures were critical for reducing the impact of extreme weather events, particularly in areas prone to bushfires and strong winds (Community Workshops, 2024). • Aerial Bundled Cabling was seen as a more cost-effective solution compared to undergrounding. Stakeholders recognised its potential for reducing the risk of outages caused by falling branches and vegetation interference. However, concerns were raised about whether ABC alone would suffice for high-risk areas that face prolonged outages or more severe weather-related events (Community Workshops, 2024). • Undergrounding was acknowledged as a more robust and permanent solution that would significantly enhance infrastructure resilience by eliminating overhead risks entirely. Stakeholders recognised the high upfront cost as a major barrier, particularly in rural or semi-rural areas where the infrastructure upgrade might not serve a large customer base (Community Workshops, 2024). • Stakeholders supported the use of MERVs during emergencies for communication and support, with recommendations for this role to include proactive community education and strategic deployment during crises (Community Workshops, 2024). • Stakeholders valued the role of officers in engaging with local communities and improving resilience planning. Suggestions included increasing the number of officers and ensuring they have strong liaison skills, particularly in high-risk areas like the Mornington Peninsula. (Community Workshops, 2024).
First Nations	• During the exploratory phase of research, Indigenous Australian customers wanted to know how Powercor would improve reliability in the future, particularly in the context of extreme weather events and frequent outages (Yorta Yorta Country Broad and Wide, 2023).

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Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
In times of emergency, customers expect to be able to rely on their distributor, in conjunction with other stakeholders like the government, to play a vital role in restoring power to regional communities, with special attention given to the needs of vulnerable customers.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**In times of emergency, customers expected to be able to rely on their distributor, in conjunction with other stakeholders like the government, to play a vital role in restoring power to regional communities, with special attention given to the needs of vulnerable customers.**	**In times of emergency, customers expected to be able to rely on their distributor, in conjunction with other stakeholders like the government, to play a vital role in restoring power to regional communities, with special attention given to the needs of vulnerable customers.**

Customer feedback used to develop insights located below

Summary insights: **Resilience**

	What we heard from customers
All customers	• Customers see the energy network as a shared resource and are willing to invest more into resilient infrastructure solutions to improve reliability, particularly for underserved and extreme weather-prone regions (CPPALUE ideation workshop, 2022). • Power quality is a high priority for customers, driven by greater electricity reliance, remote work and equity concerns, seeing renewable energy transitions as part of the solution to these concerns (Customer Service Incentive Scheme, 2023). • Stakeholders highlighted the need for backup measures before, during, and after power outages. They suggested deploying backup batteries and deployable generators in vulnerable communities, addressing road closure concerns, and prioritising community relief hubs for enhanced resilience (JDB Resilience Framework and approach workshop, 2023). • Workshop participants stressed the importance of communication for resilience, suggesting proactive and reactive strategies. They recommended improving pre-emptive communication, engaging with diverse communities, and collaborating with other service providers for better communication during and after events, enhanced Estimated Time to Recovery accuracy, and sharing real-time data (JDB Resilience Framework and approach workshop, 2023). • Participants emphasised the importance of collaboration among distribution businesses, service providers, councils, and communities to enhance community resilience. Recommendations include increasing collaboration to improve restoration efficiency, avoiding duplication of efforts, involving community leaders in emergency management preparation (JDB Resilience Framework and approach workshop, 2023). • Stakeholders highlighted the vulnerability of electricity infrastructure and other critical utilities during extreme events and outages. Recommendations include prioritising the protection and restoration of critical infrastructure, increasing proactive measures, collaborating with other service providers, adjusting vegetation clearance practices, and exploring the undergrounding of powerlines for enhanced resilience and additional benefits such as reduced urban heat island effect (JDB Resilience Framework and approach workshop, 2023). • Stakeholders proposed various proactive and reactive measures to enhance community resilience, emphasising the need for preparedness, connectedness, customer engagement, and support for vulnerable communities amidst increasing climate impacts. Recommendations include implementing community education and preparation, supporting renewable technologies, addressing the impact of large outages on community health, enhancing community connectedness, ensuring availability of Mobile Emergency Response Vehicles (MERVs) during outages, and transitioning to decentralised systems to improve resilience (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Community Liason officers were seen as vital for building local knowledge and improving communication and collaboration with communities during emergencies. Suggestions included increasing the number of officers to better serve diverse regions and vulnerable communities. (Community Workshops, 2024). • Stakeholders supported investments in mobile emergency response vehicles and liaison officers, recommending prioritisation of vulnerable populations. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Broad support for resilience initiatives focused on Community Support Officers (CSOs) to bridge gaps during emergencies, with calls for clear role definitions. (Rural and Regional Summit Report, 2024)
United Energy	• Stakeholders supported the use of MERVs during emergencies for communication and support, with recommendations for this role to include proactive community education and strategic deployment during crises (Community Workshops, 2024). • Stakeholders valued the role of officers in engaging with local communities and improving resilience planning. Suggestions included increasing the number of officers and ensuring they have strong liaison skills, particularly in high-risk areas like the Mornington Peninsula. (Community Workshops, 2024).

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Summary insights: **Resilience**

	What we heard from customers
Customers experiencing vulnerability	• Customers are interested in strengthening resilience and access to energy in emergencies for vulnerable persons. Participants highlight the vital role of community hubs, mobile emergency response vehicles and improving information dissemination for emergency preparedness (Customer Vulnerability roundtable, 2023). • Customers experiencing vulnerability also wanted CPPALUE to communicate its vision for the future, especially regarding backup plans for managing major outages in rural and regional areas (Customers Experiencing Vulnerable Circumstances, 2023). • According to rural and regional customers, who faced greater vulnerability to extreme weather and reliability challenges, there was a strong emphasis on the need for clear, timely communication from CPPALUE about outages (Customers Experiencing Vulnerable Circumstances, 2023). • When asked what customers' priority areas were regarding electricity, timely outage awareness messages during unplanned outages and accurate outage restoration times were typically in the top two priorities (Customers Experiencing Vulnerable Circumstances, 2023). • Customers understood that outages would happen from time to time and that, when they did occur, trusted CPPALUE to resolve it as quickly as possible to maintain reliability (Customers Experiencing Vulnerable Circumstances, 2023). • Stakeholders strongly supported incorporating community vulnerability into site selection for proactive investment, stressing the need for consultation with vulnerable communities and First Nations groups. They recommended standardised climate modeling for consistency and advocated for a comprehensive understanding of vulnerability, including socio-economic factors (JDB Resilience Framework and approach workshop, 2023).

Summary insights: **Resilience**

Pre-Test and Validate Broad Customer Insight
Customers stress the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also includes pre-emptive communication of contingency plans for when crises occur.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also includes pre-emptive communication of contingency plans for when crises occur.	**Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also included pre-emptive communication of contingency plans for when crises occur.**	**Customers stressed the importance of transparent communication and education, especially during crises, to stay informed about outage causes, recovery times, and preparedness measures. This also included pre-emptive communication of contingency plans for when crises occur.**

Customer feedback used to develop insights located below

Summary insights: **Resilience**

	What we heard from customers
All customers	• Customers highly value services related to outage communication, whereas business customers have higher anxiety related to outage impacts (Customer Service Incentive Scheme, 2023). • Unplanned outages are the most common issue affecting customers in relation to supply (Energy and Water Ombudsman Victoria, 2022) • Trust often hinges on the distributors' reliability and reputation (Sagacity Research Brand Tracker, 2023). • Stakeholders stressed the importance of communication for resilience, suggesting proactive and reactive strategies. They recommended improving pre-emptive communication, engaging with diverse communities, and collaborating with other service providers for better communication during and after events, enhanced Estimated Time to Recovery accuracy, and sharing real-time data (JDB Resilience Framework and approach workshop, 2023). • Stakeholders proposed various proactive and reactive measures to enhance community resilience, emphasising the need for preparedness, connectedness, customer engagement, and support for vulnerable communities amidst increasing climate impacts. Recommendations include implementing community education and preparation, supporting renewable technologies, addressing the impact of large outages on community health, enhancing community connectedness, ensuring availability of Mobile Emergency Response Vehicles (MERVs) during outages, and transitioning to decentralised systems to improve resilience (JDB Resilience Framework and approach workshop, 2023).
Powercor	• Customers highly value a well-managed planned outage process but are generally satisfied with Powercor's current service (Powercor Rural and Regional Summit, 2023). • According to rural and regional customers, who faced greater vulnerability to extreme weather and reliability challenges, there was a strong emphasis on the need for clear, timely communication from CPPALUE about outages (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers also wanted CPPALUE to communicate its vision for the future, especially regarding backup plans for managing major outages in rural and regional areas (Customers Experiencing Vulnerable Circumstances, 2023). • The rural and regional roadmap was viewed by stakeholders positively as a strategic step but required clarity on timelines and town-level impacts to build community confidence (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholder and customer calls for a more inclusive and comprehensive "Regional and Rural Roadmap" indicated dissatisfaction with limited stakeholder input in current planning (Rural and Regional Summit Report, 2024). • Strengthening community bonds through energy initiatives was seen by stakeholders and customers as essential for enhancing local resilience during crises (Rural and Regional Summit Report, 2024).
Customers experiencing vulnerability	• Customers expected outages to sometimes occur, but wanted to receive proactive and transparent communication. Notification letters were preferred for initial notice of planned outages, but emails and SMS were preferred for reminders and notification of unplanned outages Rural and regional vulnerable customers (Customers Experiencing Vulnerable Circumstances, 2023). • Customers preferred to receive detailed communications with as much notice as possible via a mixed communication method (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers also wanted CPPALUE to communicate its vision for the future, especially regarding backup plans for managing major outages in rural and regional areas (Customers Experiencing Vulnerable Circumstances, 2023). • According to rural and regional customers, who faced greater vulnerability to extreme weather and reliability challenges, there was a strong emphasis on the need for clear, timely communication from CPPALUE about outages (Customers Experiencing Vulnerable Circumstances, 2023). • When asked what customers' priority areas were regarding electricity, timely outage awareness messages during unplanned outages and accurate outage restoration times were typically in the top two priorities (Customers Experiencing Vulnerable Circumstances, 2023).

Affordability and Equity

How does the business frame Affordability and Equity:

"We need to ensure we support customers experiencing vulnerability due to loss of supply or difficulty accessing our services; manage a just transition to ensure that no one is left behind in the transition; improve regional and rural equity and also ensure we continue to deliver value for money to customers" (CitiPower, Powercor and United Energy's Customer Narrative)

What affordability means to customers

- Customers perceive affordability in this context as ensuring that the cost of energy services and tariffs is reasonable and manageable for all customers.
- Critically, affordability for most customers does not equate to the **amount** they pay for electricity, rather the perception that they are receiving **value** for their money (e.g., reliable supply).

What equity means to customers

- Customers associate equity with the idea of guaranteeing equal access to dependable and resilient energy services for all customers and communities, especially during crises and amidst changing energy environments.
- This aspiration for equitable access also encompasses consumer energy resources (CER).

Context

Customers find themselves in a challenging environment marked by a national energy market crisis, rising electricity and gas bills, and economic pressures. Unprecedented events such as cyber-attacks, severe weather, and global conflicts impact affordability and equity concerns, as inflation rates rise and living costs increase. These factors set the backdrop for customers' heightened needs and preferences in the energy sector, driving requests for assistance and emphasising the importance of addressing affordability and equity in this complex context.

Summary insights: **Affordability**

Pre-Test and Validate Broad Customer Insight
Customers are forward-thinking while considering network improvements, preferring that if there are any necessary costs, for them to be gradual; ensuring affordability into the future.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers were forward-thinking while considering network improvements, preferring that if there were any necessary costs, for them to be gradual; ensuring affordability into the future.	**Customers prioritised affordability when considering network improvements, favouring gradual, targeted upgrades that balance reliability with cost-effectiveness, particularly in light of rising energy costs.**	**Customers prioritised affordability when considering network improvements, favouring gradual, targeted upgrades that balance reliability with cost-effectiveness, particularly in light of rising energy costs.**

Customer feedback used to develop insights located below

Summary insights: **Affordability**

	What we heard from customers
All customers	• 24% of customers surveyed ranked 'Affordability and cost-effectiveness' as a top value. These must be considered for all customers, including vulnerable customers, when considering sustainability and environmental improvement measures. (Future Home Demand, 2023) • Government, Customer, Industry, Energy and Retailer stakeholders emphasised the critical need to adopt a comprehensive and multifaceted approach for the effective integration of CER into the energy system and one that prioritises affordability and equitable access (Victoria Electricity Distributors tariff structure, 2023). • The majority of residential customers prefer to pay the same for their existing service rather than paying more for improvements (Customer Values Analysis, 2024). • Customers indicated little willingness to pay for improvements for themselves or others (Customer Values Analysis, 2024). • Customers were neutral on their willingness to invest in energy infrastructure to ensure long term reliability, sustainability and affordability. Which may be influenced by concerns regarding cost-of-living pressures (Customer Values Analysis, 2024). • Stakeholders raised concerns about fair cost distribution for resilience investments, especially between safe and vulnerable communities. Recommendations included, share cost benefit analyses publicly, reassess cost distribution for equity, and explore assessment models quantifying potential savings from risk reduction (JDB Resilience Framework and approach workshop, 2023). • Stakeholders expressed concerns about networks being repeatedly rebuilt due to increasing extreme weather events. Participants overwhelmingly support both proactive and reactive resilience investment (JDB Resilience Framework and approach workshop, 2023). • Customers indicated little willingness to pay for improvements for themselves or others (Customer Values Analysis, 2024). • Customers were neutral on their willingness to invest in energy infrastructure to ensure long term reliability, sustainability and affordability. Which may be influenced by concerns regarding cost-of-living pressures (Customer Values Analysis, 2024).
Powercor	• Customers expressed that limited access to capacity hindered business scalability, causing economic uncertainty in rural/regional areas. In a summit vote, potential costs associated with network upgrades didn't deter their prioritisation; instead, some customers proposed staggering the costs over multiple years (Powercor Rural and Regional Summit, 2023) • Stakeholders supported proactive upgrades to enhance reliability and provide long-term visibility benefits. Suggestions included targeted rollouts to manage costs effectively (CitiPower, Powercor, and United Energy Roundtables, 2024). • Customers and stakeholders expressed scepticism over cost-effectiveness of SWER-line upgrades and sought evidence of exploration into all viable alternatives before committing resources (Rural and Regional Summit Report, 2024).
CitiPower	• Customers across the board were worried about long-term price stability despite expecting short-term price increases. They sought increased transparency and clarity regarding price hikes to plan for the future with confidence. They recognised the heightened impact of price instability on financially vulnerable customers, which emphasised the importance of addressing these concerns (CitiPower Broad and Wide, 2022). • Customers' priorities and concerns regarding affordability and equity reflected a need for a level of stability and certainty to help them plan their lives. The importance they placed on achieving equity for all customers showed that they were also thinking beyond their individual needs and considering the welfare and needs of the wider society and the State (CitiPower Broad and Wide, 2022). • CitiPower customers are more likely than other networks to be willing to pay more in the short term to facilitate energy upgrades to improve long-term reliability (Customer Values Analysis, 2024). • Stakeholders showed medium support for proactive meter replacements, citing immediate reliability benefits and improved network visibility. A targeted rollout approach and clear communication were recommended (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders supported proactive asset replacement to future-proof the network while avoiding overinvestment. Minimising community disruption by coordinating upgrades with other utilities was recommended (CitiPower, Powercor, and United Energy Roundtables, 2024).

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Summary insights: **Affordability**

	What we heard from customers
Commercial and Industrial	• [On the value of reducing CO2 emissions] Business customers preferred more gradual improvements as long as they were continuous: "we don't need to shock the system at once." Instead, they wanted a targeted approach with clear communication on the approach (plus implications) to be willing to invest more heavily (Customer Valuation Of Service Improvements, 2021) • Rising energy costs and volatile pricing hindered budgeting and delayed investments in energy infrastructure (Commercial and Industrial Customers Report, 2024).
United Energy	• United Energy customers prefer gradual cost increases over immediate spikes, especially in light of increased investment in renewable energy infrastructure. They want to ensure that the transition to cleaner energy sources results in manageable price hikes for consumers (United Energy Broad and Wide, 2022). • Customers, especially in Rosebud, related discussions about energy transformation to concerns about affordability and equity. They worried about potential bill impacts from increased infrastructure investment to support renewables. Customers preferred spreading these costs over time rather than facing substantial immediate price hikes while understanding the need for network readiness for the future (United Energy Broad and Wide, 2022). • Across all initiatives, there was a clear reluctance to accept maximum bill impacts, with most customers preferring moderate investment options that balanced service improvements with affordability. (Trade-Off Evaluations, 2024) • Stakeholders showed strong support for a proactive metering approach due to immediate benefits such as reliability and enhanced energy usage visibility. Participants stressed the importance of transparent communication regarding rollout benefits and privacy assurances, so customers would understand the value in the metering replacement. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders recommended front-loading the innovation fund investment within the regulatory period to maximise immediate benefits, rather than holding on to revenue. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Summary insights: **Affordability**

Pre-Test and Validate Broad Customer Insight
In the face of escalating living costs, customers prioritise affordability and value for money in their electricity service. They are keen on transparent investments and pricing practices to ensure costs are perceived as a meaningful investment

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
In the face of rising energy costs, customers prioritised affordability, value for money, and transparency in their electricity service. They seek clearer communication on cost allocation and measurable outcomes of investments to ensure that spending is perceived as meaningful and aligned with their needs.	**Amid rising living costs, customers emphasised affordability and clarity in electricity services, expressing scepticism over cost-effectiveness and a desire for transparent, measurable investments that demonstrate tangible value.**	**In the face of escalating living costs, customers prioritised affordability and value for money in their electricity service. They strongly emphasised transparent communication about investments and pricing to ensure costs are perceived as a meaningful and equitable benefit. Businesses, particularly SMBs, show higher cost sensitivity and prioritise clear, direct benefits from energy initiatives.**

Customer feedback used to develop insights located below

Summary insights: **Affordability**

	What we heard from customers
All customers	• Most customers highlighted climate change and the increasing likelihood of major outage events, however, they did worry that investments in resilience was a “black hole” issue where work may continue indefinitely without noticeable or tangible improvements; hence, transparency was important to understand where their money was going. (Customer Valuation Of Service Improvements, 2021) • Customers found it difficult to define what value meant in the context of their electricity bill. This led many customers to believe that more transparency regarding pricing was needed (CALD Broad and Wide, 2022).
Powercor	• Customers found value in learning more about Powercor's responsibilities and tasks in delivering electricity, expressing a desire for increased understanding of Powercor's role, particularly when encountering issues and knowing whom to contact (retailer, local council, or Powercor) (Powercor Broad and Wide, 2022). • Small and medium-sized businesses (SMBs) displayed higher cost sensitivity, often preferring zero-cost or minimal investment options to avoid significant increases in operational expenses. (Trade-Off Evaluations Powercor, 2024). • When asked about the improvements, almost half of Residential and SMB customers felt that the bill impact represented value for the service that they received (48.4% vs 39.9%) (Test and Validate, 2024). • Stakeholders supported proactive upgrades to enhance reliability and provide long-term visibility benefits. Suggestions included targeted rollouts to manage costs effectively (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders and customers expressed scepticism over cost-effectiveness and sought evidence of exploration into all viable alternatives before committing resources (Rural and Regional Summit Report, 2024). • Distrust around the execution of proposals was tied to concerns over cost blowouts and timelines, emphasising the need for transparency (Rural and Regional Summit Report, 2024).
CitiPower	• Some customers found it difficult to define what value meant in the context of their electricity bill. Many customers believed that more transparency regarding pricing was important (CitiPower Broad and Wide, 2022). • SMBs showed higher cost sensitivity, often preferring the lowest-cost options across initiatives to minimise the impact on their operations.(Trade-Off Evaluations, 2024). • There was a clear reluctance to accept the maximum bill impacts associated with the highest levels of service improvement. Both residential and SMB customers preferred moderate investments that balanced service improvements with affordability (Trade-Off Evaluations, 2024). • Half of Residential and SMB customers saw value for the service that they would receive in the CitiPower proposal and associated bill impact (49.4%vs 55.0%) (Test and Validate Program, 2024). • Participants showed medium support for proactive meter replacements, citing immediate reliability benefits and improved network visibility. A targeted rollout approach and clear communication were recommended so customers saw value in the meter replacement (CitiPower, Powercor, and United Energy Roundtables, 2024). • Participants supported proactive asset replacement to future-proof the network while avoiding overinvestment. Minimising community disruption by coordinating upgrades with other utilities was recommended (CitiPower, Powercor, and United Energy Roundtables, 2024).
United Energy	• Customers found high value in their electricity bills after being informed about the various activities undertaken by United Energy. They expressed particular interest in drone inspections for infrastructure, vegetation management, and cyber security. Many customers were unaware of United Energy and its role before the engagement, leading to concerns about knowing whom to contact during outages. They suggested utilising TV ads to build awareness without overwhelming communication (United Energy Broad and Wide, 2022). • UE business customers were more hesitant to pay for outcomes that didn’t have a clear, direct personal benefit in the short term (Customer Valuation Of Service Improvements, 2021) • Customers were generally unwilling to invest in initiatives with high associated costs, particularly those that did not directly benefit them. This was especially true for small and medium-sized businesses (SMBs), which showed higher cost sensitivity. (Trade-Off Evaluations, 2024). • Half of Residential and SMB customers saw value for the service that they would receive in the United Energy proposal and associated bill impact (45.7% vs 54.3%) (Test and Validate, 2024). • Strong support was shown for a proactive metering approach due to immediate benefits such as reliability and enhanced energy usage visibility to support energy management (CitiPower, Powercor, and United Energy Roundtables, 2024)

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Summary insights: **Affordability**

	What we heard from customers
Commercial and Industrial	• [Business customer response to the value of CO2 reduction] "All businesses have a responsibility to reduce GHG [Greenhouse gases]. I don't know what they [distributors] are doing, if I did know I would be more likely to pay. I don't want to put money into a black hole that just goes on forever." (Customer Valuation of Service Improvements, 2021) • Broad support existed for draft proposal infrastructure upgrades to enhance reliability and integrate renewable energy, but customers sought clearer measurable outcomes (Commercial and Industrial Customers Report, 2024). • Customers viewed the proposal positively but called for improved clarity on cost allocation and alignment with customer needs (Commercial and Industrial Customers Report, 2024). • Rising energy costs and volatile pricing hindered budgeting and delayed investments in energy infrastructure (Commercial and Industrial Customers Report, 2024).
Customers experiencing vulnerability	• Compared with the broader customer base which typically equated affordability to the value they received for their money (e.g., reliable supply), vulnerable customers were more likely to equate affordability to the amount they paid due to limited disposable income (Customers Experiencing Vulnerable Circumstances, 2023). • High energy costs were a primary concern, with flexibility to alter usage limited by factors including work status, place of work, medical / disability status and income (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Affordability**

Pre-Test and Validate Broad Customer Insight
Customers from all networks want educational and technological resources to empower them to tailor energy usage for cost savings. C&I and vulnerable customers see their tariffs as a tool to cut electricity expenses but seek a better understanding to utilise this capability

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers, especially those experiencing vulnerability, wanted educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.	**Customers, especially those experiencing vulnerability, wanted educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.**	**Customers, especially those experiencing vulnerability, want educational and technological resources to empower them to tailor energy usage for cost savings. Stakeholders and advocates suggested safeguard mechanisms and supported customer assistance package initiatives to support vulnerable customers with education, cost of transition and affordability.**

Customer feedback used to develop insights located below

Summary insights: **Affordability**

	What we heard from customers
All customers	• Research into key household values and priorities suggests that continued focus on cost-reflective pricing or financial rewards may undermine the potential for customers to participate in demand management, especially if economic measures are perceived to compromise comfort, health, and safety (Future Home Demand, 2023). • Customers find pricing and bill strategies difficult to understand and are interested in making electricity more affordable through accessing real-time data on household consumption to promote more affordable energy consumption (CPPALUE Internal Ideation Workshop, 2022) • Government, Customer, Industry, Energy and Retailer stakeholders highlight a shifting energy paradigm marked by prosumers and evolving usage patterns that necessitate thoughtful tariff adjustments to manage network change effectively. With the rise of EVs and electrical appliances, tariffs should encourage specific behaviours and energy efficiency in off-peak hours (Victoria Electricity Distributors tariff structure, 2023). • Government, Customer, Industry, Energy and Retailer stakeholders suggested simplifying tariffs for both customers and retailers in an effort to address affordability, economic efficiency and adaptability to changing technology and regulation (Victoria Electricity Distributors Tariff Structure, 2023).
CitiPower	• For both Residential and SMB customers, those who were familiar with time-of-use tariffs and willing to allow external network control were more willing to shift their energy usage than those unfamiliar with these tariffs and unwilling to allow external network control. This reinforces the importance of awareness and education (Test and Validate program, 2024). • Across both Residential and SMB customers, about half were familiar with the concept of time-of-use tariffs (49.0% vs 47.3%) (Test and Validate program, 2024).
Powercor	• Time of use tariffs: Half or more of Residential and SMB customers were unfamiliar with the concept of time-of-use tariffs (59.6% vs 49.9%) (Test and Validate program, 2024). • Familiarity with time-of-use tariffs and allowing external network control increased willingness to shift energy usage among both Residential and SMB customers (Test and Validate program, 2024).
United Energy	• Around half of Residential and SMB customer felt that the bill impact represented value for the service that they received (45.7% vs 54.3%) (Test and Validate program, 2024).

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Summary insights: **Affordability**

	What we heard from customers
Customers experiencing vulnerability	• Vulnerable Customer advocates wish to see improvements in inclusivity by empowering vulnerable customers to make informed choices by providing targeted products. They highlight the significance of energy-efficient initiatives and the provision of rebates in facilitating the transition. Additionally, advocates stress the importance of tailoring information and support to cater to the unique requirements of various communities and individuals, bringing the information gaps by increasing understanding and trustworthy communication channels (Customer Vulnerability Roundtable, 2023). • Customers wanted support to feel more informed about their energy usage and tariff structures, which they expected from their retailers (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for information on energy usage and tariff structures to reduce costs. They suggested that retailers provide clarity on how much energy different appliances consume and the price difference between peak and off-peak rates, which could develop a better understanding towards lowering bills (Customers Experiencing Vulnerable Circumstances, 2023). • Customers had a varied understanding of tariffs. Most could identify that it affected how they were charged for their energy usage, but often did not know what tariff structure they were on or how the different structures could affect them and found it difficult to compare retailers because they presented the rates differently (Customers Experiencing Vulnerable Circumstances, 2023). • Customers recommended educational campaigns on how they could be supported in transitioning to renewables, taking into account their residential status and income. They suggested this would be delivered by retailers with the support of CPPALUE (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of government incentives for installing solar panels, particularly for property owners and community solutions, e.g. generating solar and sharing it with residents (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of Information for customers in high-density living about how to transition to more renewable energies through their appliances, etc (Customers Experiencing Vulnerable Circumstances, 2023). • Youth customers generally perceived electricity as being expensive and were concerned about vulnerable customers. Additionally, they were concerned about geographical equity and felt that it was unfair that Powercor customers paid more for their electricity bill and felt that solar power would be beneficial to reducing energy costs (Youth Broad and Wide, 2022). • Most issues for customers are related to tariffs, high bills, and billing errors. Vulnerable customers, in particular, were concerned about high energy costs (Energy and Water Ombudsman annual report, 2022). • Stakeholders highlighted the evolving and decentralised nature of the energy business, where products are becoming increasingly complex and targeted to specific customer segments. This complexity poses a challenge in ensuring that vulnerable customers are not left behind during the transition. To address this, robust consumer protection frameworks should be established to complement the evolving product landscape along with clear and unbiased information (Customer Vulnerability Roundtable, 2023). • To ensure no one is left behind, participants noted that it becomes essential to identify target groups and develop support structures to empower specific groups to make the right decisions for themselves through clear information that is relevant to their situation (Customer Vulnerability Roundtable, 2023). • High energy costs were a primary concern, with flexibility to alter usage limited by factors including work status, place of work, medical / disability status and income (Customers Experiencing Vulnerable Circumstances, 2023) • Vulnerable customers were often more aware of their individual / household energy usage than regular customers (Customers Experiencing Vulnerable Circumstances, 2023). • As vulnerable customers navigate the energy transition, they expressed the foremost desire to gain a sense of agency and control. They saw education and communication as one tool in achieving this goal. (Customers Experiencing Vulnerable Circumstances, 2023). • Customers with limited flexibility to alter their consumption (full-time workers, typically younger, and medically vulnerable customers or those with a disability) generally would not be able to take advantage of time of use (TOU) tariffs and were worried that they could be disadvantaged (Customers Experiencing Vulnerable Circumstances, 2023). • Two key factors limiting accessibility to the energy transition were residential status and/or income, which made it difficult to be future-focussed (Customers Experiencing Vulnerable Circumstances, 2023).

Data table continued on next page

Summary insights: **Affordability**

Pre-Test and Validate Broad Customer Insight
Customers from all networks want educational and technological resources to empower them to tailor energy usage for cost savings. C&I and vulnerable customers see their tariffs as a tool to cut electricity expenses but seek a better understanding to utilise this capability

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but seek a better understanding to utilise this capability	**C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but sought a better understanding to utilise this capability.**	**C&I customers were largely unaware of their network tariffs. However, some wanted more education and technological resources to empower them to tailor their energy usage for cost savings but were seeking a better understanding to utilise this capability.**

Customer feedback used to develop insights located below

Summary insights: **Affordability**

	What we heard from customers
Commercial and Industrial	• Many customers are largely unaware of their current network tariff structure. C&I customers have expressed a desire for more straightforward and easily comprehensible educational materials that explain their network tariff structures in simple 'customer-friendly' terms. (Economic Growth Engagement, 2023) • Commercial and Industrial Customers want to understand how these structures can impact their energy consumption costs. The diverse and nuanced needs of individual businesses complicate this request for clearer information. (Economic Growth Engagement, 2023). • Network tariffs are viewed as a lower priority for improvement, reflecting the varying ability of customers to leverage tariff structures to their advantage. For example, some businesses lack the flexibility to change their energy consumption behaviour and thus prioritise tariff-related changes less. (Economic Growth Engagement, 2023) • Mixed feedback was received on the winter peak demand charge, with some viewing it as logical, while others saw it as unfair or impractical for energy-intensive businesses (Commercial and Industrial Customers Report, 2024). • Customers emphasised the need for clearer communication about tariff structures and their financial impact (Commercial and Industrial Customers Report, 2024). • Limited flexibility in energy consumption patterns constrained businesses' ability to respond to peak tariffs (Commercial and Industrial Customers Report, 2024). • Calls were made for more interactive tools to help customers assess and optimise their energy costs under new tariff models (Commercial and Industrial Customers Report, 2024).

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Summary insights: **Affordability**

Pre-Test and Validate Broad Customer Insight
Affordability varies based on individual circumstances and cost-of-living factors, but all customers aim to lower their bills through measures like behaviour changes, solar adoption, and electrifying appliances. This was particularly acute for customers experiencing vulnerability who also desire government incentives for solar and electrification.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Affordability drove customers to reduce bills through behaviour changes associated with financial benefits, solar adoption, and electrifying appliances. This was particularly acute for customers experiencing vulnerability who also desire government incentives for solar and electrification. Residential customers show more willingness to shift energy usage than SMBs, though barriers like time constraint activities.	**Affordability remained a priority across all customers, with motivations and challenges varying by segment. Residential customers aim to lower bills through behaviour changes combined with financial incentives, solar adoption, and appliance electrification. Customers experiencing vulnerability seek tailored support, including government incentives and education, to manage costs and adopt renewables.**	**Affordability remained a priority for customers, with preferences varying based on individual circumstances. Customers aim to lower bills through behaviour changes combined with financial incentives, solar adoption, and electrification, with government incentives for solar and efficient appliances playing a crucial role, particularly for vulnerable groups. Residential and SMB customers exhibit similar motivations but differ in barriers to shifting usage patterns, such as time constraints and appliance-specific flexibility**

Customer feedback used to develop insights located below

Summary insights: **Affordability**

	What we heard from customers
All customers	• Customers are convinced there are problems with the energy system due to increased electricity bills and expectations for further rises (Energy Consumer Sentiment- Research, 2022). • Many customers are open to participating in demand management programs, suggesting a potential for demand response initiatives to be effective in reducing energy consumption (Future Home Demand, 2023). • Customers perceive high costs for electricity and, as a result, prioritise affordable electricity (CitiPower, Powercor, United Energy Meta-Analysis, 2022). • Cooktops within existing homes were the largest point of contention when discussing cost as a key barrier to electrification. Replacing a gas stove with an induction cook top required rewiring of the fuse box to retrofit original provisioning. The investment required to do so was significant and may seem unwarranted to someone who could spend much less maintaining their current gas cooktop (Future Energy Network Forum, 2023).
CitiPower	• Residential customers were more willing to shift their energy usage than SMB customers (32.3% vs 26.1%), primarily motivated by lowering energy bills (Test and Validate Program, 2024). • Lowering energy bills was the primary stated motivator to shift energy usage, however, current activities being undertaken, were the biggest barrier for Residential and SMB customers in changing their usage. SMB customers were more likely to have no time to implement the changes versus Residential customers (34.3% vs 28.6%). Making price benefits clear in communications will be central to driving behaviour change, although additional behaviour change mechanics are also required to change behaviour (Test and Validate Program, 2024). • Washing machines, the dishwasher and clothes dryer were the top appliances that Residential customers used in specific times and were most willing to shift. However, heating and cooling systems were the appliances that SMB customers mostly used where willingness to shift usage remained low. Despite low overall willingness, SMB customers were more willing to shift their usage of their electric heaters and air conditioners than residential (37.4% vs 27.9% and 30.8% vs 15.3%) (Test and Validate Program, 2024). • Compared to customers not willing to shift, those willing to shift their energy usage were more likely to be EV owners / considerers across both Residential and SMB customers. EV owners / considerers were more interested in energy-efficient products, with Residential also interested in smart automated products (Test and Validate Program, 2024).
Powercor	• Powercor customers wished to focus on education and information to help them reduce their electricity bills, and in turn provide the ability for vulnerable customers to access affordable electricity supply (Powercor Rural and Regional Summit, 2023) • Compared to SMB customers, Residential customers were more willing to shift their energy usage (39.8% vs 25.3%) (Test and Validate program, 2024). • Lowering energy bills remained the main stated motivator for Residential and SMB customers. However, more SMB customers stated environmental concerns, social responsibility, and availability of energy-efficient products as motivators than Residential customers. For barriers, Residential and SMB customers stated their current activities and upfront costs of energy-efficient products as their top barrier (Test and Validate program, 2024). • Washing machines, dishwasher and clothes dryers were the top appliances that Residential customers used in specific times and were most willing to shift. However, SMB customers used electric heaters more than Residential customers but had still had low willingness to shift (46.1% vs 28.6%) (Test and Validate program, 2024). • Residential and SMB EV owners / considers were more willing to shift their energy usage than non-EV owners. Like other networks, Residential EV owners / considerers were more likely to want both smart automated products and energy-efficient products, while SMB EV owners / considerers were likely to want energy-efficient products only (Test and Validate program, 2024).
United Energy	• Residential customers were more willing to shift their energy usage compared to SMB customers (35.4% vs 30.2%) (Test and Validate, 2024). • Price-related factors such as lowering energy bills and government incentives remained the main stated motivator for Residential and SMB customers, significantly so for Residential. Both Residential and SMB customers also stated their current activities as top barriers. SMB customers were more likely to have no time to implement the changes required to shift their energy usage to off-peak compared to Residential (28.1% vs 18.3%) (Test and Validate, 2024). • Like other networks, washing machines, dishwasher, and clothes dryers were the top appliances that Residential customers used in specific times and were most willing to shift. Among heating and cooling appliances, air conditioners were used more by SMB customers than Residential customers (61.8% vs 48.3%) with willingness to shift remaining similar between Residential and SMB customers (Test and Validate, 2024). • Residential and SMB EV owners / considerers were also more willing to shift their energy usage than non-EV. EV owners / considerers were interested in energy-efficient products, with Residential customers also interested in smart automated products (Test and Validate, 2024). • Willingness to shift increased among Residential and SMB customers as they became more familiar with time-of-use tariffs and have more tolerance with allowing external network control (Test and Validate, 2024).

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Summary insights: **Affordability**

	What we heard from customers
First Nations	• Yorta Yorta community were concerned about the high price of electricity and understanding how to reduce their electricity bill. Solar was seen to be part of the solution to these issues. The sentiment felt amongst the community was that without clear knowledge, they were left uninformed and disempowered (Yorta Yorta Country Broad and Wide, 2022).
Customers experiencing vulnerability	• They generally believed their usage was not excessive, when comparing their usage with other households via their bills. Some customers felt that they were already taking somewhat extreme measures, e.g. not using certain appliances at all (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for information on energy usage and tariff structures to reduce costs. They suggested that retailers provide clarity on how much energy different appliances consume and the price difference between peak and off-peak rates, which could develop a better understanding towards lowering bills (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers were often more aware of their individual / household energy usage (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of government incentives for installing solar panels, particularly for property owners and community solutions, e.g. generating solar and sharing it with residents (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of Information for customers in high-density living about how to transition to more renewable energies through their appliances, etc (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
Customers expressed concerns about affordability and ensuring equitable access to the benefits of renewable energy adoption, with a particular emphasis on preventing anyone from being left behind.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations and renters. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.	**Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations and rural communities. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.**	**Customers and stakeholders consistently emphasised the importance of affordability and equitable access in renewable energy adoption, particularly for vulnerable populations, rural communities, and renters. Stakeholders supported targeted customer assistance programs to bridge disparities, advocating for transparency, cultural alignment, and the efficient use of existing networks and resources to maximise impact.**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
All customers	• Customers identified the opportunity to improve energy literacy given their minimal understanding of solar technology, pricing structures, demand management and bill management (CitiPower, Powercor, United Energy Meta-Analysis, 2022) • Youth customers were interested in the future of electricity and saw renewables as the way forward. They sought more information about the transition and what would be done to support equity (Youth Broad and Wide, 2022).
Powercor	• For Powercor customers, equity was intertwined with reliability. They believed that prioritising the improvement of reliability, network capacity and power quality would in turn positively impact the survival and growth of regional and rural communities and allow businesses in those areas to sustain themselves (Powercor Rural and Regional Summit, 2023). • Customers highly value making future electricity technology, including electric vehicles, solar, and electricity storage, accessible to everyone. However, they perceive these technologies as unattainable, especially for vulnerable individuals, due to the substantial upfront costs, with concerns about the return on investment influencing their decision-making (Powercor Broad and Wide, 2022). • Energy Care: Stakeholders proposed using this initiative to educate regional and rural communities about energy efficiency, with an emphasis on accessible resources for vulnerable customers. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Community Energy Fund: Stakeholders recommended establishing an advisory panel to oversee fund allocation, ensuring transparency and prioritising regional and rural community projects. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Customer Assistance Program: Stakeholder concerns were raised about the limited impact of investments in rural areas compared to urban-focused initiatives. Participants advocated for equitable resource distribution. (CitiPower, Powercor, and United Energy Roundtables, 2024) • First Peoples Program: Stakeholders emphasised the importance of delivering the initiative through First Peoples organisations to ensure cultural alignment and build trust. They highlighted the need for long-term collaboration and to learn from previous energy-related programs to avoid repeating past mistakes. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Energy Advisory Services: Stakeholders recommended leveraging technology, such as smart meters and AI, to personalise energy education for consumers. They also stressed the importance of delivering this initiative through trusted community organisations to maximise impact and engagement. (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders calls for a more inclusive and comprehensive "Regional and Rural Roadmap" indicated dissatisfaction with limited stakeholder input in current planning (Rural and Regional Summit Report, 2024). • Stakeholders support for electrification initiatives was tied to concerns about the network's capacity and the need for proactive communication to counter misinformation (Rural and Regional Summit Report, 2024). • Stakeholders and customers felt the proposal needed to acknowledge the urgent need for equitable investments in rural and regional energy infrastructure to prevent communities from falling further behind (Rural and Regional Summit Report, 2024).
CitiPower	• CitiPower customers prioritise equitable access and reliable electricity supply for all, regardless of their socio-economic status. They seek equal levels of service and benefits from renewables and electric vehicle infrastructure (CitiPower Broad and Wide, 2022). • Energy Care: Education was highlighted by stakeholders as critical, with suggestions to leverage CitiPower's on-ground teams to inform and assist customers in understanding their energy usage and bills (CitiPower, Powercor, and United Energy Roundtables, 2024). • Community Energy Fund: Funding was recommended by stakeholders to go to community organisations rather than individuals, ensuring equitable access and greater project impact (CitiPower, Powercor, and United Energy Roundtables, 2024). • Customer Assistance Program: Stakeholders suggestions included incorporating an educational component to help vulnerable customers understand and manage the transition from gas to electricity (CitiPower, Powercor, and United Energy Roundtables, 2024). • First Peoples Program: There was strong support from stakeholders for delivery by First Peoples organisations to ensure cultural alignment and effective implementation (CitiPower, Powercor, and United Energy Roundtables, 2024).

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Summary insights: **Equity**

	What we heard from customers
Customers experiencing vulnerability	• Vulnerable customer advocates identified several challenges in the energy transition such as disparities in impacts, social licence issues, emotional aspects, product complexity and unique First Nations community challenges (Customer Vulnerability Roundtable, 2023). • Residential Status and Income were two key reasons why vulnerable customers felt that they could not participate in the energy transition (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers were worried that the transition would be forced upon them, and they would be left behind(Customers Experiencing Vulnerable Circumstances, 2023). • Customers felt like they did not have a say in what the transition looked like and were concerned that it would be dictated to them by the government and energy companies, regardless of whether they felt ready for changes (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of clarity on what the energy transition was, what changes would be involved and when, the role of different energy companies in this process, and how customers would be impacted and supported (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of government incentives for installing solar panels, particularly for property owners and community solutions, e.g. generating solar and sharing it with residents (Customers Experiencing Vulnerable Circumstances, 2023) • Vulnerable customers wanted support in the form of Information for customers in high-density living about how to transition to more renewable energies through their appliances, etc (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for greater government incentives for installing solar panels, particularly for property owners (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for educational campaigns regarding the energy transition and they can be supported in transitioning to renewables taking into account their residential status and income, delivered by retailers with the support of CPPALUE (Customers Experiencing Vulnerable Circumstances, 2023). • As vulnerable customers navigate the energy transition, they expressed the foremost desire to gain a sense of agency and control. They saw education and communication as one tool in achieving this goal. (Customers Experiencing Vulnerable Circumstances, 2023).
First Nations	• The Yorta Yorta community had a strong wish to progress the energy transition to support the decarbonisation of the eco-system and country, particularly upgrades that could support communities to have their own solar to supply energy and store in batteries. This, in turn, would assist with reliability, however, there were mixed reviews that this would create extra cost (Yorta Yorta country Broad and Wide, 2022).
United Energy	• Energy Care: Stakeholders appreciated guidance to help vulnerable consumers participate in the energy transition (CitiPower, Powercor, and United Energy Roundtables, 2024). • Community Energy Fund: Stakeholders recommended targeted support for community-led projects over individual beneficiaries, ensuring equitable impact (CitiPower, Powercor, and United Energy Roundtables, 2024). • Customer Assistance Program: Stakeholders suggested targeted incentives for landlords to support renters in participating in energy transition initiatives (CitiPower, Powercor, and United Energy Roundtables, 2024). • Energy Advisory Services: Stakeholders emphasised leveraging technology, such as smart meters and AI, to tailor energy education and provide actionable insights for consumers (CitiPower, Powercor, and United Energy Roundtables, 2024). • First Peoples Program: Stakeholders advocated learning from similar programs to avoid past mistakes and ensure culturally aligned implementation (CitiPower, Powercor, and United Energy Roundtables, 2024).

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
In the context of cost-of-living increases, customers want to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability.	**In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability.**	**In the context of cost-of-living increases, customers wanted to ensure that the financial burden of transitioning to cleaner energy sources does not fall unfairly on certain customer groups, especially customers experiencing vulnerability**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
All customers	• Transitioning to EVs and electric appliances, improving energy efficiency, and moving to all-electric homes can significantly reduce household energy costs. However, barriers still remain that will hinder customers from making the transition and will varied across networks. Those who remain on gas will risk high energy costs (Stepping up: a smoother pathway, 2023). • SIG stakeholders highlighted concerns about potential inequities, especially for customers with lower socioeconomic status (Energy Transition Summit, 2023). • Mixed views on who should bear the financial responsibility for flexible solar exports: individual solar customers vs. collective sharing of costs (Energy Transition Summit, 2023). • Collective concern exists regarding the potential disproportionate burden on non-solar customers, leading to increased electricity prices (Energy Transition Summit, 2023). • Concerns extend to incentivising non-solar customers to participate in the transition and access benefits of solar exports (Energy Transition Summit, 2023).
Powercor	• Powercor customers prioritised reducing their electricity bills through more education and information. Additionally, the ability for vulnerable customers to get access to affordable supply, access to renewables and geographic equity regarding reliability (Powercor Broad and Wide, 2022). • Stakeholders emphasise fairness and equity in Powercor's solar export transition strategy (Energy Transition Summit, 2023). • Two preferred service options, 'Solar abundance' and 'Fast transition,' require capacity upgrades, raising concerns about fairness in cost distribution (Energy Transition Summit, 2023). • High application costs identified as a barrier to implementing mid-scale generation projects (Energy Transition Summit, 2023).
Customers experiencing vulnerability	• They supported the energy transition, but worried that it would be dictated to them, and they would be left behind if they could not afford to be part of it (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers were worried that the transition would be forced upon them, and they would be left behind (Customers Experiencing Vulnerable Circumstances, 2023). • Most customers received the solar soak positively, particularly solar customers who were already set up to benefit from it. However, those who worked full time and could not work from home saw no benefit unless they could store and use the solar energy from that period once they arrived home. Even customers with greater flexibility to adapt their energy consumption typically could not afford the upfront cost of installing solar panels and therefore would not be able to benefit from the solar soak (Customers Experiencing Vulnerable Circumstances, 2023).
CitiPower	• Stakeholders emphasised the need for equitable treatment of both solar and non-solar customers in CitiPower and United Energy networks (Energy Transition Summit, 2023). • Collective concern exists regarding the potential disproportionate burden on non-solar customers, leading to increased electricity prices (Energy Transition Summit, 2023). • Stakeholders call for active support from the state government to ensure fairness and equity in the energy transition (Energy Transition Summit, 2023). • While there was a moral inclination to support vulnerable customers, many believed that this responsibility should fall on the government rather than the network. There was significant concern about the effectiveness and fairness of these initiatives. (Trade-off Evaluations, 2024) • Customers supported investments in electrification to future-proof the grid for electric vehicles (EVs). However, there were concerns about the equity of these costs, especially among non-EV owners and those facing financial pressures. (Trade-off Evaluations, 2024)
United Energy	• United Energy customers want to ensure that the transition to cleaner energy sources results in manageable price hikes for customers, also expressing a desire for support and subsidies for vulnerable customers (United Energy Broad and Wide, 2022) • Stakeholders emphasised the need for equitable treatment of both solar and non-solar customers in CitiPower and United Energy networks (Energy Transition Summit, 2023). • Collective concern exists regarding the potential disproportionate burden on non-solar customers, leading to increased electricity prices (Energy Transition Summit, 2023). • Stakeholders call for active support from the state government to ensure fairness and equity in the energy transition (Energy Transition Summit, 2023). • 72.5% of customers were willing to invest in electrification initiatives to prepare the network for increased electric vehicle (EV) adoption. However, there were significant concerns about equity, as many customers did not want to subsidise EV owners. (Trade-off Evaluations, 2024) • While there was some willingness to support initiatives for vulnerable customers, many felt that this responsibility should lie with the government or retailers rather than the network. Non-vulnerable customers were less willing to pay more to support these initiatives. (Trade-off Evaluations, 2024)

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
Customers expected grid resilience improvements to be equitable, with particular focus on customers experiencing vulnerability including those living rurally or regionally.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**Customers expected grid resilience improvements to be equitable, with particular focus on customers experiencing vulnerability including those living rurally or regionally.**	**Not applicable**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
All customers	• Residential customers were willing to pay $28.31 per kWh for improved reliability in worst-served areas, compared to $8.81 per kWh for more general improvements in reliability. (NFT Group: Customer Valuation of Service Improvements, 2021). • Stakeholders raised concerns about fair cost distribution for resilience investments, especially between safe and vulnerable communities. Recommendations included, share cost benefit analyses publicly, reassess cost distribution for equity, and explore assessment models quantifying potential savings from risk reduction (JDB Resilience Framework and approach workshop, 2023). • Stakeholders expressed concerns about networks being repeatedly rebuilt due to increasing extreme weather events. Participants overwhelmingly support both proactive and reactive resilience investment (JDB Resilience Framework and approach workshop, 2023). • Customers indicated little willingness to pay for improvements for themselves or others (Customer Values Analysis, 2024). • Customers were neutral on their willingness to invest in energy infrastructure to ensure long term reliability, sustainability and affordability. Which may be influenced by concerns regarding cost-of-living pressures (Customer Values Analysis, 2024).
Powercor	• Youth customers generally saw electricity to be expensive and were particularly concerned about vulnerable customers. (Youth Broad and Wide 2023) • When asked to prioritise investment into improvements, customers prioritised improving network resilience (to reduce long-duration outages) (41.9% importance across six values tested) (Customer Values Analysis, 2024). • Improving reliability for 'worst-served' areas ranked second (20.4% importance) (Customer Values Analysis, 2024). • Secondary TURF (total unduplicated reach and frequency) analysis indicates that improving reliability for worst served customers is consistently grouped with improvements to network resilience in the top responses for Powercor (Customer Values Analysis, 2024). • These preferences may be attributed, in part, to Powercor customers experiencing lower levels of reliability and reporting a higher frequency of interruptions due to climate events compared to metro networks (Customer Values Analysis, 2024). • Stakeholders showed strong support for improving services for worst-served customers, with emphasis on prioritising those facing energy poverty and reliability challenges. Participants highlighted the need for feeder ties to improve reliability and resilience, particularly in high-risk, rural areas. (Community Workshops, 2024). • Customers showed a strong desire to reduce outage minutes for worst-served customers, with an emphasis on ensuring equitable access to reliable power (Trade-Off Evaluations Powercor, 2024). • Customers showed a strong emphasis on ensuring that investments benefit the most disadvantaged, such as worst-served customers and those in remote or rural areas, reflecting a moral obligation towards equitable energy access. (Trade-Off Evaluations Powercor, 2024).
CitiPower	• CitiPower are more likely than other networks to be willing to pay more in the short term to facilitate energy upgrades to improve long-term reliability (Customer Values Analysis, 2024).
United Energy	• When asked to prioritise investment into improvements, United Energy SMB customers placed 53.4% importance on improving network resilience (to reduce long-duration outages from extreme weather events) (Customer Values Analysis, 2024). • Whilst United Energy SMB customers (5.18) see improving network resilience as being important, they are less willing than SMB customers in Powercor (5.43) and CitiPower (6.16) to share this cost (Customer Values Analysis, 2024).

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Summary insights: **Equity**

	What we heard from customers
Customers experiencing vulnerability	• Stakeholders strongly supported incorporating community vulnerability into site selection for proactive investment, stressing the need for consultation with vulnerable communities and First Nations groups. They recommended standardised climate modeling for consistency and advocated for a comprehensive understanding of vulnerability, including socio-economic factors (JDB Resilience Framework and approach workshop, 2023). • Vulnerable Customer advocates suggested solutions such as community hubs, Mobile Emergency Response Vehicles (MERV), and First Nations specific community hubs in the vent of natural disasters and reliability. They also suggest collaboration between telecommunications providers and Victoria electricity distributors to ensure real-time information during bushfires. Additionally, they suggest access to loan generators or Standby Power Systems (SAPs), or more information around existing batteries in rural communities. Finally, they recommend partnerships such as “bring your bills day” program and DEECA partnership for the power bonus scheme (Customer Vulnerability Roundtable, 2023)

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
Generally, regional customers believe that their levels of service, particularly reliability are far lower than their metro counterparts, holding a desire to establish a basic minimum standard across networks.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**Generally, regional customers believe that their levels of service, particularly reliability were far lower than their metro counterparts, holding a desire to establish a basic minimum standard across networks.**	**Not applicable**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
Powercor	• Customers prioritised reliability, capacity and power quality but acknowledged that addressing current inequity between rural and regional communities and metropolitan communities would be an outcome of investing in these areas for rural and regional customers (Powercor Rural and Regional Summit, 2023). • In the context of struggling for what they view as basic reliability standards on par with metropolitan areas, customers regarded participating in the energy transition as a lower priority. Despite this, customers were eager for themselves and their communities to possess the capability to participate in the clean energy transition in the future. However, they believed that without first addressing improving reliability and capacity, they will always be behind (Powercor Rural and Regional Summit, 2023). • Customers believed the disparity of reliability between metropolitan and regional/rural was having a negative impact on their communities. They perceived a reliable electricity network and access to three-phase power to be the foundations for development of rural and regional areas. (Powercor Rural and Regional Summit, 2023) • There was mixed feedback from customers about equity across the network. Some customers accepted that electricity supply would be less reliable in regional and rural areas. Other customers were unwilling to accept the difference in reliability and argued the Victorian economy relies on the regional communities to support the state (e.g., farming), and therefore the idea of this group being disadvantaged was not fair (Powercor Broad and Wide, 2022). • When considering the cost of ensuring consistent supply across the network, the general consensus was that the costs should be shared. There was an unwillingness to accept that reliability should be any less in rural or regional Victoria compared to metropolitan Victoria, nor should it cost more to deliver that reliability (Powercor Broad and Wide, 2022). • Some regional / rural customers believed that their bills were higher than metro customers, but were not necessarily aware of the reason for the difference which caused some frustration (Customers Experiencing Vulnerable Circumstances, 2023). • Stakeholders showed strong support for improving services for worst-served customers, with emphasis on prioritising those facing energy poverty and reliability challenges. Participants highlighted the need for feeder ties to improve reliability and resilience, particularly in high-risk, rural areas. (Community Workshops, 2024). • Customers showed a strong desire to reduce outage minutes for worst-served customers, with an emphasis on ensuring equitable access to reliable power (Trade-Off Evaluations Powercor, 2024). • Piclo demand management: Stakeholders emphasised the importance of sharing relevant data with potential suppliers to optimise solutions, balancing immediate benefits with long-term resilience. Concerns were raised about prioritising urban over regional and rural areas, leaving these communities at a disadvantage (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders felt the draft proposal should acknowledge the urgent need for equitable investments in rural and regional energy infrastructure to prevent communities from falling further behind (Rural and Regional Summit Report, 2024). • Equity was a central theme, with stakeholders and customers highlighting the imbalance in investment benefits between urban and rural areas (Rural and Regional Summit Report, 2024). • Stakeholders had mixed reactions to "minimum service levels" highlighted concerns about the feasibility of uniform standards across diverse communities and that the Government should be responsible for setting minimum standards (Rural and Regional Summit Report, 2024).

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
Customers consider reliability and essential access as fundamental services, setting a basic minimum standard with an emphasis on affordability. While services like EV access and solar exports are important, they are not yet considered basic essentials. However, this perspective may evolve in the future.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable - limited feedback	**Customers considered reliability and essential access as fundamental services, setting a basic minimum standard with an emphasis on affordability. While services like EV access and solar exports were important, they were not yet considered basic essentials.** **Stakeholders expressed mixed views on defining and implementing minimum service levels, citing challenges in addressing diverse community needs and ensuring equitable outcomes. The Government was highlighted as being responsible in establishing a minimum service level.**	**Not applicable – limited feedback**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
Customers experiencing vulnerability	• Regional and rural customers urged CPPALUE to provide a clear vision for the future, inclusive of contingency plans, to effectively manage potential major outages resulting from the energy transition. They seek assurance and transparency regarding how CPPALUE plans to address increased electricity demand and potential disruptions (Customers Experiencing Vulnerable Circumstances, 2023).
Powercor	• Participants prioritised reliability, capacity and power quality but acknowledged that addressing current inequity between rural and regional communities and metropolitan communities would be an outcome of investing in these areas for rural and regional customers. Participants viewed reliability (along with capacity and power quality) as a cornerstone of a thriving rural or regional community (Power Rural and Regional Summit, 2023) • In striving for basic reliability standards akin to metropolitan areas, customers prioritise reliability over participating in the energy transition. However, they also express eagerness for future engagement in clean energy initiatives, understanding the need to address reliability and capacity concerns first. Customers worry about the existing gap and its potential widening over time, emphasising the current level of access as a pressing concern (Power Rural and Regional Summit, 2023) • Powercor customers defined equity as “equal ability to be able to afford a standard of living that is Australian”. There was consensus that there was a standard level of service that everyone deserved access to when considering an essential service such as electricity. At the very least, customers felt that everyone should have access to lighting, heating, cooling and refrigeration (Powercor Broad and Wide, 2022) • Stakeholders showed strong support for improving services for worst-served customers, with emphasis on prioritising those facing energy poverty and reliability challenges. Participants highlighted the need for feeder ties to improve reliability and resilience, particularly in high-risk, rural areas (Community Workshops, 2024). • Customers showed a strong desire to reduce outage minutes for worst-served customers, with an emphasis on ensuring equitable access to reliable power (Trade-Off Evaluations Powercor, 2024). • Customers showed reluctance to invest in maximum service improvements due to the potential increase in energy bills, particularly in initiatives that they perceived do not directly benefit them, like EV infrastructure if they didn’t own an EV themselves (Trade-Off Evaluations Powercor, 2024). • Stakeholders had mixed reactions to "minimum service levels" highlighted concerns about the feasibility of uniform standards across diverse communities. (Rural and Regional Summit Report, 2024)
CitiPower	• In terms of equity, or as customers understood it “equal access to and value from their electricity service and supply,” ensuring everyone could access the full value of their electricity service was a priority. Examples of this that were raised included, equal levels of service and access to reliable supply in both rural and urban areas (CitiPower Broad and Wide, 2023)
United Energy	• 72.5% of customers were willing to invest in electrification initiatives to prepare the network for increased electric vehicle (EV) adoption. However, there were concerns about equity, with many customers perceiving that paying more to accommodate additional EVs on the network would mean subsidising EV owners. (Trade-off Evaluations, 2024)

Summary insights: **Equity**

Pre-Test and Validate Broad Customer Insight
Stakeholders advocate for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers find current pricing strategies confusing and seek clearer information for better bill management

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers found current pricing strategies confusing and sought clearer information for better bill management	**Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers found current pricing strategies confusing and sought clearer information for better bill management**	**Stakeholders advocated for adaptable tariff structures to accommodate evolving energy consumption patterns. However, customers found current pricing strategies confusing and sought clearer information for better bill management**

Customer feedback used to develop insights located below

Summary insights: **Equity**

	What we heard from customers
All customers	• Government, Customer, Industry and Retail Stakeholders highlighted a shifting energy paradigm marked by prosumers and evolving usage patterns that necessitate thoughtful tariff adjustments to manage network change effectively. With the rise of EVs and electrical appliances, tariffs should encourage specific behaviours and energy efficiency in off-peak hours (Victoria Electricity Distributors tariff structure, 2023). • Government, Customer, Industry and Retail Stakeholders emphasised the critical need to adopt a comprehensive and multifaceted approach for the effective integration of CER into the energy system and one that prioritises affordability and equitable access (Victoria Electricity Distributors tariff structure, 2023). • Customers find pricing and bill strategies difficult to understand and are interested in making electricity more affordable through accessing real-time data (CPPALUE Internal Ideation Workshop, 2022).
CitiPower	• Across both Residential and SMB customers, about half were familiar with the concept of time-of-use tariffs (49.0% vs 47.3%) (Test and Validate Program, 2024).
Powercor	• Familiarity with time-of-use tariffs and allowing external network control had higher willingness to shift energy usage among both Residential and SMB customers (Test and Validate Program, 2024). • Half or more of Residential and SMB customers were unfamiliar with the concept of time-of-use tariffs (59.6% vs 49.9%) (Test and Validate Program, 2024).
United Energy	• Half of Residential and SMB customers were unfamiliar with the concept of time-of-use tariffs (54.6% vs 49.2%) (Test and Validate Program, 2024).
Customers experiencing vulnerability	• Customers had a varied understanding of tariffs. Most could identify that it affected how they were charged for their energy usage, but often did not know what tariff structure they were on, or how the different structures could affect them and found it difficult to compare retailers because they presented the rates differently (Customers Experiencing Vulnerable Circumstances, 2023). • Customers with greater flexibility who spent most of their time at home preferred the TOU structure and saw it as an incentive to be more mindful of their consumption behaviour and adapt it to take advantage of lower rates during the day (Customers Experiencing Vulnerable Circumstances, 2023). • A flat rate was preferred by customers with less flexibility to change their energy usage as they were more likely to do energy-heavy activities during peak time (Customers Experiencing Vulnerable Circumstances, 2023). • Customers with less flexibility typically worked during the day and arrived home after the peak period started (usually after 5pm) when they needed to engage in energy-heavy activities. As such, the shift represented an additional hour of peak time to these customers (Customers Experiencing Vulnerable Circumstances, 2023). • Most customers received the solar soak positively, particularly solar customers who were already set up to benefit from it. However, those who worked full time and could not work from home saw no benefit unless they could store and use the solar energy from that period once they arrived home. Even customers with greater flexibility to adapt their energy consumption typically could not afford the upfront cost of installing solar panels and therefore would not be able to benefit from the solar soak (Customers Experiencing Vulnerable Circumstances, 2023). • Customers wanted support to feel more informed about their energy usage and tariff structures, which they expected from their retailers (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for information on energy usage and tariff structures to reduce costs. They suggested that retailers provide clarity on how much energy different appliances consume and the price difference between peak and off-peak rates, which could help them develop a better understanding of how they could lower their bills (Customers Experiencing Vulnerable Circumstances, 2023). • Customers with limited flexibility to alter their consumption (full-time workers, typically younger, and medically vulnerable customers or those with a disability) generally would not be able to take advantage of time of use (TOU) tariffs and were worried that they could be disadvantaged (Customers Experiencing Vulnerable Circumstances, 2023).

Energy Transition

How does the business frame Reliability and Resilience:

"We need to ensure we support customers experiencing vulnerability due to loss of supply or difficulty access our services; manage a just transition to ensure that no one is left behind in the transition; improve regional and rural equity and also ensure we continue to deliver value for money to customers" (CitiPower, Powercor and United Energy's Customer Narrative)

What the Energy Transition means to customers

- Customers perceive energy transition as a dynamic shift toward cleaner and more sustainable energy sources and practices, driven by the need to combat climate change.

Context

- Customers find themselves in the midst of an evolving energy landscape, marked by a shift towards cleaner, more sustainable energy sources driven by climate change concerns.
- The adoption of renewable technologies and reduced reliance on fossil fuels are recognised by customers as an imperative, though they acknowledge the associated challenges, including affordability and equity for all, particularly vulnerable and low-income communities.
- This energy transition is anticipated to have wide-ranging impacts on their lives, encompassing energy consumption patterns, interactions with energy providers, and regulatory expectations.

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers recognise the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers recognise the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.	**Customers recognise the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.**	**Customers recognise the inevitability of a dynamic energy transition, characterised by the integration of renewable energy sources, distributed energy resources, and evolving consumption patterns, as a necessary step to combat climate change.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• CitiPower customers prioritised reducing emissions amongst their top ten priorities, while Powercor and United Energy customers, predominately in regional and rural areas, prioritise reliability and power quality due to existing inequities in basic services (Customer Service Incentive Scheme, 2022). • Local governments varied in their response maturity, with Powercor and United Energy's areas often having limited community emission reduction plans, presenting opportunities for distributors to assist. (Climate Change and Network Resilience Commitments, 2021). • Solution Stacking: participants recognised the dynamic nature of the energy transition, in which customers and networks would have to evolve as technology and the network developed. Hence, they saw that the solutions could be stacked, initially beginning with one solution and then bridged to the most ideal solution when all parties were ready (Energy Transition Summit, 2023). • Long term planning: A call for a longer timeframe for planning flexible export upgrades was raised due to a current lack in technology and regulation advancements, but there was an expectation that these would come out of necessity in the near future, emphasising the need for a strategic 5-year plan and its alignment with a 10-year vision (Energy Transition Summit, 2023). • Across all networks, stakeholders advocated for a comprehensive strategy, incorporating community batteries, mid-scale generation, and existing solar PV customers as essential resources for navigating future service levels in solar exports (Energy Transition Summit, 2023). • Stakeholders called for active support from the state government to ensure fairness and equity in the energy transition (Energy Transition Summit, 2023).
CitiPower	• CitiPower customers see a future-ready network as tied to the seamless integration of renewable energy sources and the widespread adoption of electric vehicles. However, CitiPower must ensure quality and affordability in the process (CitiPower Broad and Wide, 2022).
Powercor	• Powercor and United Energy's local councils recognise the role of distributors in addressing climate change more than CitiPower (Climate Change and Network Resilience Commitments, 2021). • Customers expressed doubt in the capacity of the regional network to support the electrification of fleets and the availability of infrastructure for EV's outside of metropolitan areas (Powercor Rural and Regional Summit, 2023). • Customers placed high importance on helping everyone gain access to future electricity technology such as electric vehicles (EVs), solar, and electricity storage. Access to these technologies was considered 'a pipe dream' and unattainable for many, particularly those who identified themselves as belonging to the vulnerable cohort who were considered "invisible" (Powercor Broad and Wide, 2022) • Stakeholders emphasised the need for a more future-focused assessment criterion considering factors like economic growth, evolving technologies, and longer-term impacts beyond regulatory reset periods (Energy Transition Summit, 2023). • Concerns were raised about the criteria for assessing network investments, urging a more inclusive approach considering environmental, social, equity, and community outcomes (Energy Transition Summit, 2023). • Powercor SMB customers held strong attitudes about increased electrification, with 50% strongly believing that society will become more dependent on electricity in the future (Customer Values Analysis, 2024). • Regional Innovation Fund: Stakeholders highlighted the need for targeted solutions to address unique rural challenges, such as reliability and renewable energy access. Ideas included small-scale community batteries and demand management systems (CitiPower, Powercor, and United Energy Roundtables, 2024). • Stakeholders recommended real-time dashboards and advisory panels to track and communicate innovation fund utilisation (CitiPower, Powercor, and United Energy Roundtables, 2024).
United Energy	• Customers of United Energy prioritised a reliable electricity supply in the energy transition and sought clear leadership in the process. There is also a clear concern for vulnerable customers and the costs associated with the transition (United Energy Broad and Wide, 2022). • Innovation Fund Allocation: Stakeholders supported the "use it or lose it" guideline and noted that all criteria align with energy transition goals. Mixed feedback was given on the proposed funding amount, with some participants favouring pilot projects. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Data table continued on next page

Summary insights: **Energy Transition**

	What we heard from customers
Customers experiencing vulnerability	• Customers felt like they did not have a say in what the transition looked like and were concerned that it would be dictated to them by the Government and energy companies, regardless of whether they felt ready for changes (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of clarity on what the energy transition is, what changes will be involved and when, the role of different energy companies in this process, and how customers will be impacted and supported (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of government incentives for installing solar panels, particularly for property owners and community solutions, e.g. generating solar and sharing it with residents (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of information for customers in high-density living about how to transition to more renewable energies through their appliances, etc. (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers had a varied, but generally limited understanding of the energy transition (Customers Experiencing Vulnerable Circumstances, 2023). • Most customers were supportive of the transition and hoped for a future with greater reliance on renewable energy (Customers Experiencing Vulnerable Circumstances, 2023). • Two key factors limiting accessibility to the energy transition were residential status and/or income, which made it difficult to be future-focussed (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
As customers increasingly move towards becoming “prosumers” of energy and shift away from traditional models of energy generation, they believe new approaches to grid management and tariff structures are necessary.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
As customers increasingly move towards becoming “prosumers” of energy and shift away from traditional models of energy generation, they believe new approaches to grid management and tariff structures were necessary.	**As customers increasingly move towards becoming “prosumers” of energy and shift away from traditional models of energy generation, they believe new approaches to grid management and tariff structures were necessary.**	**As customers increasingly move towards becoming “prosumers” of energy and shift away from traditional models of energy generation, they believe new approaches to grid management and tariff structures were necessary.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Participants held a strong interest in new energy technologies, such as mobile and rentable batteries, to diversify energy participation. Additionally, many want to share solar and saw this as enabling customers to integrate into the local community and encourage community building. (Future Home Demand, 2023). • Customers desire proactive efforts to improve renewable penetration. They prioritised decentralisation and grid development, aiming to increase the amount of future exports and decarbonise the energy supply (CPPALUE Internal Ideation Workshop, 2022). • Customers believed the integration of Consumer Energy Resources (CER) and Distributed Energy Resources (DERs), such as solar panels, energy storage, and batteries, is crucial for enhancing system resilience and reliability. DERs can contribute to grid stability during disruptions and outages (Climate Change and Network Resilience Commitments, 2021). • Consumers will play a pivotal role in decarbonising their homes with the adoption of electric appliances, EVs, and improving home thermal efficiency. However, there is concern that renters, multi-unit dwellers, and vulnerable groups will be left behind (Stepping Up: A Smoother Pathway to Decarbonising Homes, 2023). • Acceptance of low feed-in tariffs, especially for those who only recently installed solar PV, is shifting expectations of financial returns from exporting to the grid. People increasingly want to share excess solar production with neighbours and community organisations and are less focused on the financial return from selling their excess solar (Future Home Demand, 2023). • People are very interested in sharing the energy they produce via CER, especially excess solar PV production that they cannot self-consume. Not wanting to waste solar energy motivated many who would prefer to donate or share their excess solar production (Future Homes Demand, 2023).
Customers experiencing vulnerability	• Most customers received the solar soak positively, particularly solar customers who were already set up to benefit from it. However, those who worked full time and could not work from home saw no benefit unless they could store and use the solar energy from that period once they arrived home. Even customers with greater flexibility to adapt their energy consumption typically could not afford the upfront cost of installing solar panels and therefore would not be able to benefit from the solar soak (Customers Experiencing Vulnerable Circumstances, 2023). • For vulnerable customers with more flexibility in engaging with the energy transition, the main driver for adopting renewable energy (e.g., solar) was the potential financial benefits. The broader customer base also shared this sentiment, but demonstrated a willingness to share excess solar production with the community which was not yet evident amongst vulnerable customers (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.	**Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.**	**Customers and stakeholders advocated for simplified education on tariff plans, equitable access to solar benefits, and strategic investments in grid capacity, empowering consumers to make informed decisions and drive renewable energy integration.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Stakeholders found that customer education is paramount, emphasising simplicity and standardisation; with the rise of electric vehicles and electric appliances, tariffs should encourage specific usage behaviours and energy efficiency (Victoria Electricity Distributors tariff structure, 2023). • Households continue to show little knowledge of our engagement with their tariff, with 30% of customers not knowing what tariff they are on (Future Home Demand, 2023) • Stakeholders highlight a shifting energy paradigm marked by prosumers and evolving usage patterns that necessitate thoughtful tariff adjustments to manage network change effectively. With the rise of EVs and electrical appliances, tariffs should encourage specific behaviours and energy efficiency in off-peak hours (Victoria Electricity Distributors tariff structure, 2023) • Stakeholders emphasised fully utilising and planning for excess electricity generated, requiring proactive customer education on resourceful solar usage and load management (Energy Transition Summit, 2023). • Stakeholders stressed the importance of educating consumers about available options and the role of network distributors (Energy Transition Summit, 2023). • Stakeholders felt an urgency to respond to the climate emergency that motivated stakeholders in their considerations for service levels (Energy Transition Summit, 2023). • Strategic investments to augment grid capacity are seen by stakeholders as necessary for accommodating high flexible exports (Energy Transition Summit, 2023). • Stakeholders expressed commitment to ensuring new customers can access and utilise captured solar energy (Energy Transition Summit, 2023). • Stakeholders had concerns about potential costs associated with the 'Solar abundance' option, highlighting the need for careful public presentation (Energy Transition Summit, 2023). • Most customers received the solar soak positively, particularly solar customers who were already set up to benefit from it. However, those who worked full time and could not work from home saw no benefit unless they could store and use the solar energy from that period once they arrived home. Even customers with greater flexibility to adapt their energy consumption typically could not afford the upfront cost of installing solar panels and therefore would not be able to benefit from the solar soak (Customers Experiencing Vulnerable Circumstances, 2023).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers did not rank the ability to export highly and strongly opposed export tariffs as they perceived them as additional costs.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers do not rank the ability to export highly and strongly oppose export tariffs as they perceive them as additional costs.	**Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers do not rank the ability to export highly and strongly oppose export tariffs as they perceive them as additional costs.**	**Stakeholder sentiment towards solar exports was positive, with a focus on maximising solar energy output with Government support. Customers do not rank the ability to export highly and strongly oppose export tariffs as they perceive them as additional costs.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Customers have a strong preference for variable export products across most cohorts, including solar, non-solar, and customers from all socio-economic indexes. These preferences reflected broad pre-existing positive associations with the attributes of flexibility and choice (Customer Energy Futures, 2023) • Customer preferences identified the most likely factor that would influence flexible product take-up would be the Victorian government and distributors taking responsibility for managing flexible export products (Customer Energy Futures, 2023). • Despite recent rule changes allowing for export tariffs, the expectation is that the uptake, especially among solar customers, will be low due to additional charges associated with improving export hosting capacity (Customer Energy Futures, 2023) • Ability to export energy did not rank highly amongst customers across networks, despite previous qualitative research indicating its growing importance (Customer Valuation of Service Improvements, 2023) • Stakeholders emphasised fully utilising and planning for excess electricity generated, requiring proactive customer education on resourceful solar usage and load management (Energy Transition Summit, 2023). • Stakeholders stressed the importance of educating consumers about available options and the role of network distributors (Energy Transition Summit, 2023). • Strategic investments to augment grid capacity are seen by stakeholders as necessary for accommodating high flexible exports (Energy Transition Summit, 2023). • Stakeholders expressed commitment to ensuring new customers can access and utilise captured solar energy (Energy Transition Summit, 2023). • SIG stakeholders contended that non-solar users were typically less engaged in the energy category. It was felt that the average consumer was unlikely to spend time understanding this technology, the associated benefits and time required for organising installation (Future Energy Network Forum, 2023).
CitiPower	• Stakeholders had concerns about potential costs associated with the 'Solar abundance' option, highlighting the need for careful public presentation (Energy Transition Summit, 2023). • Stakeholder concerns extended to incentivising non-solar customers to participate in the transition and access benefits of solar exports (Energy Transition Summit, 2023). • Stakeholders felt an urgency to respond to the climate emergency that motivated stakeholders in their considerations for service levels (Energy Transition Summit, 2023). • CitiPower residential customers placed relatively similar importance on service improvements across improving the usage of locally generated storage for the local community (34.4%), reducing carbon emissions in the distribution of your electricity (34.4%) and ensuring the network can support customer exporting solar (31.2%) (Customer Values Analysis, 2024). • CitiPower customers prioritised ensuring the network can support customers to export solar marginally lower than the other values tested, likely due to the lower number of solar customers in CitiPower (compared with other networks) (Customer Values Analysis, 2024). • There was strong support (72% residential, 62.7% SMBs) for initiatives that enable more customers to export excess solar energy, reflecting a high value placed on renewable energy integration and grid preparedness (Trade-Off Evaluations, 2024) • Stakeholder support was shown for the equal allocation export capacity method, with participants emphasising fairness and seeking clarity on practical rollout implications. (CitiPower, Powercor, and United Energy Roundtables, 2024)
United Energy	• Preference for service options that ensure rapid uptake of solar while maintaining fairness and equity (Energy Transition Summit, 2023). • Clear and precise communication and education are deemed essential to encourage solar uptake and convey the value of solar exports (Energy Transition Summit, 2023). • Stakeholder concerns extended to incentivising non-solar customers to participate in the transition and access benefits of solar exports (Energy Transition Summit, 2023). • Ensuring the network can support customers exporting solar was prioritised third by residential customers (14% importance) (Customer Values Analysis, 2024). • Strong stakeholder support for the equal allocation export capacity model. Concerns were noted about the complexity of the value-based model and its implications for councils and tariffs. (CitiPower, Powercor, and United Energy Roundtables, 2024)

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Summary insights: **Energy Transition**

	What we heard from customers
Powercor	• Export services was an important conversation when considering long-term perspectives, as customers were interested in facilitating export services but felt that the proposed options need improvement due to negative sentiment towards export tariffs that were seen as a deterrent to adopting solar (Powercor Rural and Regional Summit, 2023). • Customers expressed strong opposition to export tariffs, perceiving them as fees that discourage rooftop solar adoption. This negative sentiment was widespread, as customers believed export tariffs hindered the promotion of solar energy, despite government incentives. Customers preferred maintaining the status quo over seeing impacts on their power bills and believed in their right to benefit from local renewable energy production. They showed interest in local solar power storage and utilisation but found the proposed export options unsuitable to meet this goal. (Powercor Rural and Regional Summit, 2023) • 78.9% of customers supported investments that would allow more customers to export excess solar energy. However, there were concerns about the fairness of this initiative, with some customers feeling that it primarily benefits those who already have solar panels (Trade-Off Evaluations, 2024) • Stakeholders advocated for solar export strategies to harness renewable energy potential effectively, especially in regional and rural areas (Energy Transition Summit, 2023). • Stakeholders has mixed views on who should bear the financial responsibility for flexible solar exports: individual solar customers vs. collective sharing of costs (Energy Transition Summit, 2023). • Mid-scale generation was proposed as a solution for inclusive participation in the energy transition, especially for renters and those unable to install rooftop solar (Energy Transition Summit, 2023). • High application costs were identified as a barrier to implementing mid-scale generation projects (Energy Transition Summit, 2023). • Mid-scale generation seen as a holistic avenue to encourage community engagement, particularly in rural areas (Energy Transition Summit, 2023). • Stakeholders emphasise fairness and equity in Powercor's solar export transition strategy (Energy Transition Summit, 2023). • Two preferred service options, 'Solar abundance' and 'Fast transition,' require capacity upgrades, raising concerns about fairness in cost distribution (Energy Transition Summit, 2023). • Importance of considering vulnerable customers, especially in rural and regional areas, acknowledged (Energy Transition Summit, 2023). • Stakeholders see government and retailers playing a pivotal role in supporting vulnerable customers (Energy Transition Summit, 2023). • High willingness to invest in initiatives that allow more customers to export excess solar energy, with a focus on promoting renewable energy adoption and grid efficiency (Trade-Off Evaluations, 2024) • There was stakeholder support for equal allocation export capacity methods, with recommendations to maintain statewide consistency to avoid consumer confusion. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.	**Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.**	**Customers were increasingly interested in Consumer Energy Resources, such as solar, batteries, electric vehicles, smart devices and other energy-efficient products. Additionally, they saw these tools as a means of supporting their community.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Residential and non-residential solar capacity has doubled over the last five years as customers continue to invest in renewable technologies. Government policies like the Solar Homes program also spur uptake (Customer Energy Futures, 2023). • While there were variations among the three networks, the option to export solar power was identified as one of the top 10 priorities for Powercor customers and 12th for CitiPower and United Energy. Qualitative research conducted in June 2023 showed that customers perceived this service to be increasingly important, given the rising cost of living and the push towards renewable energy (CSIS, 2022) • Consuming solar power from one's own system is of interest to many households with solar PV. The appeal of self-consuming solar generates positive feelings of productivity and self-reliance (Future Homes Demand, 2023). • In contrast to EVs, SIG stakeholders were less engaged in the topic of battery storage which, in some instances, attributed to customers' lower comprehension of this technology (Future Energy Network Forum, 2023). • There was a common misconception that batteries provided only two key benefits: saving money and combatting climate change. Whilst they believed that both were potentially true, SIG stakeholders contended there needed to be more education regarding reasons to adopt; the primary reason being the ability to improve reliability of electricity supply (Future Energy Network Forum, 2023). • SIG stakeholders contended that non-solar users were typically less engaged in the energy category. It was felt that the average consumer was unlikely to spend time understanding this technology, the associated benefits and time required for organising installation (Future Energy Network Forum, 2023).
First Nations	• Customers were specifically concerned about the high price of electricity and understanding how to reduce their electricity bill. Solar was seen to be part of the solution to these issues. The sentiment felt amongst the community was that without clear knowledge, they were uninformed and disempowered (Yorta Yorta Country Broad and Wide, 2022).
Commercial & Industrial	• Certain C&I customers see potential in a combination of solar and energy storage to enhance power quality and reliability. However, regulatory constraints and reluctance to manage energy storage hinder widespread adoption. To make a compelling business case, comprehensive cost analysis at the state level is crucial, necessitating a coordinated effort beyond network domains. (Economic Growth Engagement, 2023). • Regional C&I customers see solar and battery solutions as an opportunity to reduce reliance on the grid for electricity for cost and carbon purposes, empowering them to play their part in their future zero emissions target (Economic Growth Engagement, 2023). • For most C&I customers, the primary value of alternative energy sources, like solar power, lies in self-consumption rather than revenue generation through energy exports (Economic Growth Engagement, 2023)
Customers experiencing vulnerability	• Retailers were expected to be the main conduit of information, with support from CPPALUE to inform customers about the energy transition (Customers Experiencing Vulnerable Circumstances, 2023). • Customers felt like they did not have a say in what the transition looked like and were concerned that it would be dictated to them by the government and energy companies, regardless of whether they felt ready for changes (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of clarity on what the energy transition is, what changes will be involved and when, the role of different energy companies in this process, and how customers will be impacted and supported (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of government incentives for installing solar panels, particularly for property owners and community solutions, e.g. generating solar and sharing it with residents (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of Information for customers in high-density living about how to transition to more renewable energies through their appliances, etc (Customers Experiencing Vulnerable Circumstances, 2023). • For vulnerable customers with more flexibility in engaging with the energy transition, the main driver for adopting renewable energy (e.g., solar) was the potential financial benefits. The broader customer base also shared this sentiment, but demonstrated a willingness to share excess solar production with the community which was not yet evident amongst vulnerable customers (Customers Experiencing Vulnerable Circumstances, 2023).

Data table continued on next page

Summary insights: **Energy Transition**

	What we heard from customers
CitiPower	• Solar was seen as a major part of customers' energy future, and for this reason customers prioritised investment in making solar more widespread and available. An example of ways customers felt solar could be better integrated was through greater subsidisation to households, particularly those that were financially vulnerable and could not afford the upfront cost (CitiPower Broad and Wide, 2022) • Customers showed an inclusive spirit in considering the interconnectedness of the wider society in the importance they placed on equity for all (CitiPower Broad and Wide, 2022). • CitiPower SMB customers attributed relatively equal importance to Improving usage of locally generated storage (35.4%), Improving carbon emissions reduction (34.6%), and Improving solar export capacity (30.0%) (Customer Values Analysis, 2024). • Stakeholder support was shown for the equal allocation method, with participants emphasising fairness and seeking clarity on practical rollout implications. (CitiPower, Powercor, and United Energy Roundtables, 2024)
United Energy	• Customers frequently discussed electric vehicles (EVs) and solar panels in the context of the energy transition, expressing a desire for increased adoption of these technologies. This sparked debates about funding the necessary infrastructure upgrades to accommodate the growing use of EVs and solar panels. Customers did not agree on whether the costs should be covered by everyone, only EV owners, or through a means-tested approach (United Energy Broad and Wide, 2022). • Ensuring the network can support customers exporting solar was prioritised third by residential customers (14% importance) (Customer Values Analysis, 2024). • SIG United Energy stakeholders contended that investing in batteries and having access to battery storage lacked a compelling value proposition (Future Energy Network Forum, 2023). • Strong stakeholder support for the equal allocation export capacity model. Concerns were noted about the complexity of the value-based model and its implications for councils and tariffs. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Powercor	• SIG Powercor stakeholders raised the dangers of market fluctuation and consequential stock arbitrage. That is, battery owners may have the ability to buy large amounts of energy at an inexpensive price, store it and sell it at a more expensive price once demand has increased (for example, during an extreme weather event). It was anticipated that those who could afford batteries were more likely to partake in trading behaviour, with fear this could become a common practice (Future Energy Network Forum, 2023). • There was stakeholder support for equal allocation export capacity methods, with recommendations to maintain statewide consistency to avoid consumer confusion. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers generally viewed electric vehicles favourably, recognising their potential to support rapid decarbonisation. However, specific customer groups did not focus strongly on EVs due to reliability, affordability and equity concerns.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers generally viewed electric vehicles favourably, recognising their potential to support rapid decarbonisation. But some stakeholders recommended time-of-use tariffs and collaborating with retailers to manage EV uptake effectively.	**Affordability and practicality were key considerations for EV adoption, with customers favouring at-home charging and government incentives to offset costs. However, rural and agricultural needs remained under-addressed, and concerns persisted about the network's capacity to support EV growth alongside reliability and operational challenges.**	**Customers generally viewed electric vehicles favourably, recognising their potential to support rapid decarbonisation. However, specific customer groups did not focus strongly on EVs due to concerns about reliability, affordability, equity, and the need for strategic infrastructure planning to support growing demand.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Customers expressed a strong growing interest in Electric vehicles and prefer to charge their EVs at home, suggesting a shift toward electric mobility and the importance of residential charging infrastructure (Future Home Demand, 2023). • Customers are increasingly driving the energy transformation through investments in CER, such as residential electric vehicles and commercial vehicles, such as those for farming or transport (Consumer Energy Futures, 2023) • EV sales in Australia tripled in 2021 and doubled again in 2022, continuing the exponential trend of EV adoption and leading to over 130,000 EVs nationwide (Consumer Energy Futures, 2023) • Households continue to prefer the convenience of at-home charging, with over 77% of survey respondents with or intending to purchase an EV in the next 5 years indicating they do or would charge their EV at home (Future Home Demand, 2023). • Stakeholders suggested consideration is needed for other types of transport charging options as public transport, like buses, becomes electrified, influencing network decisions (Energy Transition Summit, 2023). • Concerns about overinvestment in capacity upgrades to support EVs, risking stranded assets, with emphasis on demand management during the next regulatory reset period (Energy Transition Summit, 2023). • Whilst EVs were considered economical due to rising fuel prices, SIG stakeholders regarded upfront investment an unresolved barrier to adoption, and therefore felt that government incentivisation for uptake was a key input into future demand (Future energy network forum, 2023). • Beyond price, the use of EVs for certain jobs and / or activities was perceived as a barrier to mass uptake, with a particular focus on those who require towing capacity. Current EVs do not account for groups such as tradespeople or those who use light trucks outside of their employment (Future Energy Network Forum, 2023). • Given hesitations regarding range anxiety and charging infrastructure, it was anticipated that within any given household, it is likely they will own one EV and keep one traditional gasoline-powered car. Therefore, if complications present with the EV, the other vehicle will serve as a backup (Future Energy Network Forum, 2023). • Almost half of residential customers owned or were considering purchasing an EV, suggesting metro areas would be most likely to experience the quickest increase in demand on the network (Customer Values Analysis, 2024). • Most residential EV owners and prospective owners rely on their EV as their primary vehicle, highlighting the growing importance of reliable access to charging infrastructure (Customer Values Analysis, 2024). • Over half of SMB customers in each network owned or were considering purchasing an EV in the next 5 years. This was higher in all networks compared to residential customers (Customer Values Analysis, 2024).
Powercor	• Customers were apprehensive about the capability of the network to cope with increased electricity use, particularly as we move away from gas (Powercor Broad and Wide, 2022) • Torquay's urgency to transition stemmed from wanting to enjoy the benefits that future technology will provide. This included access to EVs and local battery storage. They were also particularly interested in sustainability and felt that energy transformation would support this. They held a strong desire to be progressive and did not wish to be left behind (PowerCor Broad and Wide, 2022) • Customers placed high importance on helping everyone gain access to future electricity technology such as electric vehicles (EVs), solar, and electricity storage. Access to these technologies was considered 'a pipe dream' and unattainable for many, particularly those who identified themselves as belonging to the vulnerable cohort who were considered "invisible". Upfront costs represented the biggest challenge for many (Powercor Broad and Wide, 2022) • Customers considered the electrification of fleets redundant as they believed the network in regional or rural areas could not handle the additional capacity without issues. Furthermore, they expressed doubts about the availability of adequate capacity, power quality and infrastructure, such as charging stations, outside metropolitan areas to sustain a fleet of electric vehicles (Powercor Rural and Regional Summit, 2023) • In the Powercor network, stakeholders highlighted the need to consider EV requirements for heavy vehicles like headers, harvesters, and trucks, which may require different charging behaviour compared to residential light cars (Energy Transition Summit, 2023). • Nuanced approach required for tourism destinations within Powercor and United Energy networks due to seasonality and increased electricity demand related to EVs (Energy Transition Summit, 2023). • Range anxiety was expected to limit the uptake of EVs, particularly in areas where the footprint of charging stations was limited. SIG Powercor stakeholders commented that a more accurate view of uptake would be split by metro and rural areas, anticipating a marked difference, and weighted toward the former (Future Energy Network Forum, 2023). • Stakeholders raised concerns about rural areas being overlooked in EV infrastructure development. Questions were also raised about the practicality of EV adoption in agricultural settings. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Data table continued on next page

Summary insights: **Energy Transition**

	What we heard from customers
CitiPower	• Customers view electric vehicles (EVs) as crucial for the future and emphasise the significance of adequate infrastructure, especially more charging stations. They believe that increased charging infrastructure would lead to the successful integration of EVs into society, addressing concerns about their limited driving range due to insufficient charging options (CitiPower Broad and Wide, 2022). • Council representatives of the CitiPower network commented that consumers did not have the capital (est. $40-50k) required to progress adoption [of EVs]. Current incentivisation initiatives, such as novated leases, were not considered adequate, calling for more government support (Future Energy Network Forum, 2023). • Investment to manage EV uptake: Stakeholders raised concerns about privacy and EV ownership data visibility, with suggestions to integrate time-of-use tariffs into decision-making. Collaboration with retailers was recommended to ensure effective communication of tariffs. (CitiPower, Powercor, and United Energy Roundtables, 2024)
United Energy	• Customers would become more reliant on electricity into the future and lacked confidence that the network was able to support increased demand. Customers were looking for a leader to take charge of the transition (United Energy Broad and Wide, 2022). • United Energy customers wished to get to Charging abundance as soon as the technology and infrastructure developed to support this option was available, but otherwise favoured Shared Charging. (Energy Transition Summit, 2023). • Nuanced approach required for tourism destinations within Powercor and United Energy networks due to seasonality and increased electricity demand related to EVs (Energy Transition Summit, 2023). • Acknowledged the rapid growth of EV ownership and the need for infrastructure to support urban demand. Strategic planning was emphasised to handle peak consumption and ensure equitable access. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Commercial and Industrial	• Decarbonisation efforts were deprioritised in favour of addressing immediate operational challenges and reliability concerns (Commercial and Industrial Customers Report, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Regional and rural customers produced renewable energy for metro areas but questioned the fairness of supporting their decarbonisation efforts when they couldn't access their own local renewables and meet their decarbonisation needs.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Not applicable	**Regional and rural regions generate renewable energy for metro areas but feel underserved, citing a lack of access to their own clean energy resources. They advocated for fair compensation, infrastructure investments, and alignment with regional productivity to equitably support decarbonisation.**	**Regional and rural customers produce renewable energy for metro areas but questioned the fairness of supporting their decarbonisation efforts when they can't access their own local renewables and meet their decarbonisation needs.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
Powercor	• Customers in rural and regional areas are increasingly aware of the renewable energy generated within their communities, such as wind farms. However, they are frustrated by their inability to access and benefit from these clean energy sources. Much of the energy produced is transmitted to urban areas, leaving rural and regional customers without direct access. This lack of access not only affects their ability to reduce their environmental footprint but also hinders their participation in sustainability efforts. Customers express a sense of inequity, believing that they deserve fair compensation and acknowledgment for the value they bring to urban customers by hosting renewable energy projects. (Powercor Rural and Regional Summit, 2023) • Customers argue that regional areas make significant contributions to the overall welfare and economic prosperity of the state and nation. They propose considering a "broader set of values" when assessing these contributions and suggest stimulating economic growth, enhancing social values, and promoting environmental values as key factors in this assessment. Incorporating these values could lead to more equitable, sustainable, and community-oriented energy distribution.(Powercor Rural and Regional Summit, 2023) • Stakeholders advocated for solar export strategies to harness renewable energy potential effectively, especially in regional and rural areas (Energy Transition Summit, 2023). • Mid-scale generation proposed as a solution for inclusive participation in the energy transition, especially for renters and those unable to install rooftop solar (Energy Transition Summit, 2023). • Mid-scale generation was seen as a holistic avenue to encourage community engagement, particularly in rural areas (Energy Transition Summit, 2023). • Customers supported investing in infrastructure to connect large-scale renewable energy sources, driven by environmental benefits and sustainability. While qualitative research highlighted strong enthusiasm, quantitative findings showed a more cautious approach, with varied willingness to pay, reflecting a balance between environmental goals and costs.(Trade-Off Evaluations Powercor, 2024). • Customers and stakeholders highlighted the importance of aligning investments with regional productivity and contributions to the energy transition. (Rural and Regional Summit Report, 2024).
United Energy	• Ensuring locally generated energy can be used in the local community areas was prioritised second by residential customers (16% importance) (Customer Values Analysis, 2024). • Stakeholders advocated for solar export strategies to harness renewable energy potential effectively, especially in regional and rural areas (Energy Transition Summit, 2023). • Mid-scale generation proposed as a solution for inclusive participation in the energy transition, especially for renters and those unable to install rooftop solar (Energy Transition Summit, 2023). • Mid-scale generation was seen as a holistic avenue to encourage community engagement, particularly in rural areas (Energy Transition Summit, 2023). • Preference for service options that ensure rapid uptake of solar while maintaining fairness and equity (Energy Transition Summit, 2023). • Clear and precise communication and education are deemed essential to encourage solar uptake and convey the value of solar exports (Energy Transition Summit, 2023). • Stakeholder concerns extended to incentivising non-solar customers to participate in the transition and access benefits of solar exports (Energy Transition Summit, 2023). • Strong stakeholder support for the equal allocation export capacity model. Concerns were noted about the complexity of the value-based model and its implications for councils and tariffs. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Commercial and Industrial	• In general, C&I customers find the concept of Distribution REZs highly appealing. However, it is important to acknowledge the key risk associated with this approach. There exists a possibility that the planned renewable energy generation may not materialize as expected, leading to unreliable supply or underutilised capacity (Economic growth forum, 2023).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritising reliability and demanding clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanding clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers showed heightened environmental consciousness and willingness to invest in sustainability.	**Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanding clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers show heightened environmental consciousness and willingness to invest in sustainability.**	**Customers expected distribution businesses to commit to emissions reduction and achieving net zero, prioritised reliability and demanding clear progress and communication. C&I customers preferred gradual emission reduction strategies and accountability, while SMB customers show heightened environmental consciousness and willingness to invest in sustainability.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• It is now a core community expectation that corporations (including their own business) are working towards reduced emissions and net 0 zero status, as well as caring broadly for the environment. Residential customers want their distribution business to publicly state a goal, but this is “necessary but not sufficient” as they want to see significant progress towards the goal broadly communicated (Customer Valuation Of Service Improvements, 2021) • Some Business and Residential customers are prepared to pay for environmental improvements across the network, with 34% of customers prepared to pay an additional 8% to reduce CO2 emissions by 50%. (Customer Valuation Of Service Improvements , 2021)
Commercial & Industrial	• Business customers felt that CO2 emissions reduction should be BAU and were wary of funding infrastructure improvements that could otherwise go towards their own business. They felt that “throwing more money at CO2 reduction” would lead to more inefficient outcomes in the long-term (technology improvements, etc.). However, if there were going to be improvements, they preferred more gradual ones (Customer Valuation Of Service Improvements, 2021) • Business customers endorse emission reduction targets and transparency but require more specific, technology-focused plans for achieving them, preferring gradual adjustments over disruptive, transformative changes. (Customer Valuation Of Service Improvements, 2021) • Business customers feel they've made sacrifices and expect all companies, including distribution firms, to do the same for the environment. They seek clear plans for their contributions to reduce CO2 emissions and express concerns about transparency and sincerity from large distribution companies, emphasising accountability, progress reporting, and clear targets. (Customer Valuation Of Service Improvements, 2021) • Decarbonisation efforts were deprioritised in favour of addressing immediate operational challenges and reliability concerns (Commercial and Industrial Customers Report, 2024).
Powercor	• The relatively low rating of improving carbon emissions reduction further supports this trend [ranking reliability and resilience improvements higher], suggesting that, for Powercor residential customers, addressing basic needs such as reliability and resilience are prioritised above environmental sustainability initiatives (Customer Values Analysis, 2024).
CitiPower	• CitiPower residential customers placed relatively even importance on service improvements across improving the usage of locally generated storage for the local community (34.4%), reducing carbon emissions in the distribution of your electricity (34.4%) and ensuring the network can support customer exporting solar (31.2%) (Customer Values Analysis, 2024). • CitiPower SMB customers were more concerned about the effects of climate change and were more likely to be willing to pay extra on top of their bill to improve others’ energy supply than SMB customers in other networks (Customer Values Analysis, 2024). • A majority of customers (74% residential, 67.7% SMBs) were willing to invest in sustainability initiatives aimed at reducing carbon emissions, though there was some skepticism about the immediate impact and the network's responsibility in this area. (Trade-Off Evaluations, 2024).
United Energy	• 72% of customers supported investments in sustainability initiatives aimed at reducing carbon emissions. However, there was a common sentiment that sustainability should be a basic operational requirement and not an additional cost burden on customers (Trade-Off Evaluations, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience factors, preferences for cost-efficiency and convenience, and charging location.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience factors, preferences for cost-efficiency and convenience, and charging location. Stakeholders also raised concerns about privacy and EV ownership data visibility.	**Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience, cost-efficiency, convenience, and charging location. Rural and regional considerations, including tourism and agricultural needs, further emphasise the importance of tailored infrastructure development to address diverse priorities and practical challenges.**	**Customer preferences and behaviours regarding EV charging varied significantly based on factors such as charging options, inconvenience factors, preferences for cost-efficiency and convenience, and charging location. Perception of rapid EV adoption underscores the critical need for strategic infrastructure planning to manage peak consumption and ensure equitable access.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
Powecor	• Powercor customers' votes were dispersed across Shared Charging, Heavy Touch, and Light Touch options (Energy Transition Summit, 2023). • The inconvenience factor for deferring EV charging is approximately 10% higher for SMB customers than residential customers (Customer Values Analysis, 2024). • Both residential and SMB customers had mixed feelings towards proactive investments in EV infrastructure. There was skepticism about perceived subsidising EV owners, as many felt it was unfair to pay more for grid upgrades that primarily benefit EV users. Despite this, both groups recognised the need to future-proof the grid for growing EV adoption, supporting investments that balance current costs with future needs, with a preference for moderate or incremental upgrades (Trade-Off Evaluations, 2024). • Stakeholders raised concerns about rural areas being overlooked in EV infrastructure development. Questions were also raised about the practicality of EV adoption in agricultural settings. (CitiPower, Powercor, and United Energy Roundtables, 2024) • EV charging infrastructure was identified as a priority, with stakeholders and customers emphasising readiness to attract regional tourism and improve sustainability. (Rural and Regional Summit Report, 2024)
CitiPower	• CitiPower unveiled a predilection for minimal capacity improvements and various degrees of managed charging, encompassing Shared Charging, Heavy Touch, and maintaining the Status Quo (Energy Transition Summit, 2023). • CitiPower residential customers are more likely to charge at public charging stations and at work, which could be attributed to greater accessibility to charging infrastructure at these locations in metro areas (Customer Values Analysis, 2024). • A higher proportion of CitiPower customers are charging during the day, possibly due to charging at work (Customer Values Analysis, 2024). • Investment in managing EV uptake: Stakeholders raised concerns about privacy and EV ownership data visibility, with suggestions to integrate time-of-use tariffs into decision-making. Collaboration with retailers was recommended to ensure effective communication of tariffs. (CitiPower, Powercor, and United Energy Roundtables, 2024)
United Energy	• United Energy stakeholders wished to get to Charging abundance as soon as the technology and infrastructure developed to support this option was available, but otherwise favoured Shared Charging (Energy Transition Summit, 2023). • United Energy residential customers are more likely to charge their EV at home, which aligns with their preference for charging overnight, when it is cheapest and when it is most convenient (Customer Values Analysis, 2024). • There is a price-sensitive cohort in United Energy, with a significantly higher proportion of customers preferring to charge whenever it is cheapest (Customer Values Analysis, 2024). • Stakeholders acknowledged the rapid growth of EV ownership and the need for infrastructure to support urban demand. Strategic planning was emphasised to handle peak consumption and ensure equitable access. (CitiPower, Powercor, and United Energy Roundtables, 2024)
All customers	• Trickle chargers are preferred over fast chargers due to cost considerations and trip length estimations, with limitations based on the dwelling's voltage and renter situations (Energy Transition Summit, 2023). • Confidence in EV uptake and charging profiles varies among stakeholders, with concerns about conflicting information and lack of policy direction (Energy Transition Summit, 2023). • Affordability of EVs expected to increase in the next 10-12 months, with initiatives like Intellihub Street Power Pole EV Charger project aiming to accelerate EV charger management (Energy Transition Summit, 2023). • Without incentive for landlords and developers to invest in charging infrastructure, uptake was forecast to be constrained. Apartment buildings also suffered from the added barrier that solar power was less common, meaning their ability to charge an EV at an affordable cost was inaccessible (Future Energy Network Forum, 2023). • SIG Powercor, United Energy, and CitiPower stakeholders agreed that demand management was critical. There was a clear desire for distributers to direct and control usage as opposed to planning for all users to have complete convenience. For example, it was suggested that distributers may seek to replicate petrol station price signalling within the new charging environment (Future Energy Network Forum, 2023). • A higher proportion of residential customers indicated they are flexible when it comes to rescheduling charging their EV (Customer Values Analysis, 2024). • Generally, across networks, residential customers indicate a high preference for charging EVs overnight / when most convenient (Customer Values Analysis, 2024). • SMB customers across networks were generally flexible when it came to rescheduling their EV charging to a different time (Customer Values Analysis, 2024). • Majority of SMB customers across all networks would or do mainly recharge their EV at home (Customer Values Analysis, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers and stakeholders alike emphasised the importance of effective demand management, regulatory clarity, and transparent communication to ensure efficient grid

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Stakeholders emphasised the importance of effective demand management, transparent communication, and financial incentives. SMBs showed greater willingness than Residential customers to allow external control of appliances, highlighting grid reliability as a key driver. Stakeholders advocated for practical pilot programs for Piclo, improved data visibility, and targeted support to overcome operational and cost barriers, ensuring demand management initiatives aligned with community and business needs.	**Stakeholders emphasised the critical role of demand management, with a focus on platforms like Piclo for data sharing and tailored solutions. Ensuring equity between urban and rural communities in energy management, improving data visibility to support community-level initiatives, and fostering transparent communication were essential to optimise grid operation and build trust.**	**Stakeholders emphasised the important of effective demand management, improved data visibility and transparent communication to ensure efficient grid operation. Platforms like Piclo were seen as useful tools for data sharing and supported renewable energy adoption.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• Demand management deemed essential for grid load management, with calls for upfront charging requirements and government legislation to track EV charging installations (Energy Transition Summit, 2023). • Smart chargers enable demand management by allowing customers to program charging times aligned with off-peak hours, supporting behaviour management based on price signals. (Energy Transition Summit, 2023). • Interrelationship between electrification of various appliances and equipment on the electricity network necessitates a holistic approach to address network demand, including considerations for solar and batteries (Energy Transition Summit, 2023). • Confidence in EV uptake and charging profiles varies among stakeholders, with concerns about conflicting information and lack of policy direction (Energy Transition Summit, 2023). • SIG Powercor, United Energy, and CitiPower stakeholders, it was agreed that demand management was critical. There was a clear desire for distributers to direct and control usage as opposed to planning for all users to have complete convenience. For example, it was suggested that distributers may seek to replicate petrol station price signalling within the new charging environment (Future Energy Network Forum, 2023). • SIG stakeholders were conscious of the impact electrification may have on stability of the grid. It was anticipated that peaks during extreme weather may be heightened, particularly during Winter where heating has predominantly been powered by gas. Similarly, cooktops were a large topic of conversation where demand was concerned, given their use by all consumers within a similar time period. Gas stoves replaced by induction cooktops were expected to place heavy demand on the grid during dinner time each day (Future Energy Network Forum, 2023).
CitiPower	• Residential customers were less likely to allow for external control than SMB customers (55.1% vs 66.0%). However, more SMB customers indicated the improvement of grid reliability as another incentive than Residential (31.0% vs 17.9%). SMB customers were also more willing to allow CitiPower to manage their appliances in general than Residential customers (Test and Validate program, 2024). • Piclo demand management: Stakeholders highlighted the need to clarify parameters for potential suppliers and leverage learnings from global experiences. A pilot stage was recommended before full rollout, with the program targeting the right locations. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Data Visibility: Practical and timely data were desired by stakeholders to support community-level projects and renewable grid connections. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Powercor	• Residential Powercor customers were less likely to allow for external control than SMB customers (51.0% vs 64.6%). While price-related factors remained the biggest stated incentives, more SMB customers also indicated the improvement of grid reliability as another incentive compared to Residential customers (27.0% vs 16.7%). SMB customers were more willing to allow Powercor to manage their electric vehicle charging and smart home devices (23.7% vs 7.6% and 30.4% vs 9.3%) (Test and Validate Program, 2024). • Piclo demand management: Stakeholders emphasised the importance of sharing relevant data with potential suppliers to optimise solutions, balancing immediate benefits with long-term resilience. Concerns were raised about prioritising urban over rural areas, leaving rural communities at a disadvantage. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Data Visibility: Powercor stakeholders highlighted the need for equity in data access, with data supporting community-level renewable projects. Assistance was required to interpret complex data. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders and customers support for electrification initiatives was tied to concerns about the network's capacity and the need for proactive communication to counter misinformation. (Rural and Regional Summit Report, 2024)
United Energy	• More than half of Residential customers were unwilling to allow for external network control, while less than 2 in 5 SMB customers were unwilling (53.4% vs 38.2%). Price related factors were the biggest stated incentives for both Residential and SMB customers. Residential were less likely to allow smart home devices to be managed by United Energy than SMB customers (11.8% vs 19.9%) (Test and Validate Program, 2024). • Participants highlighted the need to clarify the value proposition of Piclo for residential consumers and suggested a pilot launch before full implementation. Concerns were raised about overlap with existing Australian Energy Market Operator (AEMO) systems. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Emphasis on improving network data visibility to empower communities, supporting renewable energy adoption, and addressing frustrations with long lead times for accessing data. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Data table continued on next page

Summary insights: **Energy Transition**

	What we heard from customers
Customers experiencing vulnerability	• Regional and rural customers urged CPPALUE to provide a clear vision for the future, inclusive of contingency plans, to effectively manage potential major outages resulting from the energy transition. They sought assurance and transparency regarding how CPPALUE plans to address increased electricity demand and potential disruptions (Customers Experiencing Vulnerable Circumstances, 2023). • Customers were concerned that the grid would not be ready to handle the increased demand and wondered what would happen to existing gas lines and gas meters (Customers Experiencing Vulnerable Circumstances Report, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Not applicable

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.	**C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.**	**C&I customers felt cautious optimism for demand management platforms, unsure of their viability. They needed to see clear financial benefits and simple implementation.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
Commercial and Industrial	• The Piclo platform was met with cautious optimism, but many businesses preferred their existing energy management systems (Commercial and Industrial Customers Report, 2024). • Respondents noted operational and capability constraints limiting their ability to participate in demand management programs, particularly in energy-intensive industries (Commercial and Industrial Customers Report, 2024). • High costs of adopting new energy technologies, such as battery storage, were significant barriers to engagement (Commercial and Industrial Customers Report, 2024). • Stakeholders highlighted the need for simplicity and strong financial incentives to drive participation in demand management initiatives (Commercial and Industrial Customers Report, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers and stakeholders were apprehensive of electrification from gas, sharing several key concerns. These include doubts about reaching the 2050 net-zero target, grid stability challenges during extreme weather, high retrofitting costs for homes, grid capacity issues, rural electrician shortages.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers and stakeholders share concerns about electrification from gas. SMB customers demonstrated a stronger willingness than Residential customers to electrify gas appliances, with a greater proportion planning near-term replacements, but significant financial and logistical barriers persist for both groups.	**Customers and stakeholders were apprehensive of electrification from gas due to several concerns. These included doubts about achieving the 2050 net-zero target, grid stability challenges during extreme weather, and high retrofitting costs for homes. Additionally, there were disparities in willingness to electrify between customer segments, with SMBs demonstrating higher interest and plans for transition compared to residential customers.**	**Customers and stakeholders were apprehensive of electrification from gas due to several concerns. These included doubts about achieving the 2050 net-zero target, grid stability challenges during extreme weather, and high retrofitting costs for homes. Additionally, there were disparities in willingness to electrify between customer segments, with SMBs demonstrating higher interest and plans for transition compared to residential customers.**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
All customers	• When discussing the [AEMO electrification of gas] forecasts, some suggested these were too conservative to service demand post-commencement of new policy in January 2024, let alone achieve the 2050 net zero goal (Future Energy Network Forum, 2023). • The broader majority of SIG stakeholders were unanimous in the sentiment that logistics of facilitating the 2050 target were not feasible (Future Energy Network Forum, 2023). • New builds were considered the path of least resistance, whereas existing homes were likely to prolong the electrification transition (Future Energy Network Forum, 2023). • It was agreed across all networks that policy change had the greatest chance of accelerating electrification (Future Energy Network Forum, 2023). • SIG stakeholders were conscious of the impact electrification may have on stability of the grid. It was anticipated that peaks during extreme weather may be heightened, particularly during Winter where heating has predominantly been powered by gas. Similarly, cooktops were a large topic of conversation where demand was concerned, given their use by all consumers within a similar time period. Gas stove replaced by induction cooktops were expected to place heavy demand on the grid during dinner time each day (Future Energy Network Forum, 2023). • Cooktops within existing homes were the largest point of contention when discussing cost as a key barrier to electrification. Replacing a gas stove with an induction cook top required rewiring of the fuse box to retrofit original provisioning. The investment required to do so was significant and may seem unwarranted to someone who could spend much less maintaining their current gas cooktop (Future Energy Network Forum, 2023).
CitiPower	• Compared to Residential, SMB customers were more likely to consider electrifying their gas appliances in the near future (37.0% vs 58.3%). Among those considering, 53.2% of Residential customers were planning to replace their gas appliances within the next 5 years, while 79% of SMB planned to replace their appliances within the same timeframe (Test and Validate, 2024).
United Energy	• Less than a quarter of United Energy Residential customers would consider electrifying their gas appliances in the near future with half of SMB customers likely to consider it (23.1% vs 52.8%). Likewise, more SMB than Residential customers were planning to electrify their gas appliances within the next 5 year among those considering (72.1% vs 43.7%) (Test and Validate program, 2024).
Customers experiencing vulnerability	• Customers were also concerned that the grid would not be ready to handle the increased demand and wondered what would happen to existing gas lines and gas meters (Customers Experiencing Vulnerable Circumstances Report, 2024).
Powercor	• SIG Powercor stakeholders commented that, to achieve a net zero economy by 2050, approximately 1,000 connections would need to be converted per day. Assuming consumers were willing, there would not be enough tradespeople / electricians to fuel this demand, particularly in rural towns where there was a scarce number of electricians (Future Energy Network Forum, 2023). • Half of SMB customers were likely to consider replacing their gas appliances whereas almost a third of Residential customers would consider replacing in the near future (50.0% vs 30.0%). Of those that would consider, over two third of SMB customers and half of Residential customers were planning to replace it in the next 5 years (73.5% vs 53.3%) (Test and Validate, 2024). • Stakeholders and customers support for electrification initiatives was tied to concerns about the network's capacity and the need for proactive communication to counter misinformation. (Rural and Regional Summit Report, 2024)
Commercial & Industrial	• Industrial organisations accounted for approximately 30% of gas usage. Furthermore, it was noted that boilers (owned by many industrial organisations) needed to heat at a high temperature, one that electricity could not facilitate. Due to these requirements, industrial organisations had made significant investment in gas which led SIG stakeholders to question how these companies would be compensated for the transition (Future Energy Network Forum, 2023). • C&I customers are interested in electrifying their operations, however, decarbonisation efforts were deprioritised in favour of addressing immediate operational challenges and reliability concerns (Commercial and Industrial Customers Report, 2024).

Summary insights: **Energy Transition**

Pre-Test and Validate Broad Customer Insight
Customers and stakeholders are apprehensive of electrification from gas, sharing several key concerns. These include doubts about reaching the 2050 net-zero target, grid stability challenges during extreme weather, high retrofitting costs for homes, grid capacity issues, rural electrician shortages.

Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts	**C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts**	**C&I customers were interested in electrifying their operations, however, operational reliability and immediate challenges often took precedence over decarbonisation efforts**

Customer feedback used to develop insights located below

Summary insights: **Energy Transition**

	What we heard from customers
Commercial & Industrial	• Industrial organisations accounted for approximately 30% of gas usage. Furthermore, it was noted that boilers (owned by many industrial organisations) needed to heat at a high temperature, one that electricity could not facilitate. Due to these requirements, industrial organisations had made significant investment in gas which led SIG stakeholders to question how these companies would be compensated for the transition (Future Energy Network Forum, 2023). • C&I customers relying on gas for high heat and power output operations expressed concerns about the feasibility of electrification without innovative alternatives, especially given gas's superior capabilities in these contexts. (Economic growth forum, 2023). • Customers anticipate network bottlenecks as electrification accelerates, raising doubts about the network's capacity to handle increased demand. (Economic growth forum, 2023). • Electricity costs, especially in regional and rural areas, are perceived to be significantly higher than gas, posing a barrier to electrification. Customers cited the expense of electricity transmission compared to the more economical availability of gas. (Economic growth forum, 2023). • Customers expressed a willingness to work with distributors to upgrade infrastructure and plan transitions over the next decade. However, they highlighted the need for distributors to adopt a proactive role in increasing supply to meet future demands. (Economic growth forum, 2023). • C&I customers are interested in electrifying their operations, however, decarbonisation efforts were deprioritised in favour of addressing immediate operational challenges and reliability concerns (Commercial and Industrial Customers Report, 2024). • Many C&I customers view decarbonisation as a medium- to long-term objective, driven by regulatory requirements and corporate sustainability goals, with net-zero deadlines ranging between 2030 and 2050. (Commercial and Industrial Customers Report, 2024). • Transitioning from gas to electricity is seen as a critical step toward decarbonisation, but many organisations face operational constraints. Industries reliant on high heat from gas find it challenging to fully electrify operations without substantial efficiency or cost trade-offs. (Commercial and Industrial Customers Report, 2024). • Customers fear rising gas costs will add to the pressure to electrify, even as they highlight the higher upfront costs and grid capacity limitations associated with the transition. (Commercial and Industrial Customers Report, 2024). • Grid bottlenecks significantly delay renewable energy adoption. Processes for securing grid connections for solar, wind, and battery projects can take years, involve substantial costs, and require meeting complex technical requirements. (Commercial and Industrial Customers Report, 2024). • Many organisations hesitate to invest in renewable projects until grid-related challenges are resolved, resulting in missed opportunities for decarbonisation. (Commercial and Industrial Customers Report, 2024).

Customer Experience

How does the business frame Customer Experience:

"We need to help improve customers' energy literacy to optimise their network use and future energy use; provide more effective and efficient communication, including during outages; and digitalise and modernise our operations and streamlining the customer connections process." (CitiPower, Powercor and United Energy's Customer Narrative)

What Customer Experience means to customers

- Customers see a positive customer experience in electricity distribution as an interaction characterised by transparency, empowerment, and a customer-centric approach.
- They consider communication, technology, community engagement, and support programs as pivotal elements shaping their experiences with distributors.
- The distributor's ability to meet commitments, fulfill their needs, and address their concerns is of paramount importance in shaping this customer experience.

Context

Customers find themselves in a rapidly changing energy landscape where their experiences and interactions with energy providers are evolving. Additionally, their expectations for a 'customer-centric' and tailored experience are increasing. In the context of energy consumption one example of this is increasing access to real-time data about their energy usage, allowing customers to monitor and manage their consumption. The digital transformation in the energy sector, characterised by innovations like smart meters, online account management, and energy-efficient technologies, is welcomed by customers as it offers convenience and control.

Summary insights: **Customer Experience**

Pre-Test and Validate Broad Customer Insight		
Effective education and tailored communication were crucial in empowering customers, particularly vulnerable and CALD communities, to navigate the energy transition, manage energy consumption, and understand tariff structures. This highlighted the need for clarity, simplicity, and support from energy retailers and distributors.		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Effective education and tailored communication were essential to empower customers, particularly vulnerable and CALD communities, to navigate the energy transition, manage consumption, and understand tariffs. Collaborative initiatives like community funding and culturally aligned programs were highlighted by stakeholders as vital to ensuring equitable access and practical support, with a strong focus on clarity and simplicity in communication from retailers and distributors.	**Effective education and tailored communication were crucial in empowering customers, particularly vulnerable and CALD communities, to navigate the energy transition, manage energy consumption, and understand tariff structures. Stakeholder support for targeted initiatives like Energy Care and Community Energy Fund further highlight the importance of equitable, accessible resources and long-term collaboration for rural and underrepresented groups**	**Effective education and tailored communication, supported by targeted community programs and technology, were seen by stakeholders as crucial in empowering customers, particularly vulnerable, CALD, and diverse community groups, to navigate the energy transition. Stakeholders believed emphasis should be placed on simplicity, clarity, equitable resource distribution, and culturally aligned initiatives to foster agency and participation in the transition.**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
All customers	• CALD communities held a very low knowledge of the industry and usually depended on calling their retailer for information (CALD Broad and Wide, 2022). • The DEF scenarios suggest that greater certainty in future demand and grid stability will be achieved through greater community engagement and autonomy, as the research indicates consumers override CER to maintain control and will align CER usage with their daily priorities and values. Additionally, there is a disparity in access to and knowledge of CER (Digital energy futures, 2023). • Vulnerable customer advocates highlighted the need for unbiased information, tailor information, and flexibility in language and energy literacy as a means to empowering vulnerable customers (Customer vulnerability roundtable, 2023). • Stakeholders found that customer education is paramount, emphasising simplicity and standardisation, with the rise of electric vehicles and electric appliances, tariffs should encourage specific usage behaviours and energy efficiency (Victoria Electricity Distributors tariff structure, 2023). • Customers had mixed experiences with reliability and prioritised proactive and informed communication to mitigate the impact of outages (Youth Broad and Wide, 2022). • Home consumption habits show cooking, heating, and cooling as the least flexible activities, posing challenges in altering customer consumption times (Customer Values Analysis, 2024). • Clothes washing and drying are the most flexible activities, presenting opportunities for influencing customer consumption times (Customer Values Analysis, 2024). • Stakeholders raised concerns about fair cost distribution for resilience investments, especially between safe and vulnerable communities. Recommendations included sharing cost benefit analyses publicly, reassessing cost distribution for equity, and exploring assessment models that quantify potential savings from risk reduction (JDB Resilience Framework and approach workshop, 2023).
Customers experiencing vulnerability	• As vulnerable customers navigate the energy transition, they expressed the foremost desire to gain a sense of agency and control. They saw education and communication as one tool in achieving this goal (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers asked for information on energy usage and tariff structures to reduce costs. They suggested that retailers provide clarity on how much energy different appliances consume and the price difference between peak and off-peak rates, which could help them develop a better of how to lower bills (Customers Experiencing Vulnerable Circumstances, 2023). • Customers wanted support to feel more informed about their energy usage and tariff structures, which they expected from their retailers (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers also wanted CPPALUE to communicate its vision for the future, especially regarding backup plans for managing major outages in rural and regional areas (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of clarity on what the energy transition is, what changes will be involved and when, the role of different energy companies in this process, and how customers will be impacted and supported (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers wanted support in the form of Information for customers in high-density living about how to transition to more renewable energies through their appliances, etc (Customers Experiencing Vulnerable Circumstances, 2023). • Retailers were expected to be the main conduit of information, with support from CPPALUE to inform customers about the energy transition (Customers Experiencing Vulnerable Circumstances, 2023).
Commercial & Industrial	• Many customers are largely unaware of their current network tariff structure. C&I customers have expressed a desire for more straightforward and easily comprehensible educational materials that explain their network tariff structures in simple 'customer-friendly' terms. (Economic Growth Engagement, 2023) • Commercial and Industrial Customers want to understand how these structures can impact their energy consumption costs. The diverse and nuanced needs of individual businesses complicate this request for clearer information. (Economic Growth Engagement, 2023). • An appealing notion discussed among some C&I customers was the capability of the businesses to leverage historical data to assess the previous duration and frequency of voltage variations. C&I customers believed this data-driven approach could empower them to make informed decisions regarding protective measures. (Economic Growth Engagement, 2023). • Effective education plays a vital role in enabling C&I customers to manage and optimise their energy consumption. Some C&I customers expressed a lack of understanding of their network tariff structures and believed that enhancing education was crucial (Economic Growth Engagement, 2023).

Data table continued on next page

Summary insights: **Customer Experience**

	What we heard from customers
United Energy	• Energy Care: Stakeholders appreciated guidance to help vulnerable consumers participate in the energy transition. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Community Energy Fund: Stakeholders recommended targeted support for community-led projects over individual beneficiaries, ensuring equitable impact. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Customer Assistance Program: Stakeholders suggested targeted incentives for landlords to support renters in participating in energy transition initiatives. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Energy Advisory Services: Stakeholders emphasised leveraging technology, such as smart meters and AI, to tailor energy education and provide actionable insights for consumers. (CitiPower, Powercor, and United Energy Roundtables, 2024) • First Peoples Program: Stakeholders advocated learning from similar programs to avoid past mistakes and ensure culturally aligned implementation. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Powercor	• Energy Care: Stakeholders proposed using this initiative to educate rural communities about energy efficiency, with an emphasis on accessible resources for vulnerable customers. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Community Energy Fund: Stakeholders recommended establishing an advisory panel to oversee fund allocation, ensuring transparency and prioritising rural community projects. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Customer Assistance Program: Stakeholder concerns were raised about the limited impact of investments in rural areas compared to urban-focused initiatives. Participants advocated for equitable resource distribution. (CitiPower, Powercor, and United Energy Roundtables, 2024) • First Peoples Program: Stakeholders emphasised the importance of delivering the initiative through First Peoples organisations to ensure cultural alignment and build trust. They highlighted the need for long-term collaboration and to learn from previous energy-related programs to avoid repeating past mistakes. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Energy Advisory Services: Stakeholders recommended leveraging technology, such as smart meters and AI, to personalise energy education for consumers. They also stressed the importance of delivering this initiative through trusted community organisations to maximise impact and engagement. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Stakeholders calls for a more inclusive and comprehensive "Regional and Rural Roadmap" indicated dissatisfaction with limited stakeholder input in current planning. (Rural and Regional Summit Report, 2024) • Stakeholders support for electrification initiatives was tied to concerns about the network's capacity and the need for proactive communication to counter misinformation. (Rural and Regional Summit Report, 2024)
CitiPower	• Energy Care: Education was highlighted by stakeholders as critical, with suggestions to leverage CitiPower's on-ground teams to inform and assist vulnerable customers in understanding their energy usage and bills. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Community Energy Fund: Funding was recommended by stakeholders to go to community organisations rather than individuals, ensuring equitable access and greater project impact. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Customer Assistance Program: Stakeholders suggestions included incorporating an educational component to help vulnerable customers understand and manage the transition from gas to electricity. (CitiPower, Powercor, and United Energy Roundtables, 2024) • First Peoples Program: There was strong support from stakeholders for delivery by First Peoples organisations to ensure cultural alignment and effective implementation. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Summary insights: **Customer Experience**

Pre-Test and Validate Broad Customer Insight		
Customers saw innovation and technology as essential drivers of an enhanced customer experience, emphasising the potential of new technologies like smart meters, digital apps, online account management, and energy-efficient technologies.		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while prioritising privacy and cost-effective rollouts	**Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while prioritising privacy and cost-effective rollouts**	**Customers and stakeholders saw innovation and proactive technology adoption as crucial for an enhanced energy experience, with emphasis on real-time feedback, smart metering, and transparency in communication. They supported targeted initiatives to improve reliability and visibility while prioritising privacy and cost-effective rollouts**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
All customers	• Most customers are not comfortable with fully automated smart appliances, preferring to have control over settings (Future Home Demand, 2023). • Participants wanted real-time feedback on household consumption to promote renewable energy use. They also sought help in integrating smart and energy technologies, envisioning services for installation, education and management (Future home demand, 2023) • When customers imagined smart technologies, they were largely intended to increase remote control over appliances, such as via an app. They did not imagine full automation or third-party management of devices (Future Home Demand, 2023). • Some customers want the option to get real-time feedback on detailed household energy consumption via notifications, including which appliances are using the most energy as well as the source of their energy to encourage greater use of renewable energy (Future Home Demand, 2023). • Choice between smart chargers (allows user to manage and monitor charging) and "dumb" chargers (simple plug-in) available for EV owners in Australia, with potential future regulations favouring smart chargers (Energy Transition Summit, 2023). • Smart chargers enable demand management by allowing customers to program charging times aligned with off-peak hours, supporting behaviour management based on price signals (Energy Transition Summit, 2023). • The interrelationship between the electrification of various appliances and equipment on the electricity network necessitates a holistic approach to address network demand, including considerations for solar and batteries (Energy Transition Summit, 2023). • Trickle chargers are preferred over fast chargers due to cost considerations and trip length estimations, with limitations based on the dwelling's voltage and renter situations (Energy Transition Summit, 2023).
United Energy	• Stakeholders showed strong support was shown for proactive metering approach due to immediate benefits such as reliability and enhanced energy usage visibility. Participants stressed the importance of transparent communication regarding rollout benefits and privacy assurances. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Innovation Fund Allocation: Stakeholders supported the "use it or lose it" guideline and noted that all criteria align with energy transition goals. Mixed feedback was given on the proposed funding amount, with some participants favouring pilot projects. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Both Residential and SMB customers preferred United Energy to start proactively replacing meters to avoid failures, similar to other networks (76.7% vs 72.6%) (Test and Validate, 2024). • Strong support was shown for a proactive metering approach due to immediate benefits such as reliability and enhanced energy usage visibility. Participants stressed the importance of transparent communication regarding rollout benefits and privacy assurances. (CitiPower, Powercor, and United Energy Roundtables, 2024)
Powercor	• Stakeholders supported proactive metering upgrades to enhance reliability and provide long-term visibility benefits. Suggestions included targeted rollouts to manage costs effectively. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Regional Innovation Fund: Stakeholders highlighted the need for targeted solutions to address unique rural challenges, such as reliability and renewable energy access. Ideas included small-scale community batteries and demand management systems like Piclo. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Over two thirds of Residential and SMB customers preferred Powercor to start proactively replacing meters to prevent failures despite the current price of $5 per month (70.2% vs 68.5%) (Test and Validate, 2024). • Stakeholders supported proactive upgrades to enhance reliability and provide long-term visibility benefits. Suggestions included targeted rollouts to manage costs effectively. (CitiPower, Powercor, and United Energy Roundtables, 2024)
CitiPower	• Stakeholders showed medium support for proactive meter replacements, citing immediate reliability benefits and improved network visibility. A targeted rollout approach and clear communication were recommended. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Both Residential and SMB customers preferred CitiPower to start proactively replacing meters to avoid failures (72.6% vs 70.5%) (Test and Validate, 2024). • Participants showed medium support for proactive meter replacements, citing immediate reliability benefits and improved network visibility. A targeted rollout approach and clear communication were recommended. (CitiPower, Powercor, and United Energy Roundtables, 2024) • Participants supported proactive asset replacement to future-proof the network while avoiding overinvestment. Minimising community disruption by coordinating upgrades with other utilities was recommended. (CitiPower, Powercor, and United Energy Roundtables, 2024)

Summary insights: **Customer Experience**

Pre-Test and Validate Broad Customer Insight		
Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.	**Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.**	**Customers wanted to be included in decision-making processes around energy industry developments, such as resilience measures and energy transition initiatives.**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
All customers	• Communities express the importance of a collaborative partnership with both the distributor and governments to address climate-driven resilience challenges and suggest the need for a community leadership manager to provide expertise and support in achieving a resilient future (Community Roundtables Resilience, 2022) • Workshop participants expressed dissatisfaction with compliance-based engagement, particularly with First Nations communities, and advocated for genuine, human-centred approaches (JDB Resilience Framework and Approach Workshop, 2023). • Participants emphasised the importance of demonstrating climate preparedness, consulting at-risk communities on resilience measures, and engaging beyond compliance standards (JDB Resilience Framework and Approach workshop, 2023). • Stakeholders preferred win-win scenarios and clear roles/responsibilities in partnerships. They advocated for collaboration with water, gas, telecoms, councils, and community groups in resilience planning (JDB Resilience Framework and approach workshop, 2023).
Commercial and Industrial	• Customers expressed a desire for distributors to move beyond transactional relationships and adopt a more strategic and collaborative approach. They emphasised the importance of joint planning for infrastructure upgrades, renewable energy integration, and long-term energy reliability (Commercial and Industrial Customers Report, 2024). • Customers saw potential for collaboration in piloting new technologies, such as smart grids and energy storage solutions, to future-proof their operations while enhancing network resilience (Commercial and Industrial Customers Report, 2024).

Summary insights: **Customer Experience**

Pre-Test and Validate Broad Customer Insight		
Customers had varying desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers had varied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.	**Customers had varyied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.**	**Customers had varyied desires for network aesthetics, with some valuing visual appearance, especially near substations and for community engagement, while others prioritised functionality and cost-effectiveness over aesthetics.**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
All customers	• Residential customers felt that the aesthetics of the network were 'nice to have' but were a lower priority. Those who lived near substations viewed aesthetics as a higher priority (Customer Valuation Of Service Improvements, 2021) • A driver of aesthetic value was an opportunity to engage the local community to develop art and visual appearance (schools, artists, etc.) They were less concerned about covering "basic assets" (Customer Valuation Of Service Improvements, 2021) • There is a low desire for financial investment across all demographics in aesthetics (Customer Valuation Of Service Improvements, 2021)
CitiPower	• Customers highly value the aesthetics of network infrastructure, emphasising efficiency and environmental integration. They appreciate murals and well-designed asset integration into public spaces. (CitiPower Broad and Wide, 2022) • These aesthetics reflect customers' expectations for an efficient and convenient customer experience, showcasing their commitment to inclusivity and ensuring everyone can access the full value of their electricity service. (CitiPower Broad and Wide, 2022)
United Energy	• Customers, particularly those in Sandringham, emphasised the importance of an aesthetically pleasing community environment when considering their experience with United Energy. Suggestions to address this included utilising community art and moving assets underground. (United Energy Broad and Wide, 2022)
Commercial & Industrial	• The majority of business customers felt that it wasn't "their role" to fund visual appearance. The only exceptions were business customers who rely on foot traffic and wanted the surrounding area to look nice (Customer Valuation Of Service Improvements, 2021)

Summary insights: **Customer Experience**

Pre-Test and Validate Broad Customer Insight		
Efficient, easily accessible and responsive customer service was a priority for customers.		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.	**Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.**	**Customers prioritised efficient, accessible, and responsive customer service, with a strong emphasis on clear communication during outages.**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
All customers	• Communication and a high level of customer experience were important for young customers, accessing sufficient warning for planned outages (Youth Broad and Wide, 2022). • Customers highly value services related to outage communication, with business customers tending to have higher anxiety associated to outage impacts (Customer Service Incentive Scheme, 2023).
Customers experiencing vulnerability	• Customers were pragmatic about outages, but expected to receive proactive and transparent communication. Notification letters were preferred for initial notice of planned outages, but emails and SMS were preferred for reminders and notification of unplanned outages (Customers Experiencing Vulnerable Circumstances, 2023). • Customers preferred to receive detailed communications with as much notice as possible via a mixed communication method (Customers Experiencing Vulnerable Circumstances, 2023). • Vulnerable customers also wanted CPPALUE to communicate its vision for the future, especially regarding backup plans for managing major outages in rural and regional areas (Customers Experiencing Vulnerable Circumstances, 2023). • According to rural and regional customers, who faced greater vulnerability to extreme weather and reliability challenges, there was a strong emphasis on the need for clear, timely communication from CPPALUE about outages (Customers Experiencing Vulnerable Circumstances, 2023). • Despite generally low awareness of CPPALUE, customers trusted their distributor to provide information about the energy transition, particularly as compared with retailers and the government (Customers Experiencing Vulnerable Circumstances, 2023). • When asked what customers' priority areas were regarding electricity, timely outage awareness messages during unplanned outages and accurate outage restoration times were typically in the top two priorities (Customers Experiencing Vulnerable Circumstances, 2023). • Medically vulnerable customers, in particular, appreciated the help they received from CPPALUE to meet their energy needs (Customers Experiencing Vulnerable Circumstances, 2023). • CPPALUE were perceived to respond quickly to outages and maintenance issues, and provide proactive and clear communication, with most customers rating satisfaction with their distributor highly. (Customers Experiencing Vulnerable Circumstances, 2023).
Powercor	• Powercor customers reported having a positive customer experience. The most important topics were improving communication, accessibility and vegetation management (Powercor Broad and Wide, 2022). • Powercor customers highly value a well-managed planned outage process but are generally satisfied with Powercor's current service (Powercor Rural and Regional Summit, 2023).
United Energy	• Customers highly value timely and clear communication during unplanned and planned outages, expecting multiple channels of support and clear estimated restoration times (United Energy Broad and Wide, 2022).
First Nations	• Yorta Yorta customers wanted proactive communication across different mediums in order to mitigate interruptions (Yorta Yorta Country Broad and Wide, 2022).
Commercial & Industrial	• C&I customers prefer proactive relationship management with multiple contact persons on both sides. They seek regular check-ins, the ability to anticipate issues, and updates for key contacts within their organisations to ensure effective communication. (Economic Growth Engagement, 2023) • Some C&I customers express confusion over whom to contact for specific issues and desire more open data sharing. They want clarity on contact points, the ability to tag critical assets, and expect these tags to be considered in planning and execution, fostering a reciprocal relationship for enhanced service. (Economic Growth Engagement, 2023) • C&I customers want better timing and communication for maintenance and planned outages. They suggest scheduling maintenance during non-sensitive periods, issuing maintenance notifications a month in advance, and providing visualisations of planned outages on the distributor's website. (Economic Growth Engagement, 2023) • Customers expressed a desire for distributors to move beyond transactional relationships and adopt a more strategic and collaborative approach. They emphasised the importance of joint planning for infrastructure upgrades, renewable energy integration, and long-term energy reliability (Commercial and Industrial Customers Report, 2024). • Customers saw potential for collaboration in piloting new technologies, such as smart grids and energy storage solutions, to future-proof their operations while enhancing network resilience (Commercial and Industrial Customers Report, 2024).

Summary insights: **Customer Experience**

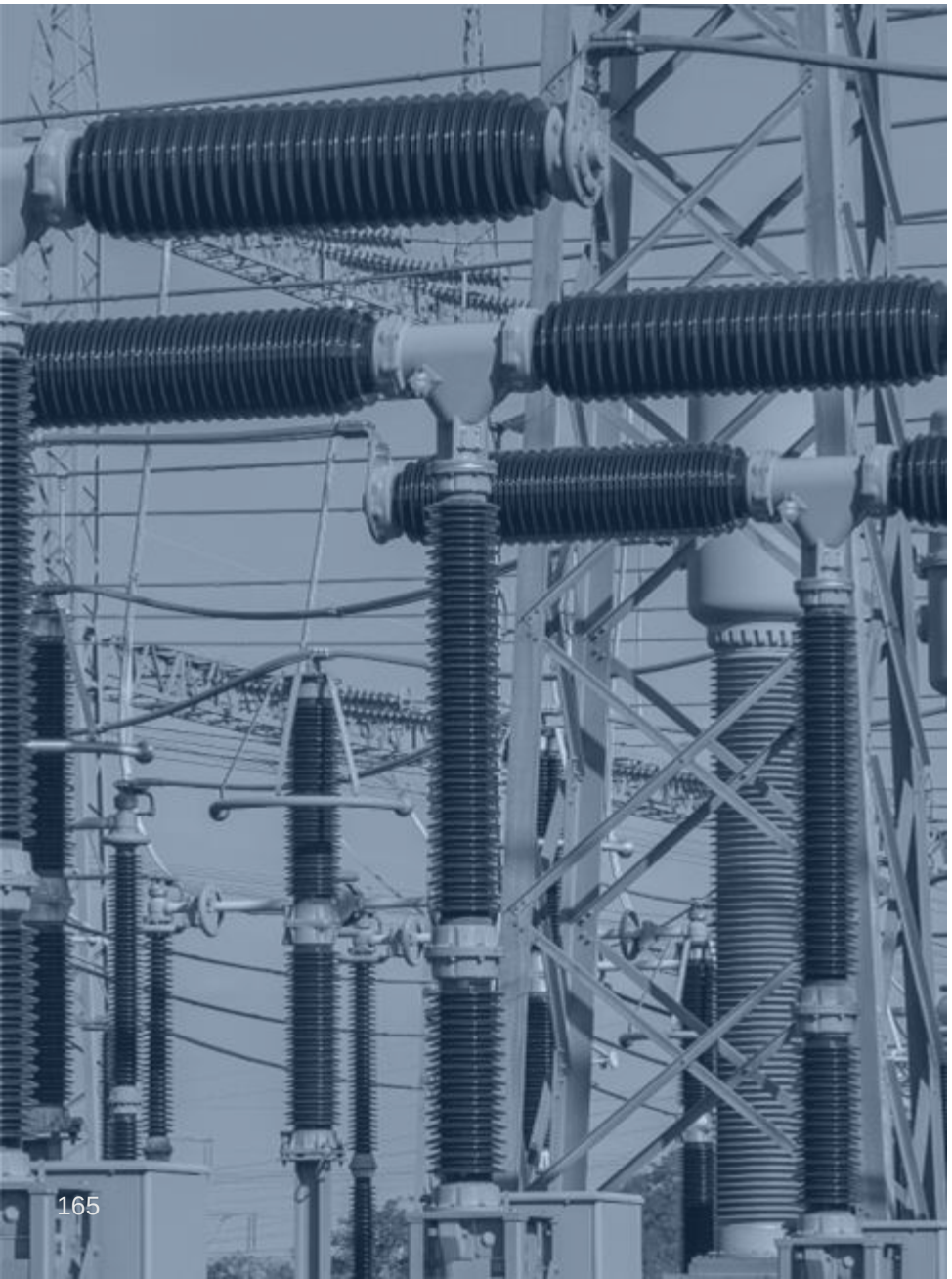
Pre-Test and Validate Broad Customer Insight		
Commercial and Industrial customers are interested in more proactive relationship management		
Post-Test and Validate Broad Customer Insight		
CitiPower	**Powercor**	**United Energy**
C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.	**C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.**	**C&I customers highlighted the need for collaborative and strategic relationships with distributors, valuing joint planning for infrastructure upgrades, renewable energy integration, long-term reliability, proactive communication, and innovation in service delivery.**

Customer feedback used to develop insights located below

Summary insights: **Customer Experience**

	What we heard from customers
Commercial & Industrial	• Customers expressed a desire for distributors to move beyond transactional relationships and adopt a more strategic and collaborative approach. They emphasised the importance of joint planning for infrastructure upgrades, renewable energy integration, and long-term energy reliability (Commercial and Industrial Customers Report, 2024). • Customers saw potential for collaboration in piloting new technologies, such as smart grids and energy storage solutions, to future-proof their operations while enhancing network resilience (Commercial and Industrial Customers Report, 2024). • Customers advocated for having multiple contacts within the distributor's organisation, making it easier to address different types of issues without relying on a single point of contact. (Economic growth forum, 2023). • Customers valued regular, proactive check-ins beyond emergency events to discuss operational concerns and anticipate potential future issues. (Economic growth forum, 2023). • Customers desired more clarity on whom to contact for specific issues, reducing confusion and improving communication efficiency. (Economic growth forum, 2023).

Individual report summaries



Phase 1: Broad and Wide

Powercor Broad and Wide Summary - 2022

Key insights

Of the four themes discussed, ***Affordability and Equity were most important to customers***, specifically being able to reduce their electricity bills. There was also a desire for equality in access to supply and renewables (such as solar) for all customers. Finally, customers were interested in equity in the context of geography (ensuring that regional/rural Victoria have access to the same reliability as metro customers).

- **Affordability and Equity**: Powercor customers prioritised the following focus areas: Education and information to help customers reduce their electricity bills, the ability of vulnerable customers to access an affordable electricity supply, improving access to renewables, geographic equity regarding reliability. The underlying sentiment driving these priorities can be broadly summarised into two main themes: what was felt to be within control and a tendency towards being community minded.
- **Reliability and Resilience:** Customers who were satisfied with their reliability tended to be those who had moved to Australia from overseas, or those living in Torquay, Bendigo, and Ballarat. People from towns surrounding Ballarat as well as Horsham and other rural areas tended to have more concerns. Powercor customers prioritised developing better infrastructure to prevent outages, including the impacts of extreme weather and more consideration given to scheduling of planned outages to support continuity and supply. The sentiment driving these priorities was driven by personal experiences and engagement in the sector.
- **Energy Transformation:** Powercor customers prioritised the speed of the energy transition and the future implications of electrification. Some customers desired a slower pace, whilst others saw more urgency to move more quickly. Residents in Torquay showed more urgency to transition, stemming from a want to enjoy the benefits that future technology will provide. Nervousness across other network customers was thought to stem from feeling out of control with the change.
- **Customer Experience:** Powercor customers reported having a positive customer experience with Powercor and had an expectation that this same high level of service would be delivered moving forward. The most important topics to customers were accessibility and improvements in communication, more information about what Powercor does and is responsible for and education supporting vegetation management. The seamless 'Uber experience' underpinned customers' sentiment, as this was felt to be a standard across all industries including Powercor.

Next steps

- This exploratory research was used to inform later research, including the Rural and Regional Summit and CSIS Phase 1.

Objectives

Explore

- Identify and understand customer needs and preferences.
- Identify key themes that customers prioritise investment in.

Method and Sample

- **Qualitative Round Tables** with special consideration given to recruit participants from diverse cross=sections of the community. Participants were from the following areas:
- Bendigo: n=38
- Ballarat: n=19
- Rural: n=7
- Horsham: n=13
- Torquay: n=17
- Total: n= 94
- Discussion of the four key themes in small working groups (~8-11 customers/stakeholders).

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

CALD Broad and Wide Summary - 2022

Key insights

Affordability and Equity as well as **Reliability and Resilience** were key topics for customers. Customers' previous experience in other countries shaped many thoughts and opinions. Chinese customers observed a strong need for certainty and security, whilst Indian customers wanted greater autonomy and self-sufficiency to support an uninterrupted lifestyle shaped by their experience in India with micro grids. For Arabic customers they placed emphasis on accessibility and affordable, reliable electricity shaped by their experiences as new Australians establishing themselves in new homes and communities.

- **Affordability and Equity**: This topic was salient for the CALD community as electricity was perceived to be expensive. Stability of electricity prices, improving the transparency of electricity supply charges, and equity in accessing infrastructure to reduce electricity prices were raised as key topics.
- **Reliability and Resilience:** There were mixed views across groups as to whether their network was reliable and resilient. Reliability today: Managing usage and Resilience to withstand weather events were key areas of importance noted by customers. Chinese and Arabic customers appeared open to paying more for increased reliability. The network was not considered resilient by CALD customers, who expressed concern about the increase of extreme weather events.
- **Energy Transformation:** Customers felt that the demand for electricity was increasing as customers switch away from gas and increase their use of electrical appliances. They believed that the introduction of more renewables was required in order to support this increased demand. Solar panel uptake and communication and education about the energy transition were important topics to customers. All CALD communities expressed ambition to use solar to support future electricity demand and a greener future.
- **Customer Experience:** This theme was less prevalent for customers than other themes, although topics including knowledge of the industry to inform action and communication of power outages emerged in the discussion. For customers without existing knowledge of the industry, they would typically call their retailer with any electricity-related issues.

Objectives

- Find out what customers need and want now and in the future.
- Learn how we can meet customers' needs by improving or changing our network.
- Figure out what areas are most important to customers for us to invest in.
- Engage with customers from culturally and linguistically diverse (CALD) communities.

Method and Sample

- The session began with scene setting to help customers understand the context for discussion and the themes to be discussed.
- Customers were asked about their electricity needs and preferences today and into the future and to ideate what they wanted their distributors to focus on in relation to the specific theme areas.
- n=8 customers from the Indian community
- n=8 customers from the Chinese Community: 8
- n=8 customers from the Arabic Community

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

United Energy Broad and Wide Summary - 2022

Key insights

Of the four themes discussed, ***Energy Transformation was the most important topic for customers***. Specifically, they shared concern for the future of network reliability and energy supply within the context of increasing electrification and penetration of renewables. Customers were confident that United Energy would be the right entity for the job due to their technical expertise.

- **Affordability and Equity**: Customers are concerned about the affordability of electricity, seeking ways to reduce their bills through energy-efficient practices and incentives. They also express a desire for support and subsidies for vulnerable customers. Customers prefer gradual cost increases over immediate spikes, especially in light of increased investment in renewable energy infrastructure. They want to ensure that the transition to cleaner energy sources results in manageable price hikes for consumers.
- **Reliability and Resilience:** Customers who have experienced outages prioritise reliable electricity supply today. Others are concerned with using electricity more efficiently during peak times to reduce disruptions, especially in high-demand periods like summer. Customers expect United Energy to proactively address future electricity demand due to electrification, increased populations, and extreme weather events. They want assurance that the network can endure these challenges and provide continuous supply. Undergrounding assets and community batteries are considered potential solutions, but customers seek more information and cost considerations.
- **Energy Transformation:** Customers prioritise a reliable electricity supply while transitioning to renewable sources and seek clear leadership to guide this process. They also want assurance that vulnerable groups will be included and are concerned about the costs associated with infrastructure upgrades for new technologies like electric vehicles and solar panels. One clear desire for customers was to be included and participate in the energy transformation.
- **Customer Experience:** Customers highly value timely and clear communication from United Energy, particularly during unplanned/planned outages. They also expect multiple support channels, empathetic interactions, and clear estimated restoration times. Additionally, customers seek more awareness about United Energy's role and responsibility and wish for inclusive communication for all demographics. Lastly, they emphasise the importance of aesthetics in the local community environment.

Objectives

- Find out what customers need and want now and in the future.
- Learn how we can meet customers' needs by improving or changing our network.
- Figure out what areas are most important to customers for us to invest in.

Method and Sample

- Facilitators guided discussions, while voting and surveys captured customer priorities.
- United Energy's approach involved senior executives and diverse participants, including youth and culturally diverse communities, ensuring a comprehensive range of perspectives.
- Discussion of four key themes in small working groups (~8-13 customers/stakeholders).

Rosebud Group

- Customer total: 21 CAP members: 1 External stakeholders: 2

Sandringham Group

- Customer total: 49 CAP members: 2 External stakeholders: 1 AER representation: 1

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Youth Broad and Wide Summary - 2022

Key insights

Reliability and Resilience and **Energy Transformation** emerged as the themes most important to 18-25 year-old customers. Customers were mindful of how reliant they had become on electricity in their day-to-day life. There was a desire to maintain a reliable network that had minimal outages in order to minimise disruptions to life and productivity. Importance was placed on the environment and sustainability as well, as customers believed that renewable energy sources were the way forward. Youth customers were eager for information so that they could participate thoroughly.

- **Affordability and Equity**: Youth customers prioritised reducing electricity bills, geographical equity regarding bills, equity in accessing renewables and geographic equity regarding reliability. Electricity was generally perceived as being expensive and the cohort was concerned about vulnerable customers. Customers also felt it was unfair that Powercor customers paid more for their electricity bill and felt solar panels were beneficial in reducing the costs of the energy bill. Many customers also wanted access to more information around the concept of geographic equity.
- **Reliability and Resilience:** Customers had mixed experiences with the reliability of electricity across the customer cohort. Their priority was proactivity to mitigate the impacts of outages. Customers required electricity ongoing, so when an outage occurred during times when it was particularly needed, it increased the salience of the outage. To mitigate these impacts, proactive, informed communication and repair was desired.
- **Energy Transformation:** Customers were interested in the future of electricity and saw the move to renewables as the way forward. Supporting the transition to a renewable future and having further information about the transition were important topics to customers. The cohort was aware that electricity demand would increase, and that renewable fuel sources would meet this demand. They held a belief that solar should be compulsory on all new home builds. Customers wanted more specific information about what was being done to support equity in a renewable future.
- **Customer Experience:** Communication and a high level of customer experience were important to youth customers. Communication was believed to be the area where the network needed to focus the most attention, whilst customers also expected a high level of service from distributors. They wanted clear, reliable and prompt communication aligned to their needs, issues to be resolved with the first query and sufficient warning for planned outages.

Objectives

- Find out what customers need and want now and in the future.
- Learn how we can meet customers' needs by improving or changing our network.
- Figure out what areas are most important to customers for us to invest in.
- Engage with youth customers

Method and Sample

- The session began with scene setting to help customers understand the context for discussion and the themes to be discussed.
- Discussion of the key themes was prefaced with a focus on the role of energy in customers' everyday life and understanding current knowledge of distributors and the electricity supply chain.
- Customers were asked about their electricity needs and preferences today and into the future.
- n=10 Youth, 18-25 year-old customers

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Yorta Yorta Country Broad and Wide Summary - 2022

Key insights

At an overall level, **Affordability and Equity** was the most important topic to Yorta Yorta community members. They were specifically concerned about the high price of electricity and understanding how to reduce their electricity bill. Solar was seen to be part of the solution to these issues. Participants also shared strong feedback regarding compensation to First Peoples for the use of their Country for Powercor assets and operation. The community wanted Powercor to facilitate greater contribution to their community.

- **Affordability and Equity**: Concern for high electricity process was felt across working households and vulnerable groups such as the elderly, people in hardship programs and those living in commission homes. The community identified that support was required to understand what contributes to high bills and how they could reduce bills through payment solutions and everyday actions. Many community members also wanted to understand how to optimise solar to reduce their electricity bills. They used the term “double dipping” to explain how Country resources were being used against the community in order to make more money off them. The community wanted a return for the land they were giving up to Powercor. Community members raised questions about Powercor’s role in giving back to First Peoples communities, with individuals having shared that they wanted investment in protection of their local cultural heritage. The sentiment felt amongst the community was that without clear knowledge they were left uninformed and disempowered.
- **Reliability and Resilience:** Given many community members’ recent blackout experiences during flooding in October 2022, customers wanted to know how Powercor would support improved reliability into the future. Mitigation activities to stop power outages during extreme weather events and reducing frequent outages in the community were priorities for customers. The community wanted Powercor to put mitigation plans in place to prevent future outages during floods, particularly in flood prone areas such as Mooroopna and Shepparton. For some customers, unplanned outages were regular which negatively impacted the community and created financial strains like the need to re-purchase spoiled food. There was a general consensus that responsibility to upgrade the grid rested on Powercor and the regulator.
- **Energy Transformation:** The community wished to progress with new electricity infrastructure to support decarbonisation of supply given the impact of climate change on the eco-system and Country, particularly upgrades that could support homes and communities to have their own solar source to supply energy and store in batteries. There was additional interest in understanding more about community batteries’ ability to improve the reliability of power. Community members had mixed views on transitioning away from gas, with concern for the cost and reliability of renewables.
- **Customer Experience:** Customers wanted accurate and proactive communication across different mediums, with a desire to be informed in order to mitigate interruptions to their day.

Objectives

- Find out what customers need and want now and in the future.
- Learn how we can meet customers' needs by improving or changing our network.
- Figure out what areas are most important to customers for us to invest in.
- Establish a strong relationship with First Peoples

Method and Sample

- The session began with a conversation about the role of Powercor through a visual activity.
- In small groups of approximately 10 people the four themes were explored in detail. Customers were asked about their community and household electricity needs and preferences today and into the future, as well as what they wanted Powercor to focus on in regard to each theme.
- Some customers nominated topics that were most important to them and shared ideas around how Powercor could best include customer views going forward.
- n=24 Yorta Yorta Country community members/ Powercor customers

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

CitiPower Broad and Wide Summary - 2022

Key insights

Of the four themes discussed, ***Reliability and Resilience was the most important topic to customers***, specifically ensuring that their lights remained on. Customers' main concern was the increase in natural disasters and a desire for the network to be able to plan for these events and prevent disruption to their lives. Additionally, customers were concerned about electricity security and availability and would like Citipower to offer greater education to the public on usage to ensure sufficient energy for all during peak times.

- **Affordability and Equity**: Customers prioritise equitable access and reliable electricity supply for all, regardless of location or socio-economic status. They seek equal levels of service and benefits from technological upgrades, such as renewables and electric vehicle infrastructure. Concerns about the cost of electricity bills and price stability are significant. Customers worry about electricity prices contributing to the overall cost of living, with uncertainties arising from factors like inflation and changing energy supply sources. They desire more transparency in pricing to plan for the future effectively, recognising the potential impact on financially vulnerable individuals.
- **Reliability and Resilience:** Customers emphasise the importance of future-proofing the network to ensure resilience against extreme weather events and potential disruptions resulting from the increased use of renewables. Customers are concerned about maintaining reliable electricity supply during times of high demand. They suggest exploring local storage solutions like batteries and improving network engineering responses to manage peak demand effectively. Additionally, customers value educating consumers about usage behaviours that can contribute to a stable supply, demonstrating a practical and forward-thinking approach to reliability.
- **Energy Transformation:** Customers view a future-ready electricity network as seamlessly integrating renewable energy sources and facilitating widespread adoption of electric vehicles (EVs). They prioritise the development of a robust EV charging infrastructure, increased penetration of renewables, and ensuring quality and affordability of services during the transition.
- **Customer Experience:** Customers prioritise a customer service experience that is inclusive and accessible to everyone, regardless of their abilities, cultural backgrounds, or age. They value the availability of diverse communication channels, fast response times, and a visually harmonious network. This reflects their desire for equitable and user-friendly interactions with CitiPower.

Objectives

- Find out what customers need and want now and in the future.
- Learn how we can meet customers' needs by improving or changing our network.
- Figure out what areas are most important to customers for us to invest in.

Method and Sample

- Qualitative round tables with discussion guided by facilitators
- Discussion of four key themes in small working groups (~8-11 customers/stakeholders).
- n= 24 CitiPower customers

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

NFT Group: Customer Valuation of Service Improvements – 2021

Key Insights

This research assessed customer valuation of service improvements for the network as a whole rather than just improvements that would directly affect their own experience. It is an additive to existing regulatory willingness to pay outcomes. The project included three phases. A range of topics and initiatives were explored in the first phase, contextualised through qualitative research in the second phase, and more targeted in the third phase.

In Phase 1, the top three values, reflected as willingness to pay for propositions per customer per year, were as follows for residential customers:

1. Willingness to pay $11 per annum for bushfire risk mitigation
2. Willingness to pay $9 per annum for improved environmental outcomes
3. Willingness to pay $8per annum for improved reliability

Business customers:

1. Willingness to pay $52 per year for improved reliability
2. Willingness to pay $48 per year for bushfire mitigation
3. Willingness to pay $38 per year for environmental outcomes

Phase 3 identified how customers valued tangible improvement outcomes, focusing on 7 key customer outcomes selected based on evidence from the first two phases. Willingness to pay for outcomes represented per-unit valuations for specific initiatives and were not considered to be per annum as they were in Phase 1. The willingness to pay for the 7 customer outcomes were as follows:

1. $28.31 per kwh for Reliability Outcome: worst-served areas
2. $8.81 per kwh for Reliability Outcome resilience
3. $9.51 per CO2e for Environmental outcome: CO2e
4. $9.38 per Mwh for Solar flexibility outcome: Restrictions
5. $0.69 per customer for Aesthetics Outcome: Improved visuals
6. $0.49 per customer for Communication Outcome: Self-Service
7. $0.12 per customer for Digital Tools Outcome: Access

The willingness to pay for the 7 business customer values were as follows:

1. $26.73 per kwh for Reliability Outcome: worst serviced areas
2. $3.05 per kwh for Reliability Outcome: Resilience
3. $1.07 per CO2e for Environmental Outcome: CO2e
4. $6.78 per Mwh for Solar Flexibility Outcome: Restrictions
5. $0.09 per customer for Aesthetics Outcome: Improved visuals
6. $0.37 per customer for Communication Outcome: Self-Service
7. $1.15 per customer for Digital Tools Outcome: Access

Objectives

Determine the amount customers would be willing to pay for various service improvements

Method and Sample

- Phase 1: Quantitative – Contingent Valuation and Experimental Choice Modelling
- Phase 2: Qualitative (In-depth interviews)
- Phase 3: Quantitative – Contingent Valuation and Experimental Choice Modelling

Quantitative Phase
n= 2197 residential customers
n= 778 business customers
Qualitative Phase
n= 23 residential customers
n= 8 business customers

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Nation Partners - Climate Change and Network Resilience Commitments - 2021

Key Insights

CitiPower, Powercor, and United Energy commissioned a review of climate change and network resilience resources, involving federal, state, and local government stakeholders, as well as local sustainability groups. The study found consensus on reaching net-zero emissions by 2050, differing plans among governments, and a need for more emphasis on clean hydrogen at the local level. Recommendations include leveraging existing alliances, prioritising local engagement, and supporting adaptation responses.

- **Stakeholders agree on reaching net-zero emissions by 2050** but have different plans. The Australian Government has a long-term view with less ambitious interim targets, while the Victorian Government focuses on more ambitious 2025 and 2030 targets. Many local councils aim for net-zero emissions by 2050, understanding their limited control over community emissions.
- **Clean hydrogen development is a top priority** for federal and state governments but is less emphasised at the local level. Clear strategies exist at higher government levels, but the role of local councils and sustainability groups is unclear.
- **Climate adaptation receives less attention than mitigation**, except at the state government level. Adaptation plans are often high-level or non-existent, with some local councils considering a future focus on adaptation.
- Local governments vary in their response maturity, with Powercor and United Energy's areas often having limited community emission reduction plans. This presents an opportunity for distribution businesses to assist.
- Powercor and United Energy's local councils recognise the role of distribution businesses in addressing climate change more than CitiPower. They see the potential for these businesses to help achieve climate goals, as noted in various plans

Objectives:

- Document and summarise stakeholder commitments, expectations, goals, and attitudes concerning climate change and network resilience.
- Offer recommendations for topics that require further discussion.

Method and Sample

- A review of climate change and network resilience resources.
- Involved Sustainability Groups, Federal, State and Local government stakeholders.

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Customer Experience Monitor Wave 1 – 2021

Key Insights

The research shows that the key metrics have remained stable, and most customers did not know how communications could be improved.

Types of events surveyed for included planned interruptions, unplanned interruptions, quality of supply, phone enquiry, CI Augmentation Projects, Vegetation Management, No Go Zone, Claims/Complaints and Solar/ Embedded Generation

Most key metrics remain stable compared from the last wave of research, however, there have been significant declines in the Experience and Expectations scores for CitiPower Unplanned Interruptions and United Energy CI Augmentations.

Across many processes, customers could not think of any way of making the process less effort 40%+ of customers across all three distributors had no suggestions for making the process less effort for: Planned and Unplanned Interruptions, Phone Enquiries, Vegetation Management, No Go Zone, Solar / Embedded Generation.

There were many commonalities across processes for making the process easier for customers. The following were most frequently cited, in declining order of frequency: Better communication, Better / clearer information, Improved response times, Better customer service.

We are exceeding expectations for many customers but are falling below for others. Claims and complaints customers were most likely to be disappointed – while it may not be possible to give them all what they want, there may be an opportunity to manage expectations here.

Objectives:
- To track customers' experiences with CitiPower, Powercor or United Energy from 2020 to 2021.

Method and Sample
- 5-10 minute surveys conducted via a mix of online (via email and SMS invites) and telephone.
- The research targeted participants from each distributor who had experienced CI Augmentation Projects, Vegetation Management, and planned and unplanned interruptions, quality of supply, phone enquiry, claims and complaints and solar/embedded generation.

Sample
- n= 663 United Energy customers
- n= 540 CitiPower customers
- n= 894 Powercor customers

IAP2 Spectrum

1. Inform
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5. Empower

Forethought - Community Roundtables Resilience - August 2022

Key insights

Communities generally define resilience as the ability to withstand and respond to external pressures. However, their specific resilience goals differ based on their experiences. Those who have faced extreme weather events prioritise tactical, survival-based goals, while those who haven't experienced such events focus on long-term, strategic goals, including achieving net-zero targets and ensuring energy continuity.

Communities acknowledge that climate change contributes to network resilience challenges. For those who have experienced major events, resilience goals revolve around recovery planning. In contrast, communities without such experiences emphasise building environmentally friendly infrastructure to mitigate climate change impacts.

Communities believe that solving energy-related resilience issues requires collaboration between themselves, government(s), and the distributor (CitiPower, Powercor, and United Energy). They feel responsible for leading the change, including fundraising for solutions. The government is expected to set the climate change agenda and provide funding, while the distributor is seen as a critical partner due to its expertise and data access. Hence, they expect distributors to lead solution development and provide significant support and accountability.

The most critical role communities want the distributor to play in this partnership is sharing technical and human support. This includes securing emergency generators, community battery programs, micro-grids, data provision, and offering advice on infrastructure and decision-making. Communities seek the distributor's help in translating technical information into everyday language, removing barriers, advocating with regulators and government, and providing new ideas and education.

Trade-Offs

1. Safety is non-negotiable: All communities prioritise safety over reliability, and any action that compromises safety is vehemently rejected. Transparent communication about the causes of reliability issues builds community support and garners positive sentiment.

2. Vegetation management trade-offs: Initially, communities strongly resist vegetation management due to concerns about the environment and aesthetics. However, communication about the trade-offs (e.g., safety and continuity of supply) can lead to acceptance. Improved communication and engagement in vegetation management are essential.

3. Time of Use tariffs face trust issues: Communities lack trust in the energy industry, particularly regarding Time of Use tariffs. They perceive these tariffs as unfair and a form of profiteering. Communities prefer educational initiatives over tariff-based behavioural changes.

4. A balance between financial and non-financial benefits: Communities aspiring toward self-reliance believe that discussions on future-gen solutions should encompass non-financial benefits, such as environmental, social, and economic utility. While they don't expect distributors to fund non-viable solutions, they are willing to contribute financially and effort to achieve their goals.

Objectives

The primary information needs of this project focused on the community's understanding of resilience trade-offs, their expectations of the network, and their communication needs.

The secondary information needs included delving into the community's definition of network resilience, its relationship with climate change, the prioritisation of critical services, and the development of strategies for prevention and recovery.

Additionally, the program aimed to foster empathy and establish a presence in the community while gathering information to support operational planning, investment decisions, safety standards, regulatory alignment, and enhanced communication strategies. The consultations sought to understand what resilience means to the community and their expectations from CitiPower, Powercor, and United Energy.

Methodology and Sample

5 communities were engaged in roundtable discussions:

n= 22 Trentham

n= 4 Fitzroy

n= 25 Red Hill

n= 4 Mildura

n= 9 Geelong

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Energy and Water Ombudsman (Victoria) Annual Report Summary- 2022

Key insights

The Energy and Water Ombudsman (Victoria) (EWOV) is an industry-based ombudsman scheme. Its primary purpose is to provide dispute resolution service to Victoria's energy and water customers and companies. The main issues that EWOV deals with are billing-related, however, Credit and Supply issues also make up a considerable proportion of the cases they deal with.

Context & EWOV Awareness

EWOV considers the national energy market in a 'crisis' due to wholesale electricity prices as having spiked and recognises regulators stepping in to ease community tensions concerning blackouts and energy supply. They identify that customers across all segments are worried about rising electricity prices amongst the overall rise in 'cost of living'.

It is worth noting that the Ombudsman has a significant fall in cases from 2018-2019 to 2021-2021, which they see as energy companies offering compassion to customers.

Affordability and Equity: Most cases EWOV receives are electricity-specific and are most commonly about tariffs, high bills, and billing errors. Case studies of several vulnerable persons reveal a concern for high energy costs and poor customer service in resolving issues associated with high costs and meter issues.

Reliability and Resilience: 85% of all case studies related to supply are electricity and are most commonly about unplanned outages (largely due to storm activity), planned outages, and variations in supply. Indicating that customers are most affected by unplanned outages compared to other supply issues.

Energy Transformation: A case study involving a customer who suffered increased electricity costs due to outdated meter reading technology for his solar power reveals a need for more education at the residential level in the solar and renewable energy transition. Provision at an existing connection proved to be a common sub-issue for solar, along with tariffs and high bills.

Customer Service: Customer service is another area where the ombudsman receives cases; however, this is considerably lower than all other areas of customer concern. Customer service is considered at the level of service received or not received. The common issues are related to poor service, failure to respond/inform, and incorrect advice or information. Over two-thirds of cases related to customer service are electricity-related. What should be noted is that tension with customer service was highlighted to focus mainly on retailers.

Objectives

EWOV's objectives include providing dispute resolution services, fostering industry relationships, engaging with customers and communities, influencing policy, ensuring robust IT solutions, adapting to a changing environment, and nurturing a high-performing workforce.

EWOV engages with all customer groups, especially vulnerable and disadvantaged customers, actively seeks and acts on feedback, and shares their knowledge and insights.

Method and Sample

- EWOV employs a structured framework to assess fairness and reasonableness in complaints, ensuring a reasoned and logical approach.
- 16.038 received cases
- Reaches 200,000 users with their content

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
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CitiPower, PowerCor, United Energy – Internal Ideation Workshop - 2022

Key Insights

There were four themes that articulated what was most important to customers, these were: 1) Affordability and equity, 2) Resilience and Reliability, 3) Environment Future Network, and 4) Customer Experience.

Affordability & Equity: Customers want **rewards and incentives** to make electricity more affordable. They're interested in **real-time data** but won't pay for it, especially for shared energy usage, time-based usage, and appliance costs**. Low energy literacy** is a hurdle, particularly in understanding pricing and bill strategies.

- Possible Solutions include the Summer Saver Network, diverse tariffs, and dynamic pricing for affordability. To boost energy literacy, marketing, clear billing, info sharing about the network, and energy management systems are needed, along with government support and energy retailer regulation.

Resilience and Reliability: Customers **prioritise reliability** and are willing to invest more in it, especially in underserved areas. They see the energy network as a **shared resource** and are open to **resilient infrastructure solutions**, like microgrids and undergrounding, particularly for extreme weather or bushfire-prone regions.

- Possible Solutions: Proactive planning, future-proof policies, mobile hubs, decentralised micro-networks, customer network ownership, batteries, and community battery leasing. Organisational-run solutions: Batteries in network assets, holistic system approaches, undergrounding in fire-risk areas. Tech advancements: Energy demand control, AI systems, load management. Encourage customer ownership of off-grid solutions for cost reduction and accessibility.

Environment and Future Network: Customers want more renewable energy in the grid through decentralisation and grid development, aiming to increase grid exports and decarbonise energy. Changing connection agreements for greater renewable penetration is a lower priority.

- Possible Solutions: Prioritise electrification, reduce vegetation, enable power trading, and offer free exports up to a minimum level. Focus less on short-term connection changes but seek long-term export limit improvements. Emphasise grid decentralisation, enable customer connections to energy assets, expand solar export and electric vehicle infrastructure, and reduce emissions and gas usage for cleaner energy.

Customer Experience: Customers are satisfied with current communication but want better outage information and improved digital tools for a comprehensive digital customer service experience.

- Solutions: Enhance the website, increase responsiveness, use AI for fault detection, improve energy literacy through platforms like TikTok, provide storm response support, offer a unified app for all communications, and ensure transparent fault reporting with accurate estimated time of restoration (ETR) and crew tracking for outage planning.

Objectives

- Immerse the CitiPower, Powercor and United Energy team in the customer insights synthesis
- Engage with the CitiPower, Powercor and United Energy internal teams to ideate solutions that directly solve for customers' needs. These ideas will be iterated on and potentially included in the 2026-2031 Regulatory Reset proposal

Method and Sample

In a half-day workshop internal team members from CitiPower, Powercor, and United Energy aimed to understand customer needs and generate ideas for addressing them in the context of developing a Regulatory Reset Proposal. The workshop followed these steps:

1. **Insights Immersion**: Aligning the group on customer data synthesis, including identified needs and priorities, and discussing their significance from a customer perspective.
2. **Future State**: Brainstorming possibilities and envisioning a post-2026 world
3. **Ideation**: Generating a comprehensive list of ideas directly addressing customer needs while considering the potential future state.
4. **Prioritisation**: Assessing ideas on a 2 x 2 matrix to determine their potential impact on customers and the organisation's control over them. Participants then voted on optimal initiatives for further development, with scoping to define success from a customer perspective

IAP2 Spectrum

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CitiPower, Powercor, United Energy Meta-analysis – 2022

Key Insights

A meta-analysis was performed by Forethought to underpin the 2026-2031 Regulatory Reset Engagement, ensuring no duplication of prior research and promoting innovative engagement methods. This analysis encompasses stakeholder engagement from 2017 to 2020 and subsequent research by CitiPower, Powercor, and United Energy.

Reliability and Resilience: Customers prioritise electricity supply reliability, are willing to pay more, especially in underserved areas, and recognise the network as a shared resource. Growing importance of reliability, especially in worst-served areas due to climate change. High importance on infrastructure resilience; open to investments like microgrids and Standalone Power Systems (SAPS). Strong support for safety initiatives, including undergrounding and pole inspections, with a focus on cost-benefit balance. Customers universally emphasise maintaining and improving reliability, resilience, and safety.

Affordability and Equity: Customers prioritise affordable electricity due to perceived high costs. Low energy literacy hinders understanding of solar technology, pricing structures, and bill management. A desire for tariff options and assistance in choosing them. Support for time-of-use tariffs with a gradual transition, education, and incentives for efficiency. Emphasis on net-zero transition and affordability at federal and local levels. Customers seek rewards for demand management and real-time data but hesitate due to a lack of understanding. Opportunity to improve energy literacy for informed decision-making.

Energy Transition: Customers expect networks to reduce carbon emissions in line with government efforts. Climate change discussions focus on both mitigation and adaptation. The government aims for net-zero emissions with varying local council targets. Distributors can support this by enabling more renewable energy sources. Customers prioritise renewables, electrification, and energy efficiency. They want climate resilience and education. Many residential customers are unaware of network environmental investments, highlighting the need for better communication. Customers seek a flexible network with renewable options, proactive plans for increased renewables, and variable solar export limits with incentives. Trust in the industry varies, emphasising the importance of trust-building for innovative offerings.

Customer Experience: Enhancing customer experience, especially during outages, is vital for electricity networks. Customers expect prompt outage communications, finding a 12-minute wait acceptable, with 80% accepting waits up to 5 minutes. While current communication channels work, customers lack awareness of the benefits of advanced digital tools, especially residential customers. There's limited understanding among residential customers about the network's role and value. Building a strong, trusted brand is crucial since customer interactions are infrequent but sensitive, often during outages. Improved outage communication, featuring accurate, frequent, and accessible information, is a priority for customers, significantly impacting overall satisfaction.

Key Gaps Requiring Further Research:

1. **Customer Segmentation**: Segment customers based on their current and future perceived value of network services across residential, small business, and larger commercial/industrial segments.
2. **Energy Transition Preferences**: Research customer preferences concerning the energy transition and the role of networks in facilitating greater electrification.
3. **Economic Conditions Impact**: Investigate the impact of current economic conditions, including the energy crisis and COVID-19, on customer preferences and intentions.
4. **Communication and Data Preferences**: Research customer preferences for communication, data provision, and digital tools.

Objectives:

- Review research and engagement conducted as part of the 2021-2026 Regulatory Reset
- Identify what CPPALUE have learnt from prior engagements
- Identify information gaps that still exist

Method

Audit and analyse the engagement and research previously conducted by CPPALUE

Sample

- N/A

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Consumer Impacts of the energy transition: modelling report - 2023

Key Insights

Energy Consumers Australia (ECA) commissioned a study by CSIRO and Dynamic Analysis to assess the economic impacts and benefits of Australia's energy transition under the Step Change scenario, finding that the transition leads to shared system benefits, including up to $500 annually per household from vehicle electrification, with additional benefits from flexible customer energy resources and various energy-saving measures such as electrifying gas appliances and improving energy efficiency.

Energy Transition and Affordability

Shared Benefits of Energy Transition: The analysis commissioned by Energy Consumers Australia reveals that Australia's energy transition, driven by the Step Change scenario, generates significant shared benefits. It aligns with net-zero emissions goals, emphasising energy efficiency, renewables, and electrification. Notably, electrifying vehicles and gas appliances boosts electricity sales, enhancing infrastructure efficiency and reducing costs, with shared household benefits reaching up to $500 annually.

Flexible Customer Energy Resources (CER): The report explores the potential of Customer Energy Resources (CER), like electric vehicles and batteries, to contribute to grid flexibility. Optimising CER operation could yield shared benefits of up to $50, enhancing energy system resilience and cost-effectiveness.

Significant Individual Savings: Individual consumers can achieve substantial savings through various measures. Electric vehicle ownership stands out, potentially saving around $1400 annually by 2030. Solar PV and home batteries offer slightly lower yet substantial savings, around $1250 yearly. Energy efficiency measures could save an average of $500 per year.

Total Energy Bill Reduction: In 2023, the average 20-year energy bill for National Electricity Market (NEM) consumers is $11,060, rising marginally to $11,110 by 2030. However, proactive adoption of savings measures could reduce bills by up to 31%, amounting to $7620 annually. These savings grow over time, with potential reductions of 34% in 2035, 36% in 2040, and 38% in 2050, potentially totalling several multiples of $10,000 over two decades.

In summary, the analysis highlights the substantial benefits of Australia's energy transition, emphasising shared advantages, the potential of flexible customer resources, significant individual savings, and considerable reductions in total energy bills, ultimately contributing to a cleaner and more cost-efficient energy landscape.

Objectives

Determine the economic impacts and available benefits of the energy transition on energy consumers

Methodology and Sample

System modelling scenarios

There are three questions that the system modelling has been designed to answer:

What is the system impact of greater CER flexibility through more dynamic coordination?

What is the system impact of electric vehicle uptake?

What is the system impact of the electrification of gas in buildings?

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Stepping Up: A smoother pathway to decarbonising homes – 2023 Energy Consumer Australia

Key Insights

By 2050, Australia envisions a transformative energy landscape where nearly all households have adopted electric vehicles, electric heating, and cooking, and the majority have rooftop solar and potentially batteries, driven by the "Step Change" scenario. However, limited analysis of the impact of this scenario on household bills necessitates a comprehensive national plan and partnership across government levels, with a focus on promoting electric vehicle adoption, addressing barriers for renters and apartment dwellers, and managing the decline of household gas use to ensure equitable and orderly energy transition.

Energy Transition

The challenges ahead for decarbonising households: To achieve Australia's net-zero emissions goals, consumers in 11 million households will play a pivotal role in decarbonising their energy use by electrifying gas appliances, switching to electric vehicles, and improving home thermal efficiency. However, consumers need to be made aware of their role, and with tailored support, some households, particularly renters and those in multi-unit dwellings, risk being left behind, exacerbating the energy divide between income groups.

Understanding the impacts of the transition on households: Transitioning to electric vehicles, electrifying appliances, improving energy efficiency, and moving to all-electric homes can significantly reduce household energy costs. While the potential savings vary, the shift towards electrification will benefit both individual households and the broader community by lowering electricity bills, reducing greenhouse gas emissions, and promoting network efficiency. However, challenges remain in informing consumers, particularly those in rental properties or multi-unit dwellings, and addressing upfront costs and barriers. Additionally, staying on the gas network may escalate household costs as more consumers switch to electricity. Government intervention is essential to ensure a fair transition and prevent widening energy costs and service quality disparities.

Stepping Up: A smooth planned journey for customers: Transitioning households to decarbonise their energy use is a critical but often overlooked aspect of achieving net-zero emissions. To successfully navigate this transition, consumers need clear information, financial support, and trusted guidance. The upfront costs and potential disruptions associated with electrifying homes, switching to electric vehicles, and adopting energy-efficient measures can be significant barriers for many households. Governments must play a central role in coordinating efforts across all levels of government to create a national partnership that develops a comprehensive plan for guiding households through the decarbonisation process. This plan should include both top-down policies and bottom-up actions to ensure an equitable and efficient transition while avoiding inconsistencies in approaches across jurisdictions. Effective engagement with consumers, tailored information, and support for their agency in decision-making are essential components of this transition. Understanding consumer motivations and preferences is critical to building social acceptance and ensuring the success of the energy transformation. Research programs should be initiated to gain insights into consumer behaviour and decision-making related to energy use to inform the efforts of the national partnership. Collaborative efforts between governments and consumers are essential to navigate this unprecedented shift successfully.

Objectives

This report sets out the case for a new national partnership across all levels of government. The partnership would be tasked with developing a national plan for decarbonising households to support consumer agency, provide financial support and address structural issues including managing the decline in household use of gas.

Methodology and Sample

This report has referenced other sources and research produced by government bodies and academic institutions both locally and internationally to support its initiatives about future energy.

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Sagacity Research Brand Tracker Report - 2023

Key Insights

Q2 has seen all distributors on par with 2022 and showing some positive momentum. Trust in Powercor has recovered after a slight dip, trending up from April to June. Citipower has continued to build momentum through 2023. United energy has recovered the ground lost early in the year, but has been remarkably consistent ever since. Powercor continues to steadily trend up since the very start of the campaign (2019) and recent gains have come from trust to ensure safety and reliance in an emergency. This can be attributed to both campaign activity, sponsorship and experience of planned outages and associated comms.

Customer Experience

- **Trust Trends**: In Q2 2023, all three brands (Powercor, CitiPower, and United Energy) are at a comparable level with 2022, displaying positive momentum. Trust in Powercor has rebounded, mainly due to safety and reliability during emergencies. CitiPower has consistently improved throughout 2023, driven by better customer experiences, network maintenance, and communication. United Energy recovered after a slow start in the year and saw gains in Q2, particularly in reliability and communication.
- **Campaign Activity Boosts Trust**: Trust-building campaigns and sponsorships have a significant impact on improving distributor awareness and understanding among customers. The exposure to these activities reinforces trust in the brands.
- **Customer Experiences Matter**: Positive customer experiences, including dealing with outages, play a crucial role in enhancing trust in these energy distributors. These real-life interactions contribute to trust levels.

Energy Transition

- **Renewable Energy Trust**: Customers express a desire for greater trust in the distribution of all forms of renewable energy. While specific knowledge of these efforts is limited, trust often hinges on the distributor's reliability and reputation. Customers believe that proactive companies will effectively implement and utilise renewable energy.

Affordability and Equity

- **Customer Priorities**: Affordability of network charges gained prominence in Q2, particularly among Powercor and United Energy customers. CitiPower customers consistently prioritise affordability. Trust factors such as being reliable in emergencies, charging fair prices, ease of interaction, assistance with usage management, and facilitating renewable energy distribution are essential for customers.

Objectives:

- Explore key results for each distributor across Q2 2023
- Consider key learnings from the past
- Look ahead to measuring 'future focused'
- Explore customer understandings of the trust attribute

Methodology and Sample

- **MONTHLY ONLINE SURVEYS**: For 2023, we have continued with 250 surveys each month, with 100 in each of Powercor and United Energy and 50 in CitiPower.
- **COVERAGE**: Surveys are conducted across the Powercor, Citipower and United Energy regions, which are identified using supplied postcodes.
- **PROFILE**: Any customers aged 18+ are eligible to take part, with regional level quotas and weighting applied by age and gender to match ABS (Australian Bureau of Statistics) figures.
- **ANALYSIS**: At a total level, regional data is merged together as sampled for analysis. Data is reported on an annual, 3 monthly or monthly basis. * Within Powercor, surveys are monitored with quotas, to ensure a spread across the region.

AGE	Powercor	CitiPower	United Energy
18-34	28%	45%	29%
35-44	26%	24%	26%
45-64	24%	17%	23%
65+	22%	14%	22%

GENDER	Powercor	CiitPower	United Energy
Male	49%	48%	49%
Female	51%	52%	51%

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Energy Consumer Sentiment Research - October 2022

Key insights

- Recent bill increases and expectations of further rises have convinced consumers that there are underlying problems with the energy system
- Consumers lack trust in energy providers and governments to put consumers' best interests ahead of their own
- Customers are supportive of the transition to renewables although some are concerned about reliability issues and costs

- **Perceptions on the current state of the energy market:** Consumers, including small businesses, are aware of impending energy price increases but haven't felt the financial strain yet. These price hikes stem from problems with energy providers, infrastructure underinvestment, and a slow transition to renewables. Consumers see it as a systemic issue, blaming historical government inaction and underinvestment.
- **Individual impacts and consumer response to the energy crisis:** Energy consumers, including small businesses, feel powerless due to a lack of communication from providers. Some haven't felt the crisis yet but are worried about rising costs. Financially strained consumers are already feeling the pinch and making adjustments. They all want more control over their energy bills and seek tailored advice to reduce costs.
- **Consumer trust and the energy system:** Consumers distrust both the government and energy providers, viewing them as self-interested. They feel past mismanagement has eroded trust and see no clear government plan to address current energy issues. Australians lack confidence in government actions and investment in the energy system during the crisis.

Recommendations from report

- To improve trust, providers must provable a reliable power supply and good customer source. Loyalty schemes such as on time discounts and price increase relief payments are effective ways to demonstrate consumer commitment.
- Additionally, Australians want long-term investments in the energy system, with a strong push toward renewables.
- Small business owners are especially enthusiastic about this transition. Offsetting emissions is viewed as a short-term solution, with small business owners criticizing it as "false accounting" that doesn't address the real problem. They see it as offering only marginal benefits.

Objectives

- Explore views of private households and small businesses on the current state of the energy market given the market suspension mid 2022, and the expected (and in some cases experienced) price rises.
- Exploring concepts such as trust in different market players (providers, governments etc.) as well as broader causes and impacts of the 'energy crisis'

Method and Sample

- **Online Focus Groups and online discussion boards** were used as a platform for personal stories to be shared and help understand the lived experience and impact of the energy market inside Australia households and small businesses

Three themes were explored including:

1. Perceptions on the current state of the energy market
2. Individual impacts and consumer response to the energy crisis
3. Consumer trust and the energy system

Group 1: Business Owners

- Main or joint decision maker when choosing energy products and services for a business
- n=10 have mains gas connected to business for heating, hot water or cooking
- n=4 Sole trader, n=12 1-50 employees, n=4 100+ employees

Group 2: Financially pressured Energy Consumers

- Main or joint responsibility for paying the electricity bill in their household
- n=10 have mains gas connected to household for heating, hot water or cooking
- Have been concerned about, threatened or physically disconnected from their household electricity previously

Group 3: General Energy Consumers

- Main or joint responsibility for paying the electricity bill in their household
- n=10 have mains gas connected to household for heating, hot water or cooking

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Flexible Service Offer Optimisation - August 2022

Key insights

- All customers, including solar, non-solar, SMB customers, expressed a strong preference for a variable product as opposed to a fixed product.
- Across all three networks, whether an export product was variable and whether customers were charged extra per quarter for staying on a fixed product were the leading drivers of choice.
- SMB customers were more motivated by financial deterrents than if the product was fixed or variable and expressed more concern about the unpredictability of the new product.
- Retailers and solar installers lacked the trust that customers had to roll the product out across the three networks. The Powercor brand elicited more trust in customers than any other industry stakeholder however there was a lack of trust in CitiPower and United Energy's ability to behave ethically and act in the best interests of customers relative to the Victorian Government.
- The perceived benefits of a flexible service offering across all networks were shaped by a desire for decarbonisation, network efficiency and cost savings.
- The greatest concerns across the three networks were the potential impact of environmental factors and unpredictability of the product, ongoing work and maintenance, and the retailers and installers involved with the new product. Unpredictability was of particular concern to SMB customers who were more likely (12.8%) to rate this higher as a concern than residential customers (4.4%).

Key Product and Communications Recommendations that emerged from the study:

- **Communicate the benefits:** A more efficient and less wasteful network, helping drive decarbonisation and greater potential of financial returns to customers.
- **Communicate the incentives:** The variable product will give customers greater flexibility and avoid additional costs associated with staying on a fixed product (if possible to do so).
- **Mitigate and address concerns:** Address concerns around lack of stability and security of the product by communicating that the product as a safe, financially secure product, particularly to SMB customers.
- **Maximise product uptake by leveraging Trust in Victorian Government across the CitiPower and United Energy Networks:** Manage perceptions that CitiPower and United Energy are actively addressing concerns around ethics and acting in customers best interests or partner with the Victorian Government in the roll out of this product.

Objectives

Develop and refine a Flexible Service Offering that will maximise uptake.

Method and Sample

Solar customers

- n= 198 CitiPower customers
- n= 202 Powercor customers
- n= 199 United Energy customers

Considering uptaking solar in the next 12 months

- n= 193 CitiPower customers
- n= 203 Powercor customers
- n= 147 United Energy customers

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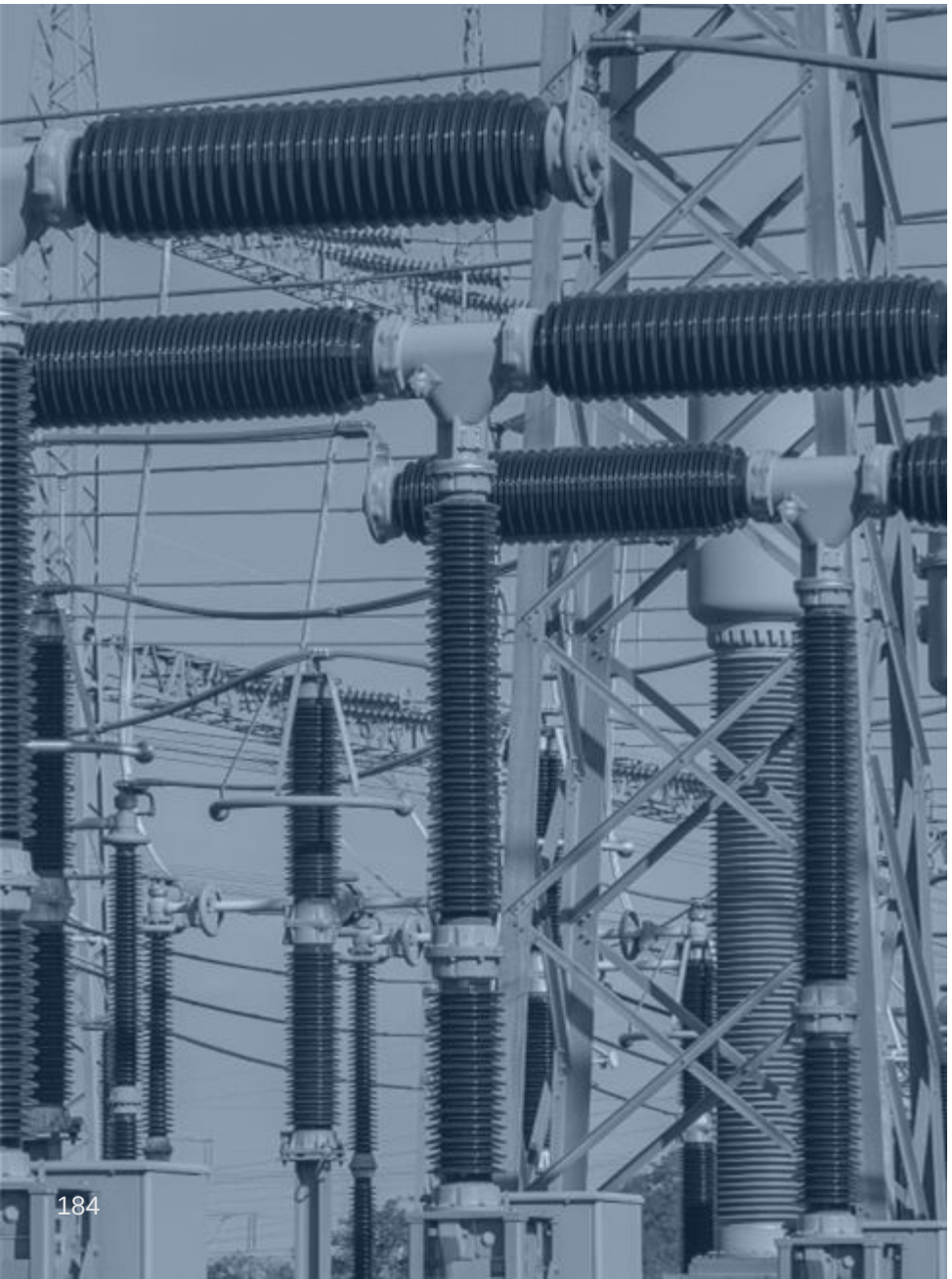

Phase 2: Deep and Narrow

Future Home Demand: 2023 (Part 1)

Key Insights

The research uncovered 51 emerging digital energy trends, categorised across nine practice domains that encompass significant areas of household life where energy demand is prominent or undergoing substantial changes:

Affordability and Equity

Recreation and play: As a result of the ongoing COVID-19 pandemic and increased cost-of-living pressures, households are spending more time at home. Consequently, there is greater focus on household comfort, as well as investments in home improvements and digital devices that provide further opportunities for entertainment and recreation. Households are witnessing a surge in expectations for their homes, driving an inclination towards luxurious upgrades, particularly in alignment with personal standards. This trend coincides with the proliferation of screens and the growing tendency to use multiple devices simultaneously. Gaming has become a progressively prevalent source of entertainment, and electric vehicles are increasingly adopted for recreational purposes. Additionally, the home is now serving as a hub for exercising, contributing to the growing use of technology for fitness and well-being activities. This is an anticipated growth area for electricity demand.

Reliability and Resilience

Caring at home: Households are recognising pets as integral family members with unique energy requirements. The importance of occasional guest hosting is growing as a key consideration in household decisions. Caring responsibilities now emphasise preparedness for unforeseen situations. Self-care is on the rise, linked to both physical and mental well-being, while the increasing demand for at-home care is placing higher demands on energy usage and limiting load flexibility within households.

Healthy indoor air and thermal comfort: Households are increasingly focusing on the expansion of heated and cooled spaces within and around their homes, reflecting a growing concern for indoor air quality. They are turning to various technologies like air purifiers and dehumidifiers to maintain and improve air quality. Furthermore, households are demonstrating an increased interest in managing indoor air quality through a combination of methods, such as adjusting natural ventilation, electrifying gas cooking, and switching to electric heating, all of which are contributing to a greater emphasis on indoor air quality as a priority.

Cleaning, showering and laundering: Households are embedding showering into their daily routines to maintain structure and routine in their day-to-day lives, emphasising the importance of this practice. Concerns related to air quality are driving increased dryer usage, reflecting a growing focus on indoor environmental conditions. However, there remains a disconnect between energy management strategies and household cleaning priorities, highlighting the need for more aligned approaches. Additionally, inherited cleaning practices and advice continue to shape the way households utilise various cleaning appliances.

Objectives

This research extends the methodology established in the Digital Energy Futures Project (DEF) and focuses on the specific needs and concerns of households within the three distributions CitiPower, Powercor, and United Energy, outlining 51 emerging trends in digital energy futures and related insights

Method and Sample

Stage 1: Recruitment survey (from 667 customers)

Stage 2: In-depth ethnographic research (with 36 households from CitiPower, Powercor and United Energy) involving a ethnographic home tour, and an ethnographic design activity, lasting from two to three hours

Stage 3: Forecasting workshop (with four CPU forecasters).

Stage 4: Household survey (from 1,325 customers)

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1. Inform
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Future Home Demand: 2023 (Part 2)

Key Insights

The research uncovered 51 emerging digital energy trends, categorised across nine practice domains that encompass significant areas of household life where energy demand is prominent or undergoing substantial changes:

Energy Transition

Mobility and Charging: Electric vehicles (EVs) are gaining popularity for various reasons and are increasingly seen as part of a broader transportation mix. Home charging for EVs remains the primary method, with access to charging facilities significantly influencing EV purchases. People prioritise maintaining control over charging rather than relying on automation. Additionally, vehicle-to-grid technology is becoming appealing as a backup energy source, and charging routines and priorities hold importance. The trend of interchangeable batteries is expediting the electrification of garden and power tools, marking a notable shift in energy usage practices.

Cooking and eating: The kitchen is witnessing an ongoing surge in the adoption of small electric cooking appliances. Household electrification is commencing in the kitchen but is unfolding gradually over time. Additionally, there is a noticeable trend towards larger fridges and freezers, reflecting increased usage and expanded storage capacities.

Making, saving, sharing, and storing energy: Interest in smart home technology serves as a precursor to broader energy technology engagement among households, highlighting the interplay between these areas. Many households still lack knowledge about or engagement with their electricity tariff. Solar self-consumption is gaining appeal as households seek to harness renewable energy more effectively. The desire for resourcefulness is driving an increasing focus on the self-consumption of solar energy. Responding to demand management is less reliant on financial incentives and increasingly motivated by other factors. However, demand management strategies designed to boost demand are creating confusion among households. Differential access to Clean Energy Regulator (CER) incentives is exacerbating inequities in participation in the energy transition, underlining the importance of addressing such disparities.

Customer Service

Smarthome and automation: Overall, interest in smart home technology and automation remains relatively low, but when adopted, it is creatively customised to meet individual household needs. Notably, gender differences persist in technology acceptance and usage, and the departure of the initial installer can lead to growing frustrations with smart home and energy management technology. Furthermore, the introduction of automation tends to heighten household complexity, causing some households to reject it, while a common desire prevails for the ability to retain the final say and easily override automated systems.

Working and Studying from home: A hybrid model of working from home is a continuing trend, influencing adaptations within households to accommodate remote work and study requirements. This shift is driving increased household computer needs, which, in turn, support the potential for load shifting in the afternoon. The specific demands of working from home are also playing a more significant role in shaping the need for heating and cooling in households.

Objectives

This research extends the methodology established in the Digital Energy Futures Project (DEF) and focuses on the specific needs and concerns of households within the three distributions CitiPower, Powercor, and United Energy, outlining 51 emerging trends in digital energy futures and related insights

Method and Sample

Stage 1: Recruitment survey (from 667 customers)

Stage 2: In-depth ethnographic research (with 36 households from CitiPower, Powercor and United Energy) involving a ethnographic home tour, and an ethnographic design activity, lasting from two to three hours

Stage 3: Forecasting workshop (with four CPU forecasters).

Stage 4: Household survey (from 1,325 customers)

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Future Home Demand – 2023 (Part 3)

Household values and values-based demand management designs

The research revealed key household values and priorities, which have significant implications for demand management and forecasting strategies:

1. A strong focus on cost-reflective pricing or financial incentives and penalties may undermine demand management potential in CPU's customer base, especially if economic measures are perceived to compromise comfort, health, and safety.
2. While sustainability and appeals to environmental benefits are influential, they must also consider the importance of values such as comfort, health, safety, and affordability.
3. These values often overlap; for example, comfort, health, and safety are closely tied to environmental concerns, particularly regarding air quality during events like bushfires.
4. Values related to comfort, health, and safety extend to community health and safety, emphasizing the importance of preventing outages and protecting vulnerable customers in demand management efforts.
5. The prevalence of socially conscious values among households offers opportunities to frame demand management strategies that appeal to a diverse range of values within the community.

- 52% ranked ‘Comfort, health and safety’ as top value, 24% ranked ‘Affordability and cost effectiveness’ as top value
- Customers are seeking education to optimise their consumption, however, 30% of customers don’t know what tariff they’re on

Survey Findings

1. **EV Adoption**: There is a growing interest in electric vehicles (EVs), with a significant portion of respondents expressing intentions to purchase an EV in the next five years. This suggests a potential shift towards electric mobility.
2. **Home Charging Preference**: The majority of respondents who own or plan to own an EV prefer to charge their vehicles at home. This highlights the importance of residential charging infrastructure for EV users.
3. **Smart Appliance Attitudes**: Most respondents are not comfortable with fully automated smart appliances. They prefer having control over settings or the ability to override automation, indicating a desire for user-friendly and customisable smart technologies.
4. **Remote Work**: A substantial number of respondents engage in remote work, indicating a continued interest in flexible work arrangements, even beyond the COVID-19 pandemic.
5. **Demand Management Willingness**: Many respondents are open to participating in demand management programs, suggesting a potential for demand response initiatives to be effective in reducing energy consumption.
6. **Household Values**: "Comfort, health, and safety" is the top-rated household value among respondents, followed by "affordability and cost-effectiveness" and "sustainability." This underscores the importance of these values in shaping consumer preferences and decisions regarding energy-related matters.

Objectives

This research extends the methodology established in the Digital Energy Futures Project (DEF) and focuses on the specific needs and concerns of households within the three distributions CitiPower, Powercor, and United Energy, outlining 51 emerging trends in digital energy futures and related insights

Method and Sample

Stage 1: Recruitment survey (from 667 customers)

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Future Homes Demand – 2023 (part 4)

Future Peak Scenarios

Analysis of all research findings identified nine possible emerging peaks with the potential to impact network businesses from 2023 onwards, if demand response opportunities are not implemented.

1. **Holiday Hosting Peak**: During the holiday season, increased convenience charging of electric vehicles (EVs) alongside high and inflexible energy demand creates localised peaks in areas popular with holidaymakers.
2. **Storm Charging Peak**: Prior to forecasted storms, home batteries and EVs automatically respond to storm warnings to maintain their charge. Households also charge up other mobile battery-powered devices to prepare for potential power outages.
3. **Major Event Peak**: Growing expectations for the home and new digital technologies increase the energy needs of entertaining, leading to significant demand peaks during major sporting or cultural events.
4. **Automation Override Peak**: Smart home devices with automated settings, rather than responding to energy signals, exacerbate evening peaks by prioritising comfort and convenience.
5. **Friday Work From Home Peak**: Increased remote work on Fridays, coupled with EV charging in preparation for the weekend, creates demand peaks on Fridays.
6. **Thunderstorm Asthma Peak**: Serious health and air quality concerns during asthma thunderstorms lead to closing up homes, running air conditioning, and air purification, coinciding with reduced solar production.
7. **Bushfire Peak**: More frequent bushfires create prolonged smoky conditions, limiting solar production while people stay home and increase their energy use to ensure safe and healthy indoor air.
8. **Diversifying Demand Troughs**: The presence of more Consumer Energy Resources (CER), changes in household practices, and increasingly efficient appliances result in more frequent and intense demand troughs, rather than peaks.

Objectives

This research extends the methodology established in the Digital Energy Futures Project (DEF) and focuses on the specific needs and concerns of households within the three distributions CitiPower, Powercor, and United Energy, outlining 51 emerging trends in digital energy futures and related insights

Method and Sample

Stage 1: Recruitment survey (from 667 customers)

Stage 2: In-depth ethnographic research (with 36 households from CitiPower, Powercor and United Energy) involving a ethnographic home tour, and an ethnographic design activity, lasting from two to three hours

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Digital Energy Futures: Scenarios for Future Living 2030/2050 - 2023

Key Insights - Diversifying the System:

DEF scenarios prioritise higher certainty through greater consumer engagement and autonomy. Evidence from DEF research indicates that people don't solely use automation for energy related purposes, consumers override Consumer Energy Resources (CER) to maintain control, individuals align CER usage with their daily priorities and values, and disparities exist in access to and knowledge of CER.

The DEF scenarios reveal that the industry needs to consider, encourage, and prepare for more diverse forms of participation and engagement than CER uptake to maintain high levels of material certainty. View the rationale behind each scenario placement on the following page.

Climate Impact on Scenarios:

Climate models predicted an increased frequency of extreme weather events by 2030 and 2050, regardless of emission pathways (RCP2.6 or RCP8.5). This includes higher temperatures, more intense heatwaves, heavier rainfall, prolonged droughts in southern Australia, and elevated forest fire risks in the south and east. All DEF scenarios consider these projections, significantly intensifying in the 2050 scenarios due to their high confidence.

Scenarios at a glance: Four people-centred scenarios created by the DEF project. They aim to provide alternative scenarios that better match individuals' evolving lives and priorities.

- **Creature Comforts (2030):** This scenario envisions a world where self-sufficiency, driven by consumer electronics and luxury, challenges load management.
- **Sharing the Load (2030):** In this scenario, the grid transforms into a tool for community well-being, supporting a decarbonised, reliable, and affordable energy system driven by diverse participation.
- **Hunkering Down (2050):** Emphasising automated technologies, this scenario grants individuals' control, especially during extreme weather events, leading to investments in housing and technology upgrades.
- **Sunrises & Siestas (2050):** Adapting to climate change and energy system shifts, this scenario aligns renewable resource availability with daily life and emphasises community resilience.

Objectives

Explore

- Introduce four innovative scenarios to guide energy planners, industry stakeholders and futurists in understanding future energy landscapes.

Method and Sample

- Examination of Industry research
- Ethnographic research with n=72 households
- Energy Consumers Australia's Energy Consumer Behaviour Survey
- Future-oriented workshops

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Digital Energy Futures: Scenarios for Future Living 2030/2050 - 2023 (Part 2)

Next steps

Leveraging scenarios
The DEF Roadmap leverages scenarios to shape and achieve desired visions, offering a foundation for energy planners. It aligns practical foundations and opportunities with each scenario to create an industry path aligned with a people-centric energy system. Seven key foundations for demand management were identified by DEF research:

1. **Alignment:** Proposed electricity sector changes must align with household values and priorities, considering economic resources, cultural differences, internet accessibility, security, and health concerns.
2. **Language:** The energy industry language needs more consumer appeal and needs to capture diverse awareness.
3. **Awareness:** Concepts like peak demand need better communication, especially in the context of rising solar opportunities.
4. **Rewards:** Instead of penalties, focus on rewards to reduce distrust and engage households, especially low-income and culturally and linguistically diverse (CALD) communities.
5. **Recognition:** Emphasise demand management's role in community, system, and sustainability, appealing to households as a social and environmental responsibility.
6. **Access:** Address distrust and inequities in access to tailored energy feedback, practice insights, and Consumer Energy Resources (CER).
7. **Partnering:** Engage households and organisations, prioritise appliance-specific feedback, and couple energy data with incentives.

The DEF scenarios offer insights into potential outcomes based on how people will live, supporting energy planning by:

- **Reframing Assumptions:** Challenge and revise existing assumptions about people within energy scenarios.
- **Alternative Narratives:** Develop and model alternative narratives to explore potential future outcomes.
- **Guiding Programs:** Support demand response initiatives, energy system design, and technology development aligned with consumer needs.
- **Realistic Expectations:** Establish realistic expectations regarding consumer engagement with energy technology and automation.
- **Consider Social Changes:** Include considerations of anticipated social changes in energy planning.

The DEF methodology prioritises people's present and future daily lives, practices, and values, offering a holistic perspective compared to traditional techno-centric scenarios. While not exhaustive, these scenarios encourage engagement with the methodology to develop innovative, people-centred forecasting resources. Embracing diverse perspectives, including Indigenous and First Nations viewpoints, enriches the value and opportunities of this approach. The DEF methodology draws from critical futures and design ethnography, enabling thinking beyond established values and beliefs and anticipating future worlds with emerging technologies.

Objectives

Explore

- Introduce four innovative scenarios to guide energy planners, industry stakeholders and futurists in understanding future energy landscapes.

Method and Sample

- Examination of Industry research
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Customer Service Incentive Scheme Metric - 2023

Key insights

Customer priorities for CitiPower, Powercor, and United Energy services were assessed through a quantitative MaxDiff study. Key insights reveal the significance of outage-related communication, power quality, and future renewable technologies, while export services ranked lower than expected.

Outage Communication Priority: Customers highly value services related to outage communication, including accurate restoration times, information accuracy, and timely awareness messages. Business customers tend to have higher anxiety regarding outages' impacts.

Power Quality Emphasis: Power quality (voltage) has increased in priority, driven by greater electricity reliance, remote work, and equity concerns. It is viewed as an enabler for renewable energy transitions, particularly among rural customers.

Frequency and Duration of Outages: Customers highly value outage-related services. Notably, Powercor and United Energy customers had lower expectations than CitiPower customers. Business customers, who value time highly, expect better service during unplanned outages, offering an improvement opportunity.

Future Renewable Technologies: Export services, though lower in priority, ranked among the top 10 for Powercor customers and 12th for CitiPower and United Energy. Reducing emissions is a higher priority for CitiPower customers, while Powercor and United Energy customers prioritise reliability and power quality due to existing inequities.

These insights highlight the significance of outage communication, power quality, and the growing importance of renewable technologies among customers. Export services, despite growing interest, remain a lower priority.

Objectives

•Measure the importance customers place on service improvements.
•Determine service hierarchy within each distributor's area.

Methodology and Sample

- Online quantitative study employing Maximum Difference Scaling (MaxDiff), a statistical technique used to model choice trade-off.
- Sample: 2,949 respondents, including residential, small business, and commercial/industrial customers across the three energy distributors.

	Residential Customers	Small Business Customers	Commercial and Industrial Customers	Total
CitiPower	N=486	N=157	N=16	N=659
Powercor	N=928	N=82	N=4	N=1014
United Energy	N=748	N=73	N=0	N=821
Total	N=2162	N=312	N=20*	N=2949

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Powercor Rural and Regional Summit Summary - 2023

Key insights

The rural and regional summit sought to understand how customers prioritise key topics and outcomes and whether any trade-offs impacted this, with ***improving reliability*** emerging as the most important topic. However, these priorities were often seen as interconnected, with network reliability and resilience impacting rural and regional equity and their potential to participate in the clean energy transition. This represents an evolution from earlier engagement programs where customer topics were considered separately.

- **Reliability and Resilience:** Customers in rural and regional areas prioritise improving reliability, network capacity, and power quality, seeing them as interconnected and critical for community survival and growth. They view these improvements as essential for businesses to sustain themselves, attract new businesses, and prevent job losses. Additionally, they believe that addressing reliability, power quality, and capacity issues is essential for their communities to participate in the clean energy transition. They feel frustrated by their inability to access renewable energy generated locally and believe that improving these limitations would enhance their businesses' sustainability, reputation, and participation in sustainability initiatives.
- **Energy Transformation:** While enabling capacity for energy export services was not rated as highly as other priorities like reliability and capacity management, it gained importance when discussing long-term perspectives. Customers expressed interest in facilitating exports but found the proposed options for enabling exports needed improvement, mainly due to negative sentiment towards export tariffs, which were seen as a deterrent to adopting rooftop solar. Some customers considered these initiatives as benefiting Powercor more than customers and were reluctant to allocate additional funds for such endeavours, especially in the context of a cost-of-living crisis. Additionally, customers expressed doubts about the regional network's capacity to support the electrification of fleets and questioned the availability of infrastructure for electric vehicles outside metropolitan areas.
- **Disaster Recovery and future planning**: Customers, particularly those who have experienced extreme weather events, expect Powercor to adopt a measured and strategic approach to disaster preparedness and recovery. They emphasise targeted investments aligned with community feedback and needs, favouring cost-effective solutions like undergrounding and community collaboration. Furthermore, Customers who have personally experienced extreme weather events prioritise non-network solutions such as standalone power systems (SAPS) and microgrids to mitigate reliance on the network during disruptions. Customers also see a role for Powercor as part of a multi-agency response team and value practical and psychological support provided by resources like the Mobile Emergency Response Vehicle (MERV).
- **Planned Outage Process**: Customers highly value a well-managed planned outage process but are generally satisfied with Powercor's current service. Tailored outage notifications may be necessary for specific customer types, such as farmers, due to biosecurity and business concerns. Some customers suggested alternative communication methods for elderly or vulnerable individuals. Customers prioritised earlier outage notifications, doorknocking before disconnection, annual engagement with large customers on outage timing, and conducting more work on weekends or after-hours

Objectives

- Explore and understand regional and rural customer priorities and needs.
- Discuss and debate considered customer outcomes aligned to customer needs
- Identify trade-offs that customers make within service areas to identify the key priorities for investment for rural and regional customers

Method and Sample

- **Focused Working Groups** with n=8-10 participants. The aim was to ensure a deep understanding of customer priorities and facilitate equal participation.
- **Structured Discussions and Voting**: Customers reflected on their electricity needs and preferences, voted on proposed outcomes, and discussed topics presented in clear, unbiased pre-reading materials. Customers were encouraged to suggest additional outcomes. Voting was done to prioritise topics, and participants received information on the required investments and bill impacts to inform their choices.

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Economic Growth Engagement (C&I Customers) - 2023

Key insights

C&I customers prioritise power quality and network reliability as crucial for business operations, with a strong emphasis on transitioning to renewable energy. While network tariffs are viewed with varying priority, there is a significant demand for enhanced collaboration and information exchange between customers and distributors to address these concerns effectively.

- **Tariffs (Affordability and Equity:** C&I customers express a need for simplified education on network tariff structures and desire easily understandable materials to comprehend how these structures impact energy costs. Despite positive feedback on the current network tariff structure, readiness to implement changes based on new tariff options is generally low, with mixed reactions to critical peak demand charges. Customers highlight the misalignment of peak periods between network and retail tariffs, posing challenges in optimising energy usage and managing costs. Some customers find tailored network tariffs appealing, while interest in critical peak demand charges varies based on operational flexibility. Effective education and collaboration with distributors are deemed essential for C&I customers to navigate and optimise their energy consumption.
- **Power Quality (Reliability and Resilience):** C&I customers emphasise increasing concern about power quality during the energy transition, as disruptions impact business operations and equipment performance. While acknowledging improvements in network reliability, they highlight power quality as a key challenge, especially in rural areas. Various power quality issues, including harmonics, voltage fluctuations, and outages, have significant financial and operational costs for businesses, prompting some to invest in backup power solutions. Customers consider energy storage as a potential solution but note regulatory constraints. Future concerns include maintaining unrestricted access to energy load for uninterrupted business operations. Case studies across different industries illustrate the critical impact of power quality challenges, with customers exploring self-generation and collaboration with distributors to enhance reliability.
- **Energy Transition**: C&I customers express concerns about the transition to renewable energy, particularly its impact on electricity distribution, emissions targets, and business operations. Many are innovating with investments in energy storage and solar power to meet emissions goals. The proposed electrification of gas raises challenges, especially for operations with high-heat demands, and affordability concerns persist in transitioning from gas to electricity. Distribution Renewable Energy Zones (REZs) are seen as a solution, but risks of unreliable supply exist. Case studies highlight the adoption of anaerobic digesters, reflecting a broader trend toward sustainability, energy efficiency, and challenges in accommodating increased energy exports to the grid.
- **Customer Experience**: C&I customers express a desire for enhanced communication and collaboration with electricity distributors, emphasising the need for improved timing and communication regarding maintenance and planned outages. They seek proactive relationship management, preferring regular check-ins beyond issue-specific interactions to anticipate and resolve potential problems. Customers also call for reciprocal relationship practices and increased data sharing, with a preference for a self-service portal allowing them to tag critical assets for consideration during planning and outage prioritisation. The aim is to create a more nuanced and collaborative system for effective two-way communication between major customers and distributors across Victoria.

Objectives

- Identify key concerns for C&I customers now and in the future.
- Assess awareness and response to current network tariff structures.
- Understand C&I customer energy preferences, experiences, and needs.

Method and Sample

1. Roundtables

a. Follow up evaluation surveys

2. Site tours and informal interviews

3. in-depth interviews

Customer Group	Engagement	No. attendees
Metro based C&I	In-person roundtables	N=12
Regional/Rural based C&I	In-person site visits	17 businesses
Regional C&I	In person roundtables	N-8
All C&I and advocates	Online in depth interviews	N=7

IAP2 Spectrum

1. Inform
2. Consult
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5. Empower

Customer Vulnerability Roundtable – September 2023

Key Insights

This report summarises the outcomes of two stakeholder roundtable discussions focusing on how Victorian electricity distributors can better support customers experiencing vulnerability in preparation for their 2026-31 price reset regulatory proposals. Participants discussed key areas, including an inclusive transition, natural disasters and reliability, and partnerships.

An Inclusive Transition

An Inclusive Transition include recognising disparities in the distribution of impacts and social license, acknowledging the social and emotional aspects of the energy transition, addressing the increasing complexity of energy products, and understanding the unique challenges faced by First Nations communities. Participants emphasised the need for clear communication and tailored support, balancing immediate financial concerns with broader transition challenges, and promoting energy efficiency. To ensure an inclusive transition, there is a call for trustworthy communication channels, increased community understanding, and avoidance of divisive labels, emphasising the importance of empowering all customers while addressing their specific needs during the transition process.

Natural disasters and reliability

Participants discussed the importance of community hubs as secure locations during emergencies and the need for local communities to have space and resources for self-organisation. Additionally, Mobile Emergency Response Vehicles (MERVs) were recognised for providing essential services and communication during incidents. First Nations communities emphasised the need for prioritising community hubs in alignment with established Reconciliation Action Plans, considering cultural sensitivities and safe spaces. Collaboration between telecommunications providers and electricity distributors during natural disasters is essential to ensure access to real-time information. Participants highlighted gaps in community information regarding solar power operation during emergencies, the lack of information about preparing for long blackouts, and the importance of translating and distributing this information. Concerns were raised about the tracking, maintenance, and safety of loan generators, and the need for distributors to be aware of existing batteries in rural communities. Standby Power Systems (SAPs) and split funding models for energy supply were suggested as potential solutions.

Partnerships

Participants mentioned the success of collaborations with grassroots community organisations for programs like "Bring Your Bills Days" and extending these programs to address energy transition topics. Building partnerships with DEECA for unbiased information on transitioning to solar energy and engaging CALD communities through advocacy and membership organisations were found to be effective. The importance of leveraging existing networks and resources for information distribution was emphasised. Partnership ideas involved teaming up with councils to provide electricity optimisation information, businesses for guidance on alternatives to high-heat cooking, and school hubs with health workers for family support. Additionally, partnerships with real estate agencies and property managers were proposed to address apartment-specific challenges. First Nations communities emphasised partnerships with local emergency services, alignment with community goals, and clear communication. There was a suggestion to update retailer scripting and offer comprehensive information on the energy transition, including potential rewiring costs. Collaborations with gas networks and telecommunications companies were also recommended. To minimise stranded assets, providing details on energy-efficient appliances and house rewiring for electrification was suggested.

Objectives

- Discuss how Victorian electricity distributors can best support customers experiencing vulnerability
- Support the development of tangible solutions and recommendations that will be brought forward to the Australian Energy Regulator (AER)

Methodology and Sample

Qualitative round tables with discussion guided by facilitators

Participants were selected for their expertise in understanding vulnerability and its interaction with the energy system

- James Lazzaro - **Anglicare**
- Keicha Day - **Gunditjmara and Yorta Yorta, Chair of the First Peoples Advisory Committee for CitiPower, Powercor and United Energy**
- Piang Lilian - **Chin Community Victoria Inc.**
- Martin Turnbull - **COTA Victoria**
- Zoe Pilven - **Department of Energy Environment Climate Action**
- Gavin Dufty - **St Vincent de Paul**
- Rory Anderson - **Victorian Council of Social Services**
- Surmeli Yesilyurt - **Ethnic Communities Council Vic (ECCV)**
- Mark Feather - **Australian Energy Regulator (AER)**
- Matthew Morrison - **Australian Energy Regulator (AER)**

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CitiPower | Powercor Australia | united energy | Forethought Outcomes

Victoria Electricity Distributors Tariff structure - 2023

Key Insights

The workshop is the first of a series of workshops aimed at developing a joint Tariff Structure Statement (TSS) in response to evolving energy dynamics, with the key insight emphasising the need for adaptable tariffs that balance incentives and affordability while placing customers at the core of tariff design.

Evolving Tariffs for an Adaptive Energy Landscape: Enhancing existing tariffs demands a multifaceted approach in response to the dynamic energy transition. Incentives and penalties must strike a balance, prioritising affordability for customers. The shifting energy paradigm, marked by prosumers and evolving usage patterns, necessitates thoughtful tariff adjustments to manage network charges effectively. Customer education is paramount, emphasising simplicity and standardisation. With the rise of electric vehicles and electrical appliances, tariffs should encourage specific usage behaviours and energy efficiency, particularly during off-peak hours. Tariff design should prioritise customers, considering load management for cost reduction. Integration of Consumer Energy Resources (CER) requires adaptable, technology-agnostic tariffs. Special attention is warranted for vulnerable customers, ensuring protection and support.

Maximising opportunity to integrate CER: Participants emphasised the critical need to adopt a comprehensive and multifaceted approach for the effective integration of Consumer Energy Resources (CER) into the energy system. This insight is derived from a range of key themes and considerations highlighted during the discussions: Incentivising Customer behaviour, flexibility in tariff structures, supporting vulnerable customers, alignment of tariffs, data-driven tariff design, enhanced communication, retailer collaboration, electric vehicle impact, tailored tariffs, consumer protections, energy storage and solar PV. The research emphasises that successful integration of CER into the energy system requires a comprehensive strategy that addresses various stakeholder needs, prioritises affordability and equitable access, and aligns with the continually evolving energy landscape. This multifaceted approach ensures that the benefits of CER integration are maximised for all participants in the energy ecosystem.

Pricing Objectives: Discussions on pricing objectives revolved around simplifying tariffs for both customers and retailers, maintaining economic efficiency to balance costs and investments, ensuring adaptability to changing technologies and regulations, addressing affordability with a focus on economic efficiency, and navigating the complexities of equity. Participants suggested several amendments to enhance the objectives of creating greater simplicity, economic efficiency, adaptability, affordability, and equity, through using term such as ‘exports’, commercial model’, reliability of networks’, and ‘especially for customers experiencing vulnerability’.

Objectives

Share feedback and insights between Electricity Distributors and relevant stakeholders on the key issues

Methodology and Sample

The group discussions were structured around three main topics, namely:

1. Enhancing current tariffs
2. Maximising opportunities to integrate Consumer Energy Resources (CER)
3. Pricing objectives

Each topic was introduced by a respective expert, followed by small group discussions that included a mix of participants from civil society, government, industry, retailer organisations, and Victorian Distribution Network Service Providers (DNSP) members. A facilitator from BD Infrastructure guided the discussions using prepared worksheets. Groups were reassigned between topics to maximise diverse input.

n= 59 stakeholders*
(*Government, Customer Advocates and industry groups, energy developers/consultants, and retailers)

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1. Inform
2. Consult
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5. Empower

Framework and Approach Workshop: Outcomes Report – June 2023

Key insights

Data management was a key concern for both electricity distributors and participants in the workshop. There was also consistency across both groups in the mention of equity and the capacity to provide certain services consistently. Remuneration was more specifically identified as a gap to workshop participants, but not electricity distributors.

Gaps identified by participants

- Participants were concerned with equity in services and remuneration and believed there was blurring of services and removal of some distinct boundaries.
- They also had concerns around how management of land functions are handled, especially rural, as well as concerns around data management.

Gaps identified by electricity distributors

- Gaps in the provision of export services
- Gap in the capacity to provide essential system services
- Gap in the provision of network data sharing and advisory services
- Gap in the ability to unlock value from batteries without contracting costs
- Gap in the provision of new electricity services in regional areas
- Gap in the provision of stand-alone power systems (SAPS)

Objectives

- Share service gaps identified by Victorian electricity distributors and consider if they should play a role in meeting them
- Understand the implications for customers of Victorian electricity distributors changed or provided new services

Method and Sample

All participants were given a pre-read pack to provide context and information about the topics being discussed.

The workshop involved short presentations about each topic under consideration, followed by small group discussions

n=1 SE (Jemena EOI) participant
n=3 CGI (Jemena EOI) participants
n=4 Ausnet Stakeholder Representatives
n=1 Red Energy participant
n=1 Energy Council participant
n=2 CGI participants
n=1 CCP participant
n=1 AER participant
n=2 Powercor CAP participants
n=2 DEECA participants
n=1 KPMG participant
n=1 Energy Australia participant
n=1 independent participant

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1. Inform
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Customer Vulnerability Workshop: Outcomes Report – June 2023

Key insights

A number of participants suggested there needed to be a move from considering people as vulnerable to considering how it might be possible to increase someone's agency. This lense was applied to all discussions. Four key themes emerged: Situational, Kinship and Community, Individual and Structural.

Participants revised the key categories identified by the Victorian distributors to the following:

1. Reducing vulnerability during loss of supply
2. Being in, or at risk of the ability to access essential energy services/ increasing access to energy services (absolute poverty)
3. Ensuring no one is left behind by the energy system transition to renewables and electrification (relative poverty)

- Regarding the energy transition and vulnerable customers, participants believed that communities are the key to transition.
- They also believed that despite government suggesting the energy transition would lower bills that this was not true and that if it did indeed result in higher bills, trust from the community would diminish.
- Participants also expressed concern for the cost of the energy transition.

Objectives

- Develop a mutual understanding of what vulnerability means in the context of energy and how Victorian distribution businesses impact it
- Understand challenges and impacts for vulnerable customers for the future as the electricity system changes
- Consider what support the Victorian distribution businesses could directly provide (or facilitate) to support these customers
- Capture informed insights to develop tangible recommendations in 2026-31 proposals that ensure no customer is left behind or faces energy poverty or disadvantage where preventable

Method and Sample

Participants were chosen based on their demonstrated understanding of the lived experience of people experiencing vulnerability and firsthand knowledge of how they interface with the energy system.

All participants were given a pre-read pack. The workshop involved short presentations about each topic, followed by small group discussions where groups worked together to consider different elements of vulnerability. Representatives from VICBDs were allocated to each of the two groups Outcomes were shared with the full group at the end of small group discussions.

n= 11 participants
n= 1 observer
n= 7 VICBD representatives

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1. Inform
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Energy Transition Summit - November 2023

Key Insights

Stakeholders from Powercor, CitiPower, and United Energy showcased a resolute commitment to fairness, equity, and sustainability in navigating challenges related to solar exports and electric vehicle (EV) integration. Their collective insights emphasised the importance of inclusive energy transitions, nuanced considerations in financial responsibility for solar exports, recognition of mid-scale generation as a key solution, and the need for regional resource harnessing to address disparities.

Equitable transitions: CitiPower and United Energy stakeholders echoed Powercor's stakeholders' commitment to equitable transitions, emphasising fairness for non-solar customers and incentivising rapid solar uptake while underscoring the critical role of government support for vulnerable customers.

Stakeholders expressed urgency in responding to the climate emergency and emphasised proactive customer education for sustainable practices.

Solar export preferences: Regarding solar export service level preferences, Powercor stakeholders favoured the Solar abundance option for its fairness, support for regional customers, intrinsic hosting capacity, and flexible export options.

CitiPower preferred Solar abundance, prioritising climate action, self-consumption, and fast decarbonisation. United Energy leant towards Fast transition for its efficiency in enabling high solar adoption and facilitating communication.

Holistic solar amendments: Stakeholders advocated for holistic approaches in solar export amendments, emphasising community batteries, mid-scale generation, and clear communication.

Robust connectivity and longer planning timeframes were highlighted to ensure a seamless and efficient transition.

EV stakeholder insights: Insights on electric vehicles revealed stakeholder uncertainties and conflicting views on adoption, debates on advanced EV technologies, and an anticipation of trickle-charging preferences.

Stakeholders called for nuanced approaches in Powercor and United Energy due to tourism factors. Service level options voting reflects preferences for gradual investment, comprehensive strategies, and shared charging among stakeholders.

EV amendments: Amendments for electric vehicles included optimising EV battery use, planning for future EV availability, considering modem connections for smart chargers, acknowledging public EV transport, promoting smart chargers for demand management, and recognising the interrelationship to the future of electrification.

Powercor-specific insights emphasised considerations for heavy EVs in regional communities.

Online engagement: Feedback from online engagement highlighted stakeholders' diverse engagement with rooftop solar, mixed motivations, reluctance to pay more for solar export, varied responses on EV ownership, and support for network investment.

Suggestions included community batteries, opposition to natural gas bans, and localised energy storage for vulnerable customers.

Objectives

Explore and understand stakeholder's (and whom they represent i.e. vulnerable customers community areas etc.) priorities and needs in utilising and managing new energy technologies such as rooftop solar and electric vehicles (EVs).

Method and Sample

Special Interest Group (SIG) representatives

- Councils
- Business associations
- Vulnerable group advocates
- Community groups
- SMB customer representatives
- Organisations

Participants from all three of the network areas

Large forum split into 5 discussion tables (of 8-12 stakeholders)

N = 36 participants

Online participations = 32

IAP2 Spectrum

1. Inform
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Future Energy Network Forum - December 2023

Key Insights

Stakeholders consistently highlighted four major concerns during discussions: affordability, functionality, demand management, and the necessity of government intervention to incentivise the transition to new energy-efficient technologies. Affordability and government intervention were repeatedly emphasised as critical areas for improvement, seen as interconnected with a desire for reduced upfront costs through government support. Stakeholders expressed concerns about cost-prohibitive activities, such as acquiring electric vehicles, batteries, and transitioning from gas to electric, especially for those in lower socioeconomic areas. The lack of government incentivisation raised equity concerns, emphasising the need for policy changes to accelerate the adoption of new technologies.

Affordability: Stakeholders identified upfront investment as a significant barrier to Electric Vehicle (EV) adoption.

Government incentivisation, inspired by initiatives in other countries, was considered crucial for promoting EV uptake.

Concerns were raised about the cost-prohibitive nature of EVs, limiting access for those in lower socioeconomic areas

Functionality: Stakeholders highlighted the importance of addressing concerns related to EV functionality, especially in areas such as towing capacity. Range anxiety and charging infrastructure limitations were identified as significant factors affecting EV adoption.

The potential slow adoption of EVs was discussed, with considerations about the transition from fuel to electric being phased.

Demand management: Charging behaviours, influenced by factors such as convenience and cost, were considered crucial for managing demand on the grid. Concerns were raised about the potential challenges in implementing fast-charging infrastructure and the impact of such infrastructure on demand.

Government intervention: Stakeholders emphasised the need for government intervention to support EV adoption and battery storage.

Policy changes, including phased transitions and incentives, were seen as effective tools for accelerating the adoption of new technologies.

Government endorsement and support were viewed as essential to reducing upfront costs and promoting equity in access to new technologies.

Battery storage: Stakeholders showed lower engagement with battery storage, attributing it to a lack of comprehension among consumers.

Battery storage benefits beyond cost savings and climate change mitigation were acknowledged, but stakeholders called for more education.

Concerns were raised about the economic viability of community batteries and the potential for market fluctuations and inequity in trading behaviours.

Gas to electric transition: Stakeholders expressed scepticism about the feasibility of achieving a net-zero economy by 2050, citing logistical challenges. The transition from gas to electricity in existing homes was anticipated to be slower due to cost barriers and maintenance concerns.

Concerns were raised about the impact of electrification on the stability of the grid, particularly during peak demand periods.

Objectives

Explore, discuss and debate the differences across assumptions relating to the three scenarios.

Method and Sample

Special Interest Group (SIG) representatives

- Councils
- Business associations
- Vulnerable group advocates
- Community groups
- SMB customer representatives
- Organisations

Participants from all three of the network areas

Large forum split into 4 discussion tables (of 8-12 stakeholders)

N = 26 participants

IAP2 Spectrum

1. Inform
2. Consult
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Customers experiencing vulnerability research- December 2023

Key Insights

The research showed Vulnerable customers' ongoing concerns about high energy costs and limited flexibility in altering usage, while emphasising the importance of proactive management of major outages during the energy transition. New findings reveal heightened awareness of household energy usage and a focus on affordability rather than value for money. Additionally, factors such as residential status and income pose barriers to accessing renewable energy options, with upfront costs and financial returns being key considerations.

What was aligned to current knowledge?

- High energy costs were a primary concern[1], with flexibility to alter usage limited by factors including work status, place of work, medical / disability status and income.
- Their knowledge of the energy transition was on par with the general population. They supported the energy transition, but worried that it would be dictated to them, and they would be left behind if they could not afford to be part of it[2,3]
- Regional / Rural customers wanted CPPALUE to ensure that there was a vision for the future, including back up plans, to manage major outages through the transition[4,5]
- Awareness of CPPALUE was very low, particularly in metro areas, but experiences with CPPALUE, typically during outages, were recalled positively
- Customers were pragmatic about outages, but expected to receive proactive and transparent communication[6]. Notification letters were preferred for initial notice of planned outages, but emails and SMS were preferred for reminders and notification of unplanned outages

What was new?

- Vulnerable customers were often more aware of their individual / household energy usage.
- They were more likely to equate affordability to the amount they paid for energy rather than value for money due to limited disposable income.
- Customers with limited flexibility to alter their consumption (full-time workers, typically younger, and medically vulnerable customers or those with a disability) generally would not be able to take advantage of time of use (TOU) tariffs and were worried that they could be disadvantaged.
- Two key factors limiting accessibility to the energy transition were residential status and/or income, which made it difficult to be future-focussed.
- Amongst vulnerable customers who had greater flexibility to participate in the energy transition, the upfront cost of adopting renewable energy and financial return was a primary consideration, contrasting the broader customer base which increasingly wanted to share excess solar production with the community[7].

Vulnerable customers needed to feel informed and in control

To support this objective, the key needs across three priority areas included:

Cost of living pressures: Education regarding how much energy different appliances used and clarity on tariff structures to lower their bills, delivered by retailers.

Participating in the energy transition: education campaigns regarding the energy transition; greater government incentives.

Maintaining proactive and transparent communication: Proactive and transparent communication from CPPALUE to all customers regarding outages with timely notifications of key information, communicated through the right channel; communication of the CPPALUE vision for the future, including back up plans, to manage major outages in regional / rural areas.

Objectives

Explore, discuss and debate the differences across assumptions relating to the three scenarios.

Method and Sample

Special Interest Group (SIG) representatives

- Councils
- Business associations
- Vulnerable group advocates
- Community groups
- SMB customer representatives
- Organisations

Participants from all three of the network areas

Large forum split into 4 discussion tables (of 8-12 stakeholders)

N = 26 participants

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5. Empower

J.D.B. Resilience Network Investment Framework - October 2023

Key Insights

The workshop gathered interactive customer feedback on resilience investments, highlighting concerns over equitable cost distribution and the importance of proactive and reactive communication measures. Recommendations include enhancing community resilience through backup measures, infrastructure protection, collaboration, and customer-driven outcomes, while emphasising genuine, human-centred engagement for future workshops and ongoing involvement in the Resilience Investment Framework.

Investment and cost-sharing: Participants in the workshop highlighted concerns regarding the equitable distribution of costs for resilience investments, particularly between safe and vulnerable communities. Recommendations include publicly sharing cost-benefit analyses for transparency, further evaluating cost distribution to address equity issues, and considering assessment models that quantify potential savings associated with risk reduction.

Communication: Participants in the workshop emphasised the importance of communication in building network and community resilience, suggesting both proactive and reactive measures. Feedback highlighted the need for better pre-emptive communication of potential outages and improved communication with diverse communities. During outages, concerns were raised about the loss of communications and the speed of notifications. Recommendations include enhancing pre-emptive communication, engaging directly with diverse communities, and exploring improvements in communication during and after events through collaboration with other service providers and councils, improving Estimated Time to Recovery accuracy, and real-time data sharing.

Backup and relief measures: Participants emphasised the importance of backup and relief measures before, during, and after power outages. Proactive measures included ensuring key facilities had backup power and expressing interest in improvements such as battery backups and faster deployment of generators. Reactive measures included swift deployment of generators and ensuring fuel stations had power. Recommendations include deploying backup batteries in vulnerable communities, addressing concerns about road closures during events, and prioritising community relief hubs to enhance community resilience.

Infrastructure protection and recovery: Participants highlighted the vulnerability of electricity infrastructure and other critical utilities during extreme events and outages. Recommendations include prioritising the protection and restoration of critical infrastructure, increasing proactive measures, collaborating with other service providers, adjusting vegetation clearance practices, and exploring the undergrounding of powerlines for enhanced resilience and additional benefits such as reduced urban heat island effect.

Coordination and collaboration: Participants emphasised the importance of collaboration among distribution businesses, service providers, councils, and communities to enhance community resilience. Recommendations include increasing collaboration to improve restoration efficiency, avoiding duplication of efforts, involving community leaders in emergency management preparation, and proactively extending collaboration to enhance climate resilience through knowledge-sharing practices.

Community resilience: Participants proposed various proactive and reactive measures to enhance community resilience, emphasising the need for preparedness, connectedness, customer engagement, and support for vulnerable communities amidst increasing climate impacts. Recommendations include implementing community education and preparation, supporting renewable technologies, addressing the impact of large outages on community health, enhancing community connectedness, ensuring the availability of Mobile Emergency Response Vehicles (MERVs) during outages, and transitioning to decentralised systems to improve resilience.

Objectives

Inform stakeholders about the development of joint resilience investment principles by distribution businesses

Gather insights from stakeholders on resilience issues

Method and Sample

N = 73

No. of Orgs. = 40

Large forum split into discussion tables, verbal meeting chat and online collaboration spaces

Participating organisations		
Ambulance Victoria	Department of Jobs, Skills, Industry and Regions	Mornington Peninsula Shire
Australian Energy Regulator	East Gippsland Shire Council	Mums of the Hills
Baw Baw Shire Council	Emerald Community House	Murrindindi Shire Council
Benalla Rural City Council	Erne Energy	nbn Australia
Boroondara City Council	Food and Fibre Great South Coast	North East Water
Cardinia Shire Council	Frankston City Council	Northern Grampians Shire Council
City of Glen Eira	Goulburn Valley Water	Parks Victoria
City of Greater Bendigo	Indigo Power	South Gippsland Shire
City of Stonnington	Latrobe City Council	St Vincent de Paul Society
Coliban Water	Maribyrnong City Council	Towong Shire Council
Committee for Greater Shepparton	Moira Shire Council	Victoria Police
Country Fire Authority	Monbulk Emergency Management Group	West Wimmera Shire Council
Department of Energy, Environment and Climate Action	Moorabool Shire Council	Yarra Ranges Shire Council
		Yarra Valley Water

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

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Part 2 - J.D.B. Resilience Network Investment Framework - October 2023

Key Insights

The workshop gathered interactive customer feedback on resilience investments, highlighting concerns over equitable cost distribution and the importance of proactive and reactive communication measures. Recommendations include enhancing community resilience through backup measures, infrastructure protection, collaboration, and customer-driven outcomes, while emphasising genuine, human-centred engagement for future workshops and ongoing involvement in the Resilience Investment Framework.

Site selection: Participants strongly supported incorporating community vulnerability into site selection for proactive investment, stressing the need for consultation with vulnerable communities and First Nations groups. They recommended standardised climate modelling for consistency and advocated for a comprehensive understanding of vulnerability, including socio-economic factors. Concerns were raised about equitable cost distribution between safe and vulnerable areas, prompting suggestions to consider geographic, socio-economic, and infrastructure vulnerabilities in decision-making processes. Recommendations emphasized inclusive criteria for site selection and fair distribution of costs among communities.

Long-term planning: Stakeholders expressed concerns about networks being repeatedly rebuilt due to increasing extreme weather events. Participants overwhelmingly support both proactive and reactive resilience investments. Cost distribution is a major concern, with calls for robust cost-benefit analyses and clarity on "building back better." Proactive investment is seen as cost-effective for long-term risk reduction. Collaboration with other service providers is recommended, and there's a suggestion to use more resilient materials in rebuilding efforts. Recommendations include robust economic models, clear definitions of "building back better," prioritising proactive investment, fostering collaboration, and improving infrastructure resilience after damage.

Partnerships: Distributors propose exploring new or enhanced partnerships with various stakeholders for better customer outcomes. Participants prefer win-win scenarios and clear roles/responsibilities in partnerships. They advocate for collaboration with water, gas, telecoms, councils, and community groups in resilience planning. Recommendations include clear communication of roles, collaboration among stakeholders, and prioritising partnerships addressing multiple customer issues simultaneously.

Economic analysis: Distributors propose data-driven economic analysis for resilience investments. Participants suggest including customer values in cost-benefit analyses and seeking alignment with current values through rule changes. Recommendations include considering a wider range of factors like environmental benefits and social costs in community benefit assessments.

Customer-driven outcomes: Distributors aim to align long-term investment plans with customer needs and views. Participants emphasised the importance of demonstrating climate preparedness, consulting at-risk communities on resilience measures, and engaging beyond compliance standards. Recommendations include incorporating customer-driven outcomes into all practices, consulting at-risk communities, collaborating with local councils, and ensuring human-centric engagement.

Future engagement: Participants expressed dissatisfaction with compliance-based engagement, particularly with First Nations communities, and advocated for genuine, human-centred approaches. They proposed separate workshops for resilience planning involving various agencies like water corporations and telecommunications providers. A poll at the workshop's end favoured workshops for future engagements. Distribution businesses pledged ongoing engagement with customers for the Resilience Investment Framework.

Objectives

Inform stakeholders about the development of joint resilience investment principles by distribution businesses

Gather insights from stakeholders on resilience issues

Method and Sample

N = 73

No. of Orgs. = 40

Large forum split into discussion tables, verbal meeting chat and online collaboration spaces

Participating organisations		
Ambulance Victoria	Department of Jobs, Skills, Industry and Regions	Mornington Peninsula Shire
Australian Energy Regulator	East Gippsland Shire Council	Mums of the Hills
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Benalla Rural City Council	Erne Energy	nbn Australia
Boroondara City Council	Food and Fibre Great South Coast	North East Water
Cardinia Shire Council	Frankston City Council	Northern Grampians Shire Council
City of Glen Eira	Goulburn Valley Water	Parks Victoria
City of Greater Bendigo	Indigo Power	South Gippsland Shire
City of Stonnington	Latrobe City Council	St Vincent de Paul Society
Coliban Water	Maribyrnong City Council	Towong Shire Council
Committee for Greater Shepparton	Moira Shire Council	Victoria Police
Country Fire Authority	Monbulk Emergency Management Group	West Wimmera Shire Council
Department of Energy, Environment and Climate Action	Moorabool Shire Council	Yarra Ranges Shire Council
		Yarra Valley Water

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

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Reliability and resilience | Affordability and equity | Energy transition | Customer experience

Customer Values research - January 2024

Key Insights

Customer priority areas for improvements

What future improvements to the network will customers value, and what are they willing to pay?

- Powercor and United Energy **residential and SMB customers** prioritised service improvements for *network resilience*, aiming to reduce long-duration outages
- CitiPower residential customers showed no strong preference for any area of improvement, rating all three relatively equally across both SMB and residential
- While ratings for CitiPower SMB were evenly spread, they were more likely to pay more for a better standard of service and prioritised solar energy exports, locally generated energy, and reducing carbon emissions relatively equally
- Both residential and SMB preferred to pay the same for the same level of service. However, United Energy and CitiPower SMB customers were significantly more likely to be willing to pay more for improvements in service standards than United Energy and CitiPower residential customers
- Residential customers expressed concerns around cost-of-living pressures, potentially influencing their willingness to pay

Emerging technologies

How will emerging technologies change customer consumption in the future, and what are the implications for networks?

- Almost half of residential customers and over half of SMB customers in each network owned or were considering purchasing an EV in the next 5 years, suggesting significant increases in demand on the network
- The majority of residential EV owners and considerers use or would use it as their primary vehicle, highlighting the growing importance of reliable access to charging infrastructure
- Across both residential and SMB customers a greater proportion are open to flexibility in EV charging schedules, suggesting potential for behaviour change incentives.
- For both SMB and residential customers, early evening and work hours are identified as the least common charging periods, while overnight and early morning see higher proportions of charging. This highlights an opportunity to collaborate with business owners, managers, or local government to encourage charging during the 10:00 am – 4:00 pm period.
- Moreover, EV owners were more open than non-EV owners to their energy provider managing charging times if it led to cost savings. This presents an opportunity to incentivise customers to modify their charging behaviours.

Future consumption behaviour

How will household energy habits change in the future and what are the implications for the networks?

Residential customers:

- Generally, residential customers are open to changing their electricity usage behaviours.
- Shifting consumption behaviour at home is expected to be more challenging with CitiPower compared with Powercor and United Energy.
- Cooking, heating and cooling are the least flexible activities, and **will likely pose the greatest challenge in influencing behaviour.**
- Clothes washing and drying are among the most flexible and **offer easier opportunities for behaviour influence.**
- Medically vulnerable customers rated the inconvenience of changing the timing of their daily tasks as higher than the other vulnerable customer cohorts.

Objectives

Measurement of the value of services provided by the networks to inform CPPALUE service prioritisation and improvement

Method

20 minute online quantitative study

Sample

	Residential Customers	Small Business Customers	Total
CitiPower	n= 402	n= 103	n= 505
Powercor	n= 406	n= 100	n= 506
United Energy	n= 403	n= 105	n= 508
Total	n= 1,211	n= 308	n= 1519

Vulnerable Customers Sample

	Income Vulnerable	Medically Vulnerable	Australian Aboriginal or Torres Strait Islander	Single Parent	Vulnerable population
CitiPower	n= 54	n=35	n= 8	n= 11	n= 85
Powercor	n= 133	n= 30	n= 4	n= 29	n= 165
United Energy	n= 91	n= 27	n= 4	n= 32	n= 129

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
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5. Empower

Powercor and United Energy Community Workshops – March 2024

Key Insights

United Energy conducted customer trade-off evaluations to guide its 2026–2031 regulatory reset proposal. Customers prioritised investments in network resilience and renewable energy initiatives but exhibited cost sensitivity, especially toward high-cost service improvements.

Customer Priorities: Participants strongly supported solutions enhancing resilience and reliability, particularly for "worst-served customers" and regions prone to natural disasters.

Equity emerged as a significant theme, with customers advocating for fair and inclusive access to resilience investments, especially in rural and high-risk areas.There was consensus on the value of improving emergency responsiveness, including deploying mobile response units and establishing community liaison officers.

Resilience Solutions: Powercor solutions, such as micro-grids, community liaison officers, and rapid earth fault current limiters (REFCLs), were seen as proactive measures to enhance safety and reliability.

United Energy: The network prioritised solutions like targeted undergrounding and aerial bundled cables, tailored for specific high-risk regions like the Mornington Peninsula. Participants appreciated the focus on unique regional challenges, such as the area's classification as metropolitan despite its rural terrain, which limits access to certain disaster relief programs.

Powercor: The proposed micro-grids (e.g., in Trentham, Ballan, and Lancefield) directly addressed the challenges faced by smaller towns in their service area, such as frequent outages and limited emergency power options. The inclusion of Apollo Bay as a strategic hub for resilience underscored the focus on locations critical to emergency response for surrounding communities.

Willingness to Invest: Stakeholders recognised the importance of these initiatives but raised concerns about the cost implications, particularly for large-scale infrastructure upgrades.Participants supported prioritising initiatives with clear cost-benefit analysis, ensuring investments align with long-term community needs.

Collaboration and Communication: Participants highlighted the need for greater collaboration between energy providers, local councils, and emergency services to ensure seamless implementation and coordination during emergencies.

Transparent communication and community education were considered essential to building trust and improving resilience outcomes**.**

United Energy: Emphasised proactive coordination through solutions like the deployment of mobile emergency response vehicles (MERVs) and the integration of a "single pane of glass" IT platform. These measures aim to streamline information sharing and resource allocation during emergencies, building community trust and transparency.

Powercor: Focused on addressing equity and reliability gaps with solutions like supporting worst-served customers through feeder ties and upgrading single wire earth return (SWER) lines. This solution highlighted Powercor's commitment to improving both reliability and resilience for underserved rural communities, ensuring these areas receive equitable investment.

Objectives

- Obtain feedback on resilience solutions and refine them to align with community needs.
- Develop proposals that reflect diverse stakeholder perspectives and enhance network resilience.

Method and Sample

- Engagement Format: Three workshops were conducted across March 2024, including two in-person sessions and one online roundtable, with a total of 37 participants.

Session	Network	Format	Date	Attendees
Session 1	United Energy	Face-to-face	12 March 2024	5 stakeholders, 1 AER representative
Session 2	Powercor	Face-to-face	18 March 2024	13 stakeholders
Session 3	Both	Online	27 March 2024	14 Powercor, 4 United Energy

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
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CitiPower Trade Off Evaluations – May 2024

Key Insights

CitiPower conducted an extensive trade-off evaluation engagement to inform its 2026–2031 regulatory reset proposal. The findings reveal customers' preferences for various discretionary initiatives, with strong support for sustainability and renewable energy initiatives but limited willingness to pay for maximal service improvements.

1. The majority of customers were in support of improving service levels of each initiative presented, except Reliability. Customers wanted reliability to be maintained, as they were satisfied with current reliability service.

2. Compared to residential customers, SMB customers were often less willing to invest, preferencing 'zero cost' options more consistently. SMB customers were generally more selective in what they were willing to invest in.

3. Overall, there was an even willingness to pay across levels of investment for residential and SMB customers.

4. Residential and SMB customers recognised the value of investing in discretionary initiatives beyond compliance costs to achieve service level improvements. However, they were unwilling to invest in the proposed maximum bill impacts associated with the highest level of improvement across initiatives.

5. Qualitatively, customers voiced strong support for initiatives that supported renewable energy, particularly Supporting Additional Solar and Electrification. However, within in the quantitative insights there were no significant differences in sustainable vs. non sustainable initiatives.

6. Whilst customers supported the Customers Experiencing Vulnerability initiative, it was believed that it was the responsibility of the state and federal government to implement this service. Customers felt that there were other agencies who were better equipped to manage the necessary support, when compared with CitiPower.

The majority of customers supported improving service levels across all initiatives, with the exception of Reliability, which they preferred to maintain at current levels due to general satisfaction with existing service. Compared to residential customers, SMB customers were more cost-sensitive, consistently favouring zero-cost options and demonstrating greater selectivity in their investment preferences. Overall, there was a balanced willingness to pay across both residential and SMB customers, though neither group supported the highest bill impacts associated with maximum improvement levels. Customers valued discretionary initiatives, particularly those supporting renewable energy, such as Supporting Additional Solar and Electrification. However, quantitative insights showed no significant preference differences between sustainable and non-sustainable initiatives. Finally, while the Customers Experiencing Vulnerability initiative was supported in principle, many believed that its implementation should fall under the responsibility of state and federal governments or other specialised agencies rather than CitiPower.

Objectives

- Assess customer preferences for discretionary initiatives.
- Balance willingness to pay against service improvements.
- Refine the regulatory reset proposal based on findings.

Method and Sample

- Approach: Mixed-methods combining qualitative and quantitative research.
- Qualitative: Pre-education sessions and deliberative forums.
- 32 participants (28 residential, 4 SMB).
- Quantitative: Menu-based choice modelling survey.
- 514 respondents (406 residential, 108 SMB).

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

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Powercor Trade Off Evaluations – May 2024

Key Insights

Powercor engaged customers through qualitative and quantitative methods to inform its 2026–2031 regulatory reset proposal. Customers prioritised network resilience, solar energy support, and equity for worst-served areas, demonstrating strong community-focused values. However, cost sensitivity limited their willingness to pay for maximal service improvements.

1. The majority of customers were in support of improving service levels of each initiative presented, except Reliability. The majority of customers wanted reliability to be at least maintained, as they were satisfied with current service.

2. Compared to residential customers, SMB customers were typically more cost-sensitive with a higher proportion preferencing 'zero cost' options more consistently.

3. Overall, there was an even split between customers' willingness to pay across outlined service levels, with most wanting improvements to some degree.

4. Residential and SMB customers recognised the value of investing in discretionary initiatives beyond compliance costs to achieve service level improvements. However, they were unwilling to invest in the proposed maximum bill impacts associated with the highest level of improvement across initiatives.

5. Customers expressed a desire for Powercor to make service level improvements that resulted in more equitable service across the community, feeling that the energy distributor was best placed in making improvements to enhance Network Resilience and improve performance for Worst Served Customers.

The majority of customers supported improving service levels across most initiatives, with the exception of Reliability, which they believed should simply be maintained as they were generally satisfied with the current service levels. Small and medium businesses (SMBs) were more cost-sensitive than residential customers, consistently favouring lower-cost or no-cost options. Overall, customers were divided in their willingness to pay, though most supported some level of improvement across initiatives. Both residential and SMB customers acknowledged the importance of investing beyond compliance costs for discretionary initiatives but resisted the highest bill impacts associated with maximum improvement levels. Customers also expressed a strong desire for Powercor to prioritise equitable service improvements, with a focus on enhancing Network Resilience and addressing performance issues for Worst Served Customers, which they felt aligned with the distributor's responsibilities to the community.

Objectives

- Assess customer preferences for discretionary initiatives.
- Balance willingness to pay against service improvements.
- Refine the regulatory reset proposal based on findings.

Method and Sample

- Approach: Mixed-methods combining qualitative and quantitative research.
- Qualitative: Pre-education sessions and deliberative forums.
- 62 participants (56 residential, 6 SMB).
- Quantitative: Menu-based choice modelling survey.
- 509 respondents (411 residential, 98 SMB).

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

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United Energy Trade Off Evaluations – May 2024

Key Insights

United Energy conducted customer trade-off evaluations to guide its 2026–2031 regulatory reset proposal. Customers prioritised investments in network resilience and renewable energy initiatives but exhibited cost sensitivity, especially toward high-cost service improvements.

1. Majority of customers were in support of each initiative presented except Reliability. Reliability was an exception as customers generally discussed experiencing good reliability and felt little need for additional investment.

2. Compared to residential customers, SMB customers were often less willing to invest, preferencing lower or 'zero cost' options more consistently.

3. Despite a general willingness to invest beyond compliance costs from most, customers were typically unwilling to invest in the proposed maximum bill impacts associated with the highest level of improvement across initiatives.

4. Qualitatively, customers voiced strong support for Network Resilience. They viewed it as 'future-proofing' the network against increasing extreme weather events. Investing now was believed to avoid increased costs in the future relating to the impacts of climate change.

Customers demonstrated strong support for network resilience, viewing it as essential for preparing the network against extreme weather events and population growth, with many believing early investment would mitigate future costs related to climate change impacts. While there was a general willingness to pay for moderate-cost improvements, both residential and SMB customers rejected maximum bill increases, with SMBs consistently favouring lower-cost or no-cost options. Equity concerns were prominent, particularly for initiatives like electrification and solar support, as non-users questioned the fairness of funding these improvements through shared costs. Vulnerable customer support was widely regarded as important, but many felt it should be funded by governments or retailers rather than through customer bills. Sustainability and solar-related initiatives were broadly supported; however, some customers believed these disproportionately benefited certain groups, such as solar users, and sustainability measures were seen as a fundamental responsibility of the network. Finally, while reliability was recognised as important, most customers considered existing service levels sufficient and prioritised other initiatives over further reliability improvements.

Objectives

- Assess customer preferences for discretionary initiatives.
- Balance willingness to pay against service improvements.
- Refine the regulatory reset proposal based on findings.

Method and Sample

- Approach: Mixed-methods combining qualitative and quantitative research.
- Qualitative: Pre-education sessions and deliberative forums.
- 32 participants (28 residential, 4 SMB).
- Quantitative: Menu-based choice modelling survey.
- 514 respondents (406 residential, 108 SMB).

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

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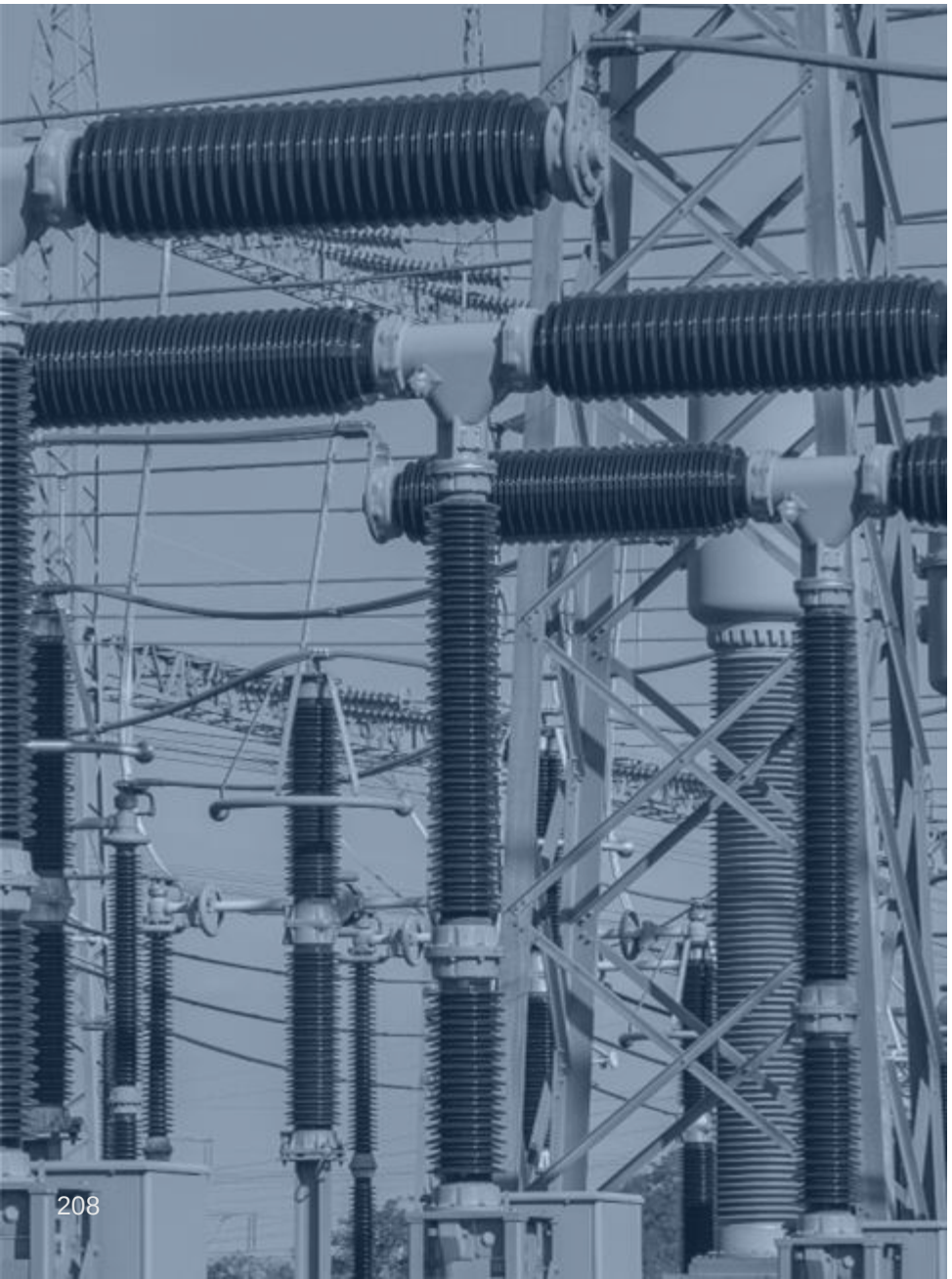


Phase 3: Test and Validate

Commercial and Industrial Customers Engagement - October 2024

Key Insights

The October 2024 engagement sought to test and validate the alignment of the 2026–2031 regulatory reset proposal with the priorities of Commercial and Industrial (C&I) customers. Key concerns included energy quality and reliability, cost management, decarbonisation, and establishing more of a relationship with their DNSP highlighting the need for tailored solutions and clear implementation plans.

Current and Emerging Issues

Energy Reliability and Power Quality: Reliability was the universal top priority. Momentary outages caused operational delays, financial losses, and reputational damage across sectors. Sensitive industries, such as utilities and research, faced compounded risks due to equipment vulnerabilities.

Backup Systems: Investments in generators and battery storage were widespread but recognised as insufficient for extended outages.

Decarbonisation Challenges: While long-term goals included reducing emissions and integrating renewables, immediate operational priorities such as cost and reliability took precedence. Grid constraints were a significant barrier to renewable energy adoption.

Overall Proposal

General Support: Participants broadly supported the 2026–2031 draft proposal, particularly for addressing grid reliability, voltage management, and infrastructure upgrades.

Power Quality

Broad Support for Initiatives: Investments in asset replacement, harmonics management, and vegetation control were welcomed, particularly in regions prone to environmental risks or with sensitive equipment.

Tariffs

Mixed Reactions to Winter Peak Demand Charge: While some supported the concept of cost-reflective tariffs, others criticised its fairness, particularly for sectors with inflexible energy needs, such as retail and manufacturing.

Demand Management

Cautious Optimism for Piclo Platform: Interest was contingent on simplicity, clear financial incentives, and compatibility with existing systems. Sectors with rigid energy consumption patterns (e.g., food retail, manufacturing) found it challenging to participate.

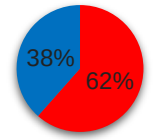
Objectives

- Refine 2026–2031 proposal according to C&I customer needs and desires.
- Gauge C&I customer support for overall proposal, power quality, tariff and demand management initiatives.

Method and Sample

Customer Group	Engagement	Consultation Date and Time	Number of Attendees
All commercial and industrial customers or advocates	Online 45-minute in-depth interviews	9 September – 8 October	n=13
Commercial and industrial manufacturers from Greater Shepparton area	Committee for Greater Shepparton (C4GS) manufacturers Online member meeting	24 September 9:15 am – 10 am	n=18
EUAA members	Online member feedback meeting	19 September 2pm – 3pm	n=8
			Total = 39

Participant distribution



Powercor only

Across all networks

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

CitiPower | Powercor Australia | United Energy | Forethought Outcomes

CitiPower, Powercor, and United Energy Quantitative Test & Validate program

Key Insights

The 2026–2031 regulatory reset program sought customer feedback on proposed energy initiatives. Residential customers were more open to shifting energy use and electrification, while SMB customers prioritised grid reliability and efficiency. Barriers to behaviour change included upfront costs, time constraints, and limited familiarity with time-of-use tariffs.

CitiPower

- **Shifting Consumption Habits**: Residential customers were more willing than SMBs to shift energy usage (32.3% vs 26.1%).
- Dishwashers, washing machines, and clothes dyers are high potential candidates to target for shifting, as they are high usage but also have a high willingness to shift for Residential customers
- **Electrification**: SMBs were more likely to consider electrifying gas appliances than Residential (58.3% vs 37.0%), among those considering, 53.2% of Residential customers were planning to replace their gas appliances within the next 5 years, while 79% of SMB planned to replace their appliances within the same timeframe.
- **Time-of-Use Tariffs**: Around half of both Residential and SMB customers were familiar with time-of-use tariffs (49.0% vs 47.3%).
- **Network Control**: Residential customers were less willing than SMB customers to allow external control of their network devices (55.1% vs 66.0%). However, grid reliability improvements were identified as a key motivator for encouraging SMB customers to adopt external network control.
- **Meter Upgrades**: Both Residential and SMB customers preferred CitiPower to proactively replace meters to avoid failures, with a high level of support from both groups (72.6% vs 70.5%).

Powercor

- **Shifting Consumption Habits**: Residential customers showed greater willingness to shift energy usage (39.8% vs 25.3% for SMBs). Cost and environmental responsibility were motivators, with upfront costs of energy-efficient products being barriers.
- **Electrification**: Half of SMBs considered replacing gas appliances, with 73.5% planning to do so in 5 years. Residential customers showed similar intent at 53.3%.
- **Time-of-Use Tariffs**: Half or more of Residential and SMB customers were unfamiliar with the concept of time-of-use tariffs (59.6% vs 49.9%).
- **Network Control**: Similar to CitiPower, SMBs were more open to network control (64.6% vs 51.0% for Residential customers).
- **Meter Upgrades**: Over two-thirds of both Residential and SMB customers preferred Powercor to proactively replace meters to prevent failures, showing strong support for preemptive actions (70.2% vs 68.5%).

United Energy

- **Shifting Consumption Habits**: Residential customers were more willing to shift energy usage (35.4% vs 30.2% for SMBs). Price-related factors such as lowering energy bills were top motivators, while SMBs cited timing challenges as barriers.
- **Electrification**: Less than a quarter of Residential customers would consider electrifying gas appliances, compared to half of SMBs (23.1% vs 52.8%). SMBs had higher intent to act in the next 5 years (72.1% vs 43.7%).
- **Time-of-Use-Tariffs**: Familiarity with time-of-use tariffs was lower among Residential and SMB customers, with over half being unfamiliar (54.6% vs 49.2%).
- **Network Control**: SMB customers were more open to external network control (53.4% vs 38.2% for Residential), with grid reliability seen as an incentive.
- **Meter Upgrades**: Similarly, both Residential and SMB customers expressed a preference for United Energy to replace meters proactively to prevent potential issues, showing broad customer support (76.7% vs 72.6%).

Objectives

One of the key objectives of this program was to understand key motivators, barriers, and customer profiles influencing willingness to modify energy consumption habits.

Method and Sample

Sample Size: Residential and SMB decision-makers across CitiPower, Powercor, and United Energy networks.

Method: Online quantitative survey (15 minutes).

	Income Vulnerable	Medically Vulnerable	Australian Aboriginal or Torres Strait Islander	Single Parent	Vulnerable population
CitiPower	n = 51	n = 45	n = 4	n = 14	n = 90
Powercor	n = 123	n = 31	n = 3	n = 22	n = 145
United Energy	n = 66	n = 30	n = 4	n = 23	n = 98

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

	Residential Customers	Small Business Customers	Total
CitiPower	n = 311	n = 117	n = 428
Powercor	n = 317	n = 110	n = 427
United Energy	n = 313	n = 104	n = 417
Total	n = 941	n = 331	n = 1,272

CitiPower Roundtables

Key Insights

The Test & Validate Roundtables engaged customers to refine the 2026–2031 regulatory reset proposals for CitiPower, Powercor, and United Energy. Participants broadly supported initiatives focused on energy transition, customer assistance, and modernisation, while emphasising equity, clear communication, and strategic investments.

CitiPower

The key themes for the **energy transition** initiatives included:

- Strategic planning and collaboration wanted with government and energy experts to set a strategy which initiatives can contribute towards
- Equity wanted in addressing the specific needs for a metropolitan area
- Community engagement was desired to ensure localised solutions were delivered
- Prioritising low-cost solutions was desired, prior to expensive augmentation
- Education raised as a challenge in consumers understanding the energy transition and its implications

The following feedback was shared relating to m**etering**:

- Participants agreed on the importance of upgrading meters without interruptions
- A targeted rollout approach was preferred in order to optimise the rollout effectiveness without compromising the meter benefits
- A proactive rollout approach was considered reasonable noting that there would be immediate benefits, such as reliability, as well as long-term visibility benefits
- Communication and transparency was desired:
- Participants wanted clear communications with customers relating to the purpose and benefits of the rollout
- Customers required confidence that their privacy would be maintained to prevent speculation
- Enhanced data and monitoring capabilities were also expected in the new assets

Specific feedback on the **customer assistance package** included the below:

- Energy Care: Education was important and seen to support vulnerable customers. An additional suggestion was to leverage the network's team on-the-ground to educate and inform consumers
- Community Energy Fund: It was proposed that the funding should go towards organisations or community groups compared to an individual as there were concerns of who would apply for this funding. Additionally, concerns were raised in switching from the current pro-bono approach to support vulnerable customers, to a funding approach
- Customer Assistance Program: An idea raised was to include supporting education
- First Peoples Program: There was an emphasis that the initiative delivery was undertaken by a First People organisation

The key themes raised relating to **modernisation** included:

- Ensuring the network was future-proofed without implementing a gold-plating approach
- Minimising community disruption by coordinating with other utility providers when upgrading the assets

Objectives

- Gather feedback to refine the 2026–2031 regulatory reset proposals, ensuring alignment with customer needs and priorities.
- Test customer support for proposed initiatives, addressing equity, energy transition, and infrastructure modernisation.

Method and Sample

- Format: Roundtable discussions, 3 hours each, held online and in-person (September–October 2024).
- Participants: Customers and stakeholders from CitiPower, Powercor, and United Energy networks.
- Engagement Approach: Qualitative, deliberative discussions capturing diverse perspectives.

Network	CitiPower	Powercor	United Energy
Format	1 x face-to-face 1 x online	2 x online	1 x face-to-face 1 x online
Participation of participants	n=9	n=22	n=7
Customer Advisory Panel attendance	n=2	n=1	n=1
Customer Challenge Panel attendance	n=1	n=2	n=1

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

Powercor Roundtables

Key Insights

The Test & Validate Roundtables engaged customers to refine the 2026–2031 regulatory reset proposals for CitiPower, Powercor, and United Energy. Participants broadly supported initiatives focused on energy transition, customer assistance, and modernisation, while emphasising equity, clear communication, and strategic investments.

Powercor

The key themes for the **energy transition** initiatives included:

- Ensuring regional and rural equity as well as vulnerable customer equity was considered. Frustration was raised in the current generation and transmission inequity with inability of communities to access generated renewable energy
- Strategic planning and collaboration required to coordinate with government and energy experts to set an overarching strategy and ladder initiatives up to
- Collaboration wanted with community to support decisions that deliver optimal and localised solutions

The following feedback was shared relating to **metering**:

- Participants agreed on the importance of upgrading meters without interruptions
- A targeted rollout approach was wanted to optimise the rollout effectiveness without compromising the meter benefits
- A proactive rollout approach was considered reasonable noting that there would be immediate benefits, such as reliability, as well as long-term visibility benefits
- Communication and transparency was desired: Participants wanted clear communications with customers on the purpose and benefits of the rollout

Specific feedback on the **customer assistance package** included the below:

- Highlighting importance of accountability tracking and communication of outcomes, especially as success was defined by the impact made
- Building strong partnerships to deliver greater impact and ensure access to vulnerable customers
- Increasing investment to deliver more meaningful impact. Examples included:
- Concerns about funds being absorbed by administration
- Some participants felt that the investment to the full grid including farmers and other vulnerable groups facing energy poverty in regional and rural Victoria was insufficient as initiatives totaled investment of $5.85million, compared to investment to the Frist People community where the total investment was $9.5million
- Specific to the Community Energy Fund initiative, participants raised a recommendation to have an advisory panel oversee fund allocation

The key themes raised relating to **innovation fund** included:

- Support of the overarching criteria, including:
- Accountability seen in the ‘use it, or lose it’ guideline
- Support that all criteria felt related to the energy transition
- An additional criteria wanted in demonstrating customer benefits

The key themes raised relating to **regional and rural options** included:

- Appreciation of Powercor’s proposal, given regulatory constraints, however, more investment was wanted for the regional and rural community to have access to energy that supports their growing needs
- There was acknowledgment of the challenge in balancing affordability and reliability which was described as an industry structural problem that was a bigger challenge than what the network proposal could solve for
- Strategic planning and collaboration between Government and other energy experts to coordinate efforts and ladder up to an overarching goal

Objectives

- Gather feedback to refine the 2026–2031 regulatory reset proposals, ensuring alignment with customer needs and priorities.
- Test customer support for proposed initiatives, addressing equity, energy transition, and infrastructure modernisation.

Method and Sample

- Format: Roundtable discussions, 3 hours each, held online and in-person (September–October 2024).
- Participants: Customers and stakeholders from CitiPower, Powercor, and United Energy networks.
- Engagement Approach: Qualitative, deliberative discussions capturing diverse perspectives.

Network	CitiPower	Powercor	United Energy
Format	1 x face-to-face 1 x online	2 x online	1 x face-to-face 1 x online
Participation of participants	n=9	n=22	n=7
Customer Advisory Panel attendance	n=2	n=1	n=1
Customer Challenge Panel attendance	n=1	n=2	n=1

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

United Energy Roundtables

Key Insights

The Test & Validate Roundtables engaged customers to refine the 2026–2031 regulatory reset proposals for CitiPower, Powercor, and United Energy. Participants broadly supported initiatives focused on energy transition, customer assistance, and modernisation, while emphasising equity, clear communication, and strategic investments.

United Energy

The key themes for the **energy transition** initiatives included:

- Equity considerations raised to ensure vulnerable customers renter, and short term-residents did not get left behind
- Prioritisation wanted in low-cost solutions prior to expensive augmentation
- Strategic planning and collaboration required with government and energy experts to set a strategy which initiatives can contribute towards
- The need for community involvement in decisions to support localised solutions

The following feedback was shared relating to **metering**:

- A proactive approach was preferred due to:
- Immediate reliability and visibility benefits
- Renewable uptake and managing energy usage
- There was emphasis on the need for an immediate start in the next reset to acquire benefits
- Communication and transparency was wanted:
- On the purpose and benefits of the rollout
- To bring confidence to their privacy and prevent speculation
- Enhanced data and monitoring capabilities expected in the new assets

Specific feedback on the **customer assistance package** included the below:

- Energy Care: guidance was appreciated to support vulnerable consumers participate in the energy transition
- Customer Assistance Program: Participants suggested targeted incentives for landlords supporting renters participate
- Energy Advisory Services:
- Leveraging technology to tailor data requests
- Recommendation for a role for smart meters and generative AI to support tailored education
- Seen as an imperative initiative in connecting respective stakeholders with all other Customer Assistance Packages
- First Peoples Program: Seek learnings from similar energy related programs

The key themes raised relating to **innovation fund** included:

- Support of the overarching criteria, including:
- Accountability seen in the ‘use it, or lose it’ guideline
- Support that all criteria felt related to the energy transition
- Mixed feedback was shared in the investment amount. Some participants advocated for this investment to be used as a pilot, whereas others wanted more to be proposed
- Ideas were shared of what innovation could look like such as demand management solutions such as the Piclo system proposed demand management
- Timing of investment spend was also essential. It was recommended that investment was front loaded in the next regulatory period to reap immediate benefits

Objectives

- Gather feedback to refine the 2026–2031 regulatory reset proposals, ensuring alignment with customer needs and priorities.
- Test customer support for proposed initiatives, addressing equity, energy transition, and infrastructure modernisation.

Method and Sample

- Format: Roundtable discussions, 3 hours each, held online and in-person (September–October 2024).
- Participants: Customers and stakeholders from CitiPower, Powercor, and United Energy networks.
- Engagement Approach: Qualitative, deliberative discussions capturing diverse perspectives.

Network	CitiPower	Powercor	United Energy
Format	1 x face-to-face 1 x online	2 x online	1 x face-to-face 1 x online
Participation of participants	n=9	n=22	n=7
Customer Advisory Panel attendance	n=2	n=1	n=1
Customer Challenge Panel attendance	n=1	n=2	n=1

IAP2 Spectrum

1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower

CitiPower | Powercor Australia | united energy | Forethought Outcomes

CitiPower, Powercor, and United Energy Rural and Regional Summit

Key Insights

The Rural and Regional Energy Summit engaged 26 stakeholders to gather feedback on Powercor's 2026–2031 regulatory reset proposal. Participants highlighted the urgency of addressing infrastructure inequities and emphasised localised, sustainable solutions to enhance energy reliability, equity, and resilience.

Rural Supply & Equity:

- Investment Adequacy: The proposed $45 million SWER line upgrade was considered by most stakeholders as insufficient. Participants estimated it would take 150–200 years to fully upgrade lines at the proposed pace and accordingly there were a few calls for a more ambitious and accelerated. However, other stakeholders did support this level of investment to avoid overinvestment and allow for better solutions to be discovered.
- Alternative Solutions: Some customers questioned if Stand-Alone Power Systems (SAPS) were a more suitable and cost-efficient alternative to SWER lines, with the potential to reduce fire risks and improve energy independence.
- Equity Concerns: Significant frustration arose from the perceived imbalance between regional areas hosting renewable energy projects and metro areas receiving most of the benefits. Stakeholders called for equitable distribution of economic and energy benefits.

Power Quality:

- Operational Impacts: Industries like dairy and irrigation reported severe disruptions due to voltage sags and harmonics, which affected equipment functionality and animal welfare. Some participants had begun installing backup generators to mitigate losses.
- Proactive Leadership: Participants emphasised the need for Powercor to lead in educating customers, conducting regular technology audits, and implementing tighter compliance standards to address evolving energy demands.
- Community Collaboration: There was a call for increased local input to ensure investments reflect specific regional needs. Innovative solutions like microgrids were also suggested to enhance grid resilience.

Resilience:

- Community Support Officers (CSOs): There was strong support for CSOs as a bridge between Powercor and communities during emergencies. Concerns included ensuring proper training, resource allocation, and clear role distinctions from other emergency services.
- Minimum Service Levels: Mixed reactions to setting minimum service levels. Participants debated whether a one-size-fits-all approach was feasible, advocating instead for flexible, community-specific standards.
- Future-Proofing: Emphasis on long-term resilience planning to address challenges such as climate change and increasing energy demand. Participants asked Powercor to balance investments in physical infrastructure with community-based initiatives to minimise overinvestment in the network and increase community resilience first before large investments were made.

Innovative Solutions proposed by customers throughout the summit:
Advocacy for community-driven projects, such as microgrids and local solar farms, and interest in replacing copper wiring with graphite for cost-efficiency. Call for transparent communication on grid readiness to support electrification and EV charging infrastructure.

Community Empowerment: Participants stressed the importance of local autonomy and collaboration in shaping solutions tailored to regional needs. Misinformation and lack of engagement with local councils and stakeholders were barriers to trust and progress.

Objectives

To gather feedback on Powercor's 2026–2031 draft regulatory reset proposal.

Test customer support for proposed initiatives, including supply upgrades, power quality improvements, and resilience measures.

Method and Sample

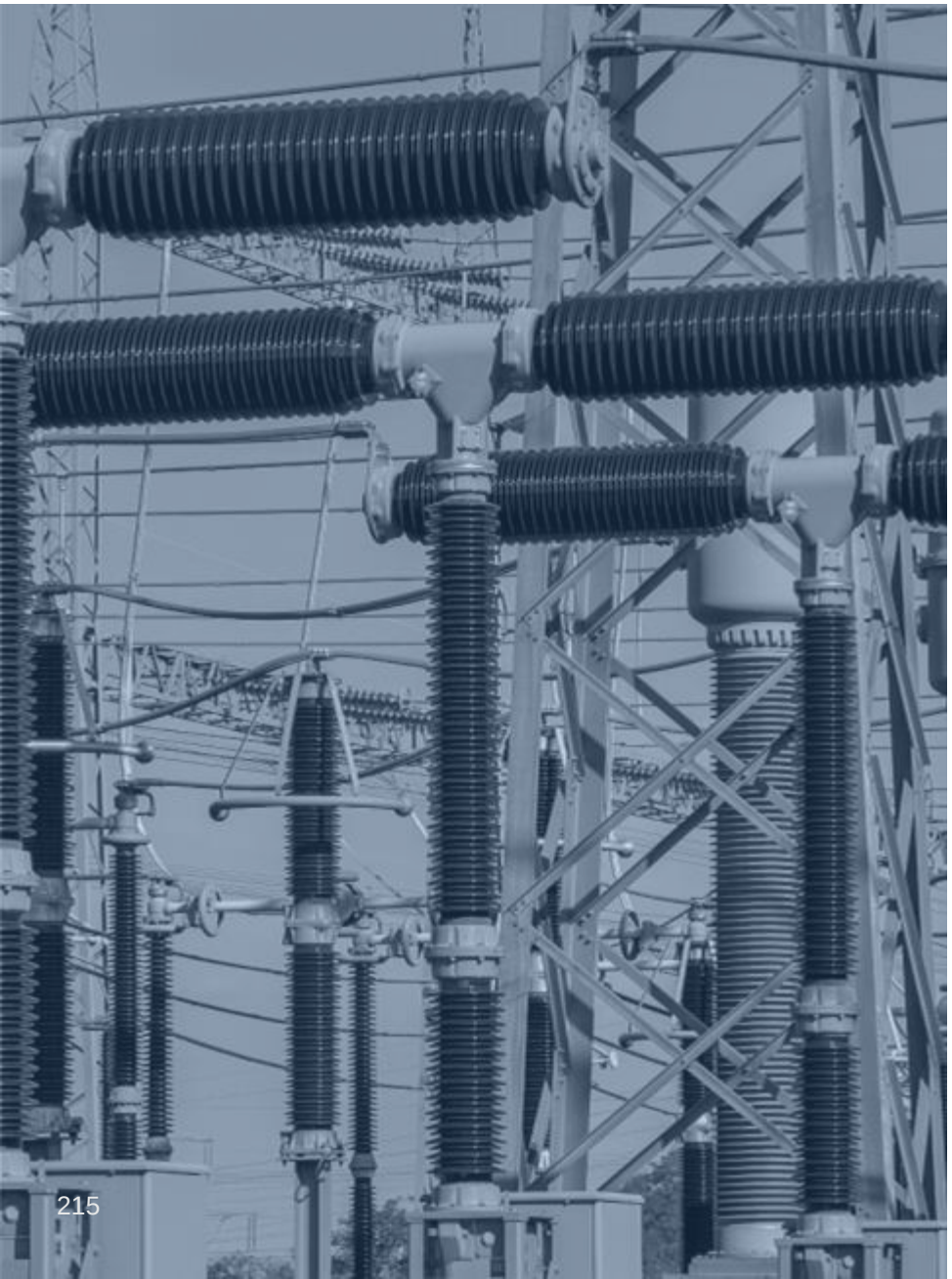
Format: In-person, 7-hour summit in Bendigo, VIC (10 October 2024).

Participants: 26 stakeholders, including farmers, councils, and community representatives.

Engagement Approach: Qualitative, deliberative discussions with Powercor representatives present for Q&A.

IAP2 Spectrum

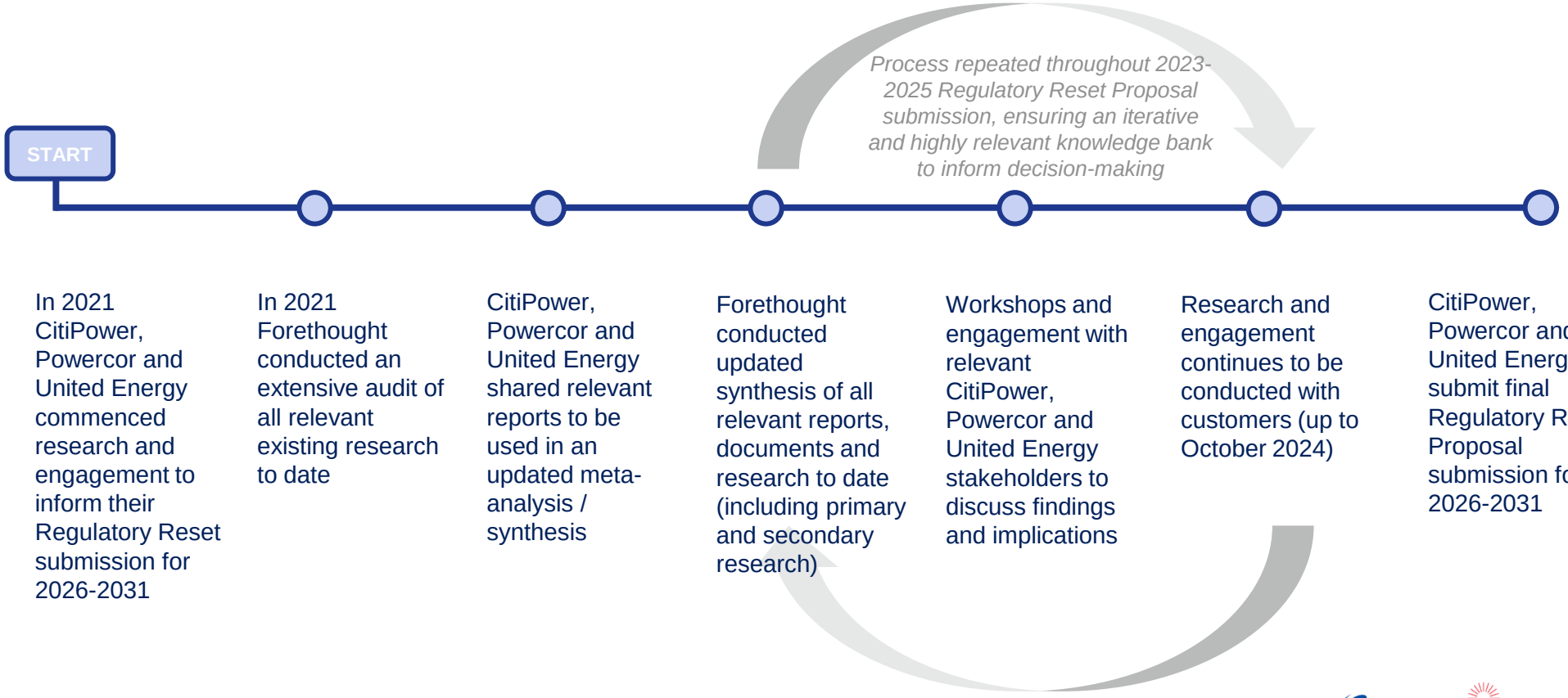
1. Inform
2. Consult
3. **Involve**
4. Collaborate
5. Empower



Appendix

The process: how did we get to this Synthesis

The Forethought Team, undertook an iterative end-to-end analysis process to prepare this synthesis of findings for CitiPower, Powercor and United Energy. The first iteration was conducted in 2023 and provided a foundation for a continuously updated source of iterative insights for CitiPower, Powercor and United Energy stakeholders.



Three phases of engagement have been developed to ensure a robust program of engagement to inform CitiPower, Powercor and United Energy's Regulatory Reset Proposal

Phase 1: Broad and Wide

Discover and explore topics that are important to customers.

Deliberate, discuss and prioritise key topics and preferred customer outcomes to develop inputs into a Draft Proposal.

- Customer valuation of services improvements (2021)
- Climate Change and Network Resilience Commitments Report (2021)
- Exports Trial Research (Flexible Service Offer Optimisation) (2022)
- Community Roundtables: Resilience (2022)
- Broad and Wide: CitiPower (2022)
- Broad and Wide: Powercor (2022)
- Broad and Wide: United Energy(2022)
- Broad and Wide: Culturally and Linguistically Diverse (CALD) (2022)
- Broad and Wide: Youth (2022)
- Broad and Wide: Yorta Yorta Country (2023)
- CAP Stakeholder Engagement Sub-committee (2022 – 2023)

Phase 2: Deep and Narrow

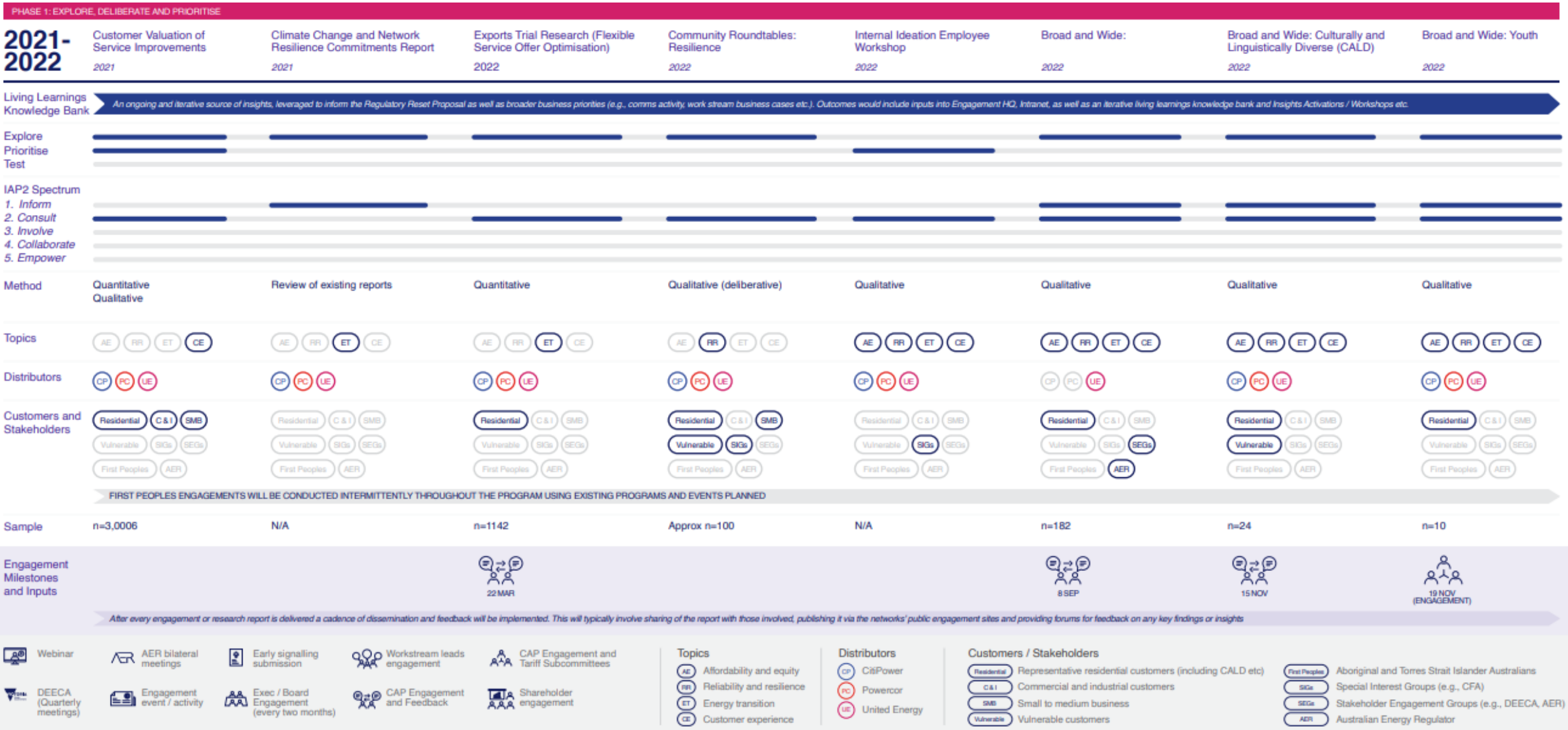
Test and optimise the Draft Proposal using stakeholder and customer input and consideration of any trade-offs associated with proposed customer outcomes.

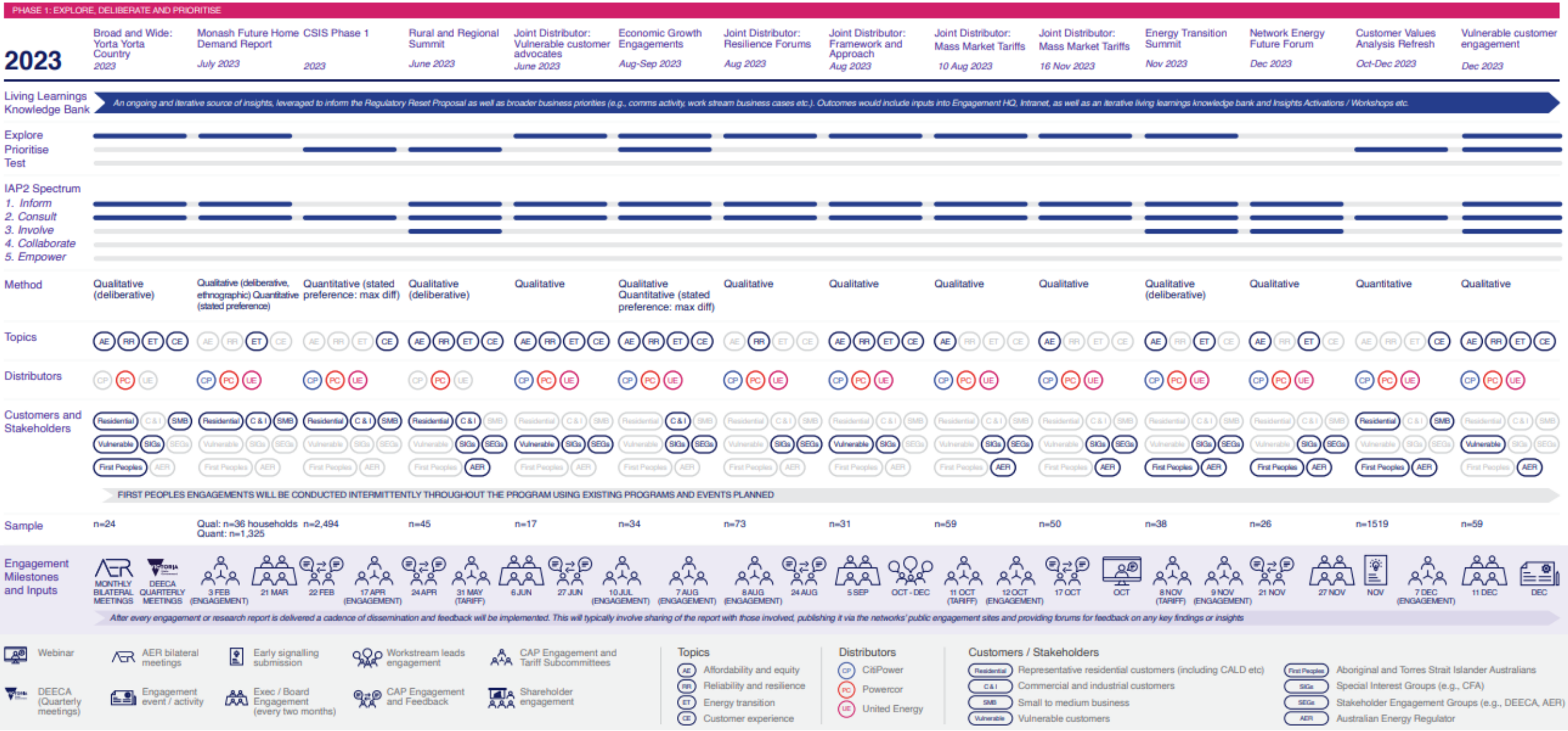
- Monash Future Home Demand Report (2023)
- CSIS Phase 1 (2023)
- Rural and Regional Summit (2023)
- Joint Distributor: Vulnerable customer advocates (2023)
- Economic Growth Engagements (Commercial and Industrial Customers) (2023)
- Joint Distributor: Resilience Forums (2023)
- Joint Distributor: Framework and Approach (2023)
- Joint Distributor: Mass Market Tariffs (2023)
- Energy Transition Summit (2023)
- Customer Values Analysis Refresh (2023)
- First Peoples Engagement (2023)
- Vulnerable Customer Engagement (2023)
- Network Energy Future Forum (2024)
- Joint Distributor Mass Market Tariffs (2024)
- Community Workshops (2024)
- Trade-off Evaluations: Mass Market Customers (2024)

Phase 3: Test and Validate

Test and validate customers' priorities and preferences, taking into consideration how needs and wants may evolve for 2026-2031 period.

- Commercial and Industrial Customer Engagement (2024)
- Test and Validate Rural and Regional Summit (2024)
- Test and Validate Roundtables (2024)
- Test and Validate Quantitative Program (2024)


PHASE 1: EXPLORE, DELIBERATE AND PRIORITISE
2021-2022
Customer Valuation of Service Improvements 2021
Climate Change and Network Resilience Commitments Report 2021
Exports Trial Research (Flexible Service Offer Optimisation) 2022
Community Roundtables: Resilience 2022
Internal Ideation Employee Workshop 2022
Broad and Wide: 2022
Broad and Wide: Culturally and Linguistically Diverse (CALD) 2022
Broad and Wide: Youth 2022
Living Learnings Knowledge Bank
An ongoing and iterative source of insights, leveraged to inform the Regulatory Reset Proposal as well as broader business priorities (e.g., comms activity, work stream business cases etc.). Outcomes would include inputs into Engagement HQ, Intranet, as well as an iterative living learnings knowledge bank and Insights Activations / Workshops etc.
Explore
Prioritise
Test
IAP2 Spectrum
1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower
Method
Quantitative Qualitative
Review of existing reports
Quantitative
Qualitative (deliberative)
Qualitative
Qualitative
Qualitative
Qualitative
Topics
Distributors
Customers and Stakeholders
Residential C & I SMB Vulnerable SIGs SEGs First Peoples AER
FIRST PEOPLES ENGAGEMENTS WILL BE CONDUCTED INTERMITTENTLY THROUGHOUT THE PROGRAM USING EXISTING PROGRAMS AND EVENTS PLANNED
Sample
n=3,0006
N/A
n=1142
Approx n=100
N/A
n=182
n=24
n=10
Engagement Milestones and Inputs
22 MAR
8 SEP
15 NOV
19 NOV (ENGAGEMENT)
After every engagement or research report is delivered a cadence of dissemination and feedback will be implemented. This will typically involve sharing of the report with those involved, publishing it via the networks' public engagement sites and providing forums for feedback on any key findings or insights
Webinar
AER bilateral meetings
Early signalling submission
Workstream leads engagement
CAP Engagement and Tariff Subcommittees
DEECA (Quarterly meetings)
Engagement event / activity
Exec / Board Engagement (every two months)
CAP Engagement and Feedback
Shareholder engagement
Topics
AE Affordability and equity
RR Reliability and resilience
ET Energy transition
CE Customer experience
Distributors
CP CitiPower
PC Powercor
UE United Energy
Customers / Stakeholders
Residential Representative residential customers (including CALD etc)
C & I Commercial and industrial customers
SMB Small to medium business
Vulnerable Vulnerable customers
First Peoples Aboriginal and Torres Strait Islander Australians
SIGs Special Interest Groups (e.g., CFA)
SEGs Stakeholder Engagement Groups (e.g., DEECA, AER)
AER Australian Energy Regulator


PHASE 1: EXPLORE, DELIBERATE AND PRIORITISE
2023
Broad and Wide: Yorta Yorta Country 2023
Monash Future Home Demand Report July 2023
CSIS Phase 1 2023
Rural and Regional Summit June 2023
Joint Distributor: Vulnerable customer advocates June 2023
Economic Growth Engagements Aug-Sep 2023
Joint Distributor: Resilience Forums Aug 2023
Joint Distributor: Framework and Approach Aug 2023
Joint Distributor: Mass Market Tariffs 10 Aug 2023
Joint Distributor: Mass Market Tariffs 16 Nov 2023
Energy Transition Summit Nov 2023
Network Energy Future Forum Dec 2023
Customer Values Analysis Refresh Oct-Dec 2023
Vulnerable customer engagement Dec 2023
Living Learnings Knowledge Bank
An ongoing and iterative source of insights, leveraged to inform the Regulatory Reset Proposal as well as broader business priorities (e.g., comms activity, work stream business cases etc.). Outcomes would include inputs into Engagement HQ, Intranet, as well as an iterative living learnings knowledge bank and Insights Activations / Workshops etc.
Explore
Prioritise
Test
IAP2 Spectrum
1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower
Method
Qualitative (deliberative)
Qualitative (deliberative, ethnographic) Quantitative (stated preference)
Quantitative (stated preference: max diff)
Qualitative (deliberative)
Qualitative
Qualitative Quantitative (stated preference: max diff)
Qualitative
Qualitative
Qualitative
Qualitative
Qualitative (deliberative)
Qualitative
Quantitative
Qualitative
Topics
AE RR ET CE
Distributors
CP PC UE
Customers and Stakeholders
Residential C & I SMB
Vulnerable SIGs SEGs
First Peoples AER
FIRST PEOPLES ENGAGEMENTS WILL BE CONDUCTED INTERMITTENTLY THROUGHOUT THE PROGRAM USING EXISTING PROGRAMS AND EVENTS PLANNED
Sample
n=24
Qual: n=36 households Quant: n=1,325
n=2,494
n=45
n=17
n=34
n=73
n=31
n=59
n=50
n=38
n=26
n=1519
n=59
Engagement Milestones and Inputs
MONTHLY BILATERAL MEETINGS
DEECA QUARTERLY MEETINGS
3 FEB (ENGAGEMENT)
21 MAR
22 FEB
17 APR (ENGAGEMENT)
24 APR
31 MAY (TARIFF)
6 JUN
27 JUN
10 JUL (ENGAGEMENT)
7 AUG (ENGAGEMENT)
8 AUG (ENGAGEMENT)
24 AUG
5 SEP
OCT - DEC
11 OCT (TARIFF)
12 OCT (ENGAGEMENT)
17 OCT
OCT
8 NOV (TARIFF)
9 NOV (ENGAGEMENT)
21 NOV
27 NOV
NOV
7 DEC (ENGAGEMENT)
11 DEC
DEC
After every engagement or research report is delivered a cadence of dissemination and feedback will be implemented. This will typically involve sharing of the report with those involved, publishing it via the networks' public engagement sites and providing forums for feedback on any key findings or insights
Webinar
DEECA (Quarterly meetings)
AER bilateral meetings
Engagement event / activity
Early signalling submission
Exec / Board Engagement (every two months)
Workstream leads engagement
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Shareholder engagement
Topics
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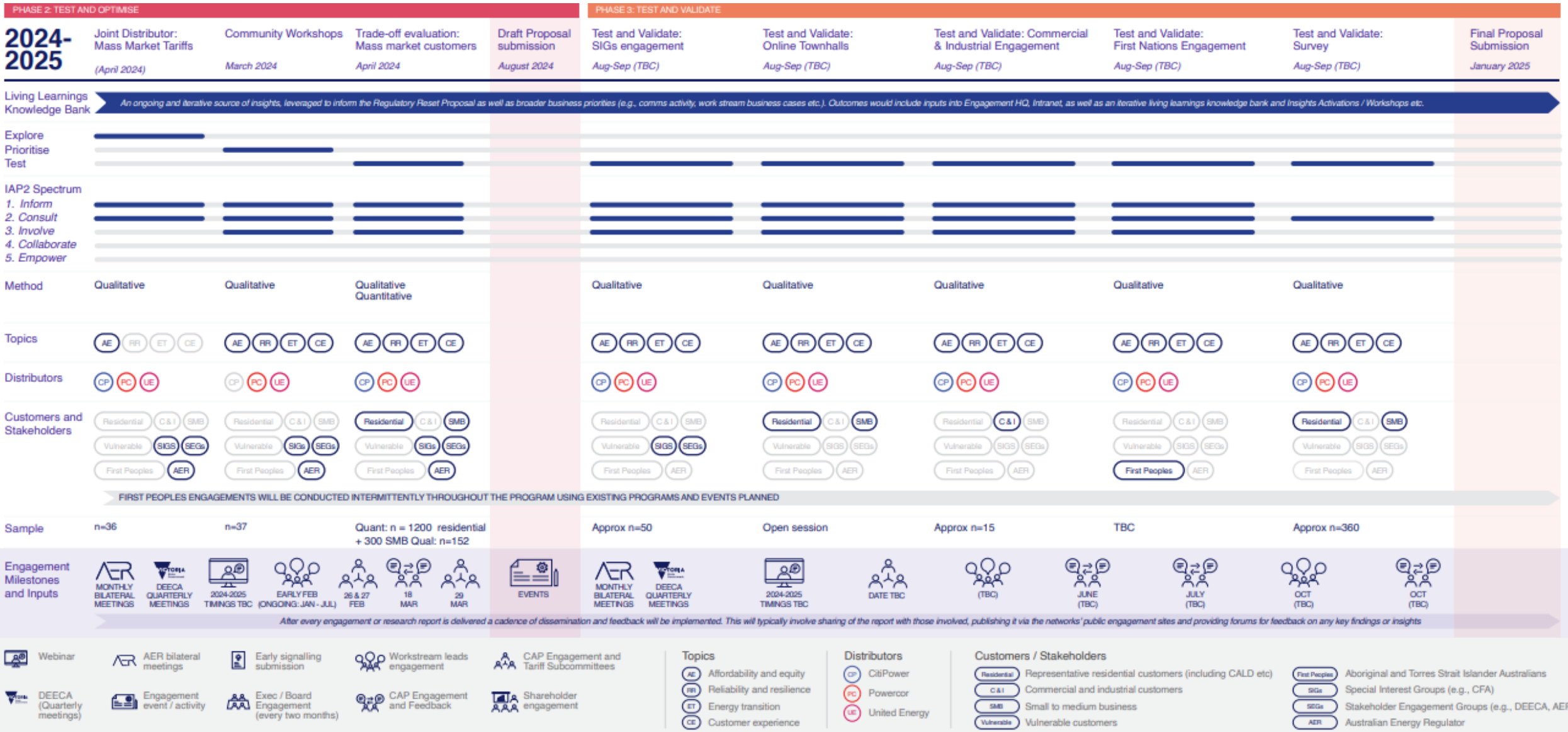
RR Reliability and resilience
ET Energy transition
CE Customer experience
Distributors
CP CitiPower
PC Powercor
UE United Energy
Customers / Stakeholders
Residential Representative residential customers (including CALD etc)
C & I Commercial and industrial customers
SMB Small to medium business
Vulnerable Vulnerable customers
First Peoples Aboriginal and Torres Strait Islander Australians
SIGs Special Interest Groups (e.g., CFA)
SEGs Stakeholder Engagement Groups (e.g., DEECA, AER)
AER Australian Energy Regulator


PHASE 2: TEST AND OPTIMISE
PHASE 3: TEST AND VALIDATE
2024-2025
Joint Distributor: Mass Market Tariffs
(April 2024)
Community Workshops
March 2024
Trade-off evaluation: Mass market customers
April 2024
Draft Proposal submission
August 2024
Test and Validate: SIGs engagement
Aug-Sep (TBC)
Test and Validate: Online Townhalls
Aug-Sep (TBC)
Test and Validate: Commercial & Industrial Engagement
Aug-Sep (TBC)
Test and Validate: First Nations Engagement
Aug-Sep (TBC)
Test and Validate: Survey
Aug-Sep (TBC)
Final Proposal Submission
January 2025
Living Learnings Knowledge Bank
An ongoing and iterative source of insights, leveraged to inform the Regulatory Reset Proposal as well as broader business priorities (e.g., comms activity, work stream business cases etc.). Outcomes would include inputs into Engagement HQ, Intranet, as well as an iterative living learnings knowledge bank and Insights Activations / Workshops etc.
Explore
Prioritise
Test
IAP2 Spectrum
1. Inform
2. Consult
3. Involve
4. Collaborate
5. Empower
Method
Qualitative
Qualitative
Qualitative Quantitative
Qualitative
Qualitative
Qualitative
Qualitative
Qualitative
Topics
AE RR ET CE
Distributors
CP PC UE
Customers and Stakeholders
Residential C&I SMB
Vulnerable SIGs SEGs
First Peoples AER
FIRST PEOPLES ENGAGEMENTS WILL BE CONDUCTED INTERMITTENTLY THROUGHOUT THE PROGRAM USING EXISTING PROGRAMS AND EVENTS PLANNED
Sample
n=36
n=37
Quant: n = 1200 residential + 300 SMB Qual: n=152
Approx n=50
Open session
Approx n=15
TBC
Approx n=360
Engagement Milestones and Inputs
MONTHLY BILATERAL MEETINGS
DEECA QUARTERLY MEETINGS
2024-2025 TIMINGS TBC
EARLY FEB (ONGOING: JAN - JUL)
26 & 27 FEB
18 MAR
29 MAR
EVENTS
MONTHLY BILATERAL MEETINGS
DEECA QUARTERLY MEETINGS
2024-2025 TIMINGS TBC
DATE TBC
(TBC)
JUNE (TBC)
JULY (TBC)
OCT (TBC)
OCT (TBC)
After every engagement or research report is delivered a cadence of dissemination and feedback will be implemented. This will typically involve sharing of the report with those involved, publishing it via the networks' public engagement sites and providing forums for feedback on any key findings or insights
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CAP Engagement and Tariff Subcommittees
DEECA (Quarterly meetings)
Engagement event / activity
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CAP Engagement and Feedback
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First Peoples Aboriginal and Torres Strait Islander Australians
SIGs Special Interest Groups (e.g., CFA)
SEGs Stakeholder Engagement Groups (e.g., DEECA, AER)
AER Australian Energy Regulator

Customer and stakeholder groups

Customer Groups	
Residential customers	End-use residential customers across the CitiPower, Powercor and United Energy distribution networks. Representative sample of Victorians (e.g., demographic, SES status, CALD, cultural background etc.)
Small-medium business (SMB)	Small and medium business customers across the CitiPower Powercor and United Energy distribution networks.
Commercial and industrial (C&I)	Commercial and industrial customers
First People	Aboriginal and Torres Strait Islander Australians
Vulnerable customers (See slide 9 for detailed description)	• Situational (e.g. rural, digital capability, financial stress, language barriers); • Kinship and community (e.g. Indigenous groups, recent migrants); • Individual (e.g. physical health difficulties, literacy and numeracy skills); • Structural (e.g. increasing cost of living, lack of agency (renters) and lack of housing
Metro / Regional and rural customers	Representative sample of metro and rural/regional customers in Victoria (see slide 7 for additional detail on sampling frame)
Special interest groups (SIGs)	Special interest groups are groups that have a vested interest in the topic being engaged upon. This includes: social services organisations, disaster recovery agencies, vulnerable customer advocacy groups etc.

Stakeholder Engagement Groups (SEGs)	
CAP / CAP sub-committees	CAP provides a forum to seek and test information from members from a cross-section of industry, government, not-for-profit and renewable energy sectors
Customer advocates	Groups that represent, and advocate for, the views of the energy customers. This includes organisations such as Energy Consumers Australia
Victorian distributors (other)	Other Victorian distributors include Jemena and AusNet
Government (e.g., DEECA)	Relevant government departments and agencies with an interest in the proposal outcomes. A key government stakeholder is the Department of Energy, Enviro and Climate Action (DEECA)
Australian Energy Regulator (AER)	The Australian Energy Regulator will be responsible for reviewing and approving the proposals and as such, may be involved in engagement activities either bilaterally or as an observer.
Essential services providers	Essential services providers are stakeholders who rely on electricity supply to provide their services. This includes telecommunications and emergency services providers etc.

Topics

These four topics were identified following a meta-analysis conducted in 2022 of historical CitiPower, Powercor and United Energy research dating back to 2019.

Topics	
Affordability and Equity	• Tariff structures • Supporting customers experiencing vulnerability • Long term stability • Regulatory asset base (RAB)
Reliability and Resilience	• Disaster impact minimisation and recovery • Improved access to network capacity and reliability • Bushfire insurance premiums • Management of cyber security risk
Energy Transition	• Long-term network planning to address energy transformation • Our role in emissions reduction • Enabling customer energy resources • Export service incentive scheme
Customer Experience	• Customer Service Incentive Scheme • What is value from a customer perspective • Accuracy of outage restoration times • Timeliness of new connections and REZs • Provision of data to customers and the market

Seeking a representative sample of residential Victorian customers

The ideal scenario involves achieving a representative sample of Victorians in accordance with the latest ABS census data. The table below provides a baseline for the sample as a measure for how well it reflects Victoria's population. It's crucial to acknowledge that this represents an aspirational goal, and the ultimate sample composition will be contingent upon various factors, including environmental and social context, participant availability, and project-specific objectives. The information in the tables below lays out profiling of representative sample of Victorians for engagement on energy distribution.

	Incidence in VIC	Soft quota target and estimated sample fall out
Gender: Male	49%	
Gender: Female	51%	
Age: Younger (18-40 y.o)	32%	
Age: Older (40-70 y.o)	36%	
SMEs	9%	
HH Income: Up to $75K	69%	
HH Income: $76K+	31%	
Area: Metro	75%	
Area: Regional/Rural	25%	
Education: Highschool	36%	
Education: TAFE / Others	38%	
Education: Higher Education or Post-Graduate	26%	Calculated from total sample for each engagement based on incidence in VIC, taking into consideration target audience and objectives for each project.
Employment Status: Unemployed / Retired / Underemployed / Others	35%	
Employment Status: Full Time / Part-Time	65%	
Vulnerable persons**	(see slide 9)	
Culturally diverse residents (incl CALD)	(see slide 8)	
First Peoples	0.8%	
Solar (as an energy source for current dwelling)	18.9%	
Non-solar	81.1%	
Renters	28.5%	
Non-renters	71.5%	
Best efforts to achieve split between distributor networks	CitiPower – **349,689 (17.62%)** Powercor – **920,608 (46.34%)** United Energy - **715,652 (36.03%)**	

Note: **Best efforts to recruit vulnerable persons across the network as defined as a person aged 18 years and above (as defined on slide 8). However, separate engagements specifically targeting vulnerable customers will be conducted to ensure they are represented across the program of engagement.

Culturally diverse Victorians

The ABS 2021 Census provides details of populations based on a range of factors. Two crucial indices for inclusion of culturally diverse Victorians are whether a customer has a parent born outside of Australia and the language spoken at home.

The proportion of Victorians that are born overseas (first generation) 31%.

Country of birth	%
England	3%
India	3%
China	3%
New Zealand	2%
Vietnam	1%

The most used languages in Victoria (other than English) are laid out in the table below. While there are a high number of Victorians that speak languages other than English, many also have English skills.

Language	Total Speakers	
	Total number of speakers in Victoria	Ranking of highest numbers of speakers
Mandarin	221,798	1
Vietnamese	118,801	2
Greek	107,158	3
Punjabi	104,949	4
Italian	92,320	5
Arabic	91,441	6
Cantonese	82,432	7
Hindi	66,930	8
Sinhalese	49,501	9
Spanish	43,181	10

The information above is drawn from the “Data table for cultural diversity summary” based on the 2021 Census Data, retrieved from Australian Bureau of Statistics: https://www.abs.gov.au/statistics/people/people-and-communities/cultural-diversity-census/latest-release and https://www.abs.gov.au/statistics/people/population/australias-population-country-birth/latest-release#country-of-birth-state-and-territory

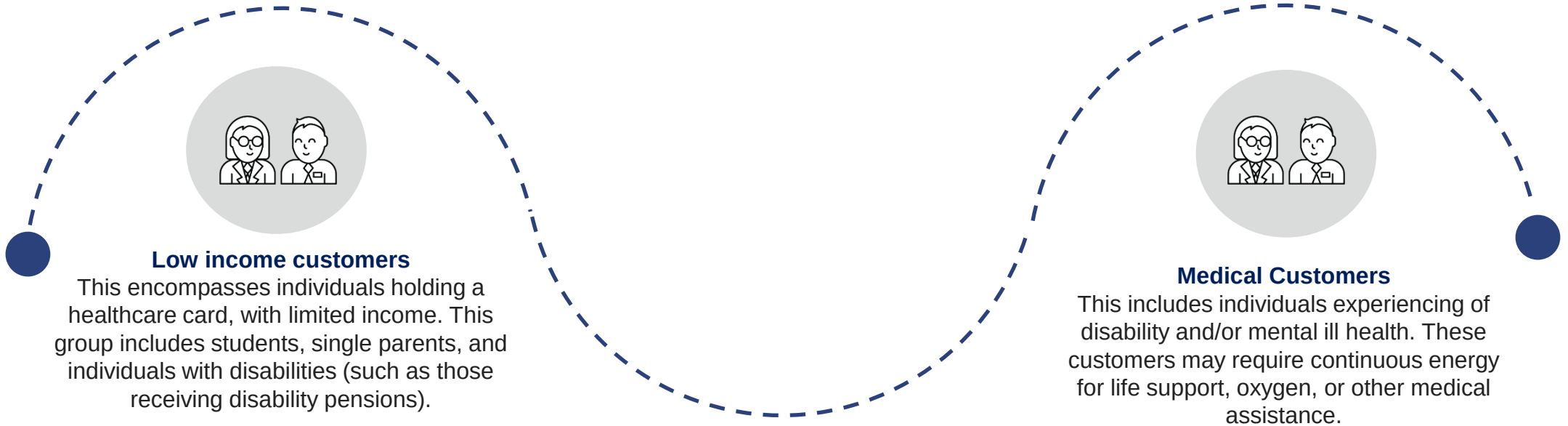
Our definitions of customers in vulnerable circumstances have been guided by AER

We acknowledge that there is currently no universally accepted definition for individuals experiencing vulnerability. Therefore, Forethought adopted the definition outlined in the AER's report titled "Towards the Energy Sector.

Consumers experiencing vulnerability' refers to circumstances that mean a person may be less able to protect or represent their interests, engage effectively and/or are more likely to suffer detriment. *This includes having insufficient capacity to pay for energy use.*

We believe that vulnerability is best understood as a dynamic spectrum, allowing people to transition in and out of vulnerable states rather than a fixed or lifelong condition. In other words, individuals may encounter vulnerability and disadvantage at various stages in their lives, and this status is not constant.

Whilst some definitions of customers in vulnerable circumstances includes Indigenous Australians , they will be engaged in separate research engagements. As Forethought has conducted research with CALD communities, for the purpose of this engagement, we talk to individuals with the following circumstances:



Low income customers
This encompasses individuals holding a healthcare card, with limited income. This group includes students, single parents, and individuals with disabilities (such as those receiving disability pensions).

Medical Customers
This includes individuals experiencing of disability and/or mental ill health. These customers may require continuous energy for life support, oxygen, or other medical assistance.

Method / Approach

The International Association for Public Participation (IAP2) Spectrum provides guidance on the types of engagement the business may wish to target. We have identified potential approaches to assist us when selecting appropriate engagement formats to achieve our engagement outcomes.

	Inform	Consult	Involve	Collaborate	Empower
Public participation goal	Providing stakeholders with information to assist them in understanding the research	Obtaining stakeholder feedback to inform the research	Working directly with stakeholders to ensure concerns and aspirations are understood	Partnering with stakeholders	Final decision making in customers' hands
Potential approach	• Media / social media • Advertising • Website • Video / animation • Reports / discussion papers • Factsheets • Presentations / information sessions • Website updates • Webinars • Engagement HQ • Community regulatory oversight reports (regular reports to inform broader community about Regulatory Reset process and updated engagements)	• Email • Polls / surveys • Webinars / Q&A • Engagement HQ • Customer contact centre • Briefings / drop-in sessions • Workshops • Focus groups • Stakeholder meetings	• Series of 'summits' • Engagement HQ • Deliberative forums • Site visits • Ideation sessions / Workshops • Interviews • Stakeholder meetings • Co-creation sessions	• Industry and government networks • Submission • Customer Advisory Panel • Advisory committees • Participatory decision-making • Workshops • Customer / stakeholder panels • Deliberative surveys • Community partnering on priority topics • Joint task forces/ forums	• Ballots • Citizen juries • Delegated decisions • Participatory governance (incorporating public input into decision making) • Community Audits and Assessments (engage community members in conducting energy audits and assessments of local infrastructure to identify areas for improvement, which can then inform the regulatory submission) • Participatory budgeting

Throughout the whole program of engagement, a broad range of different methods will be used. Each engagement will adopt a tailored design specific to the objectives and target audience.

Method / Approach	Summary
Quantitative: Inferred Preference	The stated preference research approach is a method used in social sciences and market research to understand and quantify individuals' preferences and choices. It involves presenting respondents with hypothetical scenarios or choices and asking them to express their preferences or make decisions, allowing researchers to derive insights into people's stated preferences for various options, products, or policies. May include choice modelling, choice experiments, willingness to pay, willingness to accept
Quantitative: Revealed preference	The revealed preference research approach is a method used in economics and social sciences to analyse individuals' actual behaviours and choices, based on observed data or actions. Instead of relying on stated preferences, researchers infer preferences by examining real-world decisions and actions, providing insights into what individuals value and prioritise through their observable choices and behaviours. For example, behavioural data on consumption habits. Often used in conjunction with qualitative research or quantitative surveys including stated preference
Qualitative: Deliberative	A comprehensive examination of public perspectives regarding a matter. Deliberative forums typically encompass extensive, in-person workshops on a sizable scale, granting participants ample time and information to make well-informed judgments regarding an issue or proposed resolution.
Qualitative methods: online boards, forums, groups and individual in-depth interviews	Employing both online and in-person qualitative methods provides the best approach to reach a breadth of diverse and representative customers. Online methods enhance accessibility and flexibility, while in person methods offer rich interaction, non-verbal cues and controlled environments. Which approach is best for a particular engagement depends on the research objectives, target audience, and nature of the engagement. A hybrid approach across the holistic engagement program provides a more comprehensive understanding of the issues at hand and ensures maximum accessibility across all customer segments.
Qualitative: case studies	Case studies can be a valuable research method for gaining insights into various aspects of the energy distribution system, customer interactions, and community engagement efforts. For example, case studies provide an opportunity to provide in-depth investigation into customer groups on various priority topics and testing of proposed solutions. Case studies may involve face-to-face ethnographic or observational research, individual in-depth interviewing with key stakeholders or customers and data collection and analysis. They provide a qualitative and context specific understanding of key customers and topics
Qualitative: ethnographic research	Involves systematic observation and recording of customer behaviour in their natural setting (e.g., in-home observations of energy consumption and behaviours). Ethnography is a qualitative research approach that involves the in-depth study of a particular group, culture, community, or social setting through participant observation, interviews, and the analysis of qualitative data, such as field notes, interviews, and documents. It can be used in complement with quantitative research methods such as surveys.
Secondary analysis	Researchers analyse and synthesise existing datasets collected (e.g., government reports, Australian Bureau of Statistics data)

Reference list: reports and documents review in this synthesis (2021-2022)

Report / Document	Affordability and Equity	Reliability and Resilience	Energy Transition	Customer Experience
Quantum - Customer Experience Monitor Wave 1				
NTF Group – Customer Valuation of Service Improvements				
Nation Partners – Climate Change and Network Resilience Commitments Report				
Forethought – Exports Trial Research: Flexible Service Offer Optimisation				
Forethought – Meta-analysis of CitiPower, Powercor and United Energy Customer Insights to Inform Design of the 2026-2031 Regulatory Reset				
Forethought – Internal Ideation Workshop				
Forethought – Community Roundtables Resilience				
Energy and Water Ombudsman Victoria – Annual Report				
Forethought - CitiPower, Powercor and United Energy Broad and Wide Summaries				
Forethought- CALD Broad and Wide				
Forethought – Youth Broad and Wide Customer Forum				
Forethought – Yorta Yorta Country Consultation				

Reference list: reports and documents review in this synthesis (2023)

Report / Document	Affordability and Equity	Reliability and Resilience	Energy Transition	Customer Experience
ECA – Energy Consumer Sentiment Research Findings From Qualitative Research Conducted in October 2022				
Monash – Digital Energy Futures: Scenarios for Future Living (2030/2050)				
Forethought – Rural and Regional Summit				
Economic Growth Engagements (2023)				
RPS – Framework and Approach Workshop Outcomes Report				
RPS – Customer Vulnerability Workshop Report 1				
RPS – Customer Vulnerability Workshop Report 2				
Forethought – CSIS Phase 1				
Sagacity – Brand Health Tracker				
Monash – Future Home Demand: Anticipating Energy and Everyday Life Trends Across Three Victorian Networks				
Quantum – Customer Experience Wave 1				
Vulnerable customers joint distributor forum				
Joint distributor resilience forum				

Reference list: reports and documents review in this synthesis (2023-2024)

Report / Document	Affordability and Equity	Reliability and Resilience	Energy Transition	Customer Experience
The Energy Transition Summit				
The Future Energy Network Forum				
Customer Values Analysis Refresh				
Vulnerable Customers Engagement				
Community Resilience Workshops				
Mass Market Trade Off Forums				
Commercial And Industrial Engagement				
Test And Validate Quantitative Program				
Test And Validate Roundtables				
Test And Validate Rural And Regional Summit				

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