

Customer Valuation Of Service Improvements

Final Report



December 2021



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Executive Summary

METHODOLOGY AND RESEARCH FRAMING

These research findings are based upon 2,197 online surveys conducted with residential customers, 778 online surveys completed by business customers, 8 in-depth interviews with business customers and 23 residential customers who participated in mini focus group discussions.

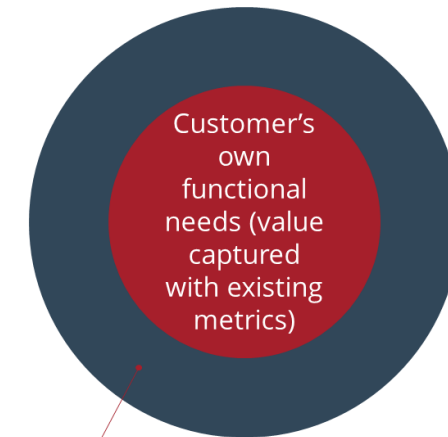
An industry standard methodology was utilised combining contingent valuation and experimental choice modelling. Contingent valuation was used to capture the amount customers would be prepared to pay for a suite of service improvements; this amount was then attributed by customers across service improvements (phase 1) and specific services outcomes (phase 3) using bimodal questions and choice modelling experiments

Research was conducted from mid-August to late November. While published business confidence data shows a significant uptick in business confidence during November following the lifting of the final Covid lockdown, business customers stated that serial lockdowns had undermined the financial resilience of their businesses and even their innate sense of optimism. As a consequence, willingness to pay amongst business customers may have been understated in this research due to timing. Residential customers reported feeling a heightened sense of community connectedness following their Covid lockdown experience.

All research phases were framed as possible improvements to the current level of service delivery, recognising the current situation meets regulatory standards and customer expectations with respect to their own functional needs, evidenced by 84% of residential customers being satisfied with current service delivery.

As such, the research provided a holistic customer valuation of service improvement, taking into account customer wants and desires for the network, not just their own functional needs. **The implication being customers show a propensity to pay for service improvements that don't directly benefit them**, for example, paying to improve reliability for those customers experiencing below average network reliability and reducing bushfire risk across the state.

Accordingly, the values outlined in this report can be considered as additive to existing regulatory willingness to pay outcomes (e.g. AER value of reliability) as they capture customer investment desires for the whole network, not just the aspects which affect their own experience.



Customers' wants and desires for the network as a whole (value captured through this research)

PROJECT FINDINGS

SUMMARY

➤ Customer insight # 1 - Customers are highly engaged with the network and associated investment trade-offs

- This customer research revealed a surprisingly high level of engagement with the network and electricity distribution. While some customers may underestimate the impact increasing levels of electrification are having on network load, they nevertheless see the electricity network as increasingly vital to supporting their lifestyle and economic prosperity and **are therefore willing to pay for improvements they deem important.**
- This sense of dependence on electricity was heightened during Covid, where residential customers felt totally dependent upon reliable supply to fulfil their working-from-home, home schooling and other key household requirements.

PROJECT FINDINGS SUMMARY

➤ Customer insight # 2 - The electricity network is seen by customers as a community asset

- Customers strongly believe reliable electricity is a right for all customers. ‘Energy equity’ was a consistent theme throughout this customer research and manifested in unexpected ways. For example, in discussing the desirability of digital tools, some customers felt they may benefit from the greater accessibility to information afforded by improved digital tools but nevertheless **discounted the value of this improvement because of concern not all customers (e.g elderly neighbours) benefit.**
- Lockdowns further led customers to consider the plight of others in the community, entrenching the belief that pre-dated Covid.
- This helps explain why customers **placed the highest value on improving reliability for those customers experiencing below average supply reliability.**
- Residential customers are willing to pay more to minimise inequity than improve their own level of reliability. Business customers value their own reliability more, but they acknowledge that reliability in worst-served areas can have direct impacts on their business through supply chain or other stakeholders

Value of Reliability	CitiPower Residential	CitiPower Business	Powercor Residential	Powercor Business	United Energy Residential	United Energy Business
Calculated value / kWh (worst-served)	\$20.08	\$30.78	\$25.40	\$35.02	\$35.53	\$9.74
AER Value of own reliability / kWh	\$21.43	\$49	\$21.43	\$49	\$21.43	\$49
% of Value	94%	63%	119%	71%	166%	20%

PROJECT FINDINGS

SUMMARY

➤ Customer insight # 3 - Delivering better environmental outcomes is seen as a core customer expectation

- Customers expressed a very strong expectation that large companies, including distribution businesses will deliver environmental outcomes, especially reducing greenhouse gases **as part of their core business.**
- Customers logically linked improving environmental outcomes with the long-term savings that would accrue from reducing the impact on the network of extreme weather events
- **The most valued proposition to customers was the reduction of CO2 emissions** (residential customers are prepared to pay an additional \$9.51 / CO2e and business customers are prepared to pay an additional \$1.07 / CO2e)
- Furthermore, residential customers were prepared to pay \$8.81 / kWh to improve network resilience and business customers were prepared to pay an additional \$3.05 / kWh.
- There were several exceptions to this trend:
 - [United Energy business customers were less likely to value CO2 emission reductions \(due to their preference for an incremental approach and wanting all businesses to take responsibility for environmental outcomes\)](#)
 - CitiPower residential customers were less likely to value solar export flexibility (due to the high concentration of apartment dwellers who do not have panels)

OVERVIEW OF PROJECT PHASES

A three-phase approach to the project was undertaken to allow for a wide range of topics and initiatives to be researched during the early phases, and then become more targeted with the final stage of research.

The research findings are based upon 2,197 online surveys conducted with residential customers, 778 online surveys completed by business customers, 8 in-depth interviews with business customers, and 23 residential customers through mini focus groups



Phase 1: *How customers value areas of service improvement* **Valuation of High-Level Customer Service Improvement Propositions**

Objectives:

- Identify the most important high-level customer service propositions and priorities
- Size customer willingness to pay for a suite of service improvement propositions in total and across propositions
- **Outcome: Willingness to pay per customer of high-level service improvement propositions**

Customer Advisory Panel and business stakeholder feedback

Phase 2: *How customers interpret improvement propositions and associated outcomes* **Contextualising Results**

Objectives:

- Understand voice of customer using qualitative research
- Define the most important attributes of each customer proposition
- Map the most important and impactful tangible customer outcomes against each proposition
- Understand drivers that influence valuation of customer outcomes
- **Outcome: List and mapping of tangible customer outcomes to test**

Phase 3: *How customers value tangible improvement outcomes* **Valuation of Tangible Customer Outcomes**

Objectives:

- Test customer willingness to pay against various tangible customer outcomes and improvements
- Derive a per-unit and per-customer willingness to pay for future comparisons and decision-making
- **Outcome: Value of tangible customer outcomes on a per-unit basis**

More
Broad

Scope of Valuation

More
focused

This process establishes a willingness to pay across all service improvement propositions before evaluating the willingness to pay for tangible outcomes *within the propositions*



RESIDENTIAL CUSTOMER VALUES – Service Improvement Propositions

Preliminary valuations of high-level customer service improvement propositions establishes the customers' willingness to pay

Values represent willingness to pay for propositions on a per-annum basis

\$11 / customer

Bushfire Risk
Proposition

\$9 / customer

Environmental
Proposition

\$8 / customer

Reliability
Proposition

\$7 / customer

Safety
Proposition

\$5 / customer

Solar Flexibility
Proposition

\$4 / customer

Visual Aesthetics
Proposition

\$3 / customer

Communication
Proposition

\$4 / customer

Information accessibility
Proposition

*Results are aggregated across the three networks using a weighting based on customer population. Specific network results are provided in the body and appendix of this report



RESIDENTIAL CUSTOMER VALUES – Tangible Outcomes

Customer evaluation of specific propositions are used to determine the customer value associated with tangible outcomes

Willingness to pay for outcomes represent per-unit valuations for specific initiatives and should not be considered per annum

\$28.31 / kWh

Reliability Outcome:
Worst-Served Areas

\$8.81 / kWh

Reliability Outcome:
Resilience

\$9.51 / CO₂e

Environmental
Outcome: CO₂e

\$9.38 / MWh

Solar Flexibility
Outcome: Restrictions

\$0.69 / customer

Aesthetics Outcome:
Improved visuals

\$0.49 / customer

Communication
Outcome: Self-Service

\$0.12 / customer

Information accessibility
Outcome: Access

*Results are aggregated across the three networks using a weighting based on customer population. Specific network results are provided in the body and appendix of this report



BUSINESS CUSTOMER VALUES – Service Improvement Propositions

Preliminary valuations of high-level customer service improvement propositions establishes the customers' willingness to pay

Values represent willingness to pay for propositions on a per-annum basis

\$48 / customer

Bushfire Risk
Proposition

\$38 / customer

Environmental
Proposition

\$52 / customer

Reliability
Proposition

\$24 / customer

Safety
Proposition

\$23 / customer

Solar Flexibility
Proposition

\$22 / customer

Visual Aesthetics
Proposition


\$20 / customer

Communication
Proposition

\$16 / customer

Information accessibility
Proposition

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BUSINESS CUSTOMER VALUES – Tangible Outcomes

Customer evaluation of specific propositions are used to determine the customer value associated with tangible outcomes

Willingness to pay for outcomes represent per-unit valuations for specific initiatives and should not be considered per annum

\$26.73 / kWh

Reliability Outcome:
Worst-Served Areas

\$3.05 / kWh

Reliability Outcome:
Resilience

\$1.07 / CO_{2e}

Environmental
Outcome: CO_{2e}

\$6.78 / MWh

Solar Flexibility
Outcome: Restrictions

\$0.09 / customer

Aesthetics Outcome:
Improved visuals

\$0.37 / customer

Communication
Outcome: Self-Service

\$1.15 / customer

Information accessibility
Outcome: Access

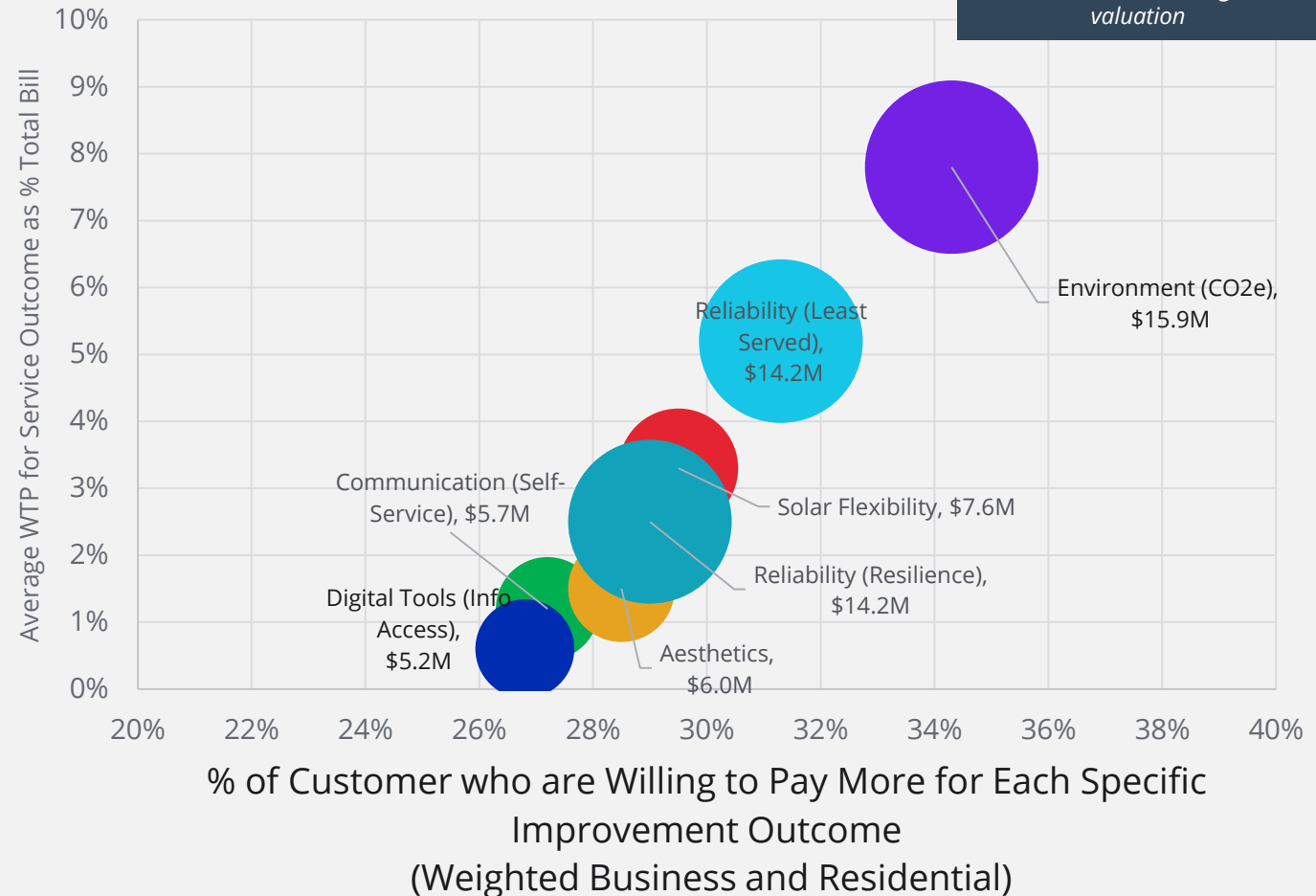
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TOTAL CUSTOMER

VALUE OF TANGIBLE CUSTOMER OUTCOMES

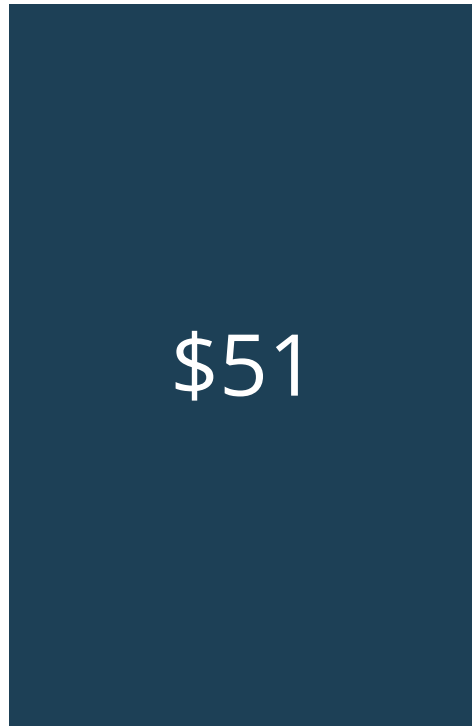
- The following chart reflects results from both phases of quantitative research, combining both residential and business customers
- The size of the bubble reflects the amount customers are willing to pay for service propositions in Phase 1. The horizontal and vertical axes reflect the results from Phase 3. The horizontal axis reflects the proportion of customers (customer weighted average of business and residential customers based on population) who are prepared to pay the incremental increase in their bill reflected on the vertical axis.
 - For example, customers are prepared to pay an additional \$15.9 M per annum for environmental improvements across the network and 34% of customers were prepared to pay an additional 8% to reduce CO2 emissions by 50%.
- Reducing CO2 emissions and improving reliability in below average areas with the most highly valued by customers.
- Network resilience was an area where customers showed a higher proclivity to pay for general improvements than for the specific outcomes tested

Aggregate Customer Value of Service Improvement Propositions



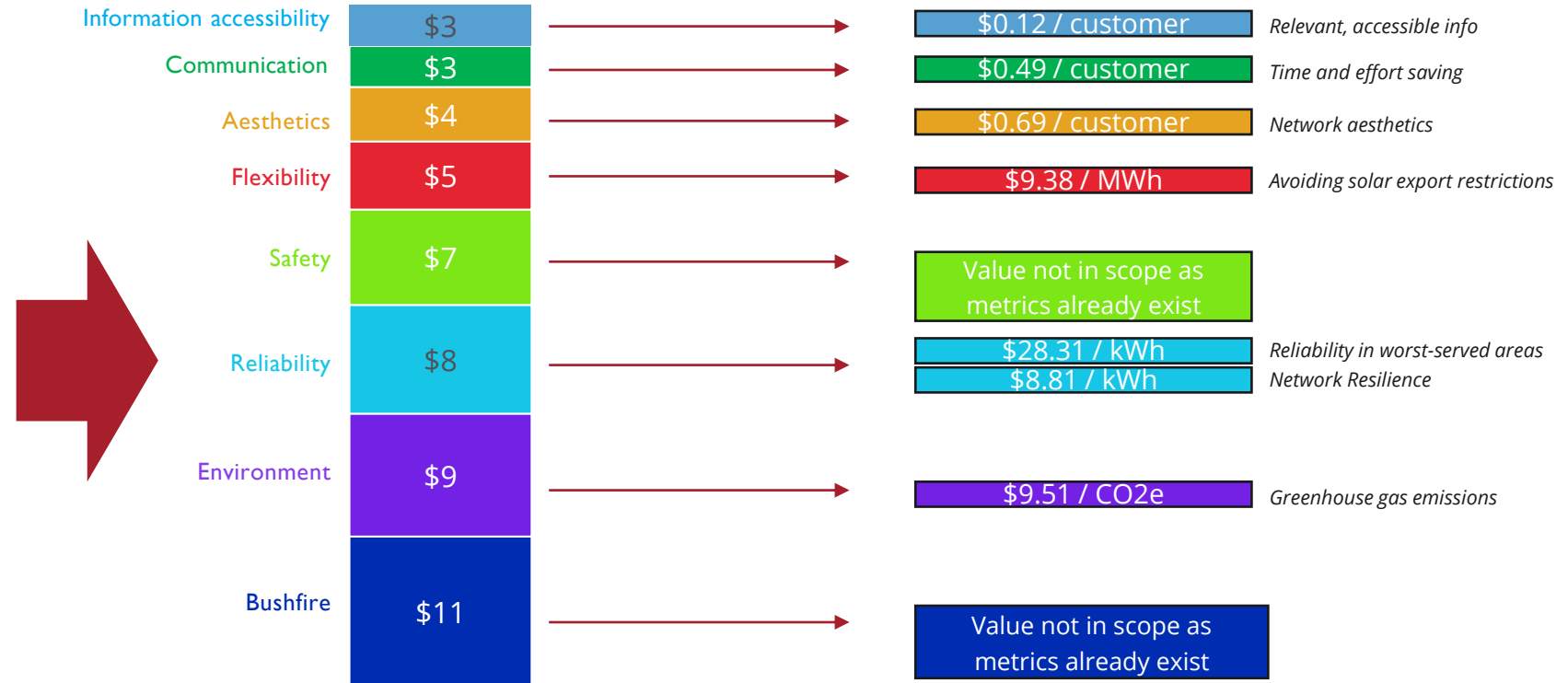
RESIDENTIAL METHODOLOGY SUMMARY

An industry standard methodology was utilized combining contingent valuation and experimental choice modelling



Total Willingness to Pay

A contingent valuation approach was used to determine the total willingness to pay for a suite of service improvement propositions



Breakdown by Service Propositions

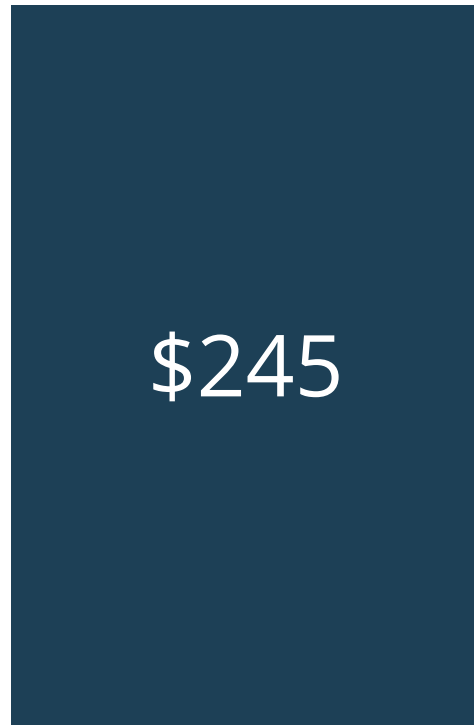
Trade-off and preference choice exercises were used to appropriate the willingness to pay across each of the high-level service improvement propositions

Willingness to Pay for Tangible Outcomes

The most impactful propositions were defined using clear customer outcomes and corresponding costs. Detailed trade-off and preference choice exercises were used to calculate value of outcomes associated with each service propositions on a per-unit basis

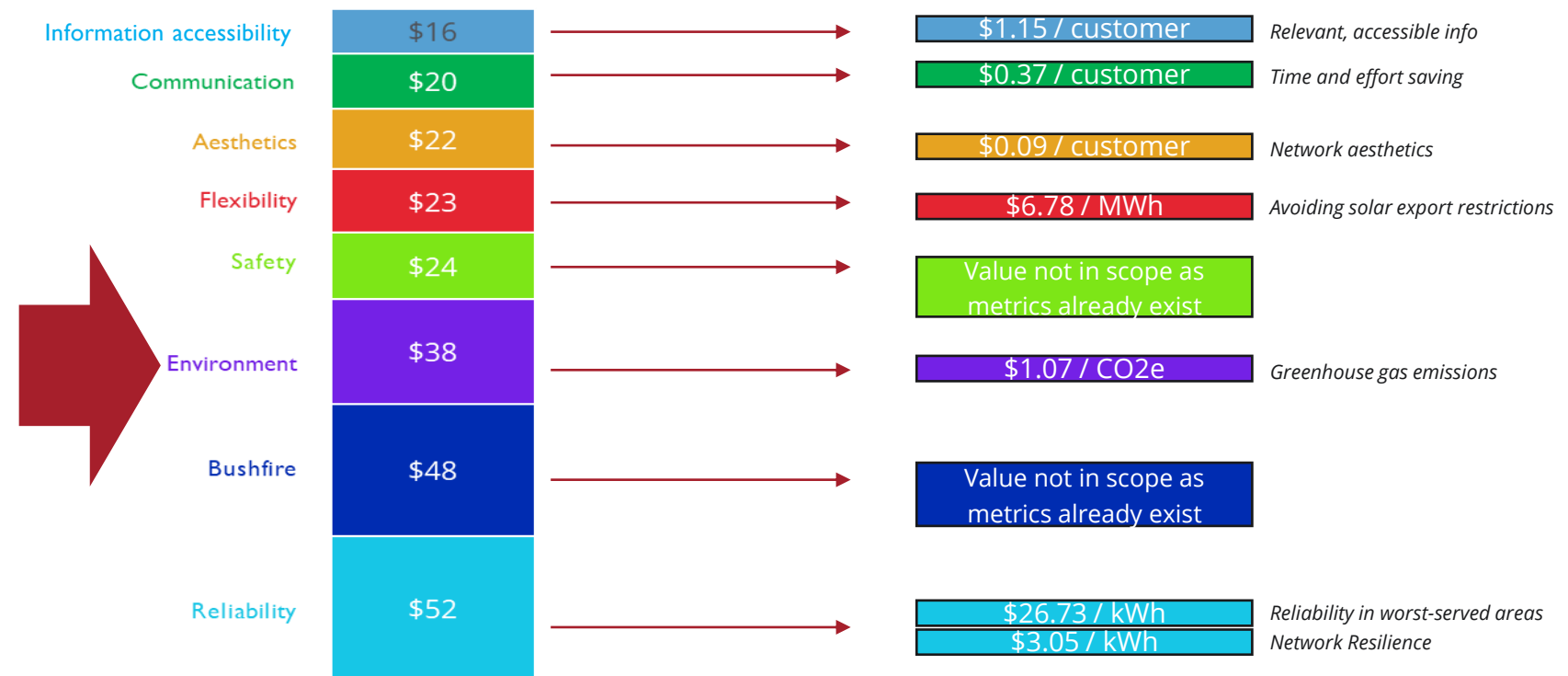
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Breakdown by Service Propositions

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Willingness to Pay for Tangible Outcomes

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Introduction

CitiPower, Powercor and United Energy (the distribution businesses) have engaged The NTF Group to quantify the value customers place on a range of service improvement propositions, to gain a better understanding of customer priorities and willingness to pay.

There are currently very few quantitative measures of customer value relevant to the various services electricity networks provide. Limited exceptions include the Australian Energy Regulator's (AER) value of customer reliability, and the statistical value of life.

The Project Objective

Is to build quantitative evidence for how customers value current and enhanced service improvement propositions, as an additional tool to incorporate customer value into investment decision-making and to pursue a more holistic approach to valuing customer preferences

The Current Methodology

Leverages customer willingness to pay. Customers are exposed to experimentally varied improvement packages and are asked their willingness to pay for these packages at various price points

The project tested a wide breadth of customer service improvement propositions, which include, **communication and information accessibility, bushfire risk, environment, reliability, safety, aesthetics, energy flexibility**

Project

background and objectives

The project is three-phases including a combination of quantitative and qualitative research whereby the early stages of the project were used to define the customer propositions and size the preliminary customer willingness to pay. The later stages of the project map these propositions to key customer outcomes for more in-depth and focused valuations that can be used broadly for decision making

The surveys also captured a broad range of demographic data to provide further context on the drivers of the valuation:

DETAILED METHODOLOGY

Table: number of customers surveyed across the project

Cohort	Phase 1	Phase 2	Phase 3
TOTAL	1599	31	1376
CitiPower	578	10	464
Powercor	522	10	452
United Energy	499	11	460



All Customers

- Geographic area, including SEIFA (relative socio-economic standing)
- Average bill size
- Age
- Ownership of residence / business site
- Whether solar panels are installed
- Whether they received GSL payment due to network reliability performance
- Presence of gas as dual energy source



Residential Only

- Number of people in the household
- Presence of a pool
- Reliance on life-saving medical device
- Received concession pricing



Business Only

- Number of employees
- Annual turnover
- Industry
- Financial impact of outages
- Whether they are considering solar
- Presence or consideration of a battery

Demographic differences will be further explored in the results section

This calculation provides the total incremental willingness to pay annually. This total value is allocated by customers across the specific propositions based on preferences demonstrated in the choice model exercises and contingent valuation.

This process is applied to phases 1 and 3

WTP calculation METHODOLOGY

The customer incremental willingness to pay for each customer cohort and initiative is a function of inputs specific to the customer type (residential vs business) and distribution business

Total Incremental Willingness to Pay



*Allocated based on
Choice Model
responses*

Total Incremental Willingness to Pay

Phase 1	Info. access	Comm.	Bushfire	Enviro	Reliability	Safety	Aesthetics	Flexibility
Phase 3	Info. access	Comm.	-	CO2 Emissions	Reliability (worst-served) Resilience	-	Aesthetics	Flexibility

Throughout this report, where significant, examples of segmental differences are highlighted. However, a key finding was the considerable uniformity observed within the residential and business customer samples, with a key exception being the differences between solar and non-solar customers



Phase 1:

How customers value areas of service improvement proposition

PHASE 1: SERVICE PROPOSITIONS TESTED

The objective of Phase 1 was to calculate a **willingness to pay** for a broad range of propositions by customer type and distribution network. The complete list of customer propositions and improvement areas were jointly defined by the distribution businesses and The NTF Group by getting input from key business stakeholders and the Customer Advisory Panel (CAP).



Customer Value of Flexibility

- Local electricity generation sources
- Export electricity without time restrictions
- Export electricity without volume restrictions



Customer Value of Safety

- Risk of community access to network assets
- Employee field worker safety around electrical assets
- Promoting employee well-being and diversity



Customer Value of Aesthetics

- Making assets blend into the environment
- Interesting designs on assets (e.g., murals, art)
- Hiding assets from view



Customer Value of Reliability

- Reliability in their own area
- Reliability in worst-served areas
- Resilience to outages from high-impact, low frequency events

PHASE 1: SERVICE PROPOSITIONS TESTED

The objective of Phase 1 was to calculate a **willingness to pay** for a broad range of propositions by customer type and distribution network. The complete list of customer propositions and improvement areas were jointly defined by the distribution businesses and The NTF Group by getting input from key business stakeholders and the Customer Advisory Panel (CAP).



Customer Value of Environment

- Reducing greenhouse gas emissions
- More renewable energy usage and generation
- Noise of assets
- Other (e.g., vegetation management)



Customer Value of Communication

- Accuracy of information
- Timeliness of information
- Effort to find information
- Personalisation of information



Customer Value of Bushfire Risk

- Reducing bushfire risk in their own area
- Reducing bushfire risk across Victoria
- Responsibility for funding initiatives



Customer Value of Information Accessibility

- Presence of digital tools
- Communication via customer channel of choice
- Ease of access
- Information consistency

Residential incremental Customer WTP of Propositions per customer per year



These values represent the customer willingness to pay for each of the propositions and establishes constraints to interpret against phase 3 value of specific outcomes

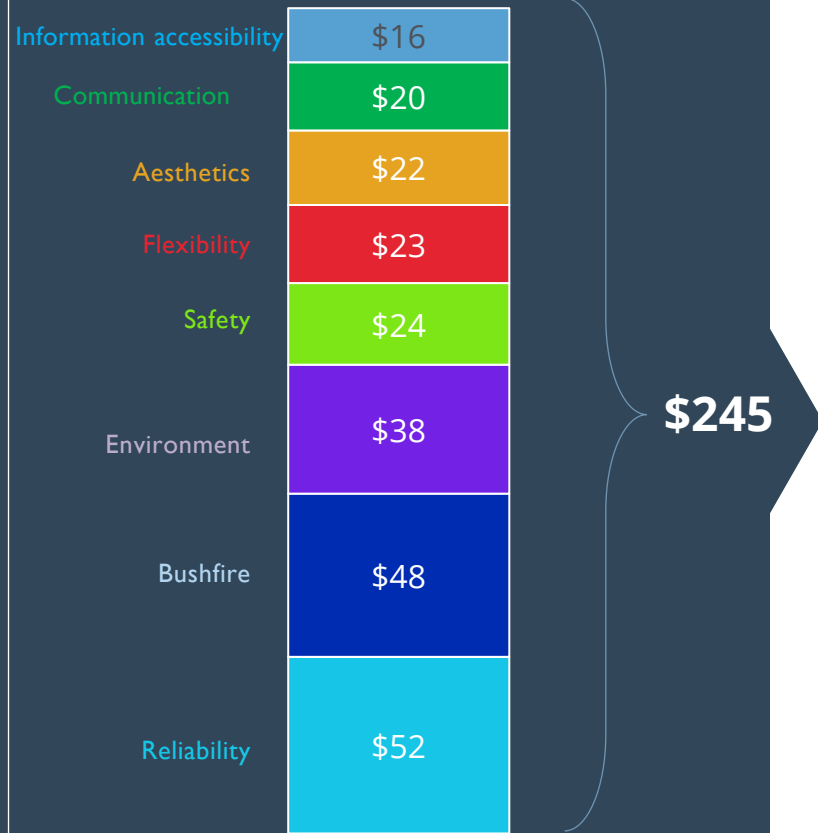
PHASE 1 RESULTS: RESIDENTIAL

The customer willingness to pay is allocated across the in-scope service improvement propositions based on the customer choice modelling

- On average, residential customers were prepared to pay an additional \$51 per annum for a suite of service improvements.
- Based upon the choice model, residential customers were prepared to pay \$11 per annum for improvements in bushfire risk mitigation, \$9 per annum for improvements in environmental outcomes and \$8 per annum for improved reliability.
- In relation to improved reliability, customers were generally more likely to pay for improvement outside their area. CitiPower residential customers were an exception to this general finding, being more prepared to pay to improve their own reliability. While these CitiPower customers currently enjoy comparatively high levels of supply reliability, it became very evident in focus groups that CitiPower customers place this high value on supply reliability to preserve the amenity and lifestyle they have become accustomed to, and for which they believe they pay a high price (e.g high real estate values; traffic congestion).
- Residential customers were prepared to fund aggressive step-changes in outcomes with regards to environmental improvements

*Results are aggregated across the three networks using a weighting based on customer population. Specific network results are provided in the body and appendix of this report

Business incremental Customer WTP of Propositions per customer per year



These values represent the customer willingness to pay for each of the propositions and establishes constraints to interpret against phase 3 value of specific outcomes

PHASE 1 RESULTS: BUSINESS

The customer willingness to pay is allocated across the in-scope service improvement propositions based on the customer choice modelling

- On average, business customers were prepared to pay an additional \$245 per annum for a suite of service improvements.
- Based upon the choice model, customers were prepared to pay \$52 per annum for improvements in reliability, \$48 per annum to reduce bushfire risks and \$38 per annum for improved environmental outcome.
- The high value business customers place on reliability reflects their pragmatism and financial stake. If the power was down, they spoke of having to stop production, send staff home as they could not afford to keep them on-site doing nothing.
- There was also a sense that through their customers and suppliers they are part of a business 'ecosystem' so were mindful of effects on all businesses.
- Regarding the environment, customers readily conceded that all businesses these days had to be moving towards net zero and reducing their carbon emissions. They viewed investment in the environment as a long-term financial investment and something that should be factored into BAU. They are concerned about the impact of climate change on their own operations. Sustainable improvements can be incremental, but are considered imperative
- [Although business customers perceive the environment as very important, they would prefer to take a more measured approach that relies on new technologies and BAU process/service improvements to avoid significant disruption. This is reflected in the specific outcome valuation](#)

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Phase 3:

How customers value tangible improvement outcomes

The value of each broad proposition must be further allocated to specific customer outcomes and improvements to determine the specific components customers value most

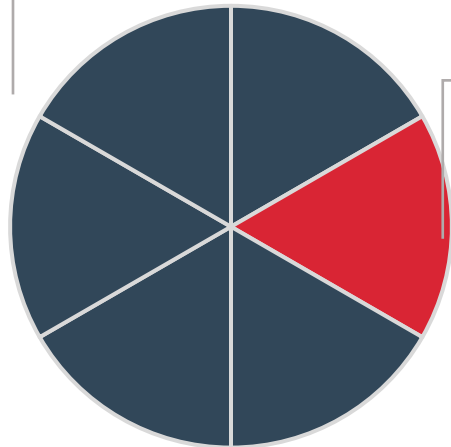
The research incorporates all phases into the design to develop an integrated customer willingness to pay
Phase 1 sizes the overall customer propositions, and phase 3 sizes the actual value of outcomes

Seven key customer outcomes were selected for deeper analysis in phase 3 to establish a per-unit customer value

Selection was based on:

- 01 The relative impact of the measure: did customers find the overall proposition valuable?
- 02 The gap in existing valuations: is there an existing proxy measure that currently captures customer value?
- 03 The level of complexity around a proposition or outcomes: did customers in phase 2 give nuance with their valuation?
- 04 Input from the Customer Advisory Panel: are there customer valuations that are important to the CAP?

The value of overall customer propositions is known from phase 1



There are individual customer outcomes that are aggregated to form the value of overall customer proposition.

However, the purpose of the research is to value several of these key customer outcomes



RESIDENTIAL CUSTOMER VALUES – Tangible Outcomes

Customer evaluation of specific propositions are used to determine the customer value associated with tangible outcomes

Willingness to pay for outcomes represent per-unit valuations for specific initiatives and should not be considered per annum

\$28.31 / kWh

Reliability Outcome:
Worst-Served Areas

\$8.81 / kWh

Reliability Outcome:
Resilience

\$9.51 / CO₂e

Environmental
Outcome: CO₂e

\$9.38 / MWh

Solar Flexibility
Outcome: Restrictions

\$0.69 / customer

Aesthetics Outcome:
Improved visuals


\$0.49 / customer

Communication
Outcome: Self-Service

\$0.12 / customer

Information accessibility
Outcome: Access

*Results are aggregated across the three networks using a weighting based on customer population. Specific network results are provided in the body and appendix of this report



BUSINESS CUSTOMER VALUES – Tangible Outcomes

Customer evaluation of specific propositions are used to determine the customer value associated with tangible outcomes

Willingness to pay for outcomes represent per-unit valuations for specific initiatives and should not be considered per annum

\$26.73 / kWh

Reliability Outcome:
Worst-Served Areas

\$3.05 / kWh

Reliability Outcome:
Resilience

\$1.07 / CO₂e

Environmental
Outcome: CO₂e

\$6.78 / MWh

Solar Flexibility
Outcome: Restrictions

\$0.09 / customer

Aesthetics Outcome:
Improved visuals

\$0.37 / customer

Communication
Outcome: Self-Service

\$1.15 / customer

Information accessibility
Outcome: Access

*Results are aggregated across the three networks using a weighting based on customer population. Specific network results are provided in the body and appendix of this report

RELIABILITY IN WORST SERVED AREAS

Different areas across Victoria have different electricity reliability levels.

For example, on average customers experience three hours off supply per year due to unplanned outages. The worst-served communities however, experience an average of six hours off supply per year due to unplanned outages

Survey respondents were asked how much they would value a 25% (~1.5 hours p.a.) or 50% decrease (~3 hours p.a.) in annual outages for worst served areas

Customer Value of **Enhancing Reliability** in Worst-Areas

\$3.952M
141k kWh

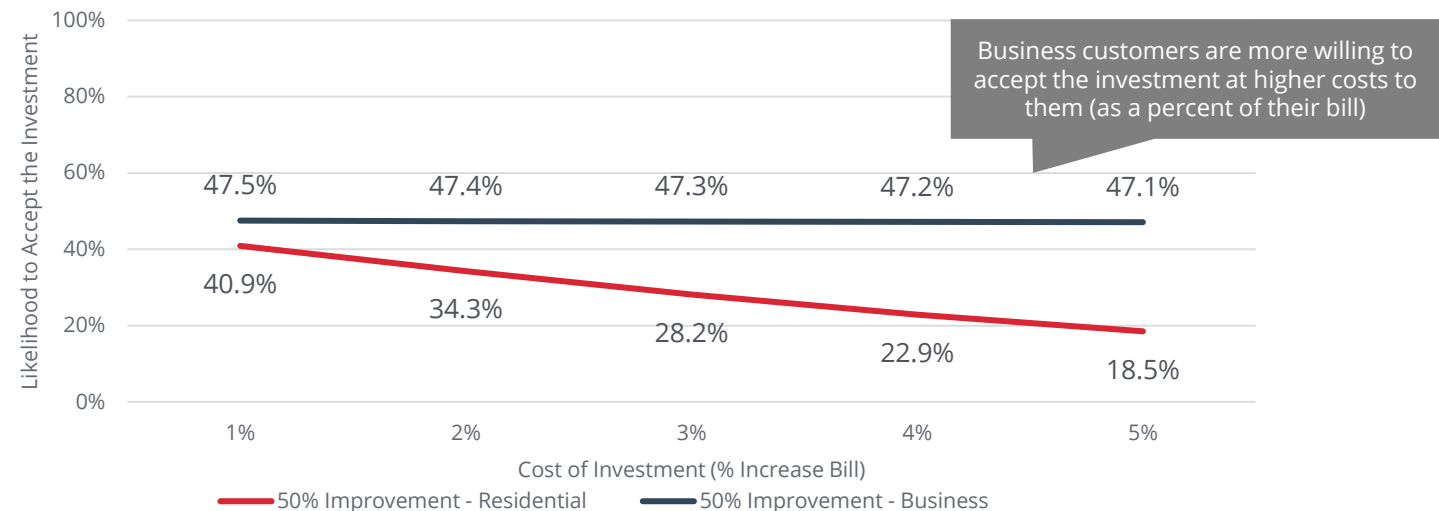
Per kWh
Value

\$28.11
Aggregate

\$28.31
Residential

\$26.73
Business

Likelihood to Accept by Level and Customer Type

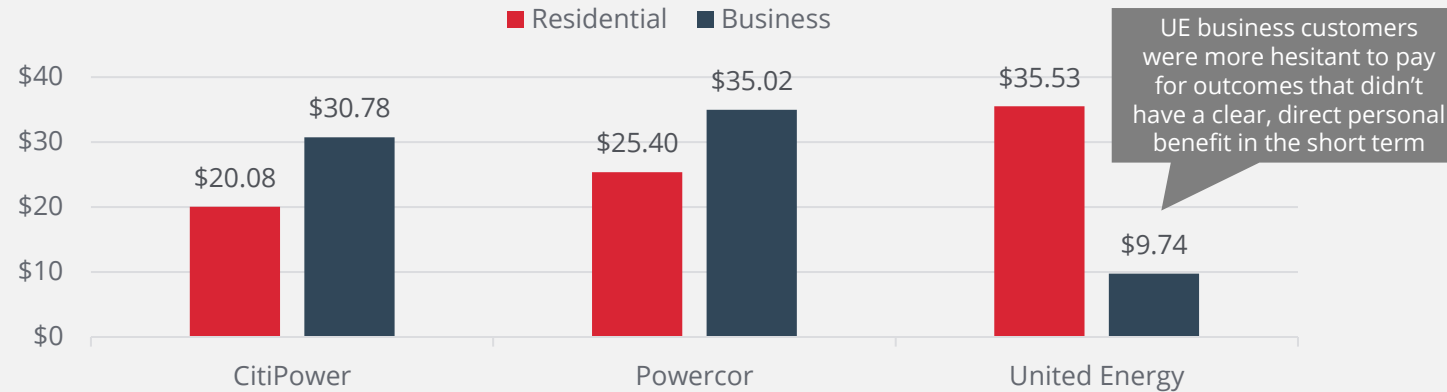


THE VALUE OF INCREASING REALIABILITY IN WORST SERVED AREAS

\$28.11

Customer Value of **Enhancing Reliability** in Worst-Served Areas (per kWh)

Value of Increased Reliability in Worst-Served Areas (per kWh)



Supporting Customer Insights

- Customers felt that electricity was a communal good and it was important everyone in their community should have access to a minimum standard of good reliability (logistical issues could prevent complete equity)
- Some urban customers were willing to pay because they had a personal connection to an area with poor reliability (family or friend, prior visit)
- 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)
- In addition to the desire for equal reliability, business owners felt a rapport with others with a strong sense they'd look after each other

Agree more with:

Important DB invests in increasing reliability	Agree equally with both statements	Lowest cost of electricity is most important
27%	49%	24%

Agree more with:

All Victorians should share funding responsibility	Agree equally with both statements	Individuals who receive most benefits should fund
25%	52%	23%

Network Resilience

Customer Value of Improving Network Resilience

\$1.927M
239k kWh

Per kWh Value

\$8.06
Aggregate

\$8.81
Residential

\$3.05
Business

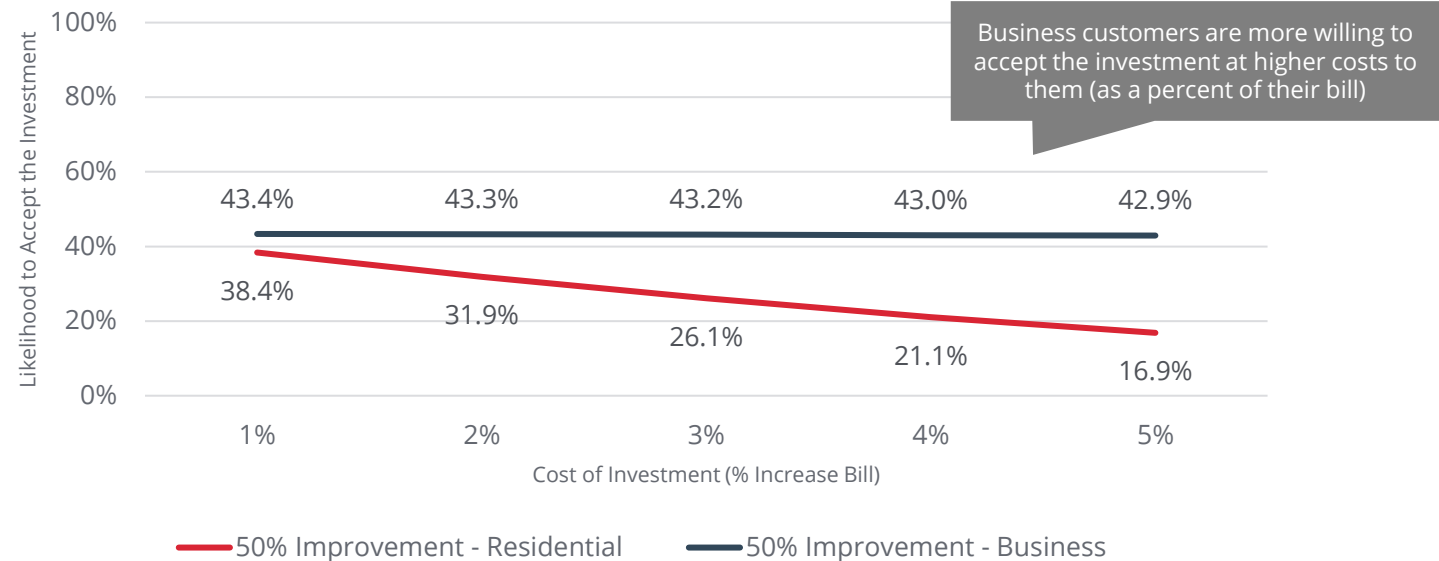
A major cause of outages is high-impact but low-frequency weather events. These include, but are not limited to, high winds, heavy rain, or hot weather. These types of weather events can lead to extended times off supply for customers. Different areas across Victoria have different susceptibilities to these events.

There have been 16 events since 2016. With increasing climate change, it is forecast that these events will occur more frequently

On average roughly 169k customers across the network experience these outages annually. Building resilience is the proactive hardening of the network to decrease the likelihood that a weather event will result in an outage

Survey respondents were asked how much they would value a 25% or 50% decrease in the number of customers impacted annually by low-frequency but high-impact events

Likelihood to Accept by Level and Customer Type

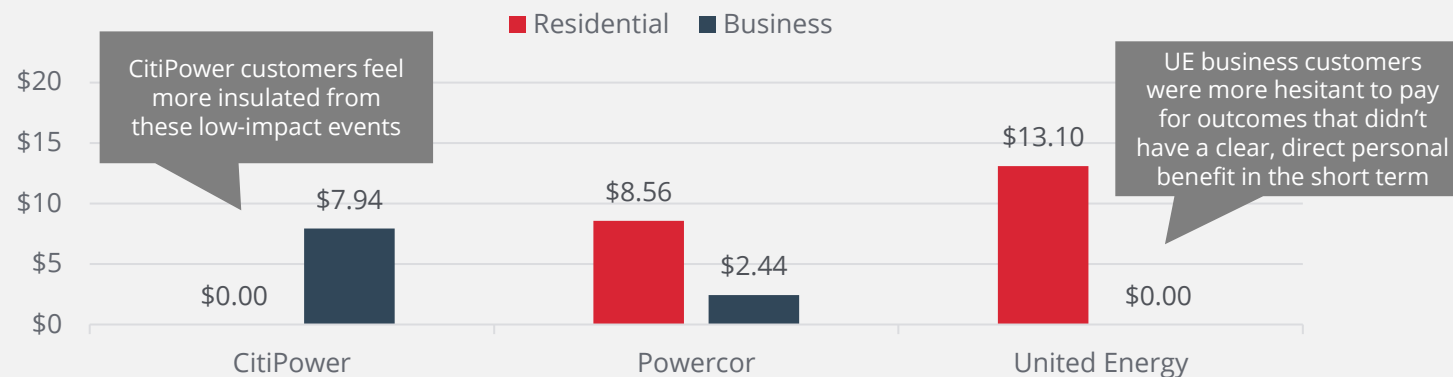


THE VALUE OF INCREASING NETWORK RESILIENCE

\$8.06

Customer Value of Improving Network Resilience (per kWh)

Value of Increased Network Resilience (per kWh)



Supporting Customer Insights

- Customers viewed resilience as an important topic because other reliability issues are isolated but resilience issues “could impact the whole state”
- Most customers highlighted climate change and the increasing likelihood of major outage events
- They did worry resilience was a “black hole” issue where work may continue indefinitely without noticeable or tangible improvements; transparency was important
- Business customers had more personal experience with impacts from these events and felt they had a responsibility to be “part of the solution”
- In particular, business customers in metro areas said that “bushfires are no longer local; they affect all of us”

Agree more with:

Important DB invests in improving resilience	Agree equally with both statements	Lowest cost of electricity is most important
35%	43%	21%

Agree more with:

All Victorians should share funding responsibility	Agree equally with both statements	Individuals who receive most benefits should fund
27%	51%	22%

Aesthetics

Customer Value of Increased Network Aesthetics

\$1.188M
1.9M customers

Per
Customer
Value

\$0.62
Aggregate

\$0.69
Residential

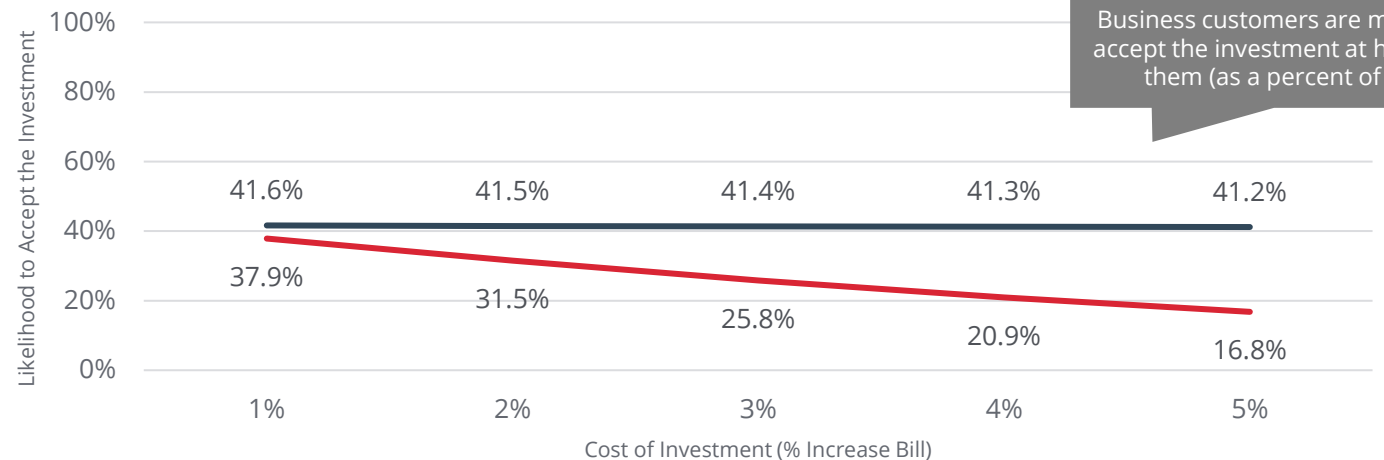
\$0.09
Business

Distribution businesses own and manage the poles, wires, substations that deliver electricity. Customers notice these assets around the street or suburb.

There are opportunities for distribution businesses to improve the visual appearance of these assets out in the community.

Survey respondents were asked whether they would value a 20%, 40% or 60% increase in the proportion of assets with enhanced visual appearance

Likelihood to Accept by Level and Customer Type



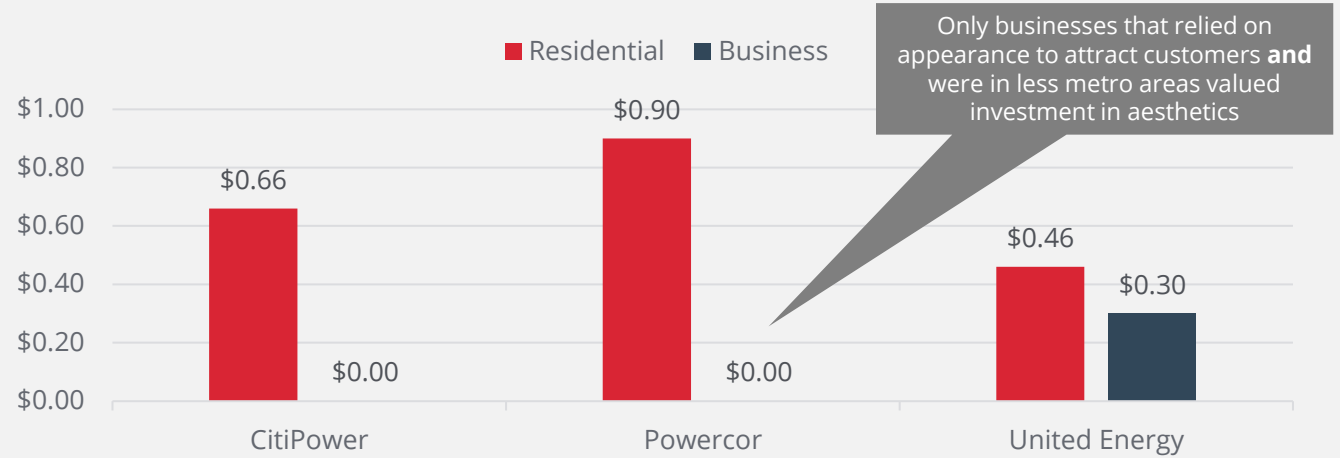
Business customers are more willing to accept the investment at higher costs to them (as a percent of their bill)

— 60% Improvement - Residential — 60% Improvement - Business

THE VALUE OF INCREASING NETWORK VISUAL APPEARANCE

\$0.62

Customer Value of Increased Network Aesthetic (per customer)



Supporting Customer Insights

- Residential customers felt that aesthetics of the network were a 'nice to have' but were a lower priority. Those that lived near substations viewed aesthetics as a higher priority
- A driver of aesthetics 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"
- The majority of business customers felt that it wasn't "their role" to fund visual appearance. The only exception were business customers who rely on foot traffic and wanted the surrounding area to look nice

Agree more with:

Important DB invests in improving aesthetics	Agree equally with both statements	Lowest cost of electricity is most important
35%	43%	21%

Agree more with:

ENVIRONMENT

Customer Value of **Reduced CO2 Emissions**

\$5.971M

710k CO2e

Per CO2
Emission
Ton Value

\$8.41

Aggregate

\$9.51

Residential

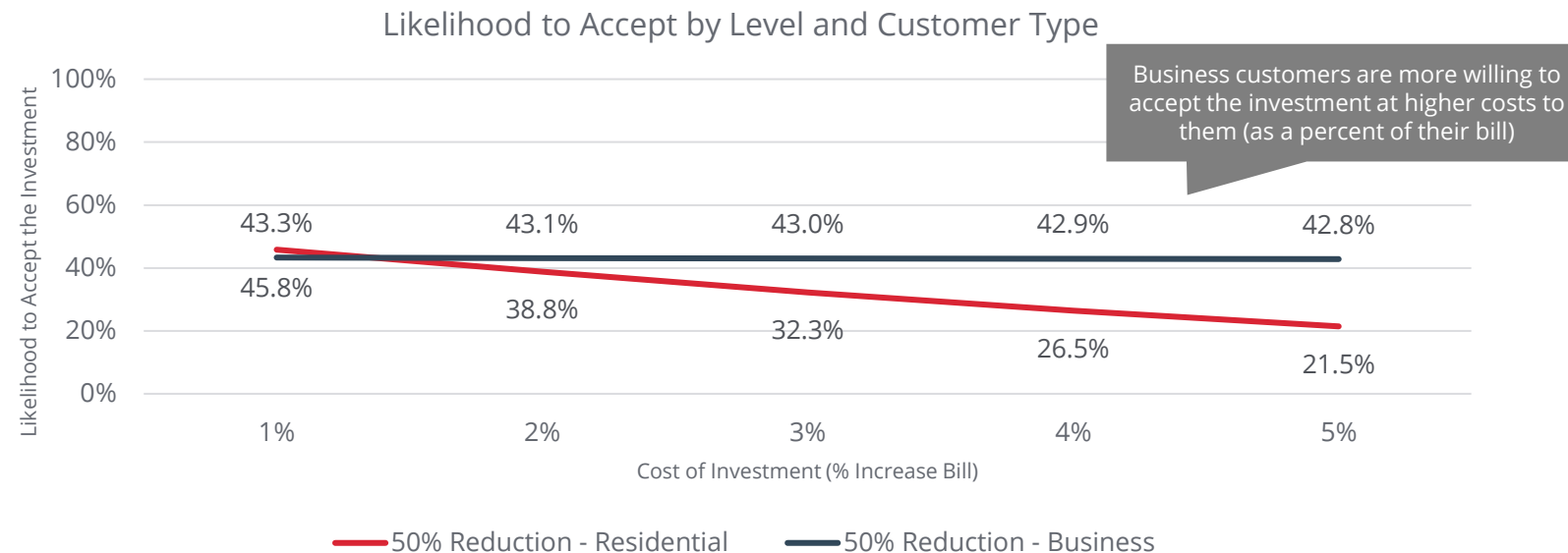
\$1.07

Business

Distribution businesses have a responsibility to the local environment

There have been some modest annual reductions in greenhouse gas emissions, but the survey aimed to understand the value of reducing CO2 emissions at a faster rate.

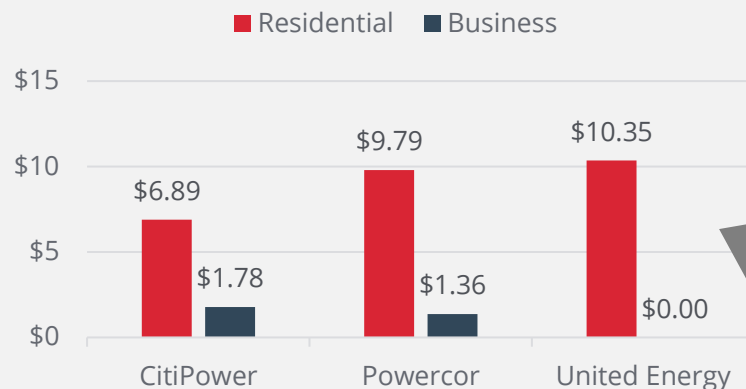
Survey respondents were asked how much they would value a 25% or 50% reduction in CO2 emissions by 2031



THE VALUE OF REDUCING CO₂ EMISSIONS

\$8.41

Customer Value of **Reduced CO₂ Emissions** (per CO₂e)



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.

While all customer types acknowledged it was important, business customers felt that “throwing more money at CO₂ reduction” would lead to more inefficient outcomes in the long-term (technology improvements, etc.).

Supporting Customer Insights

- It is now a core community expectations that corporations (including their own business) are working towards reduced emissions and net-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
- There is an implied expectation of further renewables growth, support for solar and EV, although few are aware of broader implications
- 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
- There was a strong interest from all customers in solar and EV

Agree more with:		Agree more with:
Important DB invests in reducing emissions	Agree equally with both statements	Lowest cost of electricity is most important
37%	40%	23%
All Victorians should share funding responsibility	Agree equally with both statements	Individuals who receive most benefits should fund
32%	46%	22%

VALUE OF CO₂ REDUCTION

Business Customer Explanation

Business customers were generally very eager to see improvements in environmental service improvement propositions, but their willingness to pay for a reduction of CO₂ outcome is constrained by:

1. Concerns that emission reduction targets are not grounded in operational realities

Business customers agree with targets (and transparent reporting of progress) but want more detail on *how* these targets will individually and collectively be achieved. Unlike residential customers who want to see 'step change' improvements, businesses prefer more incremental change to avoid significant disruption. They want to rely more on technological enhancements than significant and sudden behavioural or procedural changes to meet these outcomes

2. A strong sense that they, as business owners and managers, have already made sacrifices to ensure they are 'doing their' part

They expect all businesses, including distribution businesses, to make these same sacrifices for the environment.

Business customer quotes:

- “Zero 50 we don't know how it will affect us. We need to come down a level. Most agree we may have to get EVs but we need to know what changes will be made and the dates. There are a lot of ramifications. These environmental issues are going to be around - not like Covid that will be over.”
- “Get everyone on board, don't just talk about zero.”
- “I am an environmentalist, giving top priority to the environment, for example I changed our packaging to a natural fabric that cost much more, but had fewer CO₂ emissions to produce. I've made our refrigeration process more efficient. These are the things that businesses are doing themselves. It costs us to do this.”
- “Businesses are doing it themselves. I have installed solar on my warehouse roof and put timers on everything in an effort to reduce CO₂. This is mandated in Europe, but here it's left to businesses if they want to do it. If they charge us for reducing CO₂ they'll just make more money.”
- “I have already made sacrifices to move towards net zero, but I have the impression that these large distribution companies are more interested in their profit. If I'm convinced about what they are doing I'm more likely to pay.”
- “We all have a responsibility for the environment, we have to be part of the solution. We have to go step by step to mitigate the effects., but explain to me what you're doing, don't expect us to just pay endlessly.”
- “We have to have targets and they need to report their progress towards the targets, otherwise it isn't real. Don't just talk about zero.”
- “All businesses have a responsibility to reduce GHG. I don't know what they 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.”
- “Ideally I would prefer paying more, but production is down and we are living hand to mouth.”
- “We're committed to working on it (50% reduction).I've got a smart meter that tells me what each day costs me. It's hard to reduce enough. We've been planting trees. I'd like to know what they're doing – does it just go into their profit. It could just go into a black hole”

SOLAR FLEXIBILITY

Customer Value of Preventing Solar Restrictions

\$2.503M
277k MWh

Per MWh Value

\$9.04
Aggregate

\$9.38
Residential

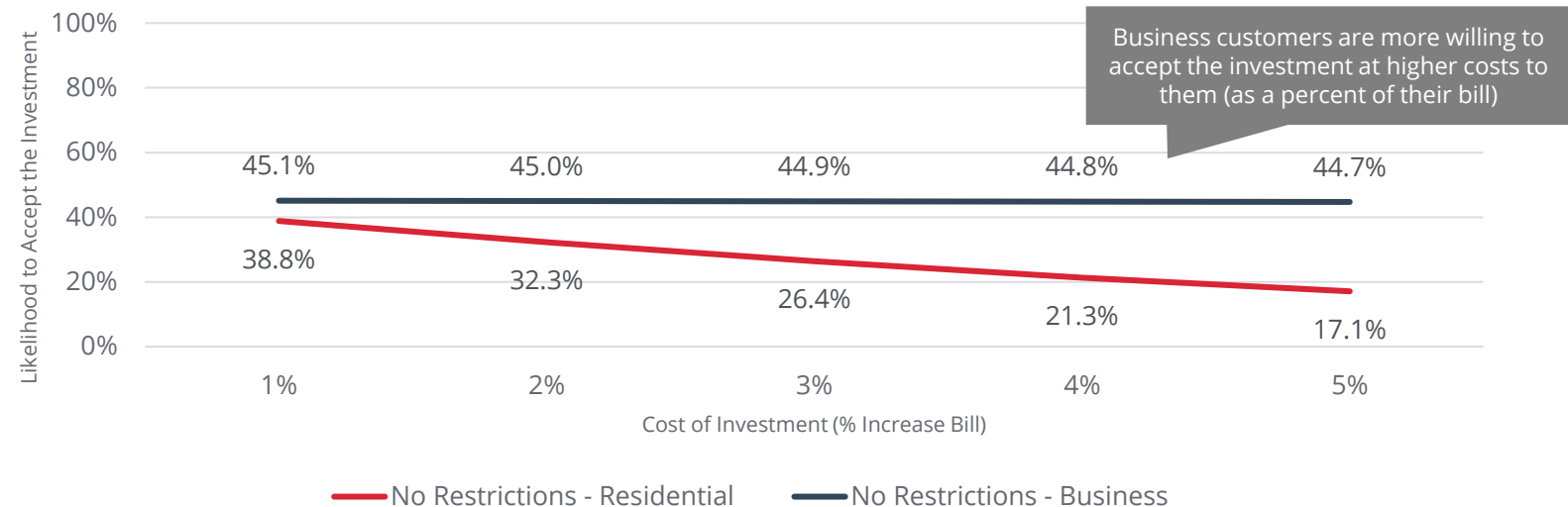
\$6.78
Business

The increase in solar rooftop panels has added the potential for congestion, reliability issues, and safety concerns as more customers feed electricity back into the grid beyond what the current infrastructure is designed to handle.

To mitigate risks, distribution businesses may need to put restrictions on solar exports (total amount exported or timing of export) or invest in improving the infrastructure.

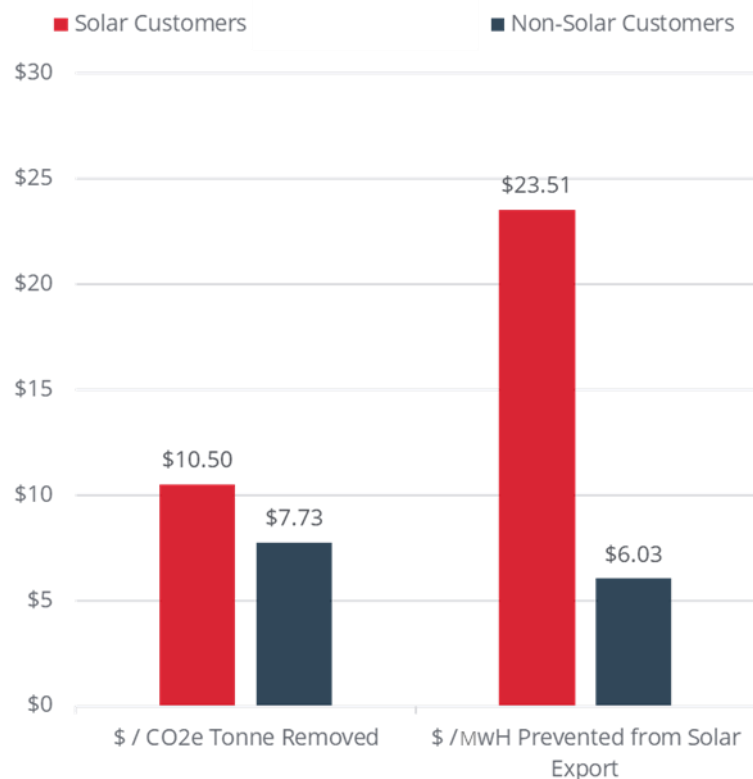
Survey respondents were asked how much they would value preventing the need for restrictions that would limit 10% or 20% of total solar exports

Likelihood to Accept by Level and Customer Type



SOLAR

Customers with solar panels on their residence or business are significantly more likely to value the reduction of CO2 emissions and the prevention of solar export restrictions



CO2 Emissions

- Customers have a very positive and increasing perception of solar energy, which they see as the best method of reducing greenhouse gas emissions
- Customers who value CO2e reduction most are naturally more likely to install solar panels to achieve the outcome
- Non-solar customers are still likely to support this outcome because it is a 'universal benefit'

Solar Flexibility

- Non-solar customers are less likely to support solar export flexibility because they do not realise the same financial benefits as solar customers
- There is a misconception that solar customers are wealthier and receive significant financial benefit from panels, which led some to a view that solar customers should be responsible for funding infrastructure improvements or manage restrictions
- Non-solar customers had lower awareness and understanding of the future issues, while solar customers were more likely to offer investment solutions like batteries to make solar more accessible

This reflects both a desire on the part of solar customers to realise a return on the financial and emotional investment they have made to solar.

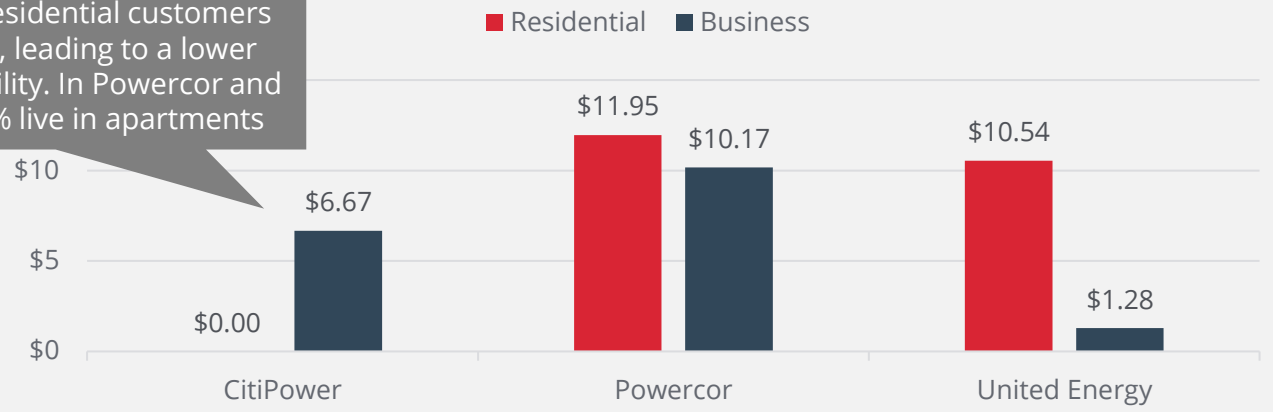
There was a sense of "solar envy" amongst some customers who are unable to install solar panels due to cost or the fact they live in apartments. This fault line was very apparent in residential customer focus groups where non-solar customers typically overestimated the net wealth of solar customers as well as the financial benefits derived from exporting solar electricity

THE VALUE OF PREVENTING THE NEED FOR SOLAR EXPORT RESTRICTIONS

\$9.04

Customer Value of Preventing Solar Export Restrictions (per MWh)

45% of CitiPower residential customers live in apartments, leading to a lower value of solar flexibility. In Powercor and United Energy, 10% live in apartments



Supporting Customer Insights

- Customers have a very positive and increasing perception of solar, but there was a low awareness and understanding of solar consequences. “Restricting solar” was seen as more of a threat to customers than a consequence of the infrastructure
- Residential customers were more interested in looking at solutions to increase solar exports available rather than manage their usage: “I want power when I want it; just upgrade the network or add batteries”
- More business customers were aware of the strain that solar was putting on the network; one referred to the “tsunami” of solar
- Most business customers expect technology improvements will make solar capability enhancements easier, so they feel that investment doesn’t need to be linear with increasing load
- They also mentioned batteries, community grids, and the high need for more education on the issues to avoid rumours

Agree more with:		Agree more with:	
Prefer to export whenever you want	Agree equally with both statements	Prefer to have complete control over how electricity is used	Agree equally with both statements
19%	50%	31%	46%
		Lowest cost of electricity is most important	Lowest cost of electricity is most important
		31%	23%
All Victorians should share funding responsibility	Agree equally with both statements	Individuals who receive most benefits should fund	
21%	51%	28%	

COMMUNICATION – SELF SERVICE

The distribution business has a key role in communicating with customers, providing information through a variety of channels (SMS, website, phone line, post, email, online, in-person).

Some of these communication channels are more time consuming or take more effort for customers.

Survey respondents were asked how much they would value if 50% or 100% of current phone calls could be self-service (or a less timely or intensive channel)

Customer Value of **Time Saving** Communication

\$914K

1.9M customers

Per
Customer
Value

\$0.47

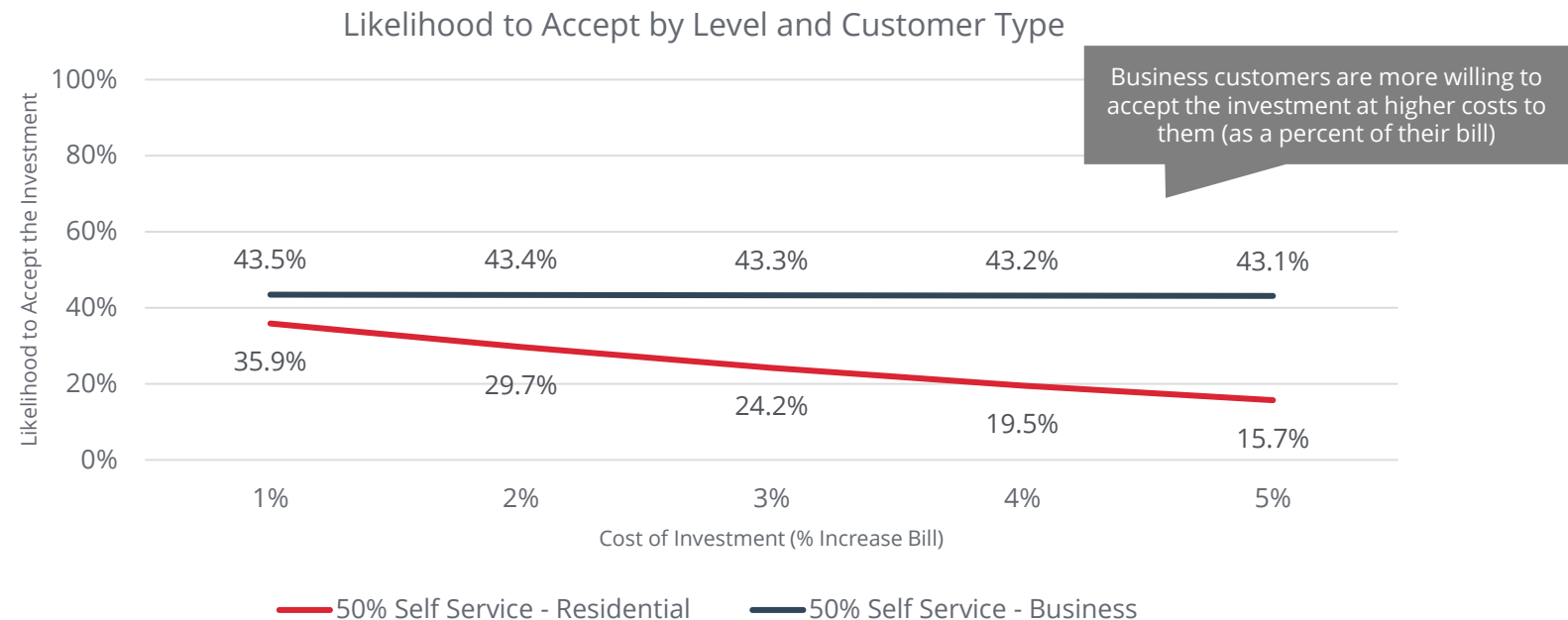
Aggregate

\$0.49

Residential

\$0.37

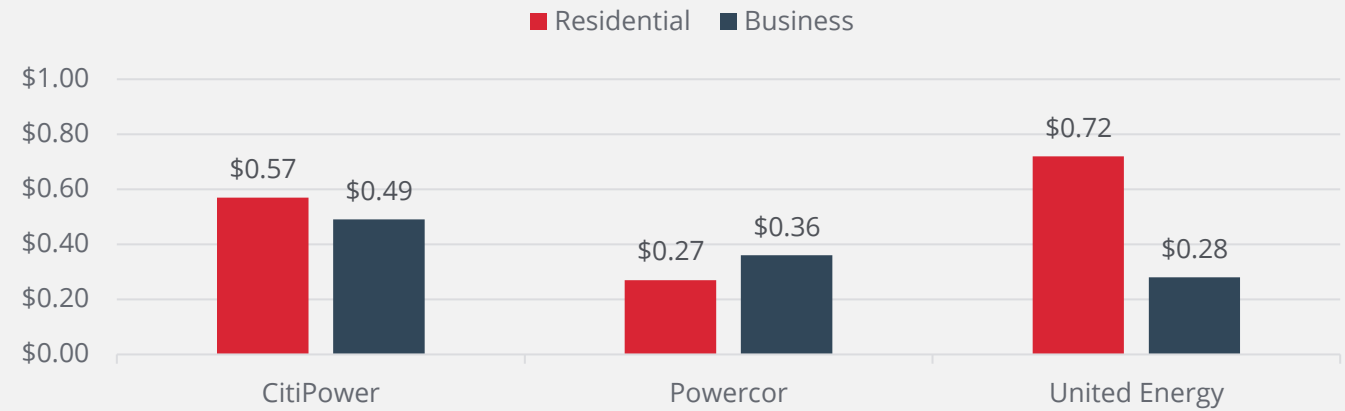
Business



THE VALUE OF FAST AND EASY COMMUNICATION

\$0.47

Customer Value of **Time Saving**
Communication (per customer)



Supporting Customer Insights

- Customers felt that their day-to-day communication needs are being met, but they identified a gap in communication regarding specific investments the distribution business is making
- Residential and business customers would pay for this visibility, and they acknowledged it would likely increase their willingness to pay in other areas, especially around environment and resilience
- Most business customers had positive comments around communication and felt it was easy to get necessary information
- SMS was generally considered the best way of notification, with some suggesting the SMS should go to multiple recipients
- Some business customers expressed the importance of more accurate information about outage duration: "I would prefer them to be 95% correct rather than being 100% and cautious so I can make my decisions faster"

Agree more with:

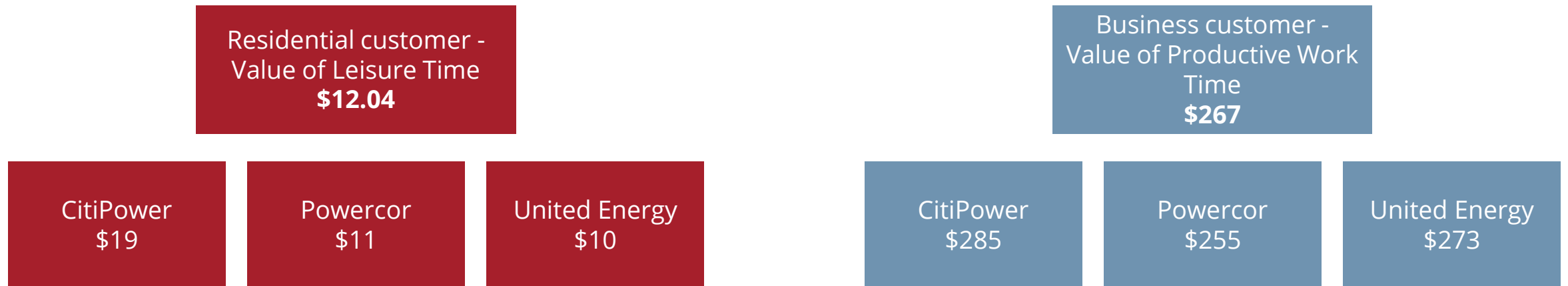
DB should invest in improving accuracy of restoration estimates	Agree equally with both statements	Agree more with: Lowest cost of electricity is most important
29%	48%	24%
DB should invest in reducing time and effort needed to find info	Agree equally with both statements	Lowest cost of electricity is most important
20%	52%	28%
I would be willing to pay more if I had more transparency	Agree equally with both statements	Individuals who receive most benefits should fund
15%	52%	34%

Customer Value of Time

An alternative method for quantifying the value customers place on supply and service improvements involves measuring the value they place on their leisure time. This method is used by Regulators including OFCOM in the UK.

The approach involves asking customers how much they would pay for an additional hour of leisure (in the case of residential customers) and how much they would pay for an additional productive hour (in the case of businesses).

The results provided below:



\$12 hourly translates to **\$480** weekly. The average Victorian earns **\$1,100** weekly

\$267 hourly translates to **\$535k** over 50 working weeks. The average business turnover in Australia is **\$908k** annually¹

1. Derived via ABS turnover distribution data

INFORMATION ACCESSIBILITY

Customer Value of **Access to Information**

\$495K

1.9M customers

Per Customer Value

\$0.26

Aggregate

\$0.12

Residential

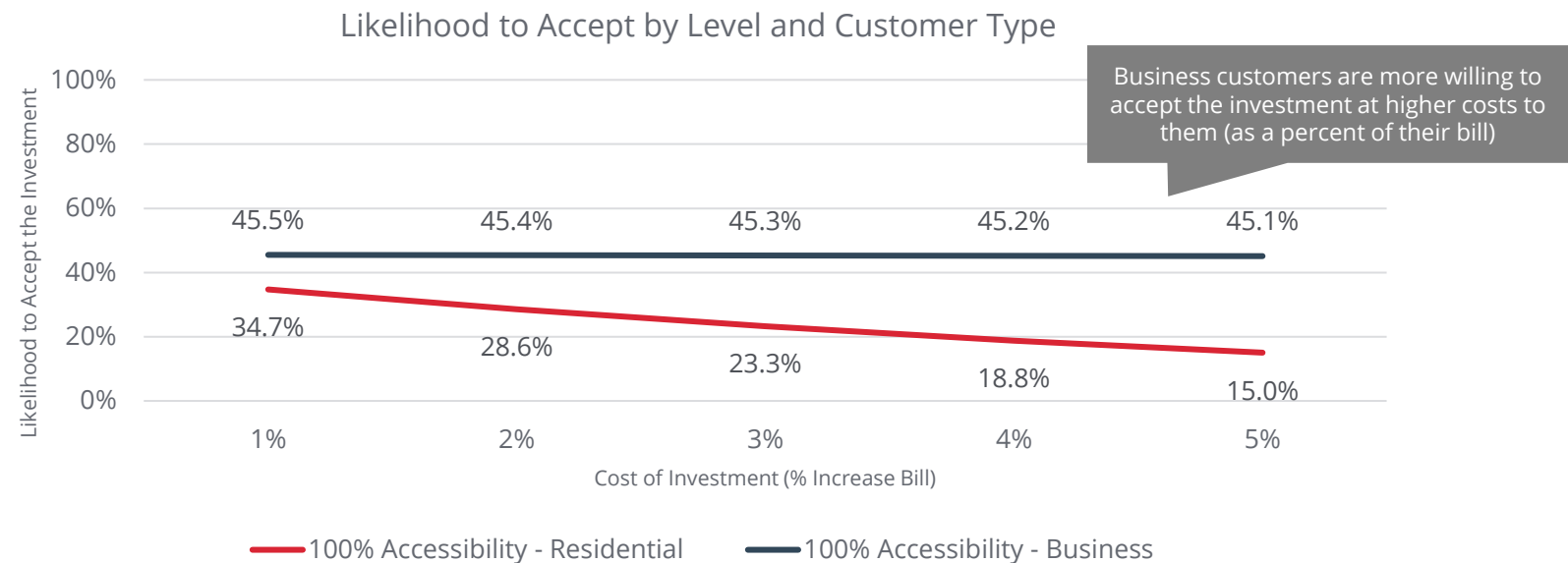
\$1.15

Business

Digital tools and channels can provide an opportunity to streamline communication and make it easier for customers to engage with the distribution business for more information. They provide a single, central, personalisable, and on-demand source of information.

Potential topics for digital tools include: outages, upgrades, performance, other investments

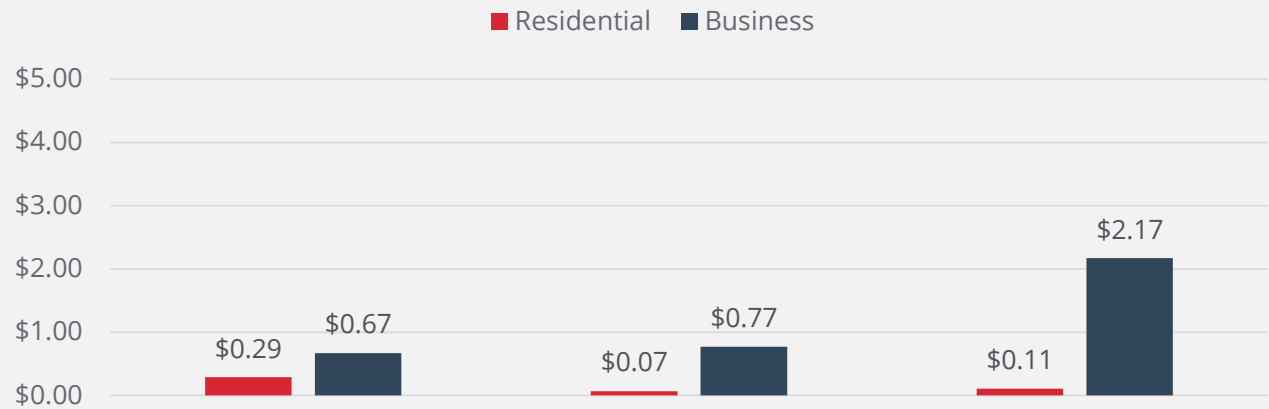
Survey respondents were asked how much they would value if 100% of relevant information is accessible on-demand and personalised via the digital customer channel of choice



THE VALUE OF HAVING ACCESS TO RELEVANT INFORMATION

\$0.26

Value of having access to relevant information
(per customer)



Supporting Customer Insights

- The majority of residential and business customers felt that the current communication channels are sufficient for their needs
- With the exception of outage information (which is being successfully communicated through SMS and website), most customers were not making significant or recurring decisions based on data from their distribution business
- There were some use-cases where customers may find digital tools helpful (e.g., reporting safety issue), but the use-cases were rare or highly individualised so customers felt they were a lower priority

Agree more with:

DB should invest in improving accuracy of restoration estimates	Agree equally with both statements	Agree more with: Lowest cost of electricity is most important
24%	51%	25%
DB should invest in reducing time and effort needed to find info	Agree equally with both statements	Lowest cost of electricity is most important
26%	45%	30%
I would be willing to pay more if I had more transparency	Agree equally with both statements	Individuals who receive most benefits should fund
26%	49%	25%

DEMOGRAPHIC DRIVERS

Considered details

Residential

- Concession pricing
- Dwelling type
- Have a pool
- Number of people in residence
- Someone relies on life-saving equipment

Business

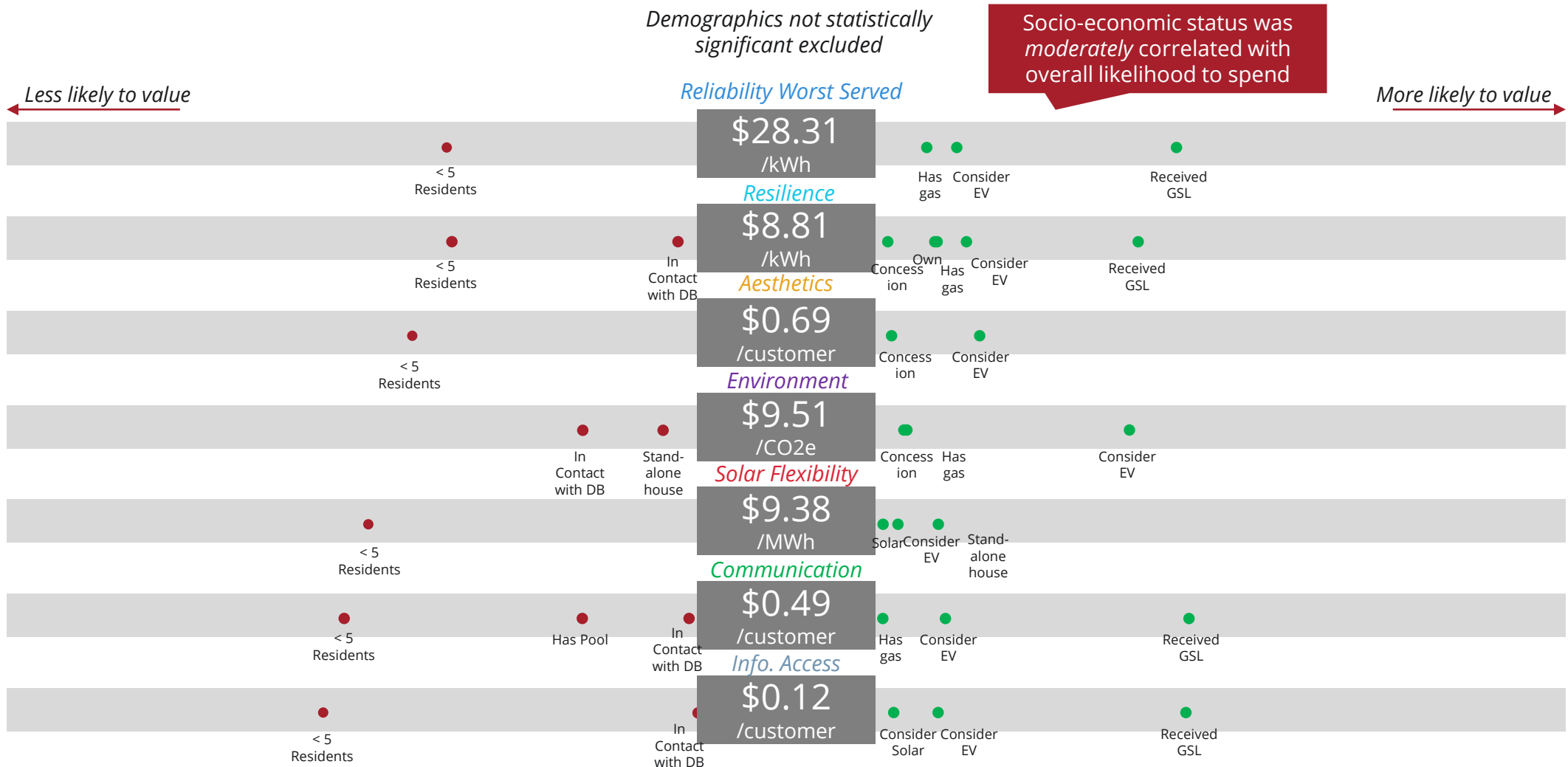
- Annual turnover
- Industry
- Number of employees
- Presence of battery + considering battery

Both

- Considering EV
- Considering solar panels
- Contact with distribution business
- Use gas at residence / business
- Own electric vehicle
- Own location
- Socio-economic status
- Solar panels
- Received GSL payment

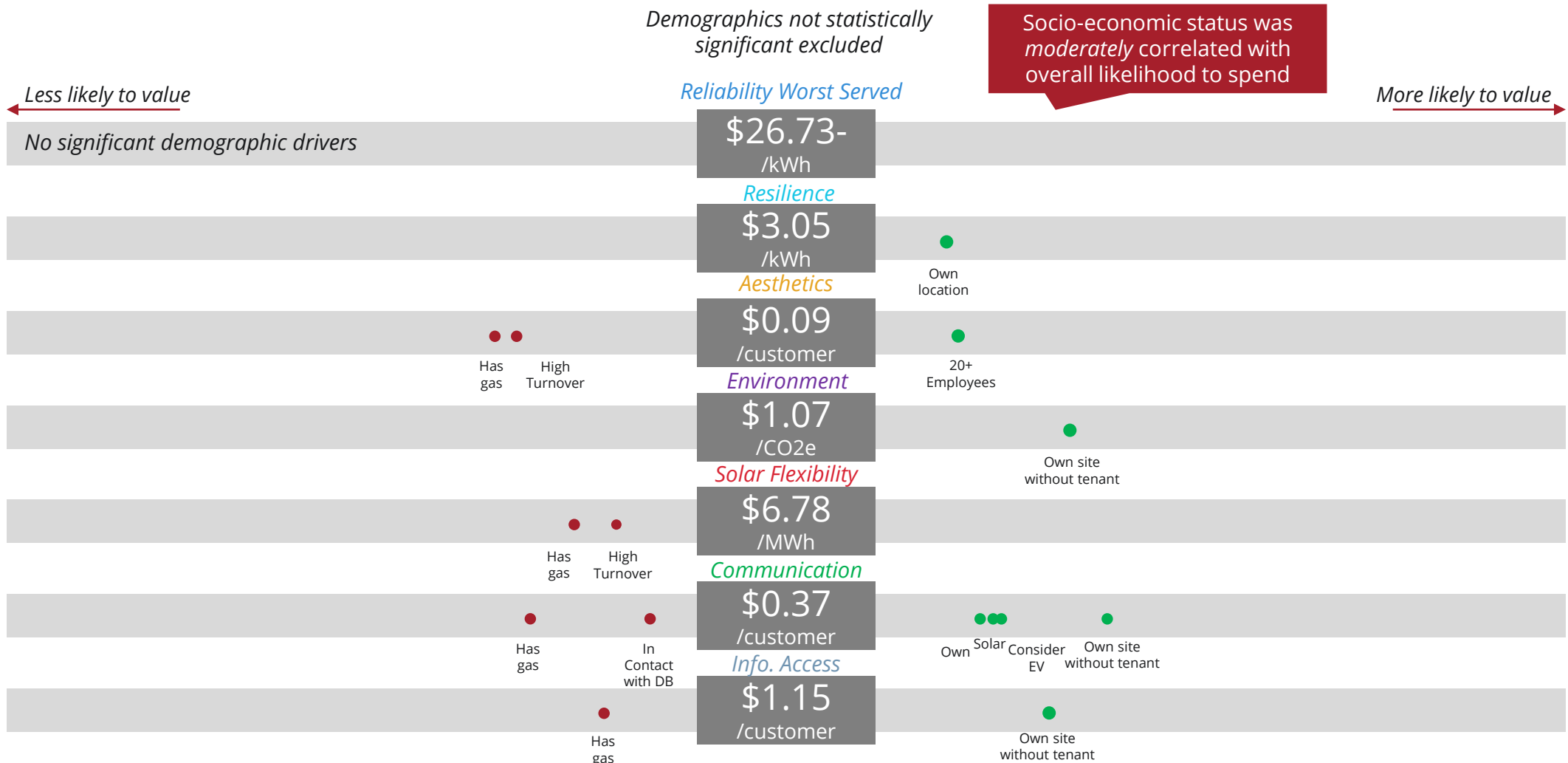
RESIDENTIAL DEMOGRAPHIC DRIVERS

Residential customers have a variety of influencing demographic drivers, including use of gas, size of residence, and GSL



BUSINESS DEMOGRAPHIC DRIVERS

Business customers are less driven by differences in demographic drivers





Appendix

DETAILED METHODOLOGY

Scope of project phase

Research was conducted from mid-August to late November. While published business confidence data shows a significant uptick in business confidence during November following the lifting of the Covid lockdown, business customers stated that serial lockdowns had undermined the financial resilience of their businesses and even their innate sense of optimism. As a consequence, willingness to pay amongst business customers may have been understated in research due to timing. Residential customers reported feeling a heightened sense of community connectedness following their Covid lockdown experience.

01

- Customers completed a 20-min online questionnaire; they received information about the various propositions and were asked to answer questions about their preferences for service improvements vs cost using Likert-scale top-2 box bi-modal analysis
- They were then asked to complete a choice model activity, where they were exposed to experimentally varied improvement packages and asked whether they would pay more to receive the improvements¹

02

- Customers were selected from the cohort of individuals who completed phase 1 to ensure they had sufficient context and were comfortable with the trade-off exercises
- There were two 1-hour Zoom focus groups for each DB's residential customers, and there were 1-hour Zoom interview for each business customer
- Topics varied slightly based on the nature of the conversation, but focused on
 - 1) Customer prioritisation of proposals,
 - 2) Impact of the proposal on the customer,
 - 3) Specific benefits, and
 - 4) Any other valuation drivers



Process to
select the most
important and
impactful
outcomes

03

- Customers completed a 20-min online questionnaire; they received information about each of the outcomes' current state and how investment in the area could impact outcomes
- Customers then completed a choice model activity, where they were exposed to experimentally varied improvement packages consistent with the outcomes and corresponding improvement levels they previously saw
- This survey took a similar approach to phase 1, but it focuses more on the specific outcomes rather than high-level propositions¹

1. The NTF Group utilised a number of modelling approaches, including hierarchical Bayesian and logistic regression to evaluate the impact of each service category improvement and price on the customers' likelihood to accept the package. Logistic regression models serve as a benchmark (and 'sense check'), while Bayesian models provide superior flexibility and predictive accuracy.

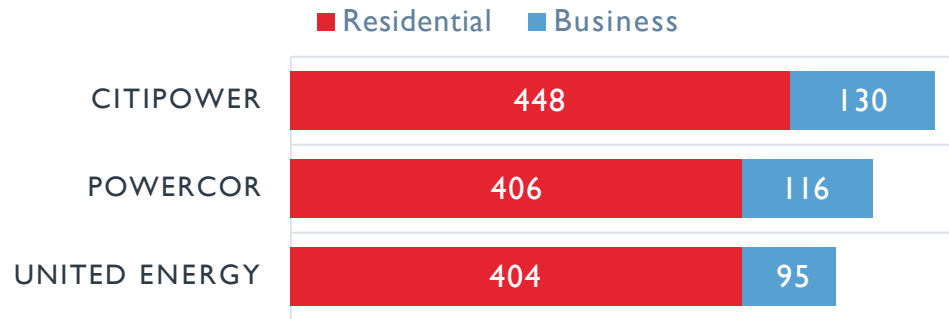
Appendix

Phase I

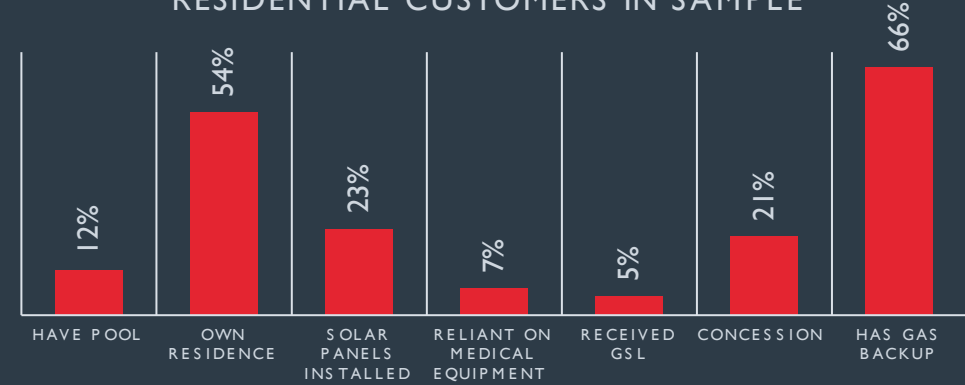
Phase 1 Sample Overview

Quarterly Electric Bill	% Res	% Bus
Less than \$100 quarterly	5%	3%
\$100 - \$250 quarterly	29%	12%
\$250 - \$500 quarterly	42%	26%
\$500 - \$750 quarterly	12%	27%
\$750 - \$1,000 quarterly	7%	18%
\$1,000+ quarterly	5%	14%

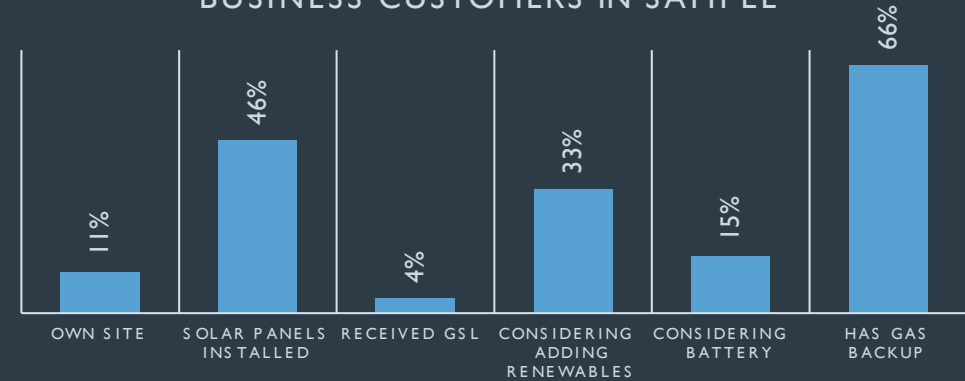
CUSTOMER SEGMENT



RESIDENTIAL CUSTOMERS IN SAMPLE



BUSINESS CUSTOMERS IN SAMPLE



As part of an industry best practice methodology, customers were asked whether they would be prepared to pay more for better network service; pay less for an inferior service or keep the same pricing and the same level of service.

A majority of CitiPower customers (51%) are prepared to pay more for a better network service.

CitiPower customers said they wanted better service in:

- 1. Increased reliability (53%)
- 2. More accessible information (18%)
- 3. Localised solutions (12%)

CitiPower customers value service improvements more than the other DBs

Preferences in service change by db

Desired Change in Service	Overall	CitiPower	Powercor	United Energy
Pay More for Better Service	35%	51%	28%	24%
Pay Same for Same Service	57%	44%	62%	66%
Pay Less for Worse Service	8%	5%	10%	10%

Research Methodology

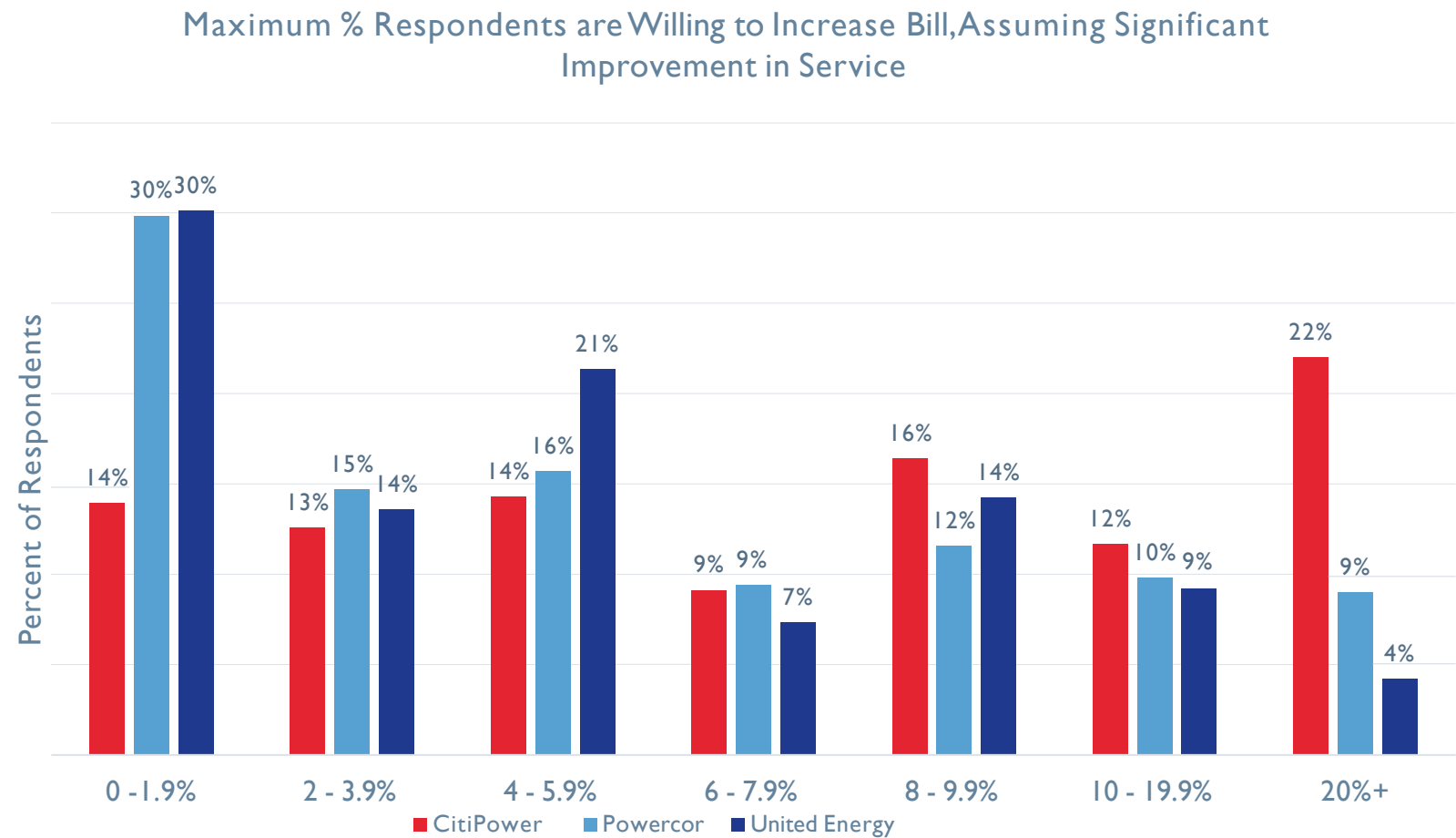
This research uses an industry best practice methodology combining contingency valuation (open ended question about how much more customers are willing to pay) with an experimental choice model, where customers choose whether or not they would be prepared to pay between 0.5% and 2.5% more on their electricity bill to receive an experimentally varied improvement package.

Customers were asked the maximum incremental amount they would be willing to pay on their electricity bill given significant improvements across the key research topics

The 35% of all customers who want to pay more for a better network service are willing to increase spend by 10%+ for significant improvement

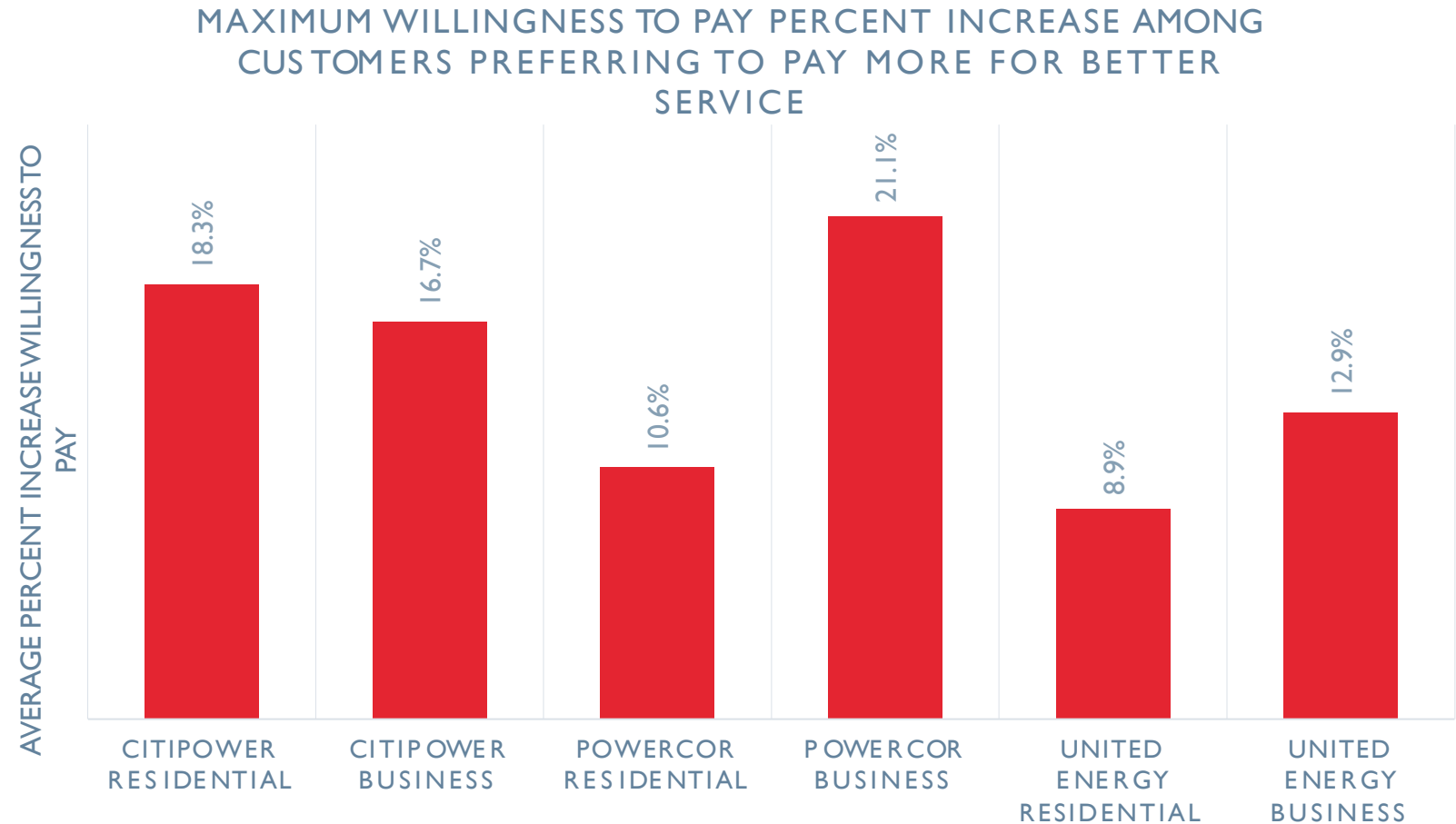
CitiPower customers are willing to pay more for service improvements than the other DBs

Despite major difference in desired change in service level, all DBs have similar (and high) customer satisfaction scores (~80%).



Customers were asked the maximum incremental amount they would be willing to pay on their electricity bill given significant improvements across the key research topics

This chart shows the maximum willingness to pay by DB and customer segment, derived by multiplying the proportion of customers willing to pay more for a better network service by the average percentage increase in price (expressed as the total cost of electricity, not just the distribution component).



*Using the same methodology as the AER's Value of Customer Reliability, choice modelling tasks we used to value the utility to customers of improvements in specific areas. The amount customers, on average, are prepared to pay for improvements in each of the eight areas tested are set out on the following slides.

These maximum customer willingness to pay calculations helps scale the valuation of specific customer outcomes within each proposition

Total Incremental Willingness to Pay



The maximum customer incremental willingness to pay for each customer cohort is a function of inputs specific to the customer type (residential vs business) and distribution business

1. Average bill is calculated based on survey participant responses. Business results are in-between external data source values (Energy Consumers Australia says average SME bill is ~\$5k. Australian Competition & Consumer Commission says median SME bill is ~\$2k)

Customer Cohort	Avg. Annual Bill ¹	% Customers Willing to Pay More	Maximum WTP From Customers Willing to Pay More	Total Incremental Willingness to Pay by Customer (\$)	Total Incremental Willingness to Pay by Customer (%)
CitiPower Residential	\$1,650	54.2%	18.3%	\$164	9.9%
CitiPower Business	\$3,458	40.0%	16.7%	\$231	6.7%
Powercor Residential	\$1,284	22.4%	10.6%	\$30	2.4%
Powercor Business	\$3,106	46.6%	21.1%	\$306	9.8%
Untied Energy Residential	\$1,324	20.0%	8.9%	\$23	1.8%
United Energy Business	\$2,831	41.4%	13.3%	\$155	5.5%

Maximum Potential Incremental Revenue Per Customer:
\$164

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



CITIPOWER RES

*Holding price equal to 2% growth

This table shows, on average, CitiPower residential customers are prepared to pay, on average, \$33 for significant improvements in environment outcomes

CitiPower Residential Customers

#	All Customers	Concession	Solar
1	Environment	Bushfire*	Communication
2	Reliability	Environment	Reliability
3	Bushfire	Safety	Energy Flexibility
4	Safety	Aesthetic	Bushfire
5	Aesthetic	Communication	Safety

**Strongest view across all CitiPower segments*

Key Demographic Differences Include:

- Customers in contact with their DB within the last year are 11% less likely to support investment, on average
- Customers with the lowest spend on electricity want the most investment in the network
- Younger customers were more willing to support investment in the network
- Customers who are very dissatisfied with the network want less investment
- Customers who: did not have a pool, are reliant on medical equipment, are on concession pricing, use gas and electricity are all over-indexed on preference for more investment in the network
- Most differences were based in overall desire for investment, and not about specific attributes

CitiPower Residential (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	My community can develop local electricity generation sources	33%	43%	24%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any maximum limit	18%	51%	31%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any time restrictions	18%	50%	32%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	38%	30%	32%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	31%	40%	29%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	17%	45%	39%	Lowest cost of electricity is all that matters to me
Safety	Reduce the risk of community access to network assets	41%	34%	25%	Lowest cost of electricity is all that matters to me
	Employee field worker safety around electrical assets	33%	46%	21%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	22%	48%	31%	Lowest cost of electricity is all that matters to me
Reliability	Increase reliability in my area	40%	33%	27%	Lowest cost of electricity is all that matters to me
	Increase reliability in areas that experience the most electricity outages	30%	47%	24%	Lowest cost of electricity is all that matters to me
	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	18%	49%	33%	Lowest cost of electricity is all that matters to me

CitiPower Residential (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Reducing the amount of greenhouse gases that it produces	47%	26%	27%	Lowest cost of electricity is all that matters to me
	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	36%	42%	21%	Lowest cost of electricity is all that matters to me
	Accommodate large renewable generation such as wind and solar farms	28%	43%	29%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	23%	47%	30%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	23%	46%	31%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	19%	43%	39%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	47%	25%	28%	Lowest cost of electricity is all that matters to me
Communication	Improving accuracy of restoration time estimates after outages	35%	36%	29%	Lowest cost of electricity is all that matters to me
	Improving the timeliness of information provided	29%	47%	24%	Lowest cost of electricity is all that matters to me
	Personalised information specific to my situation	17%	52%	31%	Lowest cost of electricity is all that matters to me
	Delivering services and projects as fast as possible	14%	55%	31%	Lowest cost of electricity is all that matters to me
	Reducing the time and effort for me to find information	13%	56%	31%	Lowest cost of electricity is all that matters to me
	Recognising my business needs	-	-	-	Lowest cost of electricity is all that matters to me
Info. Access	Digital tools to make it easier for me to find information	17%	45%	38%	Lowest cost of electricity is all that matters to me

Maximum Potential Incremental Revenue Per Customer:
\$231

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



CITIPOWER BUS

*Holding price equal to 2% growth

This table shows, on average, CitiPower business customers are prepared to pay, on average, \$50 for significant improvements in reliability outcomes

CitiPower Business Customers

#	All Customers	Solar
1	Reliability	Bushfire
2	Bushfire	Reliability
3	Environment	Environment
4	Aesthetic	Communications
5	Safety	Energy Flexibility

Key Demographic Differences Include:

- Customers in contact with their DB within the last 6 months are 19% less likely to support investment, on average
- Customers with the lowest spend on electricity want the most investment in the network
- Customers with solar panels have more of a preference for communication investment
- Customers who own their sites are significantly less likely to support investment in aesthetics and safety
- Customers who received a GSL payment are less likely to support investment, the exception is with reliability
- Customers who are non-employed or employee few people would prefer more investment
- Customers with low turnover and batteries are less likely to support investment in flexibility
- Customers in the construction, cultural, and government industry want more investment; those in finance and agriculture do not

CitiPower Business (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	My community can develop local electricity generation sources	33%	42%	25%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any time restrictions	28%	47%	25%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any maximum limit	28%	54%	18%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	37%	41%	22%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	28%	42%	31%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	24%	51%	25%	Lowest cost of electricity is all that matters to me
Safety	Reduce the risk of community access to network assets	41%	35%	25%	Lowest cost of electricity is all that matters to me
	Employee field worker safety around electrical assets	36%	45%	19%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	32%	51%	18%	Lowest cost of electricity is all that matters to me
Reliability	Increase reliability in areas that experience the most electricity outages	28%	47%	25%	Lowest cost of electricity is all that matters to me
	Increase reliability in my area	27%	44%	29%	Lowest cost of electricity is all that matters to me
	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	22%	47%	32%	Lowest cost of electricity is all that matters to me

CitiPower Business (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Reducing the amount of greenhouse gases that it produces	38%	37%	25%	Lowest cost of electricity is all that matters to me
	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	38%	42%	20%	Lowest cost of electricity is all that matters to me
	Accommodate large renewable generation such as wind and solar farms	32%	48%	19%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	29%	47%	24%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	28%	48%	25%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	24%	50%	26%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	42%	39%	19%	Lowest cost of electricity is all that matters to me
	Improving accuracy of restoration time estimates after outages	32%	39%	28%	Lowest cost of electricity is all that matters to me
Communication	Recognising my business needs	28%	42%	30%	Lowest cost of electricity is all that matters to me
	Improving the timeliness of information provided	24%	51%	25%	Lowest cost of electricity is all that matters to me
	Reducing the time and effort for me to find information	24%	48%	28%	Lowest cost of electricity is all that matters to me
	Personalised information specific to my situation	19%	53%	28%	Lowest cost of electricity is all that matters to me
	Delivering services and projects as fast as possible	17%	60%	23%	Lowest cost of electricity is all that matters to me
Info. Access	Digital tools to make it easier for me to find information	27%	47%	26%	Lowest cost of electricity is all that matters to me

Maximum Potential Incremental Revenue Per Customer:
\$30

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



POWERCOR RES

*Holding price equal to 2% growth

This table shows, on average, Powercor residential customers are prepared to pay, on average, \$8 for significant improvements in bushfire outcomes

Powercor Residential Customers

#	All Customers	Concession	Solar
1	Bushfire	Bushfire*	Bushfire
2	Reliability	Reliability	Environment
3	Environment	Safety	Reliability
4	Safety	Environment	Safety
5	Energy Flexibility	Aesthetic	Energy Flexibility

**Strongest view across all Powercor segments*

Key Demographic Differences Include:

- Customers in contact with their DB within the last year are 12% less likely to support investment, on average
- Customers with the lowest spend on electricity want the most investment in the network
- Younger customers were more willing to support investment in the network overall; 70+ year old customers want high investment in safety and bushfire risk
- Customers with solar panels were significantly more likely to support investment in flexibility; this was not the case for CitiPower
- Smaller families, customers with pools, customers with solar panels, customers who own their residence, customers on concession pricing, customers who received a GSL payment, and those with gas all prefer more investment in the network; the exception is aesthetics, which has low desire for investment across all demographics

Powercor Residential (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	Export excess electricity without any time restrictions	30%	47%	23%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any maximum limit	30%	47%	23%	Lowest cost of electricity is all that matters to me
	My community can develop local electricity generation sources	28%	54%	19%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	23%	51%	26%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	19%	48%	34%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	18%	46%	36%	Lowest cost of electricity is all that matters to me
Safety	Reduce the risk of community access to network assets	34%	49%	18%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	33%	48%	19%	Lowest cost of electricity is all that matters to me
	Employee field worker safety around electrical assets	33%	51%	17%	Lowest cost of electricity is all that matters to me
Reliability	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	36%	47%	17%	Lowest cost of electricity is all that matters to me
	Increase reliability in areas that experience the most electricity outages	34%	44%	22%	Lowest cost of electricity is all that matters to me
	Increase reliability in my area	25%	50%	25%	Lowest cost of electricity is all that matters to me

Powercor Residential (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Accommodate large renewable generation such as wind and solar farms	36%	45%	19%	Lowest cost of electricity is all that matters to me
	Reducing the amount of greenhouse gases that it produces	35%	46%	19%	Lowest cost of electricity is all that matters to me
	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	33%	49%	18%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	30%	49%	21%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	29%	48%	23%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	21%	52%	27%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	49%	38%	13%	Lowest cost of electricity is all that matters to me
	Improving accuracy of restoration time estimates after outages	24%	52%	24%	Lowest cost of electricity is all that matters to me
Communication	Improving the timeliness of information provided	22%	54%	24%	Lowest cost of electricity is all that matters to me
	Reducing the time and effort for me to find information	20%	55%	25%	Lowest cost of electricity is all that matters to me
	Delivering services and projects as fast as possible	20%	54%	26%	Lowest cost of electricity is all that matters to me
	Personalised information specific to my situation	19%	52%	29%	Lowest cost of electricity is all that matters to me
Info. Access	Recognising my business needs	-	-	-	Lowest cost of electricity is all that matters to me
	Digital tools to make it easier for me to find information	23%	54%	23%	Lowest cost of electricity is all that matters to me

Maximum Potential Incremental Revenue Per Customer:
\$306

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



*Holding price equal to 2% growth

This table shows, on average, Powercor business customers are prepared to pay, on average, \$82 for significant improvements in bushfire outcomes

Powercor Business Customers

#	All Customers	Solar
1	Bushfire	Bushfire
2	Reliability	Reliability
3	Communication	Communication
4	Safety	Energy Flexibility
5	Energy Flexibility	Environment

Key Demographic Differences Include:

- Customers in contact with their DB within the last month are 33% more likely to support investment, on average
- Customers with the lowest spend on electricity want the most investment in the network
- Customers with solar panels have more of a preference for investment
- Customers who own their own sites have a much stronger desire for investment in bushfire risk and digital tools
- Customers who received GSL, payments customers who do not have gas (especially digital tools), and customers with 200+ employees (especially safety) all want significantly more investment
- Customers who are dissatisfied have more of a preference for investment
- Customers in the government space are significantly less likely to support investment; those in finance, electricity, and agriculture are more likely to support investment

Powercor Business (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

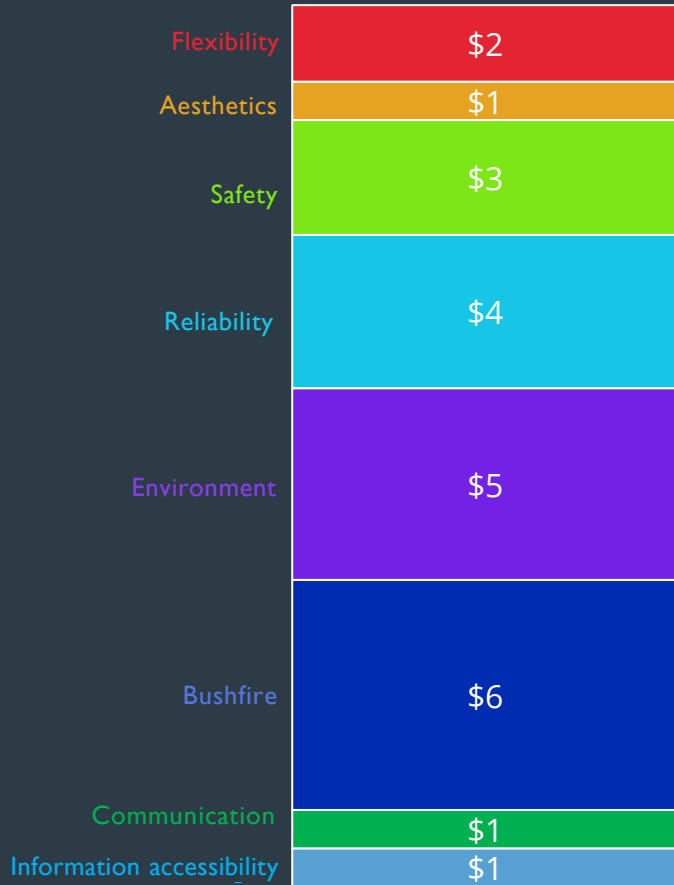
	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	Export excess electricity without any maximum limit	40%	38%	22%	Lowest cost of electricity is all that matters to me
	My community can develop local electricity generation sources	36%	46%	18%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any time restrictions	35%	44%	21%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	40%	38%	22%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	33%	38%	29%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	32%	39%	29%	Lowest cost of electricity is all that matters to me
Safety	Employee field worker safety around electrical assets	45%	34%	21%	Lowest cost of electricity is all that matters to me
	Reduce the risk of community access to network assets	42%	38%	20%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	36%	42%	22%	Lowest cost of electricity is all that matters to me
Reliability	Increase reliability in my area	36%	38%	26%	Lowest cost of electricity is all that matters to me
	Increase reliability in areas that experience the most electricity outages	35%	42%	22%	Lowest cost of electricity is all that matters to me
	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	34%	45%	22%	Lowest cost of electricity is all that matters to me

Powercor Business (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	45%	37%	18%	Lowest cost of electricity is all that matters to me
	Reducing the amount of greenhouse gases that it produces	41%	39%	20%	Lowest cost of electricity is all that matters to me
	Accommodate large renewable generation such as wind and solar farms	38%	37%	25%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	34%	39%	27%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	34%	47%	20%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	29%	47%	24%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	49%	32%	19%	Lowest cost of electricity is all that matters to me
	Improving accuracy of restoration time estimates after outages	38%	41%	21%	Lowest cost of electricity is all that matters to me
Communication	Reducing the time and effort for me to find information	30%	42%	28%	Lowest cost of electricity is all that matters to me
	Improving the timeliness of information provided	29%	45%	26%	Lowest cost of electricity is all that matters to me
	Recognising my business needs	28%	50%	22%	Lowest cost of electricity is all that matters to me
	Personalised information specific to my situation	27%	46%	28%	Lowest cost of electricity is all that matters to me
Info. Access	Delivering services and projects as fast as possible	27%	46%	28%	Lowest cost of electricity is all that matters to me
	Digital tools to make it easier for me to find information	29%	40%	31%	Lowest cost of electricity is all that matters to me

Maximum Potential Incremental Revenue Per Customer:
\$23

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



UNITED ENERGY RES

*Holding price equal to 2% growth

This table shows, on average, United Energy residential customers are prepared to pay, on average, \$6 for significant improvements in bushfire outcomes

United Energy Residential Customers

#	All Customers	Concession	Solar
1	Bushfire	Bushfire*	Bushfire
2	Environment	Environment	Environment
3	Reliability	Reliability	Safety
4	Safety	Safety	Reliability
5	Energy Flexibility	Energy Flexibility	Energy Flexibility

**Strongest view across all United Energy segments*

Key Demographic Differences Include:

- Customers not in contact with their DB (5+ years) are 8% less likely to support investment, on average
- Customers with the lowest spend on electricity want the most investment in the network
- Younger customers were over-indexed on supporting environmental investment; older customers would prefer the investment in bushfire and safety
- Customers with solar panels were significantly more likely to support investment in flexibility
- Customers who owned their own residence, who received GSL, and those who had concessions prices were the most likely to support investment. The preference for reliability was consistent across demographics, but interest in other investment areas was higher for these groups

United Energy Residential (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	My community can develop local electricity generation sources	33%	47%	20%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any time restrictions	31%	44%	25%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any maximum limit	29%	44%	27%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	31%	44%	25%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	19%	49%	32%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	16%	46%	38%	Lowest cost of electricity is all that matters to me
Safety	Reduce the risk of community access to network assets	36%	46%	18%	Lowest cost of electricity is all that matters to me
	Employee field worker safety around electrical assets	34%	50%	16%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	30%	48%	22%	Lowest cost of electricity is all that matters to me
Reliability	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	30%	50%	20%	Lowest cost of electricity is all that matters to me
	Increase reliability in areas that experience the most electricity outages	29%	49%	21%	Lowest cost of electricity is all that matters to me
	Increase reliability in my area	22%	56%	22%	Lowest cost of electricity is all that matters to me

United Energy Residential (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	40%	45%	15%	Lowest cost of electricity is all that matters to me
	Accommodate large renewable generation such as wind and solar farms	38%	47%	15%	Lowest cost of electricity is all that matters to me
	Reducing the amount of greenhouse gases that it produces	38%	46%	16%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	31%	50%	19%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	29%	49%	22%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	21%	53%	26%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	51%	36%	13%	Lowest cost of electricity is all that matters to me
Communication	Improving accuracy of restoration time estimates after outages	24%	54%	22%	Lowest cost of electricity is all that matters to me
	Improving the timeliness of information provided	22%	52%	26%	Lowest cost of electricity is all that matters to me
	Personalised information specific to my situation	18%	51%	30%	Lowest cost of electricity is all that matters to me
	Reducing the time and effort for me to find information	18%	57%	25%	Lowest cost of electricity is all that matters to me
	Delivering services and projects as fast as possible	18%	59%	23%	Lowest cost of electricity is all that matters to me
Info. Access	Recognising my business needs	-	-	-	Lowest cost of electricity is all that matters to me
	Digital tools to make it easier for me to find information	23%	52%	25%	Lowest cost of electricity is all that matters to me

Maximum Potential Incremental Revenue Per Customer:
\$155

PER CUSTOMER WILLINGNESS TO SPEND FOR SIGNIFICANT IMPROVEMENT



UNITED ENERGY BUS

*Holding price equal to 2% growth

This table shows, on average, United Energy business customers are prepared to pay, on average, \$34 for significant improvements in environment outcomes

United Energy Business Customers

#	All Customers	Solar
1	Environment	Environment
2	Digital Tools	Aesthetic
3	Reliability	Safety
4	Aesthetic	Digital Tools
5	Bushfire	Reliability

Key Demographic Differences Include:

- There were no major differences in investment preferences based on last contact
- Customers who own their site were significantly more likely to support investment, especially in safety and bushfire
- Customers who received GSL payments were less likely to support investment, especially in reliability, aesthetics, and communication
- Non-employing customers were more likely to support investment
- Mid-sized businesses (\$200k - \$2M turnover) were significantly less likely to support investment than other customers
- Customers in accommodation and agriculture supported more investment, those in transportation were significantly against most investment, except reliability and bushfire

United Energy Business (1 of 2)

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2). The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Flexibility	My community can develop local electricity generation sources	34%	45%	21%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any time restrictions	29%	49%	22%	Lowest cost of electricity is all that matters to me
	Export excess electricity without any maximum limit	27%	47%	27%	Lowest cost of electricity is all that matters to me
Aesthetics	Making assets blend into the environment	34%	44%	22%	Lowest cost of electricity is all that matters to me
	Interesting designs on assets (e.g., murals, local art)	29%	43%	28%	Lowest cost of electricity is all that matters to me
	Making assets completely hidden from view	23%	51%	26%	Lowest cost of electricity is all that matters to me
Safety	Employee field worker safety around electrical assets	35%	50%	15%	Lowest cost of electricity is all that matters to me
	Reduce the risk of community access to network assets	34%	42%	24%	Lowest cost of electricity is all that matters to me
	Promoting employee well-being and diversity	26%	49%	25%	Lowest cost of electricity is all that matters to me
Reliability	Increase reliability in areas that experience the most electricity outages	32%	49%	19%	Lowest cost of electricity is all that matters to me
	Increase reliability in my area	31%	47%	22%	Lowest cost of electricity is all that matters to me
	Reduce the likelihood of electricity outages occurring during low frequency but high impact events	30%	52%	18%	Lowest cost of electricity is all that matters to me

United Energy Business (2 of 2)

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Environment	Reducing the amount of greenhouse gases that it produces	36%	41%	23%	Lowest cost of electricity is all that matters to me
	Making it easier for customers to use and generate renewable energy (e.g., rooftop solar)	36%	41%	22%	Lowest cost of electricity is all that matters to me
	Enabling the transition towards zero-emission vehicles	29%	50%	21%	Lowest cost of electricity is all that matters to me
	Accommodate large renewable generation such as wind and solar farms	28%	48%	24%	Lowest cost of electricity is all that matters to me
	Environmental initiatives focused on community improvement other than reducing GHG	28%	49%	23%	Lowest cost of electricity is all that matters to me
Bushfire	Reducing the noise	28%	46%	27%	Lowest cost of electricity is all that matters to me
	Reducing bushfire risk	36%	41%	22%	Lowest cost of electricity is all that matters to me
Communication	Improving the timeliness of information provided	31%	42%	27%	Lowest cost of electricity is all that matters to me
	Improving accuracy of restoration time estimates after outages	29%	45%	26%	Lowest cost of electricity is all that matters to me
	Reducing the time and effort for me to find information	24%	54%	22%	Lowest cost of electricity is all that matters to me
	Recognising my business needs	23%	49%	28%	Lowest cost of electricity is all that matters to me
	Delivering services and projects as fast as possible	22%	54%	24%	Lowest cost of electricity is all that matters to me
Info. Access	Personalised information specific to my situation	20%	52%	28%	Lowest cost of electricity is all that matters to me
	Digital tools to make it easier for me to find information	27%	52%	22%	Lowest cost of electricity is all that matters to me

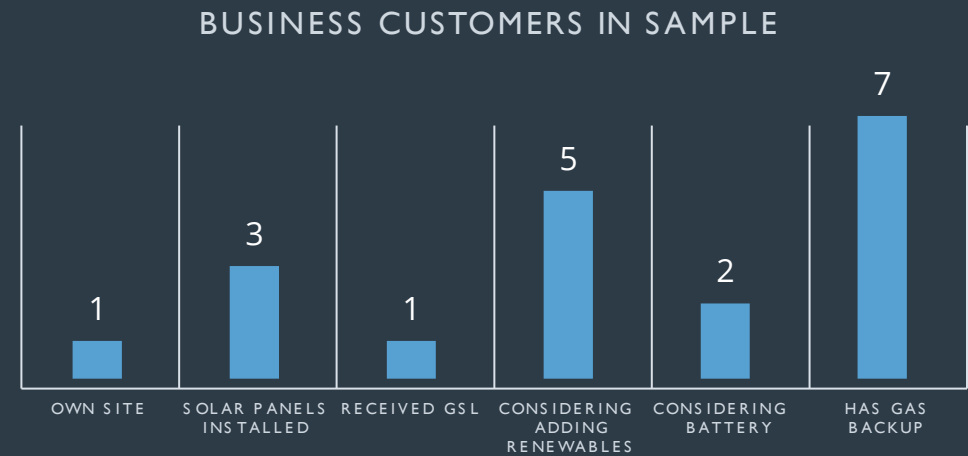
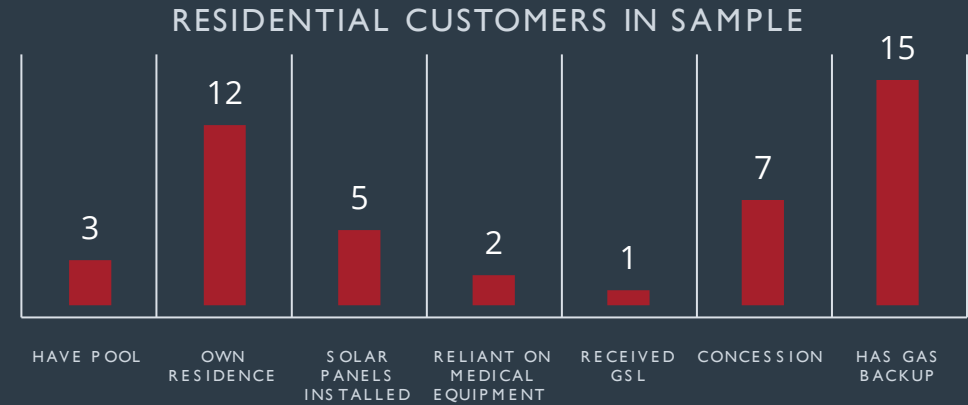
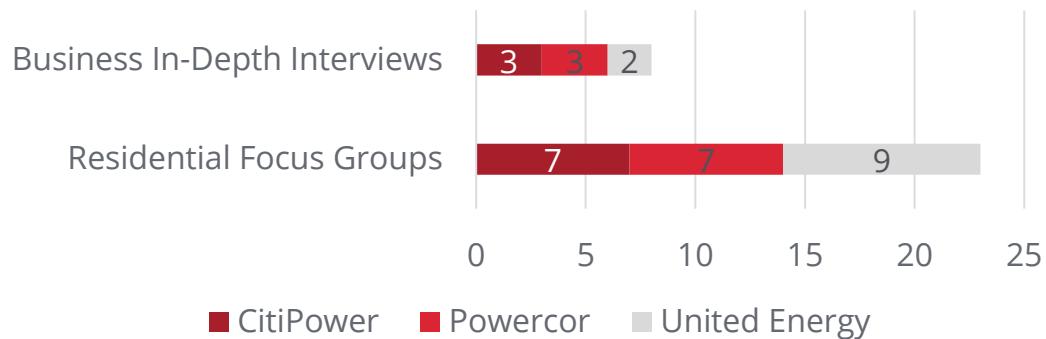
Appendix

Phase II

Phase 2 Sample Overview

Quarterly Electric Bill	# Res	# Bus
Less than \$100 quarterly	3	0
\$100 - \$250 quarterly	8	0
\$250 - \$500 quarterly	10	2
\$500 - \$750 quarterly	1	4
\$750 - \$1,000 quarterly	1	1
\$1,000+ quarterly	0	1

Total Respondents



Number of Employees

< 5	5 - 19	20 - 200	200+
1	3	2	1

Appendix

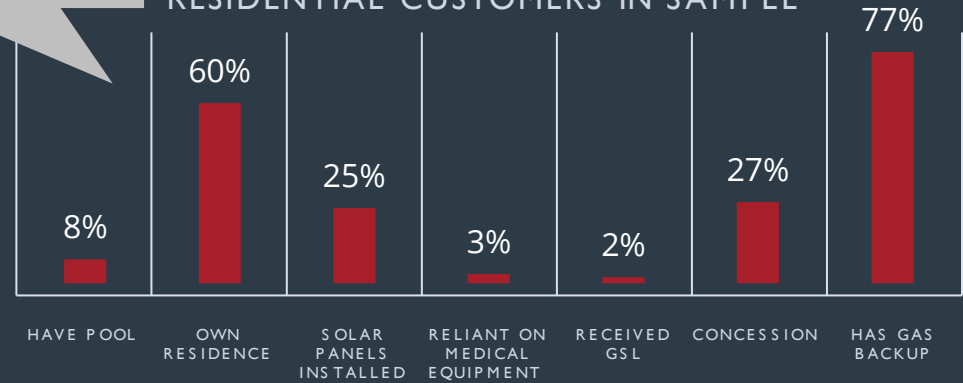
Phase III

Phase 3 Sample Overview

60% live in separate houses; 23% in apartment; 16% in townhouse

Quarterly Electric Bill	% Res	% Bus
Less than \$100 quarterly	13%	3%
\$100 - \$250 quarterly	28%	16%
\$250 - \$500 quarterly	44%	25%
\$500 - \$750 quarterly	9%	19%
\$750 - \$1,000 quarterly	3%	16%
\$1,000+ quarterly	3%	20%

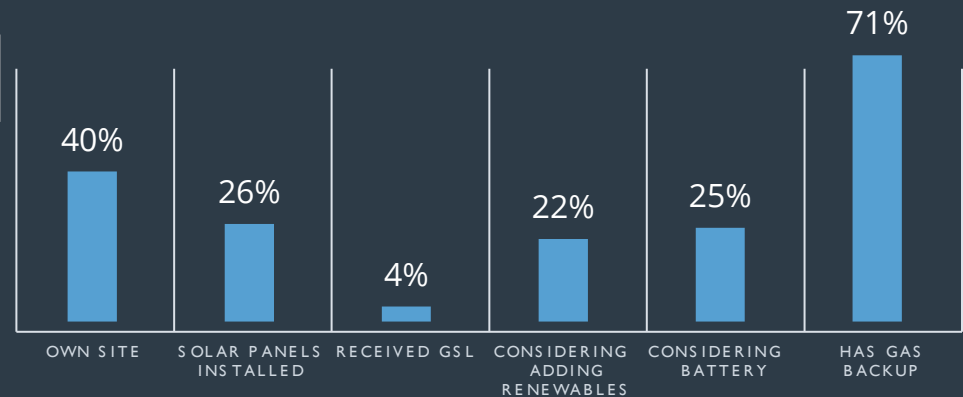
RESIDENTIAL CUSTOMERS IN SAMPLE



Number of Residents

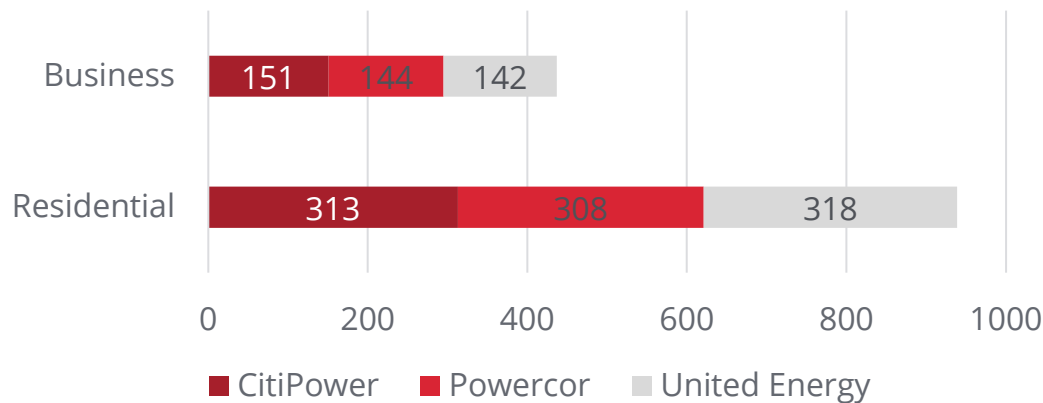
1	2	3 - 4	5+
24%	41%	30%	5%

BUSINESS CUSTOMERS IN SAMPLE



Total Respondents

22% of residential and business customers are considering EVs



Number of Employees

< 5	5 - 19	20 - 200	200+
20%	23%	33%	24%

As part of an industry best practice methodology, customers were asked whether they would be prepared to pay more for better network service; pay less for an inferior service or keep the same pricing and the same level of service.

Relative to phase I, CitiPower customers had preferences consistent with other distribution businesses. This is likely due to the fact that 'reliability in own area', a highly-prioritised outcome for this cohort, was not included in phase III testing

CitiPower customers value service improvements more than the other DBs

Preferences in service change by db

Desired Change in Service	Overall	CitiPower	Powercor	United Energy
Pay More for Better Service	30%	36%	28%	25%
Pay Same for Same Service	63%	58%	63%	69%
Pay Less for Worse Service	7%	6%	9%	6%

Research Methodology

This research uses an industry best practice methodology combining contingency valuation (open ended question about how much more customers are willing to pay) with an experimental choice model, where customers choose whether or not they would be prepared to pay between 1.0% and 5.0% more on their electricity bill to receive an experimentally varied improvement package.

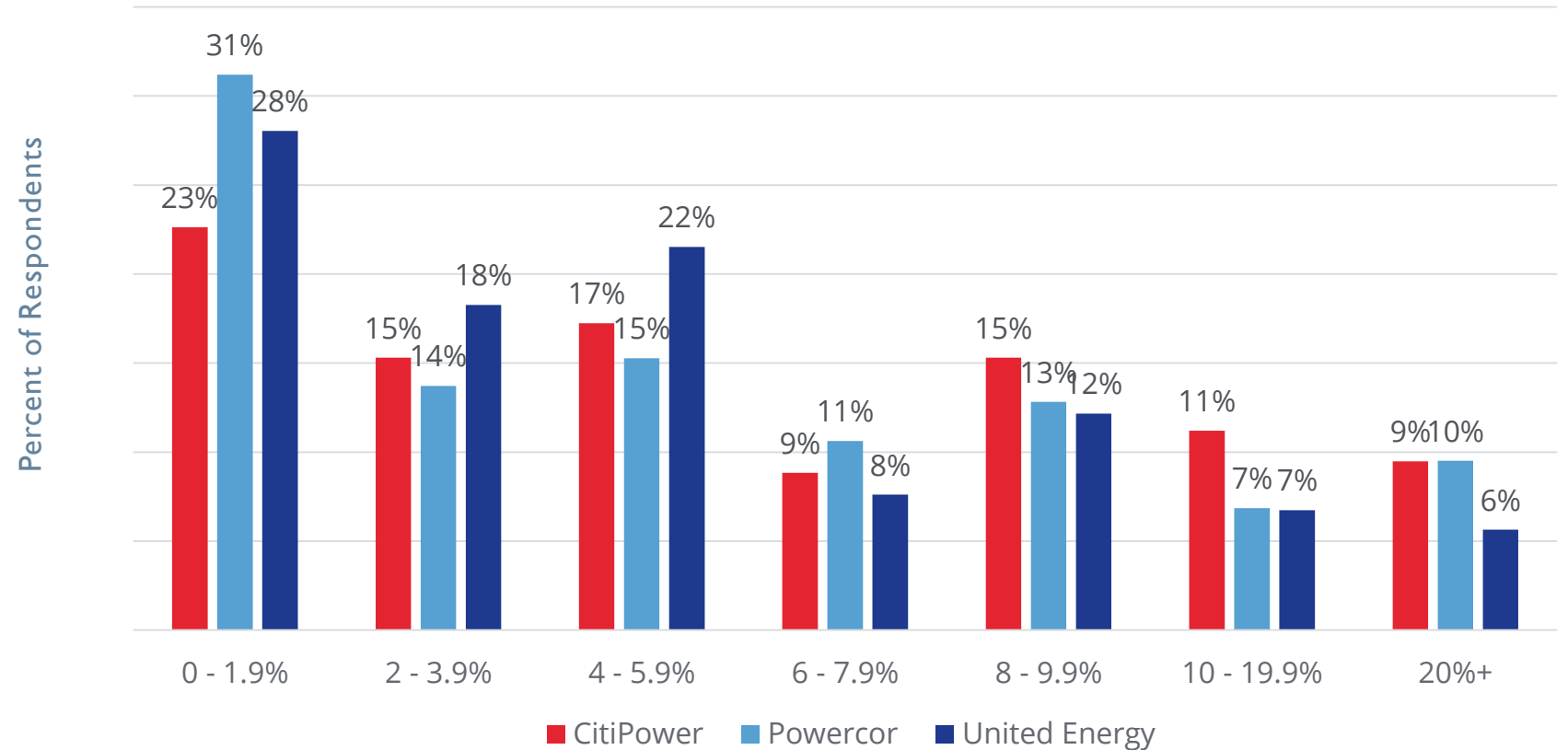
Customers were asked the maximum incremental amount they would be willing to pay on their electricity bill given significant improvements across the tested outcomes

Given the smaller scope of research outcomes, maximum willingness to pay is lower than phase I, as expected

CitiPower customers are willing to pay more for service improvements than the other DBs

Despite major difference in desired change in service level, all DBs have similar (and high) customer satisfaction scores (~80%).

Maximum % Respondents are Willing to Increase Bill, Assuming Significant Improvement in Service



An internal process was used to select the most important tangible customer outcomes to test by evaluating the customer valuation of the proposition and the existing gaps in business areas of need

Proposition	Tangible Customer Outcomes to Test
Customer Value of Flexibility	<p>Value of being able to export solar without restrictions¹ <i>Justification: No current measure, however, the AER is expected to review value of export curtailment in 2022. This provides a baseline given the low customer awareness in this area.</i></p>
Customer Value of Aesthetics	<p>Value of making a share of assets visually appealing <i>Justification: No current measures in use</i></p>
Customer Value of Safety	<p>No tangible customer outcomes to test <i>Justification: Out of scope; several measures currently in use include the statistical value of human life and lost time for injury</i></p>
Customer Value of Reliability	<p>1) Value of increasing reliability in worst-served areas <i>Justification: Current measure is the AER's value of customer reliability, but there is a gap of value relative to a customer's individual experience around being in a worst-served area</i></p> <p>2) Value of increasing network resilience <i>Justification: There is a gap in existing metrics of value relative to a customer's individual experience around low-frequency but high impact events. Given the changing climate, this was important for customers</i></p>

Proposition	Tangible Customer Outcomes to Test
Customer Value of Environment	<p>Value of reducing CO2 emissions <i>Justification: No current customer value measures, but this was a highly impactful proposition for customers</i></p>
Customer Value of Bushfire Risk	<p>No tangible customer outcomes to test <i>Justification: Out of scope; current measures in use include the statistical value of human life, the fire ignition risk unit rate in Victoria, and bushfire liability risk as an internal value</i></p>
Customer Value of Communication	<p>Value of saving time and effort when communicating <i>Justification: No current customer value measures; today average weekly earnings is a standard proxy</i></p>
Customer Value of information accessibility	<p>Value of having consistent access to relevant information with their preferred channel of choice <i>Justification: No current customer value measures</i></p>

Additionally, the approach allowed for a general value of time saving, separate from any particular proposition

1. Value of solar flexibility may be viewed separately from the rest of the model given that awareness of the issue is low, and it is the only attribute where current levels are optimal

CitiPower Residential

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliab.	It is important that DB invests more to increase reliability in areas the experience the most outages	27%	51%	22%	Lowest cost of electricity is all that matters to me
Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	34%	43%	23%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	23%	43%	35%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	42%	39%	20%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	17%	48%	35%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	28%	46%	26%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	26%	48%	26%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	19%	52%	28%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	14%	51%	35%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	23%	53%	24%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	27%	44%	28%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	28%	46%	26%	Lowest cost of electricity is all that matters to me

CitiPower Residential

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	24%	51%	25%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	25%	51%	24%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	34%	45%	21%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	21%	49%	30%	Individuals who receive the most benefit should own funding responsibility

CitiPower Business

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliab.	It is important that DB invests more to increase reliability in areas the experience the most outages	36%	38%	26%	Lowest cost of electricity is all that matters to me
Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	37%	36%	27%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	32%	31%	36%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	40%	32%	28%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	30%	41%	28%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	29%	40%	31%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	36%	35%	29%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	23%	46%	30%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	24%	47%	29%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	32%	43%	25%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	31%	39%	30%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	30%	39%	30%	Lowest cost of electricity is all that matters to me

CitiPower Business

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	29%	41%	30%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	25%	49%	26%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	30%	42%	28%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	28%	41%	31%	Individuals who receive the most benefit should own funding responsibility

Powercor Residential

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliab.	It is important that DB invests more to increase reliability in areas the experience the most outages	28%	51%	21%	Lowest cost of electricity is all that matters to me
Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	39%	44%	17%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	18%	51%	31%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	37%	44%	19%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	18%	55%	27%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	38%	48%	15%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	28%	53%	19%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	19%	56%	26%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	13%	53%	34%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	21%	54%	25%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	26%	46%	28%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	26%	54%	20%	Lowest cost of electricity is all that matters to me

Powercor Residential

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	30%	55%	15%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	36%	50%	14%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	34%	50%	15%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	21%	56%	22%	Individuals who receive the most benefit should own funding responsibility

Powercor Business

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliab.	It is important that DB invests more to increase reliability in areas the experience the most outages	28%	40%	32%	Lowest cost of electricity is all that matters to me
Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	34%	37%	29%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	26%	33%	41%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	32%	33%	35%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	26%	41%	33%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	21%	42%	37%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	30%	38%	33%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	24%	39%	38%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	17%	42%	41%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	27%	43%	30%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	22%	35%	42%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	24%	36%	40%	Lowest cost of electricity is all that matters to me

Powercor Business

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	19%	40%	40%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	20%	41%	39%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	25%	37%	38%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	21%	42%	37%	Individuals who receive the most benefit should own funding responsibility

United Energy Residential

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

The following questions are sorted by topic and agreement with statement 1

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliab.	It is important that DB invests more to increase reliability in areas the experience the most outages	25%	54%	21%	Lowest cost of electricity is all that matters to me
Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	36%	46%	17%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	19%	49%	32%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	38%	42%	20%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	13%	52%	35%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	35%	49%	16%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	27%	53%	19%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	20%	56%	24%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	11%	56%	34%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	22%	53%	25%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	24%	50%	26%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	24%	56%	20%	Lowest cost of electricity is all that matters to me

United Energy Residential

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	25%	60%	14%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	28%	57%	15%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	35%	47%	17%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	18%	57%	26%	Individuals who receive the most benefit should own funding responsibility

United Energy Business

Customers were asked to evaluate whether they prefer investment into a specific area (statement 1) or would prefer lower cost of electricity (statement 2).

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Resil.	It is important that DB invests to reduce likelihood of outages occurring during low-frequency weather events	28%	51%	21%	Lowest cost of electricity is all that matters to me
Aest.	It is important that DB invests in enhancing visual appearance of assets in the network	20%	51%	30%	Lowest cost of electricity is all that matters to me
Enviro	It is important that DB invests in reducing the greenhouse gas emissions	29%	45%	26%	Lowest cost of electricity is all that matters to me
Flexibility	I prefer to be able to use or export electricity whenever I want, even if it is more expensive	21%	54%	25%	Lowest cost of electricity is all that matters to me
	I prefer to have complete control over how electricity is used and managed in my home/business	23%	49%	28%	Lowest cost of electricity is all that matters to me
Communication	DB should invest in improving accuracy of restoration time estimates after outages	30%	49%	22%	Lowest cost of electricity is all that matters to me
	DB should invest in reducing the time and effort for me to find information	13%	57%	30%	Lowest cost of electricity is all that matters to me
	I would be willing to pay more for DB initiatives if I had transparency about goals, costs, and benefits	16%	54%	30%	Lowest cost of electricity is all that matters to me
Digital Tools	It is important that DB invests in providing me with more relevant information specific to my situation	21%	54%	25%	Lowest cost of electricity is all that matters to me
	I prefer being able to find information using self-service tools	24%	46%	30%	Lowest cost of electricity is all that matters to me
	DB should invest in tools to ensure all information is accessible to me through my channel of choice	20%	52%	27%	Lowest cost of electricity is all that matters to me

United Energy Business

Customers were asked to consider who should be responsible for funding various initiatives

	Statement 1	Agree More Statement 1	Neutral	Agree More Statement 2	Statement 2
Reliability	All Victorians should share responsibility for funding initiatives aimed at increasing reliability in worst-served areas	20%	54%	26%	Individuals who receive the most benefit should own funding responsibility
Resilience	All Victorians should share responsibility for funding initiatives aimed at increasing resilience of the network	19%	51%	30%	Individuals who receive the most benefit should own funding responsibility
Environment	All Victorians should share responsibility for funding initiatives aimed at reducing greenhouse gas emissions	27%	44%	29%	Individuals who receive the most benefit should own funding responsibility
Flexibility	All Victorians should share responsibility for funding initiatives aimed at increasing solar capacity in the network	21%	49%	30%	Individuals who receive the most benefit should own funding responsibility