



Better outcomes for energy consumers using life support equipment at home

August 2021



**Australian
Energy
Foundation**

About AEF

The Australian Energy Foundation is leading the way to an equitable zero carbon society. We accelerate the energy transition by empowering communities to take action.

Through our energy expertise, tenacity, and partnerships, we:

- Demonstrate the pathways to a zero-carbon society.
- Influence and inspire to build understanding, investment, and action.
- Deliver solutions that have a positive impact.

We are practical visionaries; a national for-purpose organisation whose work benefits all Australians.

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This project was funded by Energy Consumers Australia (www.energyconsumersaustralia.com.au) as part of its grants process for consumer advocacy projects and research projects for the benefit of consumers of electricity and natural gas.

The views expressed in this document do not necessarily reflect the views of Energy Consumers Australia.

List of Abbreviations

AEF	Australian Energy Foundation
AER	Australian Energy Regulator
CPAP	Continuous Positive Airway Pressure
ECA	Energy Consumers Australia
NEM	National Electricity Market

1. Executive summary

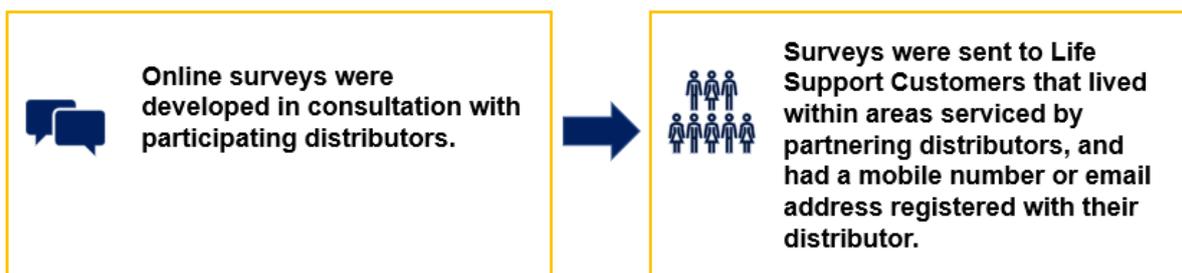
1.1. Background

Life Support Customers are a growing portion of energy industry customers. Life Support Customers are people requiring life support equipment at their premises. The energy industry has developed regulations to protect these customers. Currently, there is limited data available regarding Life Support Customers. Understanding the diverse needs and specific circumstances of Life Support Customers is critical to providing appropriate services.

1.2. Aims and methodology

This research (funded by Energy Consumers Australia) aims to identify ways Life Support Customers can be best supported by the energy industry they rely on, including identifying any changes to energy regulations that will ensure positive outcomes for them. To get a comprehensive understanding of the issues at play, the Australian Energy Foundation (AEF) engaged with consumers, industry, and consumer advocacy groups.

To access the customer voice, AEF partnered with electricity distributors from different states to engage life support customers via online surveys. We were able to identify information needs of life support customers and the level of support that consumers require to ensure they had positive outcomes. While we included feedback from consumers from processes involving both electricity distributors and electricity retailers, the focus of the research was to identify improvements to services largely managed by distributors.



4,000 Life Support Customers participated in an initial survey, of which 3,600 consented to have their responses analysed for this study. 550 participated in a follow-up survey, and 500 consented to analysis for this study.

1.3. Findings

Survey responses analysed provided insight into characteristics of life support customers, their energy needs, and expectations from the service. Key findings are summarised below. Refer to full report for more detailed findings.

1.3.1. Registration processes

The initial survey of 3,600 life support customers found that:

- **48%** found out about registering from their medical practitioner.
- **7%** found the registration process difficult. Many customers conflate the onerous concession reapplication process with their overall experience with the Life Support Customer registration process.
- **93%** do not expect changes to their registrations over the coming year.
- At least **3%** confirmed they either tried to deregister in the past (as can be observed from quotes¹ below), or don't recall signing up as a life support customer.

"I advised you 6 or 7 years ago there was no longer a life support resident".

"I have not had a life support machine at home since April 2019 when I had a kidney transplant, I did inform you, but it appears your records were not updated".

1.3.2. Objectives of being a Life Support Customer

The follow-up survey of 500 life support customers identified the following information.

Customers self-assessed² their life support needs as follows:

59% Use their life support equipment to sustain their life.

41% Use their life support equipment to make their life more comfortable.

¹ Quotes from participants 1 and 2.

² Some people generally tend to underestimate their health requirements (or vice versa). In the absence of qualified opinions from medical professionals, these self-assessments of life support needs or insights should only be used to understand customer needs as they viewed them.

Getting priority restoration after a power outage is the most important benefit of registering as a life support customer. Customers believe their status as a Life Support Customer registrant affords them this benefit, despite not being one of the protections under existing regulations.

Benefits of registering as a life support customer



Other benefits of registering cited by consumers include:

- Protection from disconnection due to non-payment of power bills.
- Identifying their energy needs for distributors to consider when scheduling maintenance.

1.3.3. Concession reapplication process

Most consumers identified the concession / rebate reapplication process as being an unnecessary, costly time-consuming requirement. This was the case for consumers accessing concessions in states where this reapplication is a requirement.

Many of these customers were dissatisfied with the process (as can be observed from quotes below³), citing multiple visits to their doctors to have the necessary paperwork completed as an undue burden on their finances and time (for them and their doctors).

"Biggest headache has been the renewal of the concession with energy retailer. I need this for life."

"I used to claim a rebate but have not renewed for a while because the rebate was not worth the trouble".

"The visit to the GP costs as much as the rebate itself".

"Please don't respond with, 'It's a government requirement'. Use some common sense, and get the rules changed."

³ Quotes from participants 5, 6, 7, and 8

1.3.4. Life support customer characteristics

The initial survey of 3,600 Life Support Customers found that:

- **56%** of life support customers surveyed are over 65 years of age.
- **33%** do not have a carer or partner at home.
- **9%** experience great difficulty managing their bills, despite qualifying for and accessing life support concessions.
- Some consumers may ration their energy consumption or make other sacrifices to afford their energy bills as observed in the comments below⁴.

“Even though I get a discount, my bill is still especially high in winter because of the continued use of a heat pump”.

“Sometimes we don’t eat”

We use power sparingly to reduce the cost”.

“As a disabled person we spend a lot of money on medical needs than the general population, so I think we need more assistance”

1.3.5. Life support equipment information

The initial survey of 3,600 Life Support Customers found that:

- As many as **26** different types of equipment were identified as being used by customers across three states.
 - **62%** use Continuous Positive Airway Pressure (CPAP) machines at home.
 - **19%** of households use more than one life support machine
- **62%** use their life support equipment continuously through the night
- **8%** use their life support equipment continuously throughout both day and night
- **68%** expect power to be restored within two hours of an unplanned outage occurring.

⁴ Quotes from participants 9, 10, 11, and 12

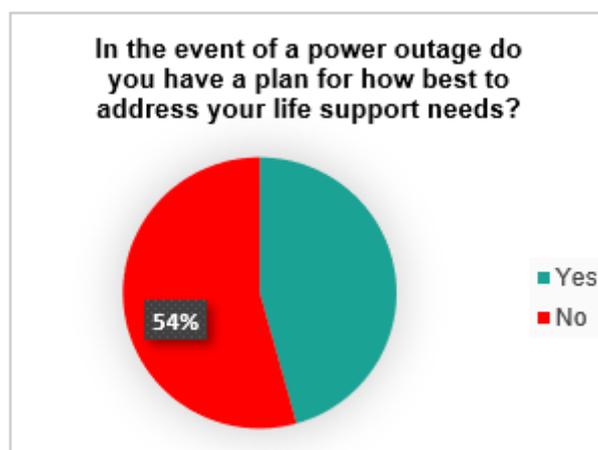
- Typically, customers that do not have an action plan in place are more likely to expect power to be restored as soon as possible as can be observed in the quote below.

“No backup, I expect you to restore power ASAP”

1.3.6. Preparedness for power outages

Initial surveys of 3,600 Life Support Customers found that:

- **54%** do not have a prearranged plan for coping during a power outage for reasons cited below:
 - They do not need one for short outages.
 - Do not know what they can do.
 - Do not believe it is their responsibility to have one.
- Many people who use multiple equipment or use their life support equipment continuously throughout the day have multi-step action plans in the event of an outage.
- Only **7%** have access to back-up power.



Many life support customers do not have an adequate prearranged plan, particularly for coping during extended outages.

The following persona has been developed to highlight the importance of consumers developing an adequate action plan for coping during short and extended outages. It also draws attention to the complexity of some life support customers circumstances, when multiple equipment types are used, and when living alone⁵.



Maria is in her 60s and on a disability pension. She lives alone and uses multiple life support equipment at home, each with varying energy needs.

She is dependent on oxygen supply, continuously every hour of the day (24/7 requirement). She uses an oxygen concentrator and a variable positive airway pressure (VPAP) machine connected to an oxygen supply. In the event of a power outage, she relies on portable oxygen equipment (bottles) which last about 3 hours.

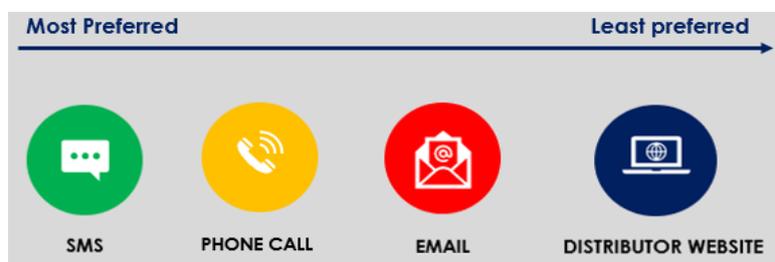
Maria also uses medically required cooling (air conditioning system), with programmed settings to run during hot days as extreme heat exacerbates her breathing. She would be unable to cope during a long power outage or one that takes place during extremely hot weather.

What support might be needed? Maria would benefit from a consultation with her distributor or medical practitioner to develop a multi-step plan for coping during short and extended outages. If available, she could benefit from a battery rental program or assistance with procuring suitable back-up power for her needs such as Uninterruptible Power Supply. Maria ultimately needs to include in her action plan, calling for an ambulance to assist with her move to the hospital.

1.3.7. Customer communication preferences

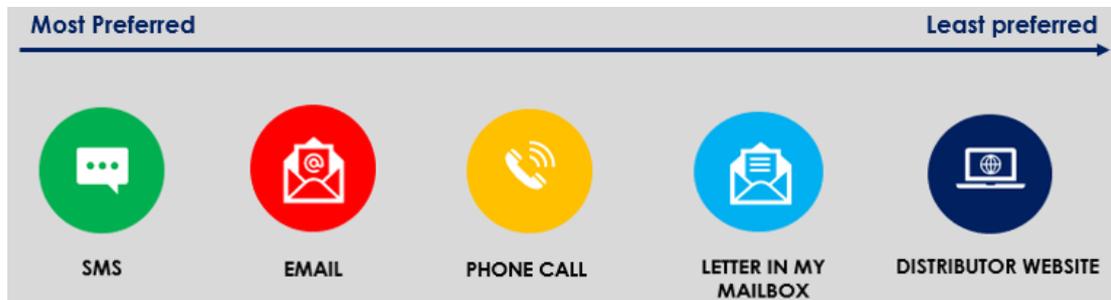
The initial survey of 3,600 Life Support Customers found that:

Most customers prefer communication about an **unplanned outage** to be made by SMS (as seen in the graphic below. Many prefer to be contacted twice, at the beginning (to confirm the outage and expected duration) and at the end, when outage has been resolved. However, some pointed out they may be unreachable in an outage as phone lines would also be down.



⁵ 19% of households use multiple types of equipment. 33% do not have a partner or carer at home.

In the event of a **planned outage**, most customers prefer to be contacted by SMS. Receiving a notification by post was also selected by some as seen below.



The following persona has been developed to highlight additional impacts of power outages on customer responsiveness and preparedness. Many consumers indicated that they would not be contactable during an outage, particularly if they did not have mobile phones, or their mobile phones had not been charged beforehand.



Mohammed is in his 50s, semi-retired, and lives with his partner. Power outages shut down most of his communication devices (i.e., phone line, Wi-Fi, TV). The first thing that Mohammed needs to know is the extent of the outage, e.g., is the issue with their fuse box, their building, the street or wider spread? Once Mohammed knows the extent of the outage he can start to plan e.g., (i) who does he call by mobile (they have an emergency battery for it)?; (ii) does he check with a neighbour? or (iii) get in contact with their distributor?

What support might be needed? The majority of customers prefer to receive notifications by SMS to confirm the outage is with their distributor and that they are working on fixing the problem. As soon as their distributor is aware of an outage that could be affecting Mohammed, they should contact him quickly by SMS, so Mohammed doesn't contribute to overloading helplines or experience long call centre wait times.⁶ Distributors could provide additional guidance through consumer education which includes keeping their mobile phones charged at all times, having access to a portable battery-operated radio, or consider purchasing satellite phones.

⁶ Fact sheet: Communication during emergencies, Department of Communications and the Arts

The follow-up survey of 500 Life Support Customers found that:

- **97%** of customers want to receive information on estimated length of an unplanned outage as this informs their resulting actions e.g., switch on back-up power, relocate elsewhere, change sleep schedule etc.
- **73%** want confirmation when the outage has been fixed and **38%** want information on locations that still have power where they could relocate to.
- **70%** of customers are happy to receive notifications that a planned outage may occur (even if it meant false alarms) compared to **30%** of customers who prefer to be notified only when it is certain that a planned outage will affect them.
- **39%** of customers found it difficult to find out more information about an unplanned outage. Many of these customers suggested their distributor should send an SMS to confirm the outage, then provide useful information about the status of the outage.
- Suggestions for improving accessibility of information include allowing enough capacity for customers to speak to a human call centre operator and providing notifications on electricity retailer apps (or develop distributor apps).

1.3.8. Support required to develop and implement action plans

Information requested by customers which will make it easier for them to develop an action plan for dealing with an outage include:

- Alternative / back-up power options to investigate.
- Checklist of items to arrange or put in place (including example action plans).
- List of localised areas to charge their equipment.
- Suggestions for coping during extended outages.

Support customers require in implementing their action plans include:

- Accessing back-up power as energy security is important to consumers.
- To be given as much advanced notice of planned outages as possible.
- Receiving timely and informative notifications.
- Information on expected timing and duration of outage.

The following persona has been developed to highlight the impact of knowing the estimated length of an outage on contingency planning⁷.



Jo & Ash find power outages very scary as they are primary caregivers for their child who relies on multiple pieces of life support equipment at home. They always call their distributor when there is an unplanned outage, before deciding what to do next. The advice they receive is always the same, to go to a hospital. In their case this would mean calling an ambulance and preparing their child for the travel, which is a very distressing process for the

family.

The power is usually back on within half an hour to two hours. Jo & Ash think it would be helpful to have a better idea of estimated restoration times when they call their distributor to avoid taking an ambulance from someone who needs it more and causing a lot of distress to their household when it is not necessary for a short outage. Hospital rooms quickly fill up with people needing to use their life support equipment (particularly during widespread outages).

What support might be needed? Ash would benefit from advice on developing a multi-step plan which includes access to back-up power. Information on best back-up power options to pursue and access to financial support to purchase the relevant system would be of particular importance. She would participate in a battery rental system if it were available. Having access to back-up power would delay transfer to a hospital as long as is safely possible.

1.4. Recommendations

1.4.1. Systems-level reforms: redesigning service to consumers

Survey results and customer comments suggest there are shortcomings in services currently provided. There are improvements that need to be made to ensure consumer energy needs are met, however these require redesigning services to enable long-term solutions. These recommendations go beyond the control of industry as they require changes to regulatory framework. To address these would require involvement by energy regulators, government, and relevant peak groups.

Below is an abridged list of recommendations:



1. Refine terminology: Replace the term “Life Support Customer” with terminology that focusses on the needs of the customer and the resulting energy needs – not the condition. Language such as ‘households with high energy needs’ or ‘connection guarantee consumer’ would then capture consumers that have certain equipment or energy needs, but that do not identify with current ‘Life support Customer’ classifications. This reframing of terminology then allows different tiers of energy needs to be captured.

⁷ 97% (of 500 consumers) want to know the estimated length of an outage, before they can determine their resulting action.



2. New criteria: For medical organisations (e.g., Australian Medical Association) and relevant Government bodies to lead the establishment of new criteria to define prioritisation of service to consumers using life support equipment according to their energy and health needs. Possible guidance on this process could be how the National Disability Insurance Scheme recognises the different values of support services by using a range of classifications and criteria to differentiate dependencies and needs of medical equipment.



3. Back-up power access: Consideration should be given to increasing access to back-up power for consumers as required through implementing a suite of financing options. These could include interest-free or low-cost loan schemes, rebates for batteries, generators, and increased solar rebate schemes.



4. Back-up power education: Education should be provided to ensure consumers were able to connect and operate back-up power effectively.



5. Standardise processes and forms: Simplify processes for consumers and industry by standardising concessions, registration, and deregistration across the National Electricity Market, including development of a standardised registration form. This form could contain relevant information for both distributor and retailer and including the confirmation from medical professionals on individual consumer energy needs.



6. Establish a central database: Explore the establishment of a central database so that consumer information can be shared and updated by both distributors and retailers as required.



7. Distributors to manage registration: Consumers should be encouraged to register with their distributor (not their retailer) when first registering for life support customer status.



8. Streamline concessions: Have a one-off concession application form, or at least, extend the reapplication period beyond the two-year cycle.

1.4.2. Service-level recommendations for distributors

In addition to the above, AEF have also identified recommendations that distributors could consider for improving services to life support customers in the short-term. Some key points to consider are:

- The development of education resources for call-centre staff members and consumers, to address gaps in knowledge.
- Expanding the communication platforms to include SMS and email, with the ability for consumers to opt-in and opt-out for outage notifications so consumer preferences are accommodated.
- Extending planned outage notifications beyond the current four days in advance, to give customers adequate time to prepare and implement their action plans accordingly.

1.5. Conclusion

By engaging with consumers across the National Electricity Market, we have been able to gain valuable insights into the life support customer journey. We have learnt that for some Life Support Customers, there are services received that are valuable and very much appreciated. However, for other Life Support Customers there is still a need for service improvement via education and providing tailored services. Additionally, through this research we have attempted to take key concerns experienced by Life Support Customers and link them to potential systemic changes to provide longer term solutions and to future-proof services for increasing volumes of consumers needing support.

2. Background and objectives

2.1. Overview

The Australian Energy Foundation (AEF) was awarded a grant from Energy Consumers Australia (ECA), to conduct research into Life Support Customers. Life Support Customers are those requiring life support equipment at their premises and the industry has developed regulations to protect these customers if they are registered as such. Every day there are thousands of Australians using life support equipment in their homes. This fact presents challenges for consumers, Energy Retailers ('retailers') and Distribution Network Service Providers ('distributors') alike.

Through this research, AEF plans to identify ways Life Support Customers can be best supported by the energy industry they rely on, including identifying any changes to energy regulations that will ensure positive outcomes for them.

To get a comprehensive understanding of the issues at play, we engaged with three tiers of stakeholder groups: consumers, industry, and consumer advocacy groups, to ensure that our research methodology was co-designed with their input and that solutions aligned with Life Support Customer needs they identified.

The starting point for any solution is to gather information. Currently, there is limited data available regarding people on the life support register. In some cases, the type of equipment is known by the retailer (possibly not the distributor), however other relevant demographic and energy use data is not. For example: age of the customer, whether they have help at home, when they use the equipment and their preferred method of contact in advance of and during an outage.

While we included feedback from consumers from processes involving both electricity distributors and electricity retailers, the focus of the research was to identify improvements to services largely managed by distributors.

For the purposes of this report, we will be using the term Life Support Customer to capture the many varying needs of consumers that require or rely upon some form of equipment listed as 'life support equipment' at their homes. However, we are mindful that not all customers that fall under this definition feel the term Life Support Customer is appropriate for their circumstances. This is further addressed in the recommendations section.

2.2. Objectives

There are a number of limitations that industry and consumer advocacy groups identify with the current regulatory framework for Life Support Customers. The information in Table 1 allowed AEF to develop surveys that sought to gain a deeper understanding of our objectives.

Table 1: Limitations with the current regulatory framework

Limitations with the current regulatory framework	Implication	AEF research objectives
<ul style="list-style-type: none"> Not everyone who uses life support equipment at home wants to be on the life support registry. Under the current regulations, if people are registered as Life Support Customers they will get the provision of all available services, regardless of what they specifically want out of registering. Some customers may only want to receive notifications ahead of and during a power outage. 	<ul style="list-style-type: none"> It is unclear what motivates customers to register and determine whether registering is what they really want to do or determine what it is they want from the service. 	<p>Ascertain:</p> <ul style="list-style-type: none"> What outcomes customers are seeking (i.e., motivations for registering). Whether customers are getting that output. Whether customers want the output they are currently receiving by registering.
<ul style="list-style-type: none"> Legal penalties behind regulatory compliance could be having the unintended impact of shifting focus away from delivering a service to a vulnerable individual to meeting a regulatory requirement. The responsibility to ensure life support registrations remain current sits with vulnerable people and their carers, which is inefficient and increases risk of disconnection. 	<ul style="list-style-type: none"> Processes don't achieve better outcomes for consumers. 	<ul style="list-style-type: none"> Explore customer service experience and level of satisfaction with the registration process, deregistration process, and power outage communications.
<ul style="list-style-type: none"> The Australian Energy Regulator (AER) sought to address many concerns through the '<i>Strengthening protections for customers requiring life support</i> 	<ul style="list-style-type: none"> Life support registers have become increasingly inaccurate. 	<ul style="list-style-type: none"> Identify whether the register has improved since then by studying experiences of people using life support equipment and

Limitations with the current regulatory framework	Implication	AEF research objectives
<p><i>equipment</i>' energy rule change. One concern being that life support registers have grown and have become increasingly inaccurate⁸. It could be expected that with Australia's ageing population and impact of climate change on health needs, this number will continue to increase into the future.</p>		<p>consulting partnering distributors in the research.</p>
<ul style="list-style-type: none"> Regulators may be reluctant to overhaul existing regulations if they do not have evidence the existing framework is not working well for consumers. They may want to allow more time for changes made in 2019 and 2020 to policy reforms on market transactions to be fully realised. 	<ul style="list-style-type: none"> Lack of forward planning in supporting consumers. 	<ul style="list-style-type: none"> Evaluate impact of existing energy regulations on overall consumer experience along the life support registration process. Identify elements that are not working for consumers and recommend improvements to get the process right from the customer perspective. To ask consumers what they need out of the registration process.

⁸ Information sheet: Strengthening protections for customers requiring life support equipment

3. Research Methodology

The graphic below illustrates the timeline AEF followed to achieve the outcomes of the research, including key activities and outcomes.

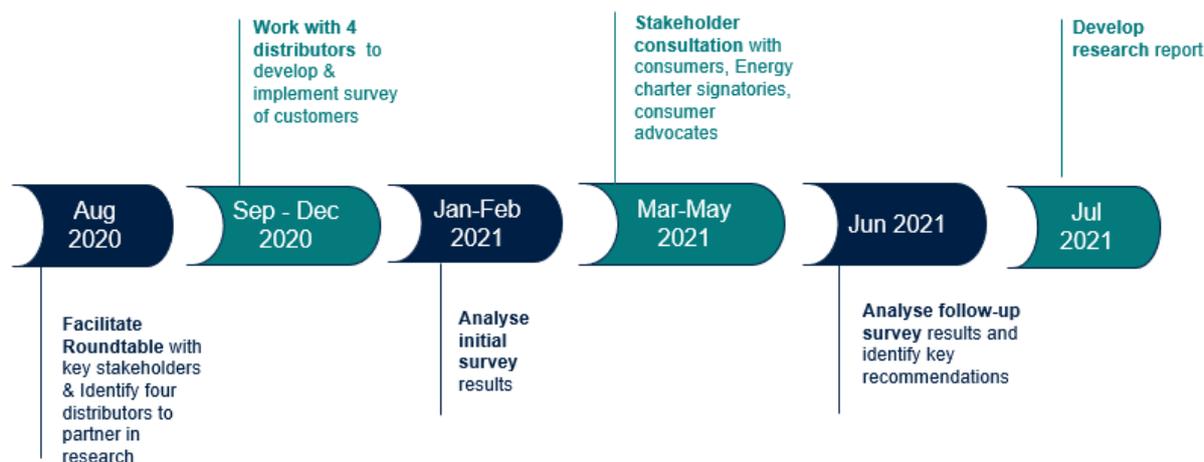


Figure 1: Project Timeline

3.1. Stakeholder mapping

It was important to identify key stakeholders who may have an interest in the outcomes of the project and/or could influence the outcomes of the project. Table 2 below provides information regarding those groups that were identified for consultation and the approach taken toward these stakeholders.

Table 2: Stakeholder Mapping

Stakeholders	Level of Engagement	Proposed Purpose for Engagement with Stakeholders
Distributors	Collaborate	<ul style="list-style-type: none"> Identify partnership opportunities including: <ul style="list-style-type: none"> ✓ Co-designing survey to be conducted with consumers. ✓ Co-designing solutions for improving service to consumers.
Consumers	Involve	<ul style="list-style-type: none"> Ensure customer needs and concerns are understood and considered.
Consumer advocacy groups and Energy Charter signatories	Consult	<ul style="list-style-type: none"> Obtain advice, feedback on alternatives and/or decisions.
ECA and Regulators	Inform	<ul style="list-style-type: none"> Provide balanced and objective information.

3.2. Stakeholder consultation

To get a comprehensive understanding of the issues at play, we engaged with three tiers of stakeholder groups to ensure that our research methodology was co-designed with their input and that solutions aligned with Life Support Customer needs they identified.

3.2.1. Life Support Customers

We wanted to bring the customer voice forward on issues that affect them so the customer-centric perspective can really be part of the solution.

In order to access this customer voice, AEF partnered with distributors from different states for this research. We wanted to identify jurisdictional challenges so that recommendations can be made to the relevant bodies. We also wanted to test whether the challenges that customers face were not unique to states but whether there were some shared experiences across the National Electricity Market (NEM).

Consumer engagement allowed us to understand individual circumstances and needs and how the service is performing at an individual level.

3.2.2. Industry

We conducted wide-ranging consultation with industry (retailers and distributors) to see how current regulations are working for this customer cohort. Industry perspective allows us to understand the challenges with individual service across the entire cohort.

3.2.3. Consumer advocacy groups

The third perspective we accessed was consumer advocacy groups that had experience working with a broad range of individuals and within the industry framework, that could comment on how the energy regulations seem to be affecting consumers overall.

3.3. Industry Roundtable

To kick off the research, AEF hosted a virtual roundtable event ('Roundtable') for distributors, regulators, the Energy Charter, and a sample of energy retailers. 30 participants attended from Victoria, New South Wales, Queensland, Tasmania, and ACT.

AEF delivered this Roundtable on Thursday 13 August 2020 with the central aim of facilitating energy industry stakeholders to reflect on the question:

How can customers who are on life support be best supported by the energy infrastructure they rely upon?

The objectives of the Roundtable were to:

- Develop a shared understanding of:
 - The energy challenges Life Support Customers face.
 - How Life Support Customers can be best supported by the energy industry.
 - Challenges and opportunities the energy industry faces in meeting the needs of Life Support Customers.
 - The potential policy reforms that could effectively address these issues
- Outline the scope and opportunity of the project AEF is undertaking and outline the process to select four (4) distributors to work more closely with to understand their Life Support Customer needs.

Distributors and retailers identified the biggest challenges (or opportunities) in managing Life Support Customers included: communications to Life Support Customers and between industry (i.e., retailer to retailer, retailer to distributor), data accuracy and management, cooperation among industry participants, and life support terminology. We interrogated these topics through our research.

More detail on these Roundtable discussions is attached as **Appendix 'C'**.

3.4. Recruitment of Distributors

3.4.1. Recruitment timeline

Distributors were invited to submit an expression of interest to partner with AEF in conducting research to better understand Life Support Customers and their specific needs. We recognised there was interest from energy retailers raised during the Roundtable and encouraged expressions of interest (EOI) from both areas of the sector accordingly. Three distributors registered their interest by the end of the recruitment phase. Many other distributors and retailers indicated that despite their support for the project, they could not participate as they did not have the capacity to work with AEF within the stipulated timeframe.

In mid-October, AEF were approached by another distributor who was interested in participating in the project. This distributor had completed extensive research into their Life Support Customers and were interested in working with AEF and other distributors to identify solutions for Life Support Customers. AEF were able finalise discussions with this distributor, outside of the recruitment period.

3.4.2. Distributor requirements

Participating distributors created Terms & Conditions for participating in the research that had a bearing on the sharing of customer data, reporting and publication of research outcomes. AEF has applied de-identification as a privacy-enhancing tool to accommodate this requirement.

3.5. Survey Design

3.5.1. Initial surveys

AEF developed an online survey for Life Support Customers, in consultation with participating distributors (refer to **Appendix 'D'** for this survey). It was important to co-design elements of the survey with our partners to ensure alignment on language and purpose across distributors. The purpose of the initial survey was to better understand Life Support Customer demographics, types of equipment used, energy needs, timing, and frequency of the energy needs (i.e., night, day, all the time), whether individuals have help at home, and whether they had an action plan in the event of a power outage. The information from the survey would enable us to better understand what distributors knew about Life Support Customers and what they need to know to better service their customers. It also provided an opportunity to test the existing customer data for accuracy.

In designing the surveys, it was important to modify certain questions to capture Life Support Customers' different perspectives on the subject matter that was unique and relevant to their circumstances. It was also important to capture unique perspectives relevant to improving service delivery from each distributor. As such, while the surveys were mostly similar in focus and content, they were developed with slight variations to allow room for each distributor to ask questions relevant to addressing existing information gaps. The initial surveys focussed on the following scope:

- i. Registration information
- ii. Key customer demographic information
- iii. Life support equipment information
- iv. Power outage preparedness
- v. Customer communication preferences

3.5.2. Follow-up surveys

The survey questions developed for the second round of Life Support Customer engagement were informed by gaps identified in the initial survey, further points of exploration coming from participating distributors and discussions with key interest groups. The survey was designed to include a combination of mostly open-ended questions that would solicit in-depth and considered responses on issues that are relevant to Life Support Customers (refer to **Appendix 'E'** for this survey). Follow-up surveys were sent to customers who had previously indicated they would like to be contacted for additional research to help us better understand their challenges and preferences.

The follow-up surveys focused on the following scope:

- i. Registration information
- ii. Outage notification preferences
- iii. Prearranged plans for coping during an outage

3.6. Survey Administration

3.6.1. Overview

Two of the three partnering distributors conducted the surveys themselves via SMS or email as per their communication protocols. This would meet their legal requirements for customers to provide consent for their data to be shared with a third party.

AEF designed a customer relationship management (CRM) system specifically for this research to manage and protect customer data. The system, which was ring-fenced and made separate to organisation-wide systems, was accessible to and managed by project team members only. Through this CRM, AEF conducted surveys on behalf of the third partnering distributor. AEF created a unique email account for this project to manage technical or subject matter queries pertaining to the survey and research.

The customer engagement commenced once the surveys, CRM system, and contractual agreements had been finalised.

3.6.2. Customer Sample

Sample size is particularly important for obtaining accurate results and in implementing this targeted research into Life Support Customers successfully. The population for this research is all Life Support Customers who have either a mobile phone and/or email address who are customers of three participating distributors.

3.6.3. Initial surveys

Initial surveys comprised a mix of closed- and open-ended questions allowing customers to provide their responses and feedback.

The surveys were conducted in a staggered approach to better manage any queries lodged by customers. They were open to customers between November 2020 and January 2021. Figure 2 below summarises the survey administration and participation level achieved at the end of the survey period.

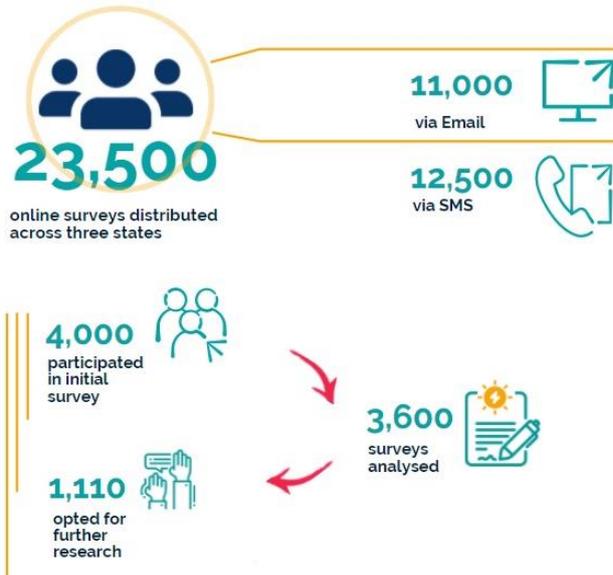


Figure 2: Initial survey participation

All sample surveys are subject to sampling error. A margin of error of plus or minus 5 percentage points, at a 95% confidence level applies for the entire survey. This means that in 95 out of 100 samples of this size, the results would fall in a range of plus or minus 5 percentage points of what would have been obtained if every Life Support Customer had participated in the survey.

3.6.4. Follow-up surveys

Follow-up surveys were sent to customers who had previously indicated they would like to be contacted for additional research to help us better understand their challenges and preferences. The surveys were designed to address gaps identified in the initial surveys, further points of exploration coming from participating distributors, and discussions with key interest groups. They comprised mostly open-ended questions that would solicit in-depth and considered responses on issues that are relevant to Life Support Customers.

The surveys were conducted in a staggered approach to better manage any queries lodged by customers. They were open to customers between late April and early May 2021. Figure 3 below summarises the survey administration and participation level achieved at the end of the survey period.

- Only those surveys where customers provided consent for AEF to analyse are discussed in this report.
- In total, 3,600 surveys were analysed to understand Life Support Customer needs.



- Only those surveys where customers provided consent for AEF to analyse are discussed in this report.
- In total, 500 surveys were analysed to understand Life Support Customer needs.

Figure 3: Follow-up survey participation

All sample surveys are subject to sampling error. A margin of error of plus or minus 6 percentage points, at a 95% confidence level applies for the entire survey. This means that in 95 out of 100 samples of this size, the results would fall in a range of plus or minus 6 percentage points of what would have been obtained if every Life Support Customer had participated in the survey.

3.7. Research limitations

There were limitations in who we were able to engage with. The Life Support Customer data that distributors record and could share was sometimes limited, which made aiming for diversity targets an impossibility (i.e., information recorded does not include language preference, access to technology etc).

During the project inception phase, AEF had made considerations for and planned on ensuring the research was conducted with a diverse mix of Life Support Customers, including those experiencing digital disadvantage and speaking a language other than English at home. However, considering the limiting factors detailed above, this aspect of the research would not be achieved. AEF attempted to improve representation of diversity via engagement with consumer advocacy groups and relevant stakeholders where possible.

For the follow-up survey, the Life Support Customer cohort was limited to those who responded to the initial survey and had opted to contribute to further research.

The research was done with customers who use electricity to power their life support equipment. This means that any distinctions that applied to customers using gas were not captured.

Further research would need to be done in this space.

4. Summary of key findings

This section contains key results from two surveys conducted with Life Support Customers. For detailed findings of the initial survey refer to **Appendix 'A'**. For detailed findings of follow-up surveys, refer to **Appendix 'B'**.

4.1. Summary of findings from initial survey

Over 4,000 Life Support Customers completed the online survey between November 2020 and January 2021, having received a link via email or SMS. AEF analysed over 3,600 of these survey responses to understand Life Support Customer needs. Only those surveys where customers provided consent for AEF to analyse are discussed in this report. The survey comprised mostly closed-ended questions focused on the following scope: (i) Registration information, (ii) Key customer demographic information, (iii) Life support equipment information, (iv) Power outage preparedness, and (v) Customer communication preferences.

Through analysis of survey responses, we identified customer needs and ways they can be best supported by distributors (and the energy industry more broadly), including any changes to energy regulations that will ensure positive outcomes for them.

4.1.1. Registration process



- Large majorities of customers confirmed that their life support equipment was still required at their property, with most not expecting any changes to their registration over the coming year.
- Some participants do not want special treatment or to be seen as being vulnerable or stigmatised. These individuals may want to be able to determine appropriate action for their needs and not be labelled as special customers. Being labelled as Life Support Customers or registering as one, potentially takes away people's feelings of agency.
- Customers are not always aware that they qualify for rebates or benefits associated with registering their life support equipment. Some customers who were relatively new on the Life Support Customer registry had been using their life support equipment for several years but were not aware of the registration service in all that time. Some, even though they were on the database were not immediately aware their medical equipment was classified as life support, nor could they reconcile this with their status as a life support registrant.
- Most customers felt the process to register their life support equipment was an easy one, with over a third describing their experience as being *very easy*.
- For some people, reliance on and use of prescribed life support equipment is transient in nature. The process to deregister from the Life Support Customer database may be difficult,

with some customers finding it more stressful to deregister than it was to register. For example, several individuals who no longer require life support equipment at their property expressed frustration and fatigue at having to request (numerous times) for their details to be removed from the database. This process is particularly stressful and burdensome on those who have lost a loved one (a Life Support Customer registrant) and are caught up in the slow administration of the deregistration process.

- Energy regulations in place for protecting Life Support Customers lend themselves to this challenge as energy companies are cautious about processing deregistration requests on the chance they mistakenly deregister those in need of protections.
- Close to half of customers found out about registering as a Life Support Customer from a medical practitioner. About a quarter found out from their retailer and fewer than a tenth finding out from their distributor.

4.1.2. Key demographic information



- Just over half of customers are over 65 years of age.
- A third of customers do not have a carer / partner at home who would support them when faced with a power outage.

4.1.3. Life support concessions



- About a tenth of consumers experience great difficulty managing their bills, despite qualifying for and accessing life support concessions. Many consumers did not believe the support they received was adequate for their needs.
- The concession reapplication process, which applies in some states, was identified as one of the most unfavourable experiences in the overall customer journey. Many customers who have had to go through this process find it is an unnecessary, bureaucratic, costly, and time-consuming requirement which should be stopped. Many customers conflate the concession application process with the Life Support Customer registration process as both are usually administered through their retailer.

“I cannot afford hospital parking and cost of seeing my specialist just to fill in paperwork”.

“The visit to the GP costs as much as the rebate itself”.

- Life support concessions don't align across states – this can be confusing to manage for both consumers and businesses. A few customers who have moved interstate found the changes to their eligibility criteria for accessing concessions frustrating and unfair.

4.1.4. Life support equipment information



- **26** different types of equipment were identified as being used by customers across three states. This extensive list aligns with the fact that most customers find out about registering as a Life Support Customer from a medical practitioner.

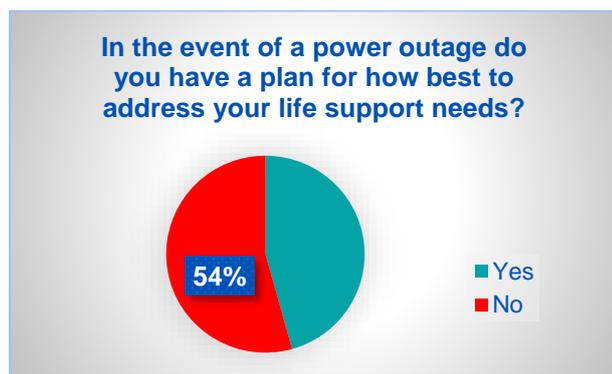
62% of customers use Continuous Positive Airway Pressure (CPAP) machines at home.

- Close to a fifth of households require more than one life support machine at their address. This is the case when an individual uses multiple equipment or multiple individuals each use their own life support machine(s).
- On average, most customers require power to their equipment during the night. Nearly two thirds require power exclusively at night, either intermittently or continuously. Less than a fifth of customers need power to use their equipment during both daytime and night-time, either intermittently or continuously. Power requirements on any given day could differ from the ideal (average trends) based on the customer's health condition.

4.1.5. Power outage preparedness



- Over two thirds of customers think it is reasonable to expect power to be restored within the first two hours of an unplanned outage occurring.



54% of customers do not have a plan in place for addressing their life support needs in the event of a power outage.

- There was a correlation between customers who do not have a plan in place and their expectations for power to be restored as soon as possible. Many customers who use multiple equipment types or use their life support equipment continuously throughout the day have multi-step action plans in the event of an outage. Some of these customers explained that the effort spent in implementing their plan aggravated their condition.

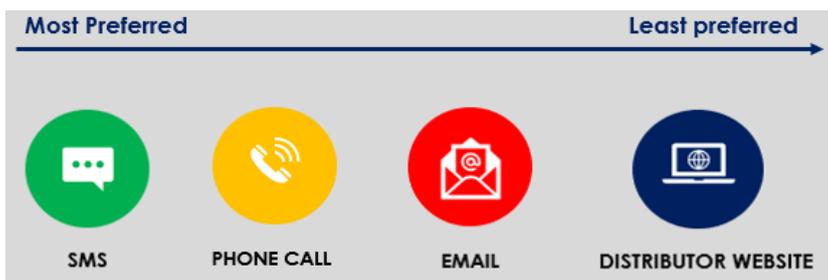
7% of customers have access to back-up power to meet their life support needs in the event of a power outage.

- As most customers do not have access to back-up power, many would either relocate to wherever there is power (hospital, hotel, stay with family/friends) or wait until the power is restored.
- Customer action plans typically do not differ significantly whether one faces an unplanned outage or a planned outage. The major difference is that concerning the latter, customers have more time to prepare for an outage and are able to consult their carers or family members or ensure their mobile phones are fully charged. Advance notifications for a planned outage limit anxiety associated with being caught out unprepared during an outage.
- Analysis of customer responses shows that many do not have an adequate prearranged plan, particularly for coping during extended outages.

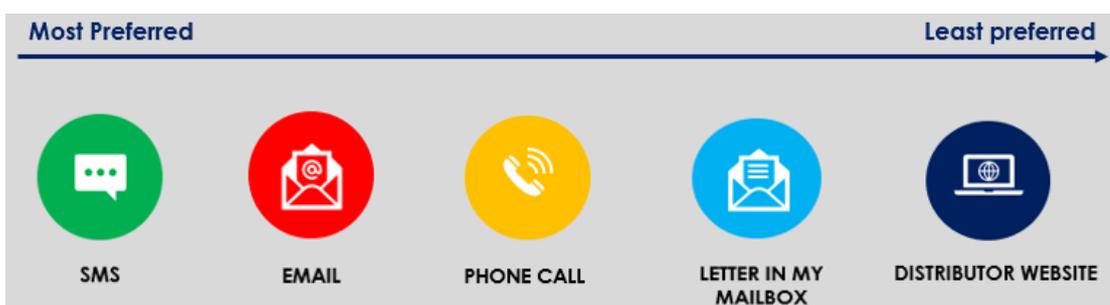


4.1.6. Managing customer communications

- About two thirds of customers expect their distributor to contact them in an unplanned outage, with about three quarters of customers expecting to be contacted within an hour of the outage occurring. Most customers prefer to be contacted by SMS as shown in the graphic below.



- Although most customers prefer to be contacted by SMS, those customers who experience digital disadvantage in accessing mobile phones and computers would prefer to receive a phone call during an outage. Furthermore, some customers cited the ability to speak to their distributor during an outage (particularly longer outages or those occurring at night) provided emotional comfort.
- Many customers prefer to be contacted twice, at the beginning of the outage (to confirm the outage and expected duration) and at the end, when outage has been resolved. However, some customers pointed out they may be unreachable in an outage as phone lines would also be down.
- Some customers did not receive outage notifications in the past because their distributor did not have accurate records for them, including best contact information, preferred method of communication, and best contact person / nominated contact.
- In the event of a planned outage, most customers prefer to be contacted by SMS as shown in the graphic below.



- A few customers were not satisfied with the regulated notification period for a planned outage, requiring more notice than currently prescribed. These customers need more time to consult their carers and family members to arrange an action plan.



4.1.7. Customer feedback

- On the whole, customers had more positive feedback about the service they received from their distributor than negative.
- Generally, communications about a planned outage are better received than communications during an unplanned outage as they former manages the anxiety of being caught out in unprepared during an outage.
- Figures 4 and 5 below show some comments made by survey participants on the service they received.

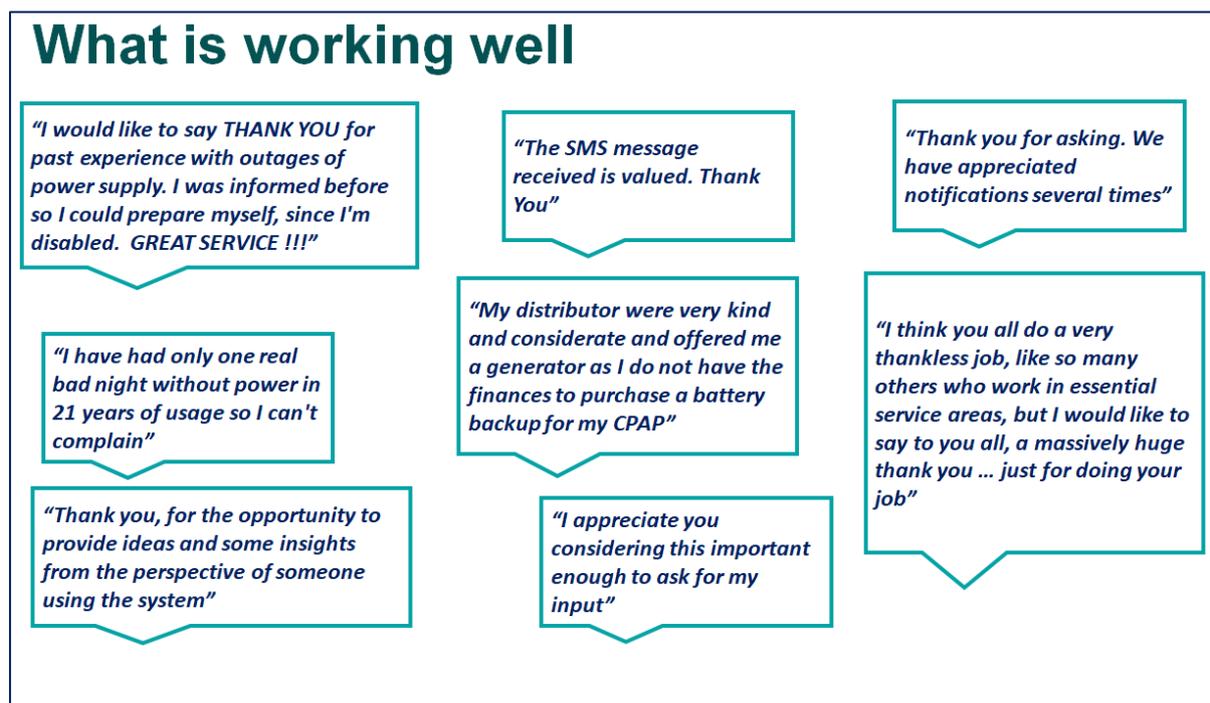


Figure 4: Positive customer feedback

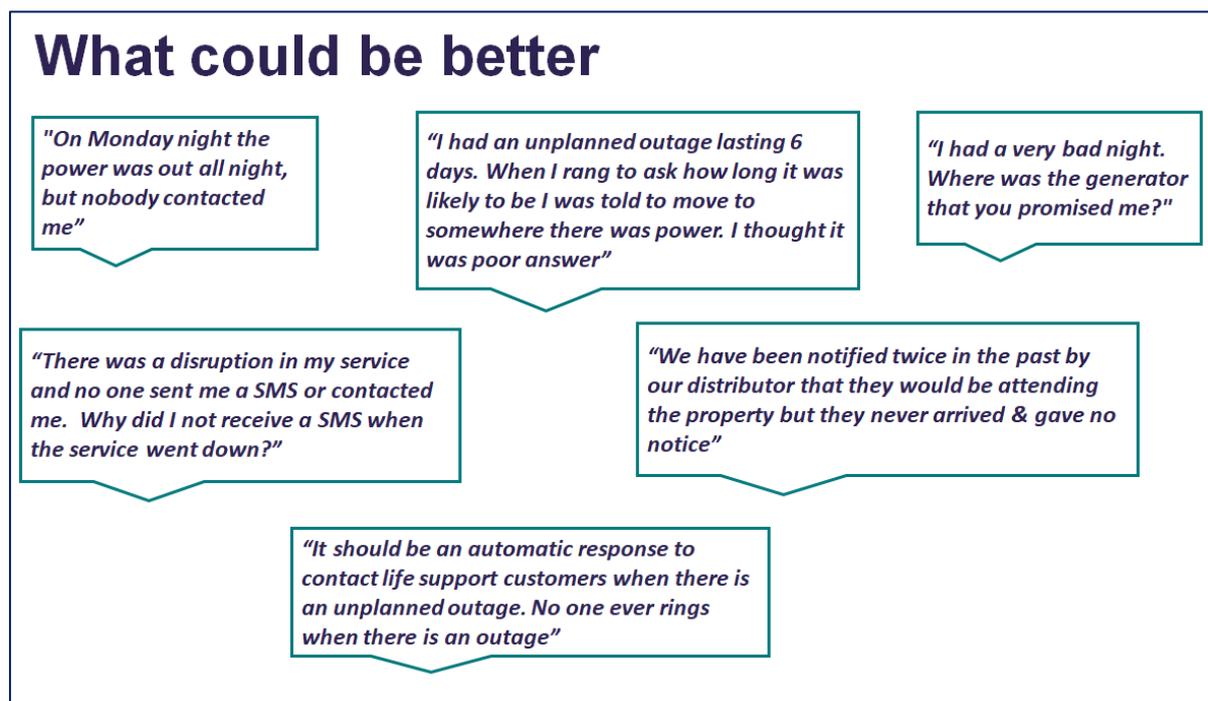


Figure 5: Negative customer feedback

4.2. Summary of findings from follow-up survey

The survey questions developed for the second round of Life Support Customer engagement were informed by gaps identified in the initial survey, further points of exploration coming from participating distributors and discussions with key interest groups. The survey was designed to include mostly open-ended questions that would solicit in-depth and considered responses on issues that are relevant to Life Support Customers. Follow-up surveys were sent to customers who had previously indicated they would like to be contacted for additional research to help us better understand their challenges and preferences.

Just over 550 Life Support Customers completed the online survey, having received a link via email in May 2021. We analysed over 500 of these survey responses to understand customer information needs. Only those surveys where customers provided consent for AEF to analyse are discussed in this report. The survey focused on the following scope: (i) Registration information, (ii) Outage notification preferences, and (iii) Prearranged plans for coping during an outage.

Through analysis of survey responses, we identified Life Support Customer information needs, and other support customers require to ensure positive outcomes.



4.2.1. Registration process

- Customers were asked to provide a self-assessment of their life support needs. Responses fall into two categories as shown in Figure 6 below.

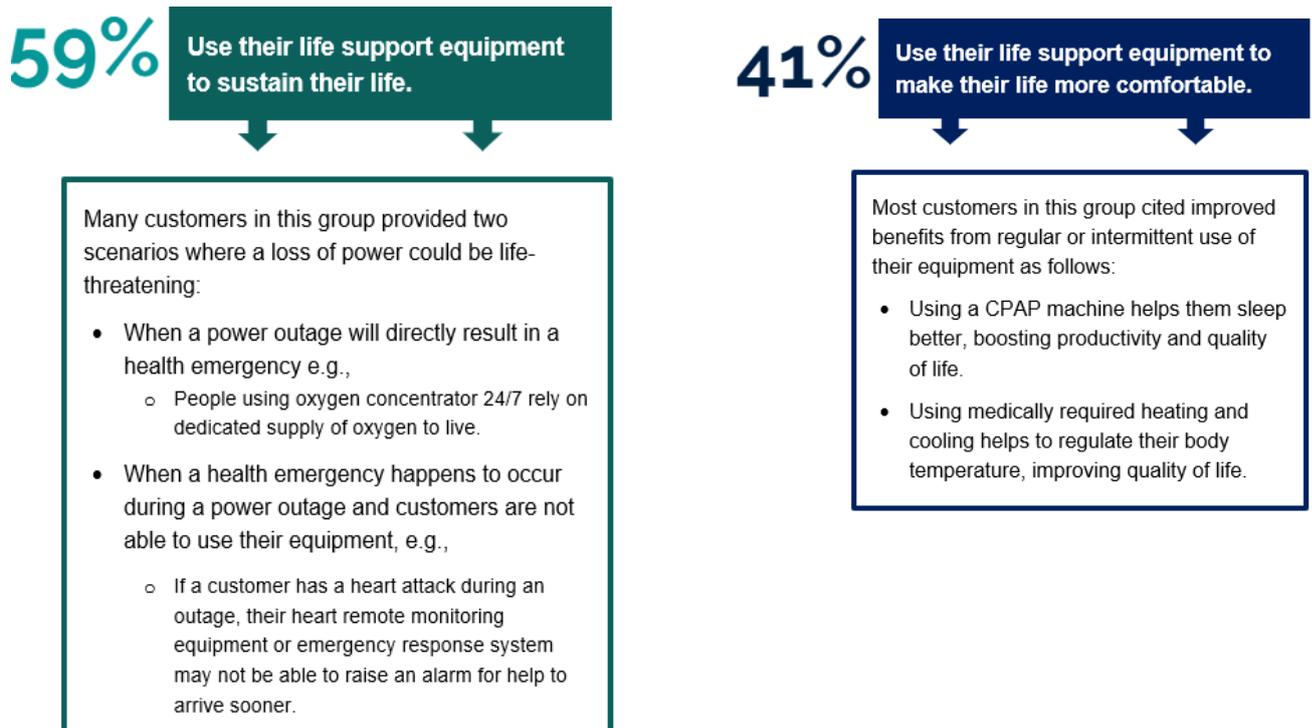


Figure 6: Purpose of life support equipment

- Customers identified the following benefits of registering as a Life Support Customer in order of preference, from most to least:



- Priority restoration after a power outage is the most important one for large majorities of customers. Customers believe their status as a Life Support Customer registrant affords them this benefit, despite not being one of the protections under existing regulations. Distributors

may not be able to deliver this expectation for every customer (particularly for unplanned outages) and given the proliferation of customers across their service areas.

- Some customers cited protection from disconnection due to non-payment of power bills as an added benefit of registering on the Life Support Customer database. There were customers who perceived that they were not getting any benefit from their registration, particularly where power restoration and overall customer service was concerned.
- When asked about their views if distributors created a category-based Life Support Customer model for identifying and providing support to those most in need, over two fifths of customers felt this would create a level of anxiety. These customers felt there was a risk their needs would be underestimated by their distributor, resulting in being placed lower on the priority list than they should be. These customers believe that only medical professionals who have an in-depth understanding of their equipment utilisation, as well as an appreciation of the various dependencies that impact their energy needs, should make those determinations.
- Very few customers are willing for others with more critical needs to be prioritised ahead of them during an outage as shown below.



- Losing priority (or perceived benefits of prioritisation) is very anxiety-inducing even for those for whom a loss of power would not necessarily be life-threatening. The comment below summarises this fact.

“I wouldn’t want to be last, would you?”

- A strong majority of customers believed it would be useful if there was a central protected database where their information was kept reducing the need to provide their details to multiple energy companies (distributors and retailers). These customers would further support the establishment of such a database. Some customers would like to see a ‘universal’ form being put in place to reduce amount of time spent trying to understand the different forms used by retailers and distributors.



4.2.2. Concession application process

- Customers identified the concession reapplication process (relevant in some states) as an unnecessary bureaucratic process, which places an undue burden on their time and money. This is the most unfavourable experience along the Life Support Customer journey. Navigating the different processes and forms used by different energy companies intra- and interstate was another. Many customers would like the concession reapplication requirement to be phased out. The majority of customers felt it would be beneficial if there was a section or checkbox on the initial application form where their doctor could indicate that they required the equipment for their whole life.



4.2.3. Outage information and notification preferences

- Large majorities of customers want to receive information on estimated length of an unplanned outage as this informs their resulting actions e.g., switch on back-up power, relocate elsewhere, change sleep schedule etc. Close to three quarters want confirmation when the outage has been fixed and over a quarter want information on locations that still have power where they could relocate to.
- Over one third of customers found it difficult to find out more information about an unplanned outage. Many of these customers suggested their distributor should send an SMS to confirm the outage, then provide useful information about the status of the outage. Suggestions for improving accessibility of information include allowing enough capacity for customers to speak to a human call centre operator and providing notifications on electricity retailer apps (or develop distributor apps).
- Close to a third of customers found it difficult to find out more information about a planned outage. When asked about ways of improving accessibility of information, suggestions included sending notifications by SMS and Email (in addition to standard mailout), and broadcasting information through radio, television, and local newspapers. Customers further requested distributors should send reminder text messages a day before the outage, provide informative updates during the outage (particularly if the outage is cancelled/postponed), and send confirmation once an outage is complete.
- Over two thirds of customers are happy to receive notifications that a planned outage may occur (even if it meant false alarms) compared to about a third of customers who prefer to be notified only when it is certain that a planned outage will affect them.

4.2.4. Action plans



75% of customers take some form of action to prepare for a potential outage after receiving a notification that an outage may affect them.

- This includes charging mobile phones, battery systems and informing their family members or carers of the situation. Whilst some customers may not have a prearranged plan in place to cope during an outage, they do come up with one in response to receiving notifications that a planned outage may affect their property. Many customers connect this type of notification with helping them prepare for their life support needs, in the event that an outage does materialise.
- To a lesser extent, outage notifications for potential outages are seen as a nuisance by customers, causing unnecessary anxiety. A quarter of customers do not take any action to prepare for a potential outage. When asked why they do not prepare, many participants responded that daytime planned outages do not affect them as they used their life support equipment exclusively at night. Some customers have experienced too many false alarms in the past they do not take those notifications seriously enough to plan anymore. Analysis of attitudes shows that, while many customers plan for their health needs, some do not believe they are responsible for securing power supply for their life support needs. Others simply do not prepare because they believe their registration affords them priority restoration during an outage.
- Low levels of awareness of types of outages, distributor maintenance practices and the complexities of managing the network coupled with the lack of personal responsibility for contingency planning on the part of customers lead to some customers being inadequately prepared.
- Many customers using CPAP machines are willing to purchase a battery system for it but lack information to guide their selections.

An overwhelming majority of customers would like to receive information about types of battery systems, where to purchase one and how to connect it to their CPAP machine.

- Others would require financial support to acquire those systems through rebates, No-Interest Loans (NILs), or low-cost loans.
- Information requested by customers which will make it easier for them to develop an action plan for dealing with an outage include alternative / back-up power options to investigate,

checklist of items to arrange or put in place (including example action plans), list of localised areas to charge their equipment, and suggestions for coping during extended outages.

- Assistance customers require in implementing their action plans include accessing back-up power, to be given as much advanced notice of planned outages as possible, receiving timely and informative notifications (as this will determine whether customers temporarily relocate), and expected timing and duration of outage

4.2.5. Nice-to-have service that distributors (and others) can offer customers



The relationship between distributors and their customers is changing, with customers wanting more varied support than traditionally provided for. When asked to list what would be a ‘nice-to-have’ service that their distributor could offer, most customers identified energy security as being most important service to ensure they can continue to use their life support equipment at home.

Customers want their distributors to consider providing, among others, free back-up power or uninterruptible power supply, community scale batteries, and life support equipment charging stations within communities. In addition to energy security, many customers want cheaper electricity prices through higher discounts, concessions, and solar feed-in-tariffs. Others want free power for all Life Support Customers and compensation for temporary relocation during a power outage.

5. Personas

Some examples of key challenges experienced by consumers using life support equipment have been summarised into personas. The personas are created as a means to provide industry insight into consumer circumstances that may be experienced within the customer cohort so that a service, e.g., an education piece, can speak to the diversity of customer needs and circumstances.

It is noted that no two customer situations are the same. In many instances there will be intersectionality of circumstances across personas. There will also be many individuals that do not fit the personas exactly but experience the disadvantage outlined.

Persona 1: Maria

Data indicates that 19% of households are using multiple types of equipment and 33% of consumers do not have a partner or carer at home. The following persona has been developed to highlight the importance of consumers developing an adequate action plan for coping during short and extended outages.



Maria is in her 60s and on a disability pension. She lives alone and uses multiple life support equipment at home, each with varying energy needs.

She is dependent on oxygen supply, continuously every hour of the day (24/7 requirement). She uses an oxygen concentrator and a variable positive airway pressure (VPAP) machine connected to an oxygen supply. In the event of a power outage, she relies on portable oxygen equipment (bottles) which last about 3 hours.

Maria also uses medically required cooling (air conditioning system), with programmed settings to run during hot days as extreme heat exacerbates her breathing. She would be unable to cope during a long power outage or one that takes place during extremely hot weather.

What support might be needed? Maria would benefit from a consultation with her distributor or medical practitioner to develop a multi-step plan for coping during short and extended outages. If available, she could benefit from a battery rental program or assistance with procuring suitable back-up power for her needs such as Uninterruptible Power Supply. Mary ultimately needs to include in her action plan, calling for an ambulance to assist with her move to the hospital.

Figure 7: Persona 1 - Maria

Persona 2: Mohammed

Many consumers indicated that they would not be contactable during an outage, particularly if they did not have mobile phones, or their mobile phones had not been charged beforehand. The following persona has been developed to highlight additional impacts of power outages on customer responsiveness and preparedness.



Mohammed is in his 50s, semi-retired, and lives with his partner. Power outages shut down most of his communication devices (i.e., phone line, Wi-Fi, TV). The first thing that Mohammed needs to know is the extent of the outage, e.g., is the issue with their fuse box, their building, the street or wider spread? Once Mohammed knows the extent of the outage he can start to plan e.g., (i) who does he call by mobile (they have an emergency battery for it)?; (ii) does he check with a neighbour? or (iii) get in contact with their distributor?

What support might be needed? The majority of customers prefer to receive notifications by SMS to confirm the outage is with their distributor and that they are working on fixing the problem. As soon as their distributor is aware of an outage that could be affecting Mohammed, they should contact him quickly by SMS, so Mohammed doesn't contribute to overloading helplines or experience long call centre wait times.⁹ Distributors could provide additional guidance through consumer education which includes keeping their mobile phones charged at all times, having access to a portable battery-operated radio, or consider purchasing satellite phones.

Figure 8: Persona 2 - Mohammed

⁹ Fact sheet: Communication during emergencies, Department of Communications and the Arts

Persona 3: Jo and Ash

The following persona has been developed to highlight the impact of knowing the estimated length of an outage on contingency planning. 97% (of 500 consumers) want to know the estimated length of an outage, before they can determine their resulting action.



Jo & Ash find power outages very scary as they are primary caregivers for their child who relies on multiple pieces of life support equipment at home. They always call their distributor when there is an unplanned outage, before deciding what to do next. The advice they receive is always the same, to go to a hospital. In their case this would mean calling an ambulance and preparing their child for the travel, which is a very distressing process for the family.

The power is usually back on within half an hour to two hours. Jo & Ash think it would be helpful to have a better idea of estimated restoration times when they call their distributor to avoid taking an ambulance from someone who needs it more and causing a lot of distress to their household when it is not necessary for a short outage. Hospital rooms quickly fill up with people needing to use their life support equipment (particularly during widespread outages).

What support might be needed? Ash would benefit from advice on developing a multi-step plan which includes access to back-up power. Information on best back-up power options to pursue and access to financial support to purchase the relevant system would be of particular importance. She would participate in a battery rental system if it were available. Having access to back-up power would delay transfer to a hospital as long as is safely possible.

Figure 9: Persona 3 – Jo & Ash

6. Recommendations

6.1. Systems-level reforms: redesigning service to consumers

This section describes recommendations for redesigning services to offer improved support to consumers. They were identified through conversations with industry stakeholders and further supported by consumer feedback. These recommendations go beyond the control of industry as they require changes to regulatory framework. To address these would require involvement by energy regulators, government, and relevant peak groups.

In some cases, a complete overhaul of current processes within the network supply chain is required. It is recognised that there are additional complexities and challenges across the entire supply chain for these recommendations to be implemented.

However, these recommendations have attempted to take key concerns that consumers with life support equipment are experiencing and link them to potential systemic changes. This aims to provide longer term solutions and to future-proof services for increasing volumes of consumers needing support.

These recommendations are not a 'silver bullet' but should be considered to overcome many of the identified challenges that Life Support Customers experience, and the additional challenges faced by industry in their commitments to support Life Support Customers. A cost-benefit analysis of these recommendations could be undertaken to provide further validation.

6.1.1. Reclassification of "Life Support" terminology and registration eligibility

Two recommendations very closely linked are the requirement to re-define Life Support terminology and the criteria that is used to differentiate needs. There needs to be a mechanism to address:

- The growing numbers of Life Support Customers, and the resulting inaccuracies in data management and ultimately ineffective service provision.
- There is a 'one-size-fits-all' approach to service provision under the current regulatory framework, despite the differences in customer wants and needs identified in this research. For example, some people need more protections than others and some may not want the protections under the current regulations.



6.1.1.1. Life Support Terminology

The recommendation is:

- Replace the term “Life Support Customer” with terminology that focusses on the needs of the customer and the resulting energy needs – not the condition. Language such as ‘households with high energy needs’ or ‘connection guarantee consumer’ would then capture consumers that have certain equipment or energy needs, but that do not identify with current ‘Life support Customer’ classifications.
- This reframing of terminology then allows different tiers of energy needs to be captured. For instance, there may be a “life support” tier by which the customer’s life depends on constant supply of energy, versus a different tier within connection guarantee definition, where customer equipment usage is intermittent.
- Broadening the terminology in this way may also improve the relationship between energy companies and customers with high energy needs. By redefining terminology, customer needs can be adequately recognised during registration processes and service can be tailored according to needs.

6.1.1.2. Criteria

The recommendation is:



For medical organisations (e.g., Australian Medical Association (AMA)) and relevant Government bodies to lead the establishment of new criteria to define prioritisation of service to consumers using life support equipment according to their energy and health needs.

- Possible guidance on this process could be how the NDIS recognises the different values of support services by using a range of classifications and criteria to differentiate dependencies and needs of medical equipment. This scheme is built with a medical background focused on needs to try and help categorise, define, and refine and work on understanding costs and benefits and outcomes for its users. The categorisation model and relevant aspects of the NDIS scheme could complement one another.
- Service across the Life Support Customer registration should differ, according to the many differing needs of the consumer. This will better accommodate those that depend upon constant energy for equipment to sustain their lives, versus those that have less constant (intermittent, though not less important) energy needs for their required medical equipment.
- Reframing of criteria may consider several tiers for energy needs. Considered tiers may include:
 - 1) Life dependent (high risk to safety if power is compromised).

- 2) High energy needs (under the current regulations are defined as ‘Life Support Customers’ but for whom a power outage would not necessarily be life-threatening).
- 3) Not classified as a “Life Support Customer” under the current framework, but still have a level of medically approved energy needs.
 - These energy needs would need to be clearly defined so that industry is not having to manage greyness and ambiguity when providing service. This would need to be identified in the registration process so ultimately, the forms need to be changed to allow medical clarification.

6.1.2. Increase access to back-up power

The primary concern for consumers requiring life support equipment for their health is the availability of a continuous supply of energy. Feedback strongly indicated consumers are keen for support in accessing back-up power for equipment required for medical purposes. Multiple consumers indicated that they are already paying for their medical equipment and its maintenance, and while they would like back-up power, it may not be affordable so assistance should be provided since outages are out of their control. There are many benefits to providing access to back-up power.

- It allows equipment to function for longer during an outage at home, thus resulting in benefit for the recipient.
- It allows people to remain at home for longer, thus freeing up emergency resources (hospital beds, ambulances etc.,) that would be required if people had to leave their homes.
- It may reduce the anxiety and exertion caused by implementing actions in an outage customer feedback has identified as exacerbating health issues.
- Access to back-up power as an additional contingency measure also has benefits for distributors; a reduction in the volume of consumers requiring priority services during an outage could free up resources to allow distributors more time to deliver maintenance in a safe way to restore power across the network sooner.

The recommendation is:



Consideration should be given to increasing access to back-up power for consumers as required through implementing a suite of financing options. These could include interest-free or low-cost loan schemes, rebates for batteries, generators, and increased solar rebate schemes.



Education should be provided to ensure consumers were able to connect and operate back-up power effectively.



Medical equipment suppliers could be incentivised to prescribe equipment that is battery-ready or have a battery-compatible status.

6.1.3. Standardise concessions, registration, and deregistration processes across the NEM

Registration, concession and deregistration forms and processes differ across different organisations (retailer to retailer, distributor to distributor and retailer to distributor) and in some cases (concession processes), across different states.

The recommendation is:



Simplify processes for consumers and industry by standardising concessions, registration, and deregistration across the NEM, including development of a standardised registration form containing all relevant information for both distributor and retailer, and including the confirmation from medical professionals on individual consumer energy needs.

- Consideration could be made to allow for the cross-acceptance of forms (i.e., concession administrators could accept registration forms for life support) so consumers do not have to submit evidence to different streams (concession application and registration).
- Eligibility criteria for accessing concessions could be standardised across the NEM.

6.1.4. Explore the establishment of a central database for information sharing

Consumer information being split and duplicated across retailer and distributor databases increases risk of error and inaccurate record maintenance. Industry conversations suggest the need for retailers and distributors to reconcile records and streamline data sharing processes to improve service provision. This is a complicated, yet short-term solution.

The longer-term recommendation is:



To explore the establishment of a central database so that information can be shared and updated by both parties as required. This would require robust security systems to protect consumer data and to ensure changes are tracked and accounted for, however similar mechanisms have been established for other purposes across the energy supply chain, so such models could be learned from.

- Regardless of who the registration process owner (RPO) was, if consumer information was uploaded to a shared centralised database, retailers and distributors could both access and upload information and forms so that there was one “source of truth”, and this would alleviate the complexity and responsibility for consumers having to repeat processes and share information multiple times across the network supply chain.
- Whilst the 2021 energy rule change on switching retailers reduces the costs incurred by customers, the onus remains on the consumer to retrieve the

medical confirmation from the outgoing RPO and provide it to the incoming RPO. Having a centralised database would mean relevant retailers can access the information they require, simplifying the process for the customer. Most customers support the establishment of this database to reduce effort involved.

- Retailers and distributors alike would need to find a database that could be regulated and that their system could integrate with, to ensure a timely and cost-effective transition to such a system.

6.1.5. Maintenance of the life support register

Most consumers register their life support details with their retailer, who then becomes the main registration process owner (RPO). However, it is the distributors who control the risks involved for customers as they are responsible for network maintenance, restoring power and disconnecting services. Distributors must work with consumers to ensure they have contingency plans in place and notify them of outages impacting their life support needs. The relationship that people using life support equipment have with their distributor is a health and safety one, and there is a penalty cost for distributors if they disconnect someone on the Life Support Customer register for example, resulting in a greater incentive to manage the register than retailers have.

Additionally, consumers have a relatively longer relationship with a distributor than a retailer, particularly if they exercise their right to keep switching retailers to get a good deal (as they should). If the retailer is the RPO, there are complexities associated with switching and risk of possibly coming off the registry in the process. Aside from increased risk, surveys identified that dealing with both retailer and distributor can be a very inconvenient and frustrating experience for consumers.

The recommendation is:



Consumers should be encouraged to register with their distributor (not their retailer) when first registering for life support customer status.

- Traditionally distributors may not have had systems for managing customer information as they track and manage National Meter Identifiers (NMI) and not individuals, but with market shifts, the importance of distributors needing to establish and maintain relationships with their customers is increasing.
- The relative expense for businesses to ensure they have appropriate customer relationship management systems and processes in place is much lower than the cost to a consumer should they be disconnected erroneously or without notice.
- If distributors manage the register, frameworks can be set up and followed that prohibit disconnecting consumers unless they can be certain there are no

individuals using life support equipment at that property. This then incentivises distributors to ensure they track where those individuals are if needed.

6.1.6. Streamlining concession reapplication process (where applicable)

In some states (e.g., NSW) consumers must reapply for the life support rebate every two years, which includes going to a medical practitioner each time to confirm they still require the life support equipment. This can be a difficult process regarding the time, effort and cost required to access the appropriate medical practitioner or specialist. Consumer feedback indicates that costs frequently outweigh the benefit of the concession or rebate itself, deeming the support redundant. For many consumers on the register, the condition is long-term and so is the need for medical equipment.

The challenges associated with this process means that some customers can't comply or won't complete the process properly and their support drops off. Analysis of survey data shows this is the case for consumers in states where rebate reapplication is required.

Customers believe that energy companies and government should trust that the need for the life support equipment remains until informed otherwise by the customer themselves. It is recognised that this would come at a financial and resource cost to government.

The recommendation is:



Have a one-off concession application form, or at least, extend reapplication period beyond the two-year cycle.

6.2. Service-level recommendations for distributors

This section presents recommendations which can be operationalised to improve customer service. These are recommendations within the control of the industry under the current regulations. This does not preclude the challenges associated with these tasks.

Retailers and distributors need to work together to tackle some of these tasks and overcome barriers to success. Setting up and actively participating in an industry-led forum will be beneficial to resolving issues that distributors and retailers face with implementing Life Support Customer regulations, as regulations can be open to interpretation. Such a forum is key to facilitate these recommendations, allocation of roles and responsibilities and to find the best way forward.

Designing services for consumers

The overarching principle to adopt in designing better services for consumers involves listening to the customer and involving them in co-designing solutions that will best support them. The following actions should also be considered:

- Simplifying processes of Life Support Customers notifying their retailer or distributor of their needs.
- Data cleaning is very important to foster better outcomes for consumers. Distributors and retailers need to work closely to reconcile Life Support Customer datasets and agree on ways to continuously improve this process possibly through performance compacts and agreeing on data cleaning cycles. There may be hesitancy to do so due to risks involved, but this step is necessary to overcome challenge of those individuals listed on the database that should not be.
- Rethinking KPIs for call centre staff to improve Life Support Customer outcomes.
- Providing clear communications on who is responsible for different elements along the customer journey (end to end).

Table 3 below lists recommendations for improving services to Life Support Customers along the customer journey. These recommendations, which are largely informed by consumer feedback and suggestions offered through the survey, are meant to address customer information and service needs.

Table 3: Recommendations for distributors to consider operationalising to improve to ensure positive outcomes for customers

CATEGORY	FINDING	RECOMMENDATION
<p>Registration</p>	<p>1a) Deregistration is a painstaking process for some.</p>	<p>1ai) Pursue performance compacts with retailers to improve reconciliation of registration (and deregistration) data. 1aii) Co-design (with retailers) improved processes for deregistering which shifts responsibility away from carers/family members of a registrant who has passed away.</p>
	<p>1b) Medical practitioners are the most trusted stakeholder along the customer journey and initiate the journey process for many customers. Ensuring they have as much information to</p>	<p>1bi) Providing education to medical providers to advise consumers of what might be available (i.e., concessions and registration). 1bii) Providing education to medical providers & equipment suppliers to advise consumers of need for and benefits of a prearranged contingency plan, including accessing back-up power.</p>
	<p>1c) Consumers don't always self-identify as people using life support equipment without someone educating them of this and options available to them. Some do not know they equipment they use can be classified as life support.</p>	<p>1c) Providing education to customers on what is a life support machine, and whether it entitles them to concession.</p>

CATEGORY	FINDING	RECOMMENDATION
	1d) Customers are not sure who they need to talk to between retailer and distributor and find it challenging dealing with both parties.	1d) Provide clear communications on who is responsible for different elements along the customer journey (end to end) i.e., distributors for communications on outages and disconnection protection and retailers for customer data and concessions.
	1e) Most consumers see the main benefit of registering as a Life Support Customer as receiving priority restoration after an outage. Others enjoy benefit of protection from disconnection should they not be able to pay their bill.	1ei) Align customer perceptions for power restoration with provisions / protections under the current regulations through educational programs 1eii) Engage regulators on the impact of existing regulations on the growing number of Life Support Customers whose expectations for priority restoration and advance notifications cannot always be met.
Concession	2a) Consumers experiencing great difficulty managing their bills want more assistance that current life support rebate levels.	2a) Lobby for life support rebate levels to be increased for those most in need of additional support.
	2b) Other consumers who want to access concessions but do not meet the qualifying criteria (e.g., no pensioner card), would like criteria expanded to all Life Support Customers with a financial need.	2b) Lobby for expansion of life support concession qualifying criteria so every consumer using life support equipment who has a financial need can receive assistance.

CATEGORY	FINDING	RECOMMENDATION
	2c) Navigating different forms and processes for concessions used across Australia was a burden on some customers.	2c) Lobby for the standardization of concessions across the NEM.
	2d) Rebate reapplication requirement in some states was the single most burdensome experience for consumers.	2d) Lobby for the rebate reapplication requirement in some states to be cancelled or period to be extended beyond two years.
Key demographic data	3a) Majority of consumers using life support equipment are over 65 years, some are below 18 years and have been using their equipment their whole life.	3ai) Ensure systems and processes for providing services consider the needs of all consumers along the age spectrum i.e., service an ageing demographic, carers and primary caregivers of minors who use life support equipment at home. 3aii) Simplify outage notifications and all messaging. 3aiii) Expand communication channels (SMS/Phone call/Email/Website/Letter/In-person/radio/local newspaper/TV), including distributing information leaflets to community centres to reach people who speak a language other than English at home.
	3b) Some consumers live alone for far from their support network – which makes facing an outage a very anxiety-inducing experience. These consumers would prefer to speak to a human operator to update them of an ongoing outage and provide them with advice for coping.	3b) Consider programs to support these consumers quicker, including allowing enough capacity at your call centre to reduce call wait times or to place automated messages more quickly or to call consumers directly as soon as outages have been confirmed.

CATEGORY	FINDING	RECOMMENDATION
<p>Equipment types & energy needs</p>	<p>4a) Many different types of equipment in use across Australia, need a way to identify energy needs for other types used by consumers. Lack of a clear definition of life support equipment (vs. medical equipment) makes expectations and registrations complex.</p>	<p>4ai) Lobby for medical peak groups to provide guidance for managing energy needs of a variety of equipment. Specifically, AMA could consider redefinition or reclassification of life support equipment to assist with identifying the most critical consumers to help streamline support for the same during outages.</p> <p>4a ii) Accessing better information about the most critical life support customers and supporting their back-up plans effectively.</p>
	<p>4b) Australia's ageing population and impact of climate change on health needs will see a growing number of consumers using life support equipment at home. Catering to these needs will require government advice and support.</p>	<p>4bi) Lobby for policy changes to ensure robustness in regulatory frameworks to support growing need for support and services.</p> <p>4bii) 'Future-proofing' service and operations to maintain or improve service to consumers.</p>

CATEGORY	FINDING	RECOMMENDATION
	<p>4c) Some consumer expectations for power restoration in an unplanned outage are not grounded in reality or pronounced in the protections. Managing customer expectations is important to ensure they plan for outages and that industry and government can identify solutions for alternative power to bridge the gap in expectations and protecting people using life support equipment.</p>	<p>4c) Manage service level expectation by educating customers of the complexities of outages and need to have a contingency plan.</p>

CATEGORY	FINDING	RECOMMENDATION
<p>Information customers find useful in an unplanned outage</p>	<p>5a) An overwhelming majority of customers want to receive information that inform their resulting actions e.g., switch on back-up power, relocate elsewhere, change sleep schedule etc.</p>	<p>The following information is of great importance to customers when faced with an unplanned outage:</p> <ul style="list-style-type: none"> 5ai) Prioritise sending initial notification to confirm the outage. 5aii) Prioritise sending information on estimated length of outage as soon as this is known. 5aiii) Prioritise sending confirmation when outage has been fixed. 5aiv) Prioritise sending information on locations that still have power where customers can relocate to, including links to maps of affected and surrounding areas. <p>The following additional information is important to consumers:</p> <ul style="list-style-type: none"> 5av) Sending information on cause of outage, extent and whether it could lead to subsequent outages. 5avi) Sending confirmation that outage is being attended to (including how it will be attended to). 5avii) Providing suggestions of actions that customers should take in the interim, particularly for extended outages.
	<p>5b) Some consumers may not know where to find information about an outage on distributor communication platforms.</p>	<p>5b) If much of this information is already available on your website or through email & SMS subscription services, consider providing the detail of all available information in an education piece for consumers. Include in this piece details where customers can find updates and information about unplanned or planned outages.</p>

CATEGORY	FINDING	RECOMMENDATION
<p>Accessibility of information about an unplanned outage</p>	<p>6a) Some customers found it difficult to find out more information about an unplanned outage. Information provided to customers should be more concise, informative and in simpler language.</p>	<p>Suggestions for improving accessibility of information include:</p> <ul style="list-style-type: none"> 6ai) Provide an internal education piece to improve staff training and knowledge of actions customers can take, support required and details of outage. 6aia) Allow enough capacity for customers to talk to a human operator. 6aiii) Provide a dedicated phone number for life support customers, available 24/7. 6aiv) Improve content of automated messages (extent, cause, tips for coping, estimated restoration). 6av) Ensure additional resources are trained to assist during extended outages and major events. 6avi) Provide timely updates on your website. 6avii) Improve accessibility of information on your website. 6aviii) Consider developing an app with real time updates. 6aix) Provide notifications on electricity retailer apps. 6ax) Provide direct links to website information via SMS or email. 6axi) Provide glow-in-the-dark fridge magnet with key information. 6axii) Provide a list of phone numbers / website links for emergency services. 6axiii) Provide a pamphlet with suggestions for dealing with the situation. <p>Preferred method of communication include:</p> <p>6axiv) Phone call / Email / SMS / Website / Social media post / Radio bulletin.</p> <p>NB: If this information / support is already available, consider an education piece for consumers to improve knowledge.</p>

CATEGORY	FINDING	RECOMMENDATION
	<p>6b) Some customers did not receive outage notifications because their distributor:</p> <ul style="list-style-type: none"> • Didn't have their correct contact information • Didn't use their preferred method of communication • Didn't send communications to nominated individuals 	<p>6b) Work together with retailers to ensure ongoing maintenance of customer data after initial registration can be achieved and for accurate customer data to be shared on an ongoing basis.</p> <p>6c) Ask the right questions at the registration stage so distributors can effectively manage Life Support Customers and meet their service needs.</p>
<p>Precautionary notifications for planned outages</p>	<p>7a) Most customers are happy to receive notifications that a planned outage may occur (even if it meant false alarms). Some find this very inconvenient and prefer to receive notifications only when it is certain that an outage will affect them.</p>	<p>7a) Customer feedback on the precautionary notifications was mixed. Distributors can commit to reviewing their notification process annually.</p>
<p>Accessibility of information about a planned outage</p>	<p>8a) Some customers found it difficult to find out more information about a planned outage. Areas for improvement include providing updates during the outage (particularly if the outage is cancelled/postponed) and sending confirmation once an outage is complete.</p>	<p>Suggestions for improving accessibility of information about a planned outage are similar to those for an unplanned outage, including:</p> <p>8ai) Advertising a dedicated call centre number for life support customers.</p> <p>8aii) Advertising where to find information about a planned outage.</p> <p>Preferred communication channels are similar to those for unplanned outages, including:</p>

CATEGORY	FINDING	RECOMMENDATION
		<p>8aiii) Sending information by mail or in-person. 8aiv) Consider broadcasting information and advice through local newspapers & TV.</p>
<p>Level of support people using CPAP machines require to purchase battery systems</p>	<p>8b) Some customers want more notice period than the regulated 4-day period to prepare their mitigation plan.</p> <p>9a) Many customers using CPAP machines are willing to purchase a battery system for it but lack information to guide their selections. Others would require financial support to acquire those systems through rebates, No Interest Loans, or low-cost loans.</p>	<p>8bi) Consider in addition to mail notifications, sending an SMS for planned outages. 8bii) Consider sending this SMS at least 7 days ahead of a planned outage. 8biii) Send a reminder SMS the day before the scheduled outage.</p> <p>9a) Deliver a customer educational piece including information: <ul style="list-style-type: none"> • about compatible battery systems to suit customer needs. • about where to purchase a battery system. • on how to connect a battery system to their CPAP machine. • on battery-life to suit customer energy needs. • on typical battery costs. </p> <p>9b) Investigate option to loan batteries for use during a planned outage. 9c) Consider lobbying state government to design financing mechanisms aimed at increasing customer access to back-up power options.</p>

CATEGORY	FINDING	RECOMMENDATION
<p>Customer action plans to cope in an outage</p>	<p>10a) Many customers don't have prearranged plans. Education on need for a plan is important as some customers do not think it is their role to come up with one.</p>	<p>10ai) Provide clear communication on customers' responsibility for contingency planning vs. distributors' responsibility for communications on outages and disconnection protection. 10aii) Provide education to customers on the importance of them having a contingency plan. 10aiiii) Provide education to customers on alternative energy support through technology such as batteries. 10aiv) Consider providing educational materials on contingency planning for medical providers to advise customers of what might be available. 10av) Consider lobbying for equipment suppliers to discuss and advise customers on available back-up power options.</p>
<p>Existing practices that have a negative impact on customers</p>	<p>11a) Customers identified current practices and business processes that have made their experience as a Life Support Customer more complex than it needed to be. In some states, most customers identified the rebate reapplication process as being an unnecessary & burdensome requirement.</p>	<p>11ai) Deliver an internal education campaign to upskill frontline workers to better understand life support customers and their needs including:</p> <ul style="list-style-type: none"> • providing more specific advice to customers on best evacuation routes enroute to locations that still have power. • improving knowledge of the lived impacts that outages have on customers to send help quicker. • Improving content of outage notifications to be more informative and offer ways to support customers (to not appear obligatory). • Increasing familiarity with jurisdictional issues. <p>11aii) Consider rethinking KPIs for call centre staff to improve service to life support customers. 11aiii) Strive for consistency of services and data across the industry. 11aiv) Inform customers of every outage even those that are under a few hours. 11av) Avoid scheduling planned outages at inconvenient times, i.e., lockdowns.</p>
<p>Information required by customers to</p>	<p>12a) Some customers have information gaps which if addressed, could increase the number of customers</p>	<p>12ai) Give as much advance notice for planned outages as possible. 12aii) Provide timely, informative, and regular notifications.</p>

CATEGORY	FINDING	RECOMMENDATION
develop their action plans	who have a prearranged plan for coping during outages.	<p>12aiii) Provide details for expected timing and length of outage as they become available.</p> <p>12aiv) Consider developing a website or portal for Life Support Customers which is a "one stop" place to get information on strategies, products, etc.</p> <p>12av) Include a list of areas unaffected by the outage when sending advance notifications.</p> <p>12avi) Provide a list of localised areas to charge equipment on your website / notifications.</p> <p>12avii) Help customers determine suitability of their action plans.</p> <p>12aviii) Help customers determine suitability of existing back-up power to meet their needs.</p> <p>12aix) Deliver a customer education piece including the following:</p> <ul style="list-style-type: none"> • Examples of typical action plans. • Checklist of things customers should obtain or arrange. • Information on compatible back-up power. • Information on more advanced life support and back-up power. equipment being developed. • Information on increasing utilisation of solar battery storage. • Provide a list of phone numbers / website links for emergency services. • Share your plan to restore power. • Any other information you deem useful.
Assistance customers require in	13a) Some customers need to be supported in implementing their action plans.	<p>13ai) Improve outage restoration times.</p> <p>13aii) Have enough capacity in your call centre for customers to speak to a human operator.</p> <p>13aiii) Share timing and expected length of outage as soon as this becomes available.</p>

CATEGORY	FINDING	RECOMMENDATION
implementing their action plans		<p>13aiv) Share suggestions for dealing with an extended outage. 13av) Give as much advance notice as possible. 13avi) Provide timely, informative, and regular notifications. 13avii) Provide details of best evacuation routes not impacted by outages. 13aviii) Notify health authorities & public housing staff of outages. 13aix) Consider battery rental program. 13ax) Consider assisting customers with getting to a hospital. 13axi) Consider offering financial assistance with temporary relocation or lobby for state government to provide this level of support. 13axii) Provide on-site assistance with lifting generator / equipment into position / setting up generator. 13axiii) Provide specialist advice to customers on:</p> <ul style="list-style-type: none"> • developing contingency plans. • energy efficiency advice. • increasing utilisation of solar and solar battery systems. <p>13axiv) Consider triaging those that require 24hr life support.</p> <p>A customer education piece to inform customers where they can access the above information is important.</p>
Nice-to-have service your consumers want you to offer	14a) The distributor – customer relationship is changing with customers looking for more services than typically provided.	<p>14ai) Consider ‘future-proofing’ service and operations to maintain or improve service to consumers. 14aaii) Consider offering compensation for temporary relocation or advocate for government assistance. 14aiiii) Consider setting up charging stations within communities / installing community batteries. 14aiv) Consider developing an app that provides tailored information for Life Support Customers / developing dedicated portal online.</p>

CATEGORY	FINDING	RECOMMENDATION
		<p>14av) Consider increasing call centre staff and facility to allow for dedicated, manned telephone contact available to Life Support Customers, 24/7.</p> <p>14avi) Consider providing information on available channels or financing instruments for accessing back-up power.</p> <p>14avii) Provide timely, informative notifications (in simple language).</p> <p>14aviii) Consider supplying back-up power through a battery rental program for planned outages and/or advocate for state government support.</p> <p>14aix) Pursue an outage-free network through:</p> <ul style="list-style-type: none"> • Having more underground electricity infrastructure (with a view to reducing incidence of unplanned outages). • Employing better maintenance practices. • Conducting more proactive tree felling. <p>14ax) Help customers with viewing / tracking real-time daily energy consumption (e.g., using an In-home device).</p> <p>14axi) Provide information on entitlements available for customers.</p> <p>14axii) Initiate contact with customers during outages.</p> <p>14axiii) Consider fast tracking smart meter rollouts, particularly for retirees.</p> <p>14axiv) Consider offering onsite or offsite assistance to customers with developing and implementing action plans.</p> <p>14axv) Consider offering free energy efficiency advice.</p> <p>14axvi) Assistance with accessing (and changing) energy efficient lightbulbs.</p> <p>14axvii) Lobby for a centralised online registration and management system linking electricity distributor, retailers, doctors, Life Support Customers, and the government.</p> <p>14axviii) Lobby for increased resilience (robustness) of communication systems and network (unaffected by outages).</p> <p>14axix) Lobby for better solar feed-in tariffs.</p> <p>14axx) Lobby for concessions/rebates to be accessible to all Life Support Customers.</p> <p>14axxi) Lobby for the repeal of registration renewals for accessing concessions.</p>

CATEGORY	FINDING	RECOMMENDATION
		<p>14axxii) Lobby for free / affordable life support equipment upgrades (energy efficiency).</p> <p>14axxiii) Lobby for government to support customers by supplying emergency life support equipment (e.g., bottled oxygen).</p> <p>14axxiv) Lobby for state government to support customers by assisting with maintenance costs for their life support equipment, emergency life support equipment and back-up power.</p> <p>14axxv) Lobby for cheaper power (lower surcharge costs, better discounts & tariffs) for Life Support Customers through revenue determination (or other relevant) processes.</p> <p>14axxvi) Lobby for free power for Life Support Customers.</p>

7. Conclusion

Through this research, AEF aimed to identify ways Life Support Customers can be best supported by the energy industry they rely on, including identifying any changes to energy regulations that will ensure positive outcomes for them.

- By engaging with consumers across the NEM, we have been able to gain valuable insights into the life support customer journey.
- We have learnt that for some Life Support Customers, there are services received that are valuable and very much appreciated. These include:
 - Improved communication methods.
 - Frequency and reminders for planned outages that allow consumers peace of mind to plan ahead and manage anxiety of being caught in an outage.
 - A dedicated helpline for Life Support Customers.
 - Recent pilot initiatives that include assistance with batteries and back-up power.
- However, for other Life Support Customers there is still a need for service improvement via:
 - More tailored communication notifications that speak to individual needs and preferences.
 - Education to increase awareness of services that exist and how to access them.
 - Education on the importance of an action plan for outages and guidance on its development.
- Additionally, through this research we have attempted to take key concerns experienced by Life Support Customers and link them to potential systemic changes to provide longer term solutions and to future-proof services for increasing volumes of consumers needing support.
- A suite of recommendations has been developed to redesign the Regulatory Framework, which may improve services to both consumers and the industry supporting them; including redefining terminology and the criteria for Life Support Customers to better meet the diversity of energy needs; increasing access to back-up power; streamlining forms and processes and management of customer data.

There are opportunities to take these recommendations further through:

- An industry-led forum to take operational recommendations forward in a uniform and consistent way so that processes can be standardised to reduce complexity, error, and difficulty for consumers.
- A potential energy rule change submission if there is appetite for the recommendations discussed.

It is through these recommendations that we hope to see an improvement of services that meet the needs of Life Support Customers into the future.

8. Appendix A – Detailed findings from initial customer survey

8.1. Background and scope

The questions developed for the initial survey were aimed at helping distributors understand who their registered consumers were and how best to support them. The survey, designed with predominantly closed-ended questions, covered the following focus areas:

- Registration information
- Life support equipment information
- Power outage preparedness
- Communication preferences

- 4,000 consumers participated in the follow-up survey.
- 3,600 completed surveys are the subject of the following analysis.
- All sample surveys are subject to sampling error. A margin of error of plus or minus 5 percentage points, at a 95% confidence level applies for the entire survey.

8.2. Registration process

How do customers find out about registering as a Life Support Customer?

Figure 10 below shows that almost half of customers surveyed found out about registering as a Life Support Customer from a medical practitioner. 23% found about from their energy retailer compared to 8% who found out from their electricity distributor.

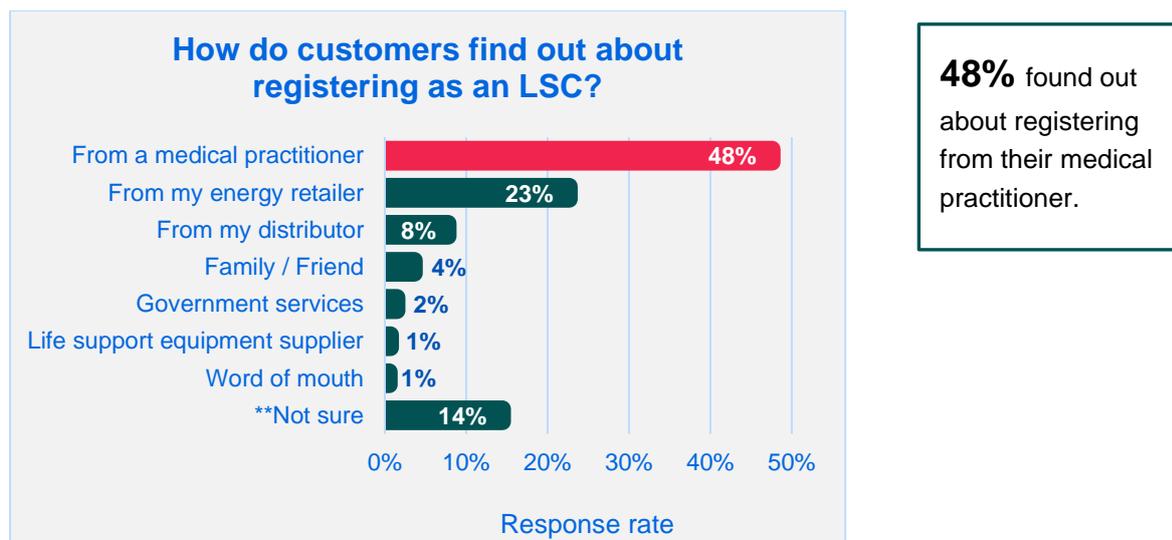


Figure 10: How do customers find out about registering as a Life Support Customer?

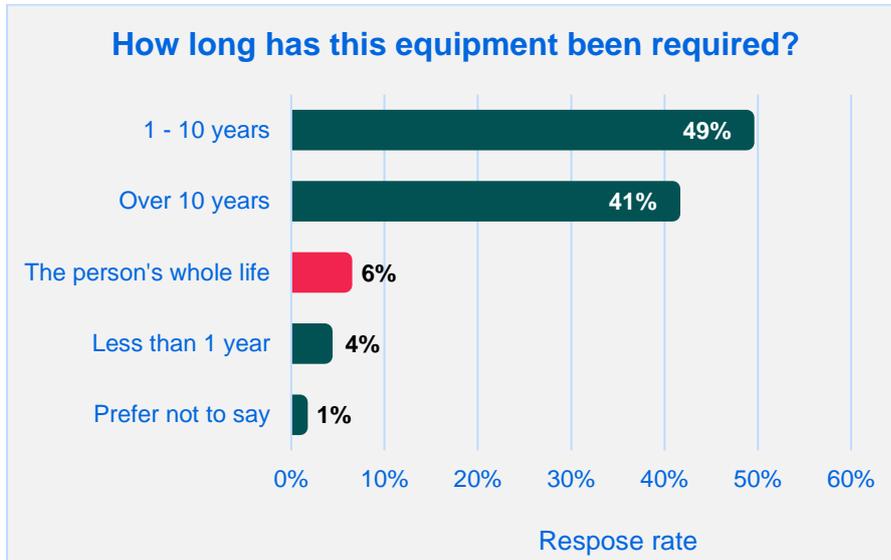
In addition to the above, a handful of customers found out about registering from:

- Health support group
- Promotional material
- Social media
- Mainstream media
- Web search / Email enquiry

Some participants do not want special treatment or to be seen as being vulnerable or stigmatised. They want to be able to determine appropriate action for their needs and not be labelled as special customers. Being labelled as Life Support Customers or registering as one, takes away their agency.

How long has this equipment been required?

At least 41% of customers have been using life support equipment for over ten years as shown in Figure 11 below. 4% of customers are new registrants, having required the use of their life support equipment for less than a year. Some customers although new to the Life Support Customer database, had been using their equipment for many years but were not aware of the registration service.



6% have been using their life support machine their whole life.

Figure 11: How long has this equipment been required?

Do you expect any changes to your Life Support registration within the next year?

97% of customers who participated in the survey confirmed that their registrations were current (i.e., life support equipment was required at their property). Some customers were not immediately aware that the medical equipment they used at home was classified as life support nor could they reconcile this with their status as a life support registrant. Whilst the majority of customers (93%) do not envisage any changes to their registration status within the next year, at least 2% expect they will need to update those registrations as they would have either moved to a new residence or discontinued use of their machine as shown in the Figure 12 below.



93% do not expect changes to their registrations over the coming year.

Figure 12: Do you expect any changes to your Life Support registration within the next year?

Deregistration process

For some people, reliance on and use of prescribed life support equipment is transient in nature; some people will recover from an illness following surgical or other intervention e.g., kidney transplant puts a stop to kidney dialysis.

The process to deregister from the Life Support Customer database may be difficult, with some customers finding it more stressful to deregister than it was to register. For example, several individuals who no longer require life support equipment at their property expressed frustrations and fatigue at having to request (numerous times) for their details to be removed from the database. This process is particularly stressful and burdensome on those who have lost a loved one (a Life Support Customer registrant) but are caught up in the slow administration of the deregistration process. These family members explained that they had sent numerous communications to their energy company requesting that their information be updated accordingly but this has not been resolved.

People expect their energy company to (i) process their request to deregister their property, (ii) inform other relevant providers of the same, and (iii) be deregistered from both the retailer and distributor databases / contact lists accordingly.

Energy companies are cautious about deregistering customers from the Life Support Customer database because of the risk of erroneously disconnecting a property or not informing every affected consumer of an outage, despite contingencies that might exist. Penalties associated with these failures also serve as a disincentive to processing deregistration requests.

Below are comments made by customers on the deregistration process.

“I advised you 6 or 7 years ago there was no longer a life support resident”.

“I have not had a life support machine at home since April 2019 when I had a kidney transplant, I did inform you, but it appears your records were not updated”.

“I have phoned your company to advise we don't have a life support machine anymore as my husband is in palliative care”.

“I do not require LIFE SUPPORT!”

How easy was the process to register your Life Support equipment with your energy company?

Insights from participating distributors and qualitative analysis of their customer survey responses indicate that most customers register their life support details directly with their electricity retailer. Majority of customers felt the process to register their life support equipment was an easy one, with 33% describing their experience as being very easy.

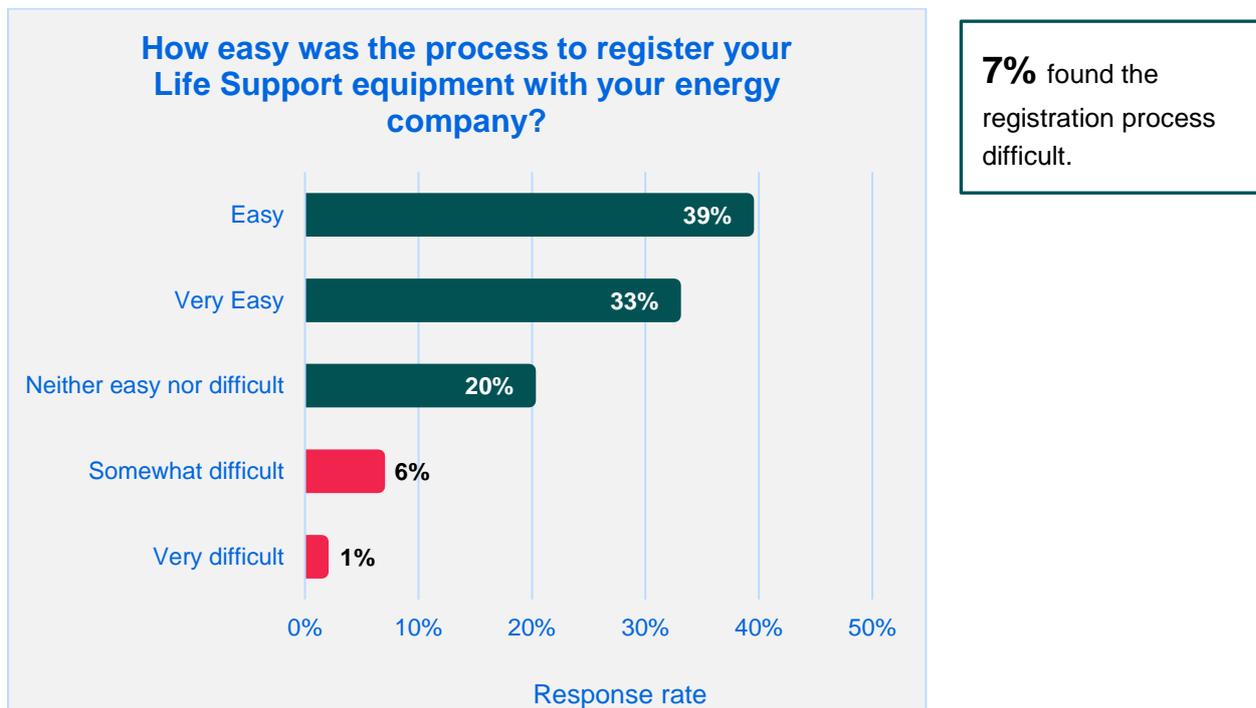


Figure 13: How easy was the process to register your Life Support equipment with your energy company?

Figure 13 above shows that 7% of customers felt the registration process was either *somewhat* or *very difficult*. These customers cited the following experiences as justification for their response:

- When energy companies lose their forms several times, requiring customers to resubmit those forms.
- When multiple residents at the same property use life support equipment and seek registration but energy companies issue a single form.
- Where registration was never finalised (because the customer decided not to register) but energy companies continue to identify them as registrants and list their property as a life support address.

In some states, customers are required to regularly reapply to continue accessing life support concessions. This is a separate requirement to the initial registration process on to the Life Support Customer database, which customers only have to do once. However, there were some customers who expressed their dissatisfaction with this concession requirement and conflated these experiences with the initial registration process.

Some customers couldn't recall the experience fully as either the registration was completed far in the past, or someone registered on their behalf. These customers contributed towards the tally of those who felt the process was neither easy nor difficult.

8.3. Key demographic information

Please indicate the age range of the person using Life Support equipment.

Figure 14 shows that over half of Life Support Customers surveyed are over 65 years of age. A parent whose two children use life support equipment at home explained that their needs are not easily understood or catered for by their retailer or distributor as systems for supporting Life Support Customers are not easily customised for their unique situation.

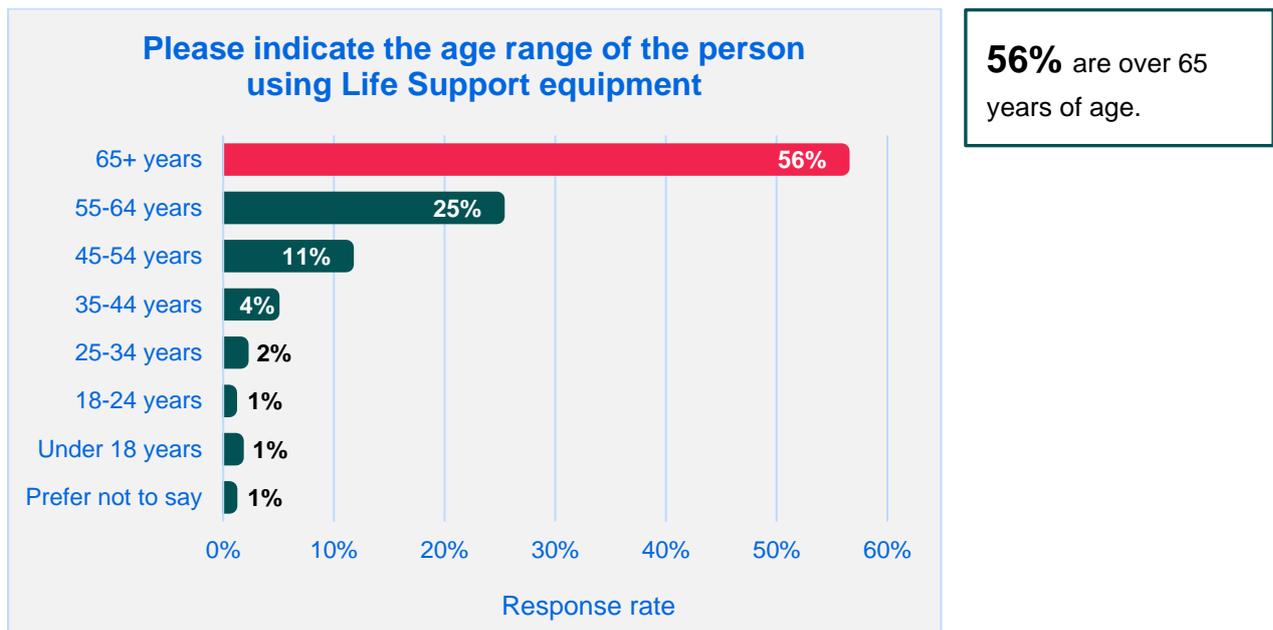


Figure 14: Please indicate the age range of the person using Life Support equipment

Does the person using life support equipment have a partner/carer?

33% of customers surveyed do not have a carer / partner at home. It was important to understand the Life Support Customers carer situation to ascertain whether customers would have support at home when faced with a power outage. Many people have a family member or spouse at home, who will be able to support them in an emergency, but this person does not identify as their carer. Others have a family member or spouse, who is a carer but wished to define that they are there primarily as a family member or spouse. Some people have a support network, for example, someone they can call in an emergency.

How are you managing the cost of your energy bills?¹⁰

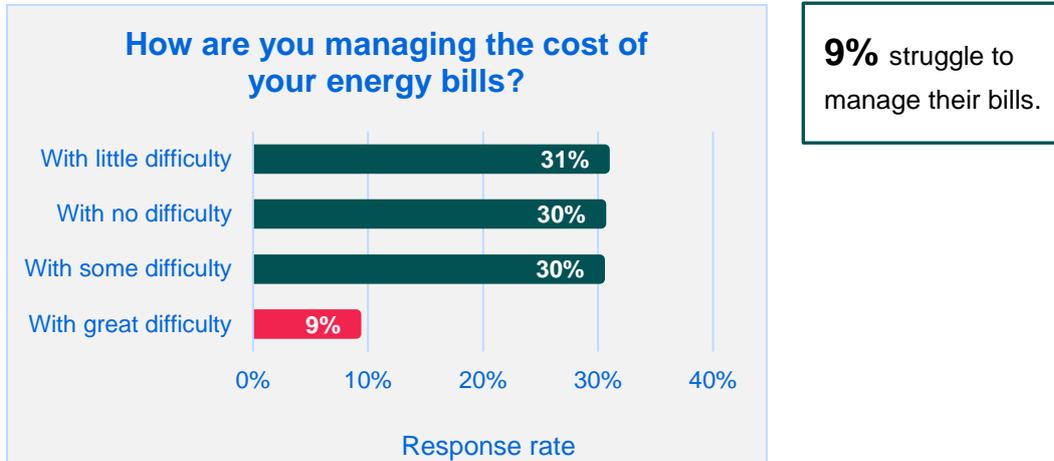


Figure 15: How are you managing the cost of your energy bills?

Many of those who are coping well have access to solar power, benefit from higher discounts or use Centrelink fortnightly payments to stay on top of their bills. Some of these customers indicated that they may not be able to manage their bills as well once they retire.

Customers who are struggling to pay their bills typically resort to rationing their energy consumption to reduce costs. Although many of these customers qualify for and receive life support concessions, the support they received is not sufficient with many asking for higher concessions. Below are some comments from customers struggling to manage their energy bills.

“Even though I get a discount, my bill is still especially high in winter because of the continued use of a heat pump”

“Sometimes we don’t eat”

“As a disabled person we spend a lot of money on medical needs than the general population, so I think we need more assistance”

¹⁰ Data shown is from 1,879 customers across two states

8.4. Types of life support equipment used at home

What type of Life Support equipment (s) is required?

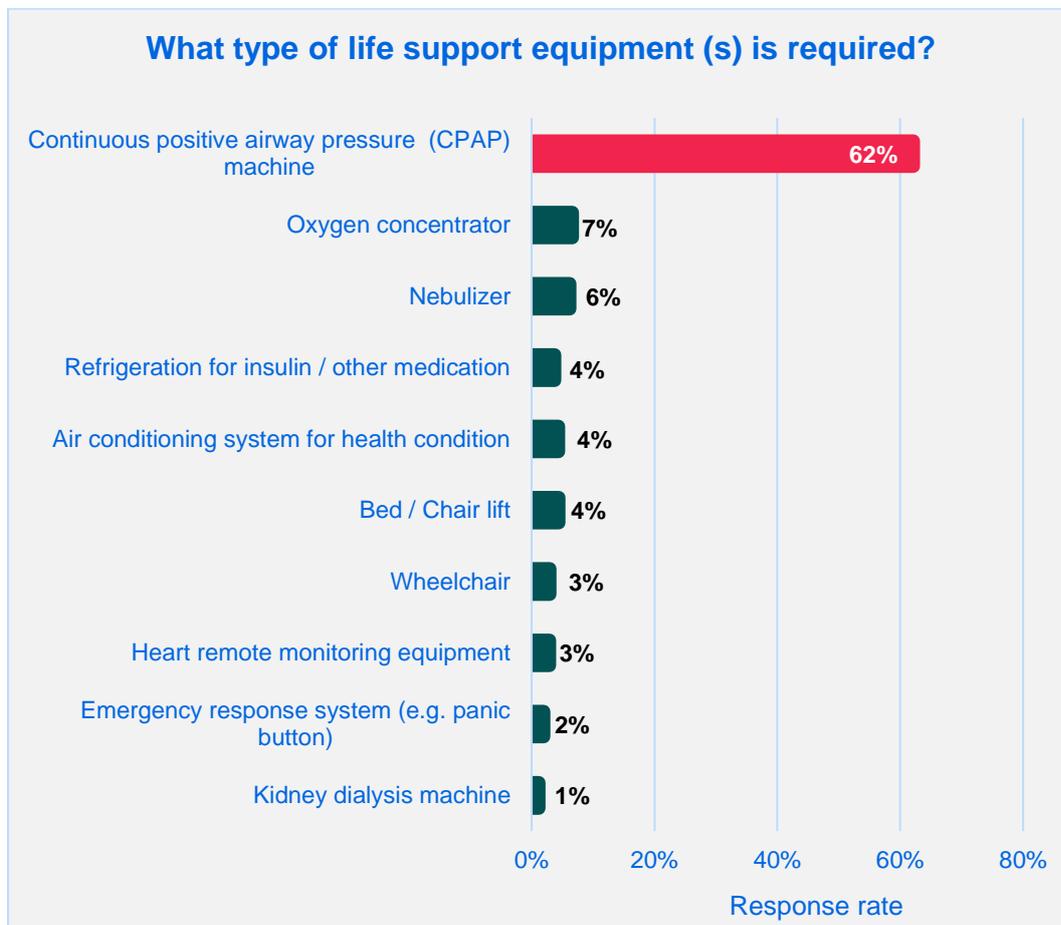
The following equipment are defined as life support equipment under the National Energy Retail Rules¹¹:

- *oxygen concentrator, kidney dialysis machine, intermittent peritoneal dialysis machine, continuous positive airways pressure respirator (CPAP), ventilator for life support, Crigler Najjar syndrome phototherapy equipment, and any other equipment a medical practitioner considers necessary for life support needs.*

As many as 26 different types of equipment were identified as being used by customers across three states. This extensive list aligns with the fact that most customers find out about registering as a Life Support Customer from a medical practitioner.

Figure 16 below shows the distribution of those equipment widely used by customers. Most life support customers (62%) use Continuous Positive Airway Pressure (CPAP) machines. About 7% use oxygen concentrators and 6% use a nebulizer.

¹¹ AER Life support registration guide 2019



62% use CPAP machines at home.

Figure 16: What type of life support equipment (s) is required?

In addition to the above, the following types of equipment were also used at home but by fewer customers.

Additional types of life support equipment used at home	
Crigler Najjar syndrome phototherapy equipment	Air mattress / alternating air pressure mattress
Ventilator for life support	Suction machine
Feeding pump	Air purifier / Reverse osmosis machine
Intermittent peritoneal dialysis machine	Cochlea processor

Additional types of life support equipment used at home	
Deep brain stimulation equipment	Augmentative and alternative communication
Insulin pump	Epilepsy monitor
Sublingual stimulator	Bilevel Positive Airway Pressure (BiPAP)
AIRVO / humidifier	Variable Positive Airway Pressure (VPAP)

Number of life support equipment at a life support address¹²

19% of households require more than one life support machine at their address as seen in Figure 17. This is the case when an individual uses multiple equipment or multiple individuals each use their own life support machine(s). The energy requirements in this case can be complex, with customers needing to power their equipment at different times and needing to have an extensive contingency plan in place in the event of a power outage.

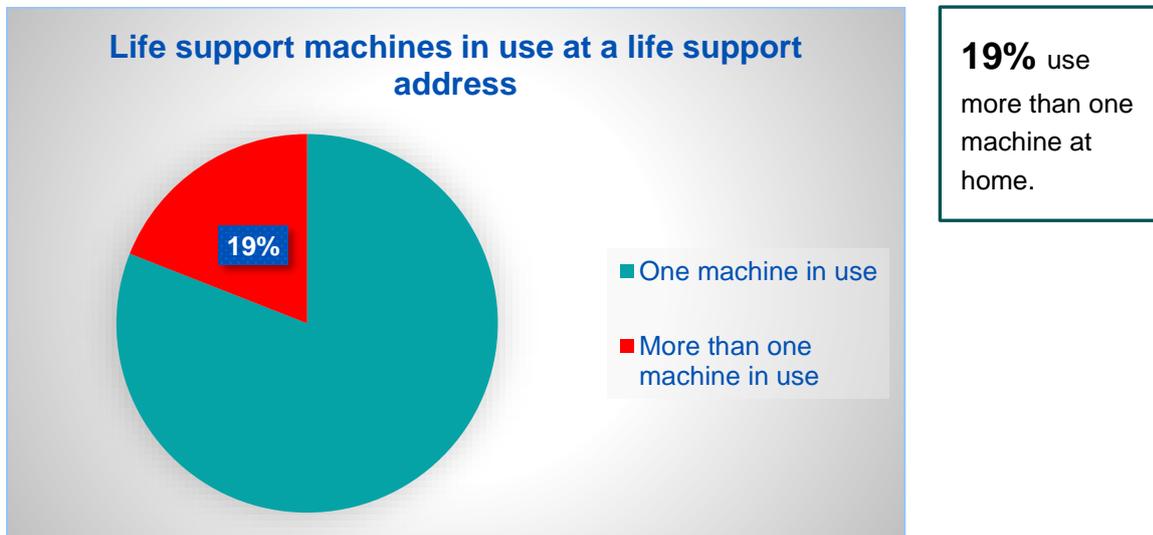


Figure 17: Life support machines in use at a life support address

¹² Data shown relates to 3,035 customers from two states

8.5. Life Support Energy Requirements

At what time of day does your life support equipment require power?

Most customers require power to their equipment during the night, with 62% requiring power exclusively all through the night (see Figure 18). This pattern aligns strongly with the use of CPAP machines, which most customers use exclusively at night when sleeping. Whilst these customers predominantly use their equipment overnight, they also use their machines whenever they sleep during the day or in response to a health emergency / health status on a particular day. Some CPAP users may sometimes work night shifts and therefore sleep predominantly during the day.

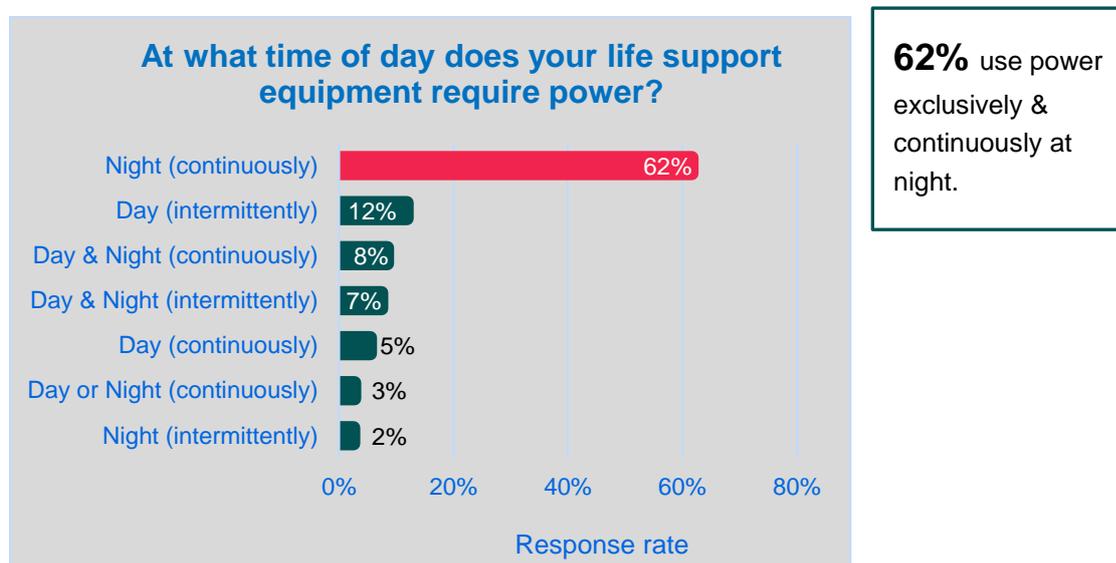


Figure 18: At what time of day does your life support equipment require power?

15% of customers need power to use their life support equipment during both daytime and night-time, either intermittently or continuously. Included in this are those individuals who use:

- Their equipment intermittently throughout the day (e.g., in response to temperature extremes).
- Their machines continuously throughout the day (e.g., ventilators, oxygen concentrators).
- More than one type of machine at different times throughout the day (e.g., oxygen concentrator during the day and CPAP machine at night).

People using ventilators for life support and oxygen concentrators indicated they typically required power day and night or for large portions of the day. Wheelchair / bed lifts require power intermittently when in use. Customers who have emergency response systems installed in their homes typically must press a button in the morning to confirm that they are feeling well. However, in the event of an emergency, they would require power to their system, so they can call for an ambulance or other

assistance. As such, most customers with emergency response systems indicated they require power during the day and night. Many of these customers also live alone and find comfort in being able to rely on their emergency response systems in an emergency.

Power requirements on any given day could differ from the ideal based on the customer's health condition. For example, an individual may use a nebulizer and oxygen concentrator interchangeably based on severity of health condition.

There are variations on timing and frequency of energy needs across customers who use the same type of equipment. This is because that same type of equipment is prescribed for a variety of health conditions. Even in the case where customers have the same medical condition, there are variations in their energy needs based on individual health circumstances. For example, three customers who use kidney dialysis machines indicated their energy needs as below.

*"2-3 hours daily,
usually afternoon"*

*"Every second day for up to
7 continuous hours"*

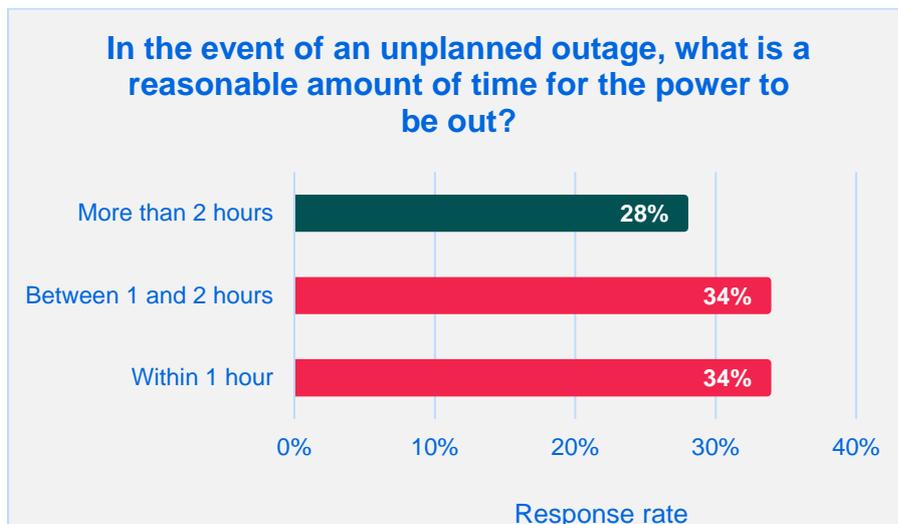
*"Night and morning
continuously, 9.5 hours"*

Access to back-up power

7% of Life Support Customers have access to some form of back-up power (e.g., generators, battery systems, solar battery) to meet their life support needs in the event of a power outage. However, these systems would not be suitable for extended outages.

In the event of an unplanned outage, what is a reasonable amount of time for the power to be out?

An unplanned power outage can be caused by various reasons, for example a tree falling on a power line or a car running into poles. 68% of customers think that it is reasonable to expect power to be restored within the first two hours of this type of an outage occurring. Included in this is 2% of customers who expect power to be immediately restored. Figure 19 summarises customer expectations of service when an unplanned outage occurs.



68% expect power to be restored with the first two hours.

Figure 19: In the event of an unplanned outage, what is a reasonable amount of time for the power to be out?

Whilst most customers acknowledged the unexpected nature of these outages, their expectations for power restoration depend on the following factors:

- The timing of the outage (particularly whether it occurred when customers need to use their life support equipment).
- Their health condition at that time.
- Past experience (i.e., how long a previous outage lasted).
- There was a marked difference in service expectations for those who live in remote areas compared to those in inner metro areas. This is likely informed by operational KPIs applicable to CBD, urban and rural areas.
- Whether outage would occur when they need to use their life support machine.
- Whether they had access to back-up power.
- How long their back-up power would last them.
- The severity of the outage.
- Whether they lived alone and would have no immediate assistance during an outage.

Below are some comments customers made against their responses.

“Minimal outage is preferred but appreciate the difficulty faced by staff in restoring services given the unpredictable weather conditions in our state”

“If outage is at night, less than 2 hours would be great. But not a worry during daytime re the CPAP”

8.6. Prearranged action plans

In the event of a power outage do you have a plan for how best to address your life support needs?

Having a plan in place for a power outage will minimise the effect it has on customers' ongoing life support needs. Over half of customers surveyed do not have a prearranged plan in place for addressing their life support needs in the event of a power outage as shown in Figure 20.

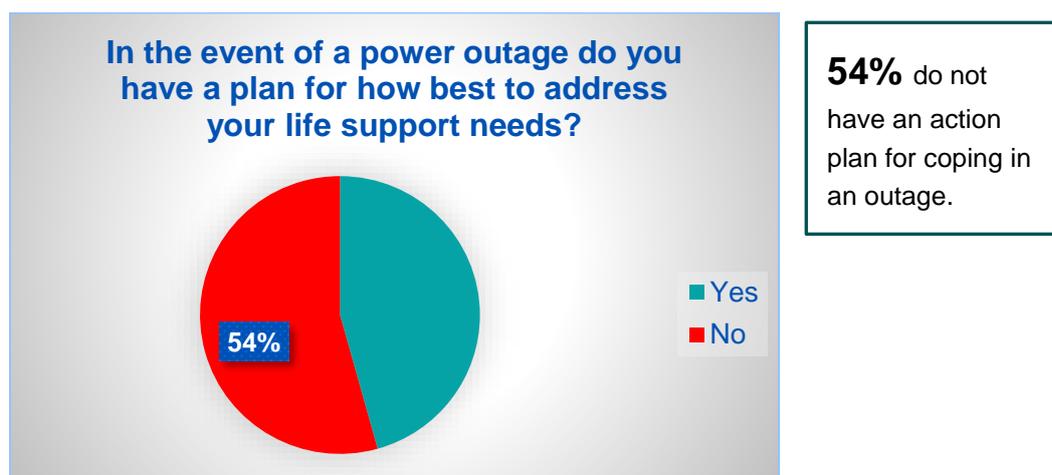


Figure 20: In the event of a power outage do you have a plan for how best to address your life support needs?

There was a correlation between customers who do not have a plan in place and their expectations for power to be restored as soon as possible. Many customers have never faced an outage and never had to prepare for such an eventuality. A lot of customers expect no outages and trust their distributor to provide power 24/7 because they are on the Life Support Customer database.

What is your action plan in the event of a power outage?¹³

Establishing the severity (duration) of outage is important in determining appropriate mitigating action. Most customers, because they do not have access to back-up power, relocate to wherever there is power (hospital, hotel, family/friends) or wait until the power is restored, particularly in the event of a short outage.

- 19% of customers explicitly stated they would relocate elsewhere (as shown in Figure 21 below).
- 18% will call their distributor with a view to confirm the outage and determine its severity before taking necessary action – whether to relocate or wait it out.
- 13% will call family / friends presumably to determine their resulting actions which would include relocation.

¹³ Data from 1,559 customers across three states

- 5% of customers will call the ambulance for assistance with relocating to a hospital.

On average, 13% of customers will connect their battery systems during an outage. This is the case for customers whose life support equipment requires power continuously throughout most parts of the day. Some of these customers indicated that they would struggle to connect their battery systems in an outage. These systems would not support life support needs during extended outages.

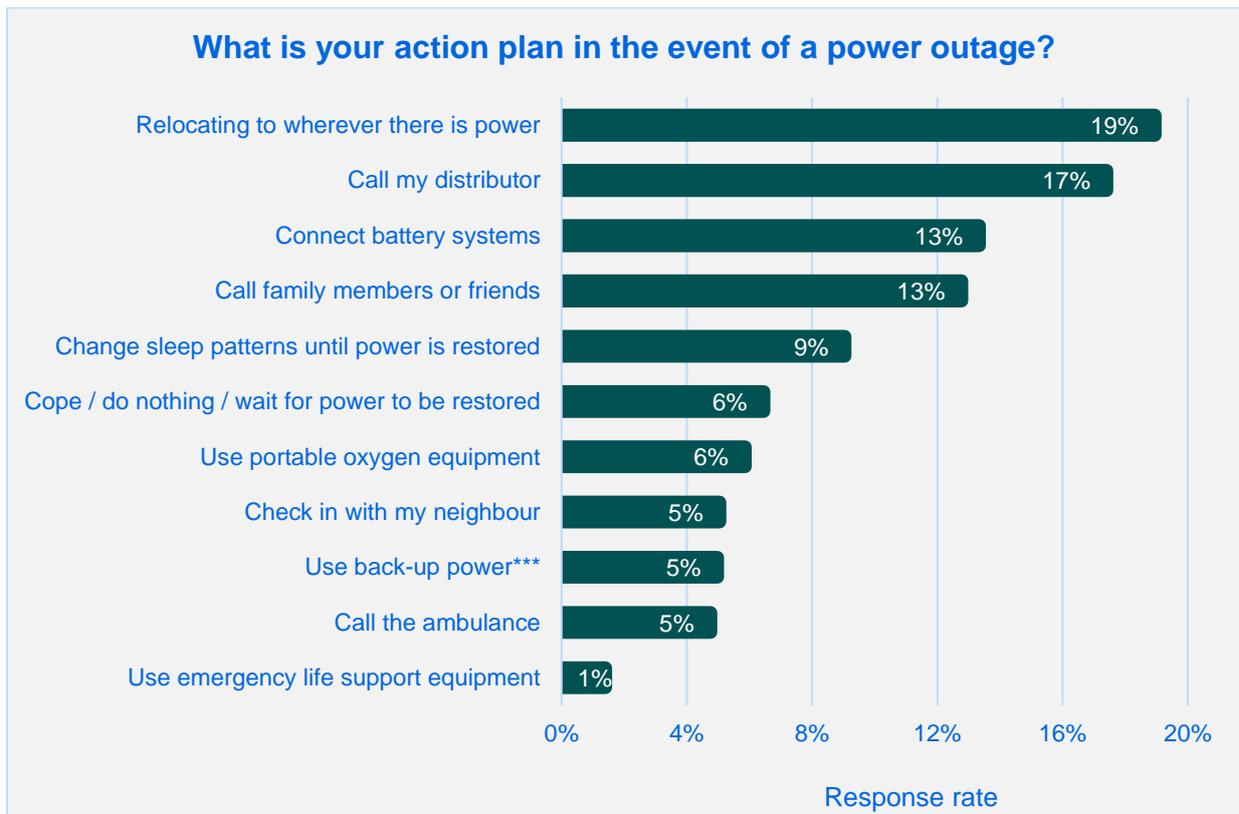


Figure 21: What is your action plan in the event of a power outage?

***Back-up power: Generator, solar battery

Qualitative analysis of customer action plans shows that many do not have an adequate plan in place, particularly when faced with a long outage. As an example, 15% of customers use slight behaviour changes as a response to an outage as follows:

- “Keep breathing” or “stay awake”.
- “Cope and wait for the power to come back on”.
- Do nothing.

Life Support Customers with multi-step action plans¹⁴

A considerable portion of customers have multi-layered mitigation plans in the event of an outage, about 28% on average. This is particularly the case for customers whose first step is to contact their distributor or family/friends before taking necessary resulting action (e.g., call an ambulance, move to a hotel, or wait for power to be restored). Other customers who rely on power continuously throughout the day or use multiple equipment typically have multi-step action plans for coping during an outage.

Customer action plans for planned and unplanned outages

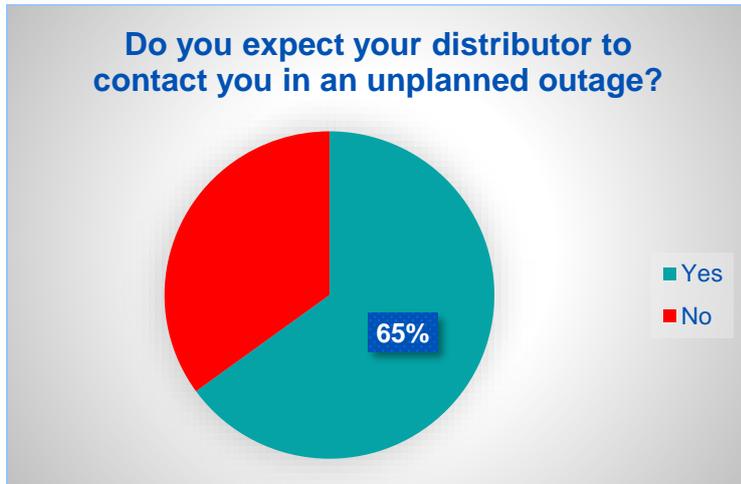
Customer action plans typically do not differ significantly whether one faces an unplanned outage or a planned outage. The major difference is that concerning the latter, customers have more time to prepare for an outage and can consult their carers or family members or ensure their mobile phones are fully charged. Advance notifications for a planned outage limit anxiety associated with being caught out unprepared during an outage. Whilst some customers may not have a prearranged plan in place to cope during an outage, they do come up with one in response to receiving notifications that a planned outage may affect their property.

8.7. Managing customer communications

Do you expect your distributor to contact you in an unplanned outage?

65% of customers expect their distributor to contact them in an unplanned outage (see Figure 22 below). Some customers would not need to be contacted for a short outage, particularly if that outage occurred during the day when most customers are not using their life support machines. Others noted that they would be unavailable in an outage as phone lines would also be down.

¹⁴ Data from 1,559 customers across three states



65% expect their distributor to contact them in an unplanned outage.

Figure 22: Do you expect your distributor to contact you in an unplanned outage?

Below are additional comments made by customers to clarify their preference for or against contact during and unplanned outage.

“If the power is out you cannot contact me unless you come here”.

“Yes, contact me straight away. It’s LIFE SUPPORT!”

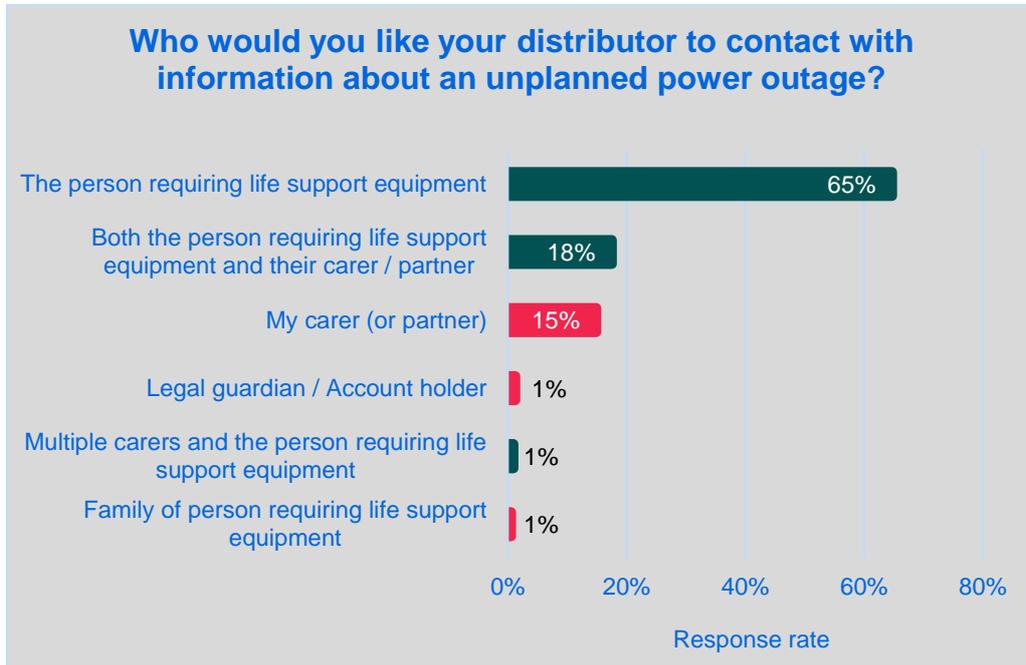
“I don’t expect them to no, but maybe a courtesy call to explain the outage and roughly how long it may be out for might be nice”.

“Yes, this is a critical medical device that my life depends on. I would expect you to keep me apprised of the situation so that I know if I have to enact my emergency action plan”.

“Only need contact if the outage is at night-time, e.g., after 10pm”.

Who would you like your distributor to contact with information about an unplanned power outage?

65% of customers prefer their distributor to contact them directly with information on an unplanned outage. 18% prefer for both the person requiring life support equipment and their spouse / carer to receive the information (see Figure 23 below).

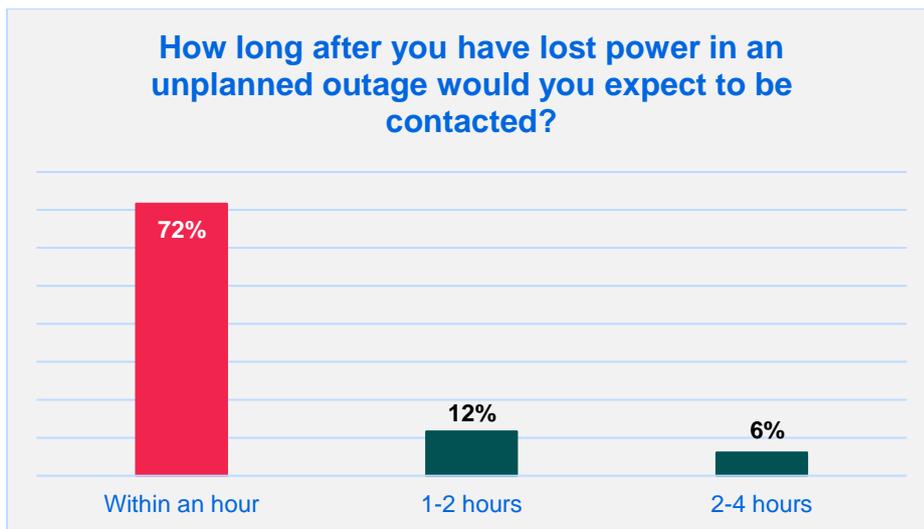


17% want others to receive information about an unplanned outage on their behalf.

Figure 23: Who would you like your distributor to contact with information about an unplanned power outage?

How long after you have lost power in an unplanned outage would you expect to be contacted?

About 72% of customers expect to be contacted within an hour of an unplanned outage occurring. Figure 24 below shows customer expectations for contact during an unplanned outage.



72% expect to be contacted within an hour of the outage occurring.

Figure 24: How long after you have lost power in an unplanned outage would you expect to be contacted?

Below is a sample of comments from customers clarifying their preferences.

“Will be uncontactable without power, may still get SMS for 1-2 hours”

“Knowing how long an outage is at night-time would be great, so can relocate if required”

“Depends on if it’s at night or day. I use my CPAP machine at night so if the power goes out then I would like to know as soon as possible but if during the day then you wouldn’t need to contact me”

How frequently would you expect updates while the power is out for a short outage (This is an outage lasting 3-4 hours)?

31% do not expect updates on progress with restoration for a short outage (lasting up to 4 hours) particularly if that outage occurs during the day. Some customers prefer to be contacted twice, at the beginning and end of outage. Others require an update only if the outage will be longer than previously advised or whenever there was new information to communicate. Some customers did not agree with the assertion that a short outage lasting 4 hours can be categorised as a short outage.

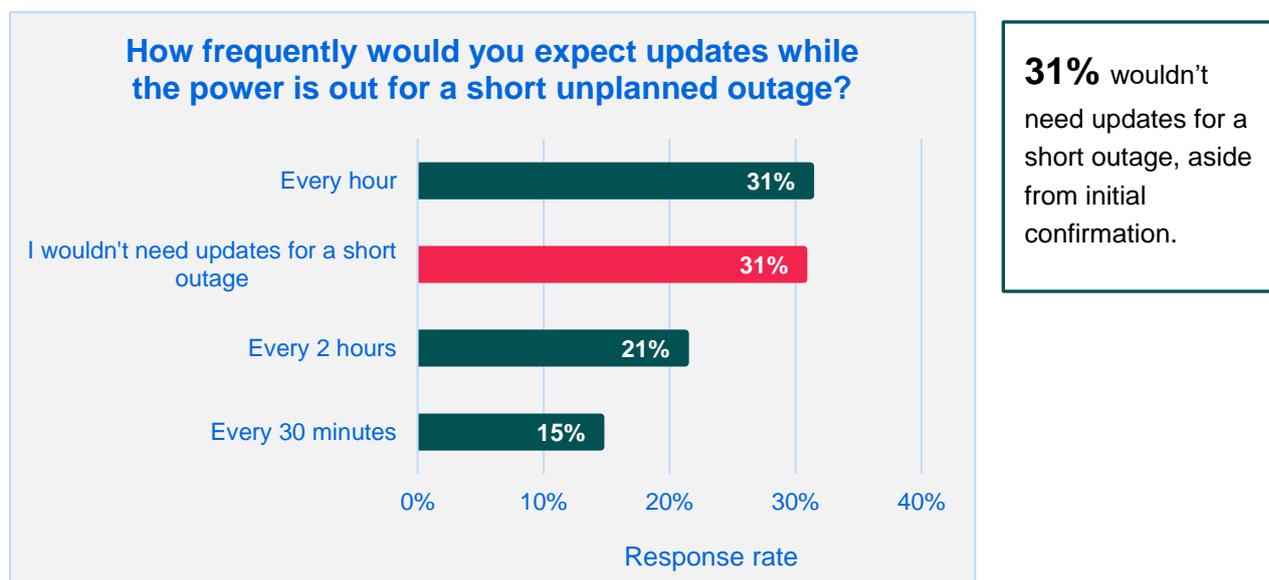
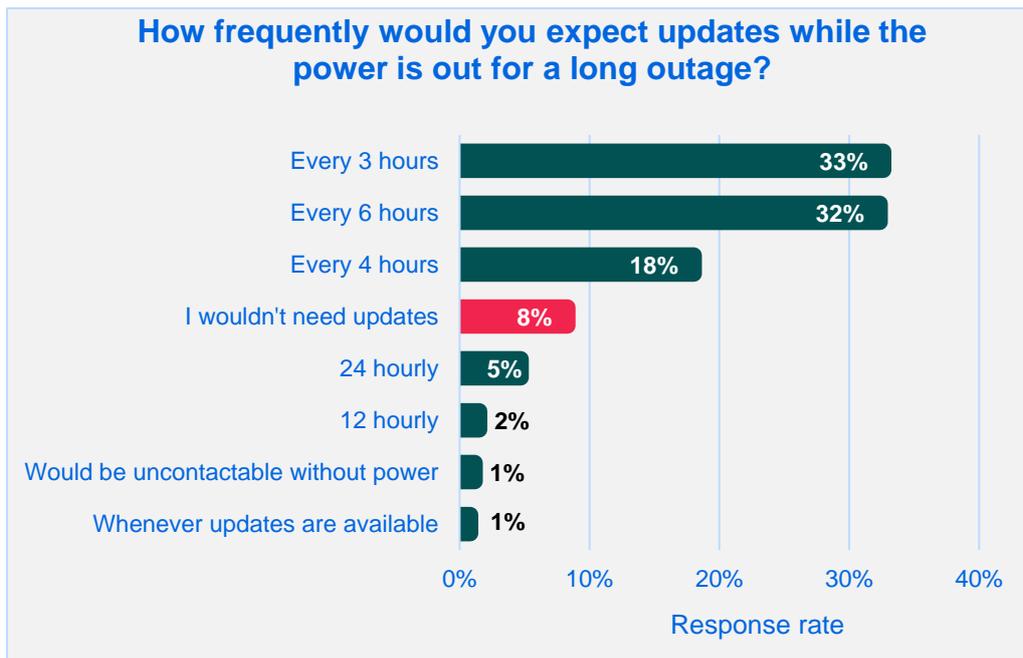


Figure 25: How frequently would you expect updates while the power is out for a short unplanned outage?

You have been informed the power outage is severe and may last longer than one day. How frequently would you expect updates while the power is out for a long outage?¹⁵

8% of customers would not need updates while power is out for long outage (i.e., an outage that is severe and may last longer than a day). 33% need updates every 3 hours and 32% require updates every 6 hours. Figure 26 below shows customer preferences for notification during a severe outage, which may last longer than a day.



8% wouldn't need updates for a long outage, aside from initial confirmation.

Figure 26: How frequently would you expect updates while the power is out for a long outage?

Below are comments from customers on communication preferences and reasons for those preferences.

“Oh my god this would be awful as I would have to relocate so I would like to be updated”.

“Update me when you have a definitive plan”.

“I would have had to go to a hotel to sleep, so would not be reachable at my home address”.

In the case of a planned outage, distributors are required to notify customers at least four business days in advance. Does this notice period meet your needs?

A planned power outage is when the power needs to be turned off for vital works to be conducted. 1.5% of customers are not satisfied with the regulated notification period, requiring more notice than

¹⁵ Data from 3,035 customers across two states

currently prescribed. These customers need more time to arrange an action plan as they must consult with professional carers to plan accordingly or need to plan for temporary relocation.

Below is a sample of comments from customers clarifying their preferences.

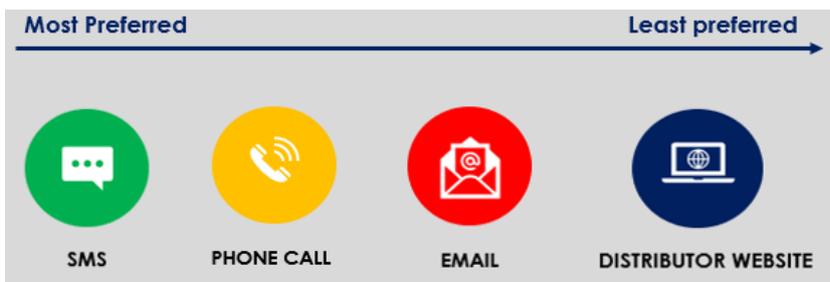
“1 week to give me time to find alternative accommodation”.

“7 days at least, to make arrangements”.

“I have to figure out where to go and set up CPAP machine”.

What method would you prefer communication about an unplanned outage to be made in order of preference, from most to least preferred?

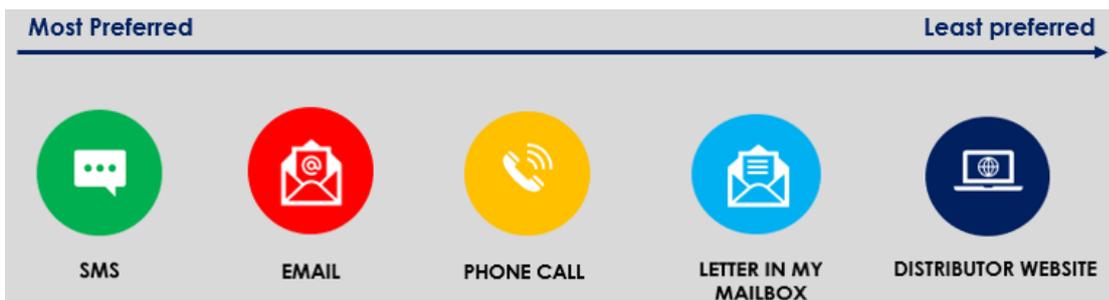
In the event of an unplanned outage, most customers prefer to be contacted by SMS. The next preferred method of contact is by phone call.



It is important to note that those customers who experience digital disadvantage in accessing mobile phones and computers would prefer to receive a phone call during an outage. Furthermore, some customers cited the ability to speak to their distributor during an outage (particularly longer outages or those occurring at night) provided emotional comfort.

What method would you prefer communication about a planned outage to be made in order of preference, from most to least preferred?

In the event of a planned outage, most customers prefer to be contacted by SMS. The next preferred method of contact is by phone call or email. Receiving a notification by letter or website was the least preferred communication method.



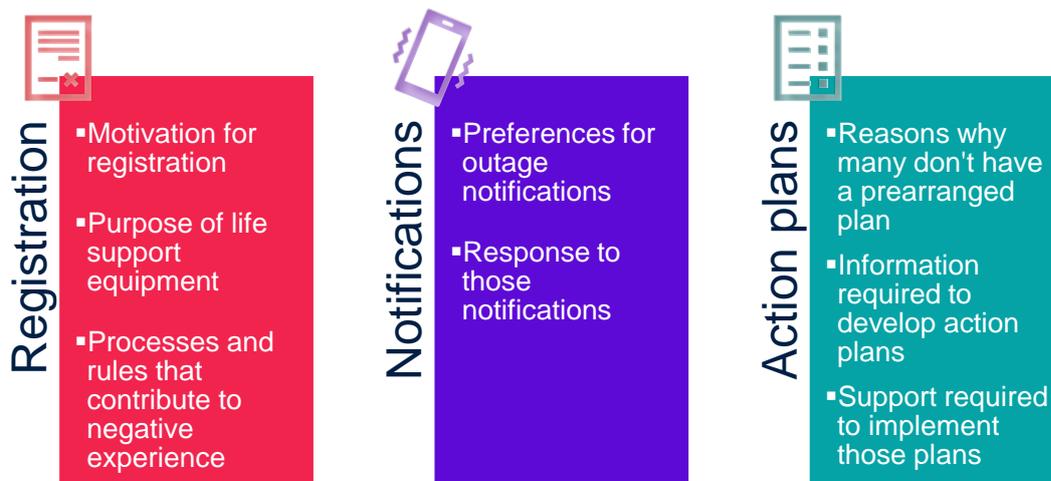
9. Appendix B – Detailed findings from follow-up survey

9.1. Background and Scope

The survey questions developed for the second round of Life Support Customer engagement were informed by gaps identified in initial survey, further points of exploration coming from participating distributors and discussions with key interest groups. The survey was designed to include a combination of open- and closed-ended questions that would solicit in-depth and considered responses on issues that are relevant to Life Support Customers.

Follow-up surveys were sent to customers who had previously indicated they would like to be contacted for additional research to help us better understand their challenges and preferences as Life Support Customers.

Scope of follow-up survey



- 550 consumers participated in the follow-up survey.
- 500 completed surveys are the subject of the following analysis.
- All sample surveys are subject to sampling error. A margin of error of plus or minus 6 percentage points, at a 95% confidence level applies for the entire survey.

9.2. Purpose of life support equipment

If we were to ask you the purpose of your life support machine / equipment, which of the following best describes your needs?

Life Support Customers use a variety of different kinds of equipment to support many different needs and circumstances. Insights from the initial survey showed us that some customers require their equipment occasionally (as and when required) whilst others depend on their equipment daily. For these reasons, the level of service required by Life Support Customers varies greatly.

We asked customers to self-analyse their life support needs and select from two options, the best statement which described the purpose of their life support equipment.

On average, 59% of customers indicated that they use their life support machine to sustain their life compared to 41% who use their machine to make their life more comfortable. Customers provided reasons for their responses as detailed in Figure 27.

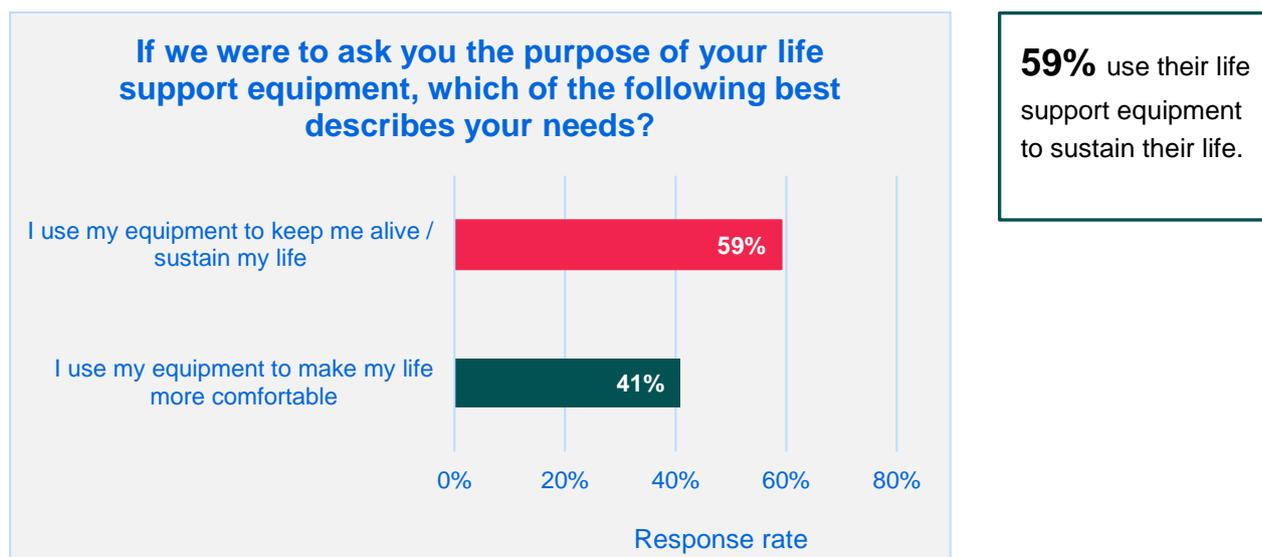


Figure 27: If we were to ask you the purpose of your life support equipment, which of the following best describes your needs?

Many customers who use their life support equipment to live more comfortably cited improved benefits from regular or intermittent use of their equipment as follows:

- Using CPAP machine helps them sleep better, boosting productivity and quality of life.
- Using medically required heating and cooling helps to regulate their body temperature, improving quality of life.

Customers who use their life support equipment to sustain their life provided two scenarios where a loss of power could be life-threatening:

- When a power outage will directly result in a health emergency e.g.,

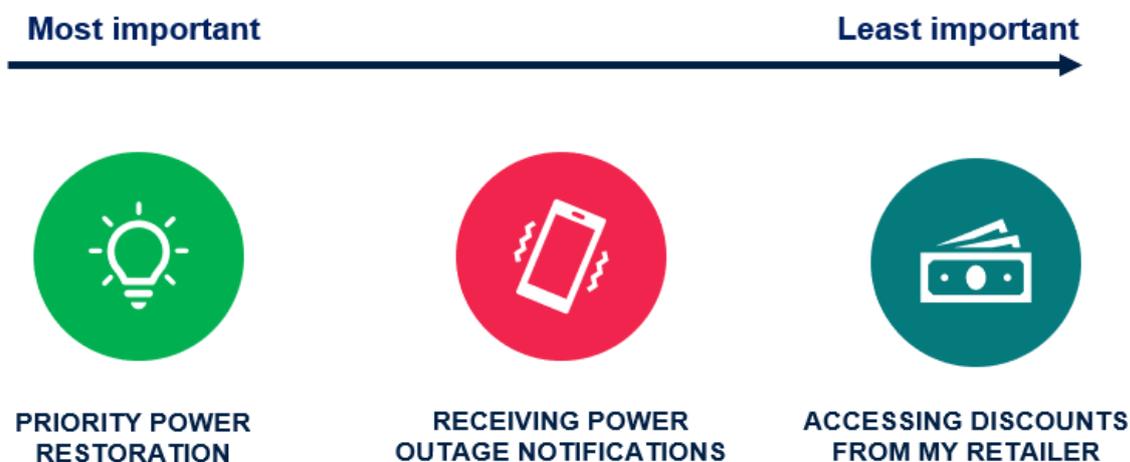
- People using oxygen concentrator 24/7 rely on dedicated supply of oxygen to live.
- People who are also dependent on assistive equipment could get stuck inside their homes and possibly *“die waiting for help to arrive”* without access to their life support equipment.
- People with severe / obstructive sleep apnea who would stop breathing in their sleep if their CPAP machine lost power.
- When a health emergency happens to occur during a power outage and customers are not able to use their equipment, e.g.,
 - If a customer has a heart attack during an outage, their heart remote monitoring equipment or emergency response system may not be able to raise an alarm sooner to get help sooner.

It is important to highlight that some people generally tend to underestimate their health requirements (or vice versa). In the absence of qualified opinions from medical professionals, these self-assessments of life support needs or insights should only be used to understand customer needs as they viewed them.

9.3. Benefits of registering as a Life Support Customer

The overarching benefit that customers get out of registering as a Life Support Customer is having peace of mind. They believe their status as a Life Support Customer registrant affords them priority restoration after a power outage, which distributors may not be able to guarantee for every customer (particularly for unplanned outages) given the proliferation of customers across their service area.

We asked customers to rank what they perceived as the benefits of registering as a Life Support Customer, from most to least important as shown below.



Additional benefits identified by customers include:

- Protection from disconnection due to non-payment of power bills.
- Accessing support programs such as battery rental system.
- Ability to continue living more independently (by getting treatment at home instead of hospitals or going into care).
- Identifying their energy needs for distributors to consider when scheduling maintenance.
- Identifying their needs to other service delivery organisations.

There were some customers who were of the view that there were not getting any benefit out of their registration, particularly where power restoration and overall customer service was concerned.

9.4. Categorisation of Life Support Customers

Currently, distributors have a 'one-size-fits-all' model for services provided to Life Support Customers, that is all Life Support Customers currently receive the same service. Given the exponential increase in Life Support Customers over the last few years, categorising customers could have the benefit of assisting distributors to provide support to those most in need will be important. We asked customers about their attitudes towards (and potentially needs of) a category-based Life Support Customer model. This was a very subjective, open-ended question and answers depended on whether one believed categorisation would place them on the bottom or top of the priority list.

There were generally two distinct groups of customers; those who understood that some categorisation or prioritisation would need to exist for distributors to manage their network and those who believed that such a categorisation model was beyond the remit of distributors. The latter believed that only medical professionals who have an in-depth understanding of their equipment utilisation, as well as an appreciation of the various dependencies that impact their energy needs, should make those determinations.

Could such a Categorisation model create a level of anxiety for you?

Customers were asked to state whether a *categorisation model* would create a level of anxiety for them. About the same number of customers explicitly indicated that categorisation would or would not create a level of anxiety for them as shown below.

- On average, 45% of customers indicated that a categorisation model would not create a level of anxiety for them as any approach to categorisation would confirm their position at the top of a priority list and ensure they received priority attention.
- 44% felt it would create a level of anxiety for them because there was a risk their needs will be underestimated by their distributor, resulting in being placed lower on the priority list than they should be.

Despite customers' self-assessment of their life support needs which split them into two categories of need, those who use their life support equipment to live more comfortably and those who use their equipment to sustain their lives, most customers do not want to receive lower priority as seen in the below illustration.



89% either want or expect to be at the top of any priority list.

11% are happy for others to be prioritised ahead of them.



Losing priority (or perceived benefits of prioritisation) is very anxiety-inducing even for those for whom a loss of power would not necessarily be life-threatening. The comment below summarises this fact.

“I wouldn't want to be last, would you?”

Suggestions from survey respondents for assigning priority level for service

Some consumers suggested the following advice for their distributor to consider, should they develop a categorisation model:

- Consider life dependency.
- Consider mobility challenges that people with a disability experience and that their energy needs extend beyond typical life support equipment to any type of assistive equipment (e.g., wheelchair, hoists, electromagnetic door locks).
- Consider multiple users at a single property or multiple equipment in use by a single individual.
- Consider subgroups within each equipment type / category as people's needs and dependency vary (even using the same type of equipment).
- Consider life of battery backup, which varies considerably based on the state of the battery and demand on the battery from more energy intensive equipment like ventilators vs CPAPs.
- Refer to the 'Telstra Priority Assist' program as a benchmark to follow.

9.5. Views on sharing information to a central database

A strong majority of customers (91%) believed it would be useful if there was a **central protected database** where their information was kept reducing the need to provide their details to multiple energy companies (distributors and retailers). These customers further indicated they would support the establishment of such a database. Customers cited difficulties dealing with both retailer and distributor, particularly satisfying either party's requirements for registering or maintaining those registrations. Some customers would like to see a *universal* form being put in place to reduce amount of time spent trying to understand the different forms used by retailers and distributors.

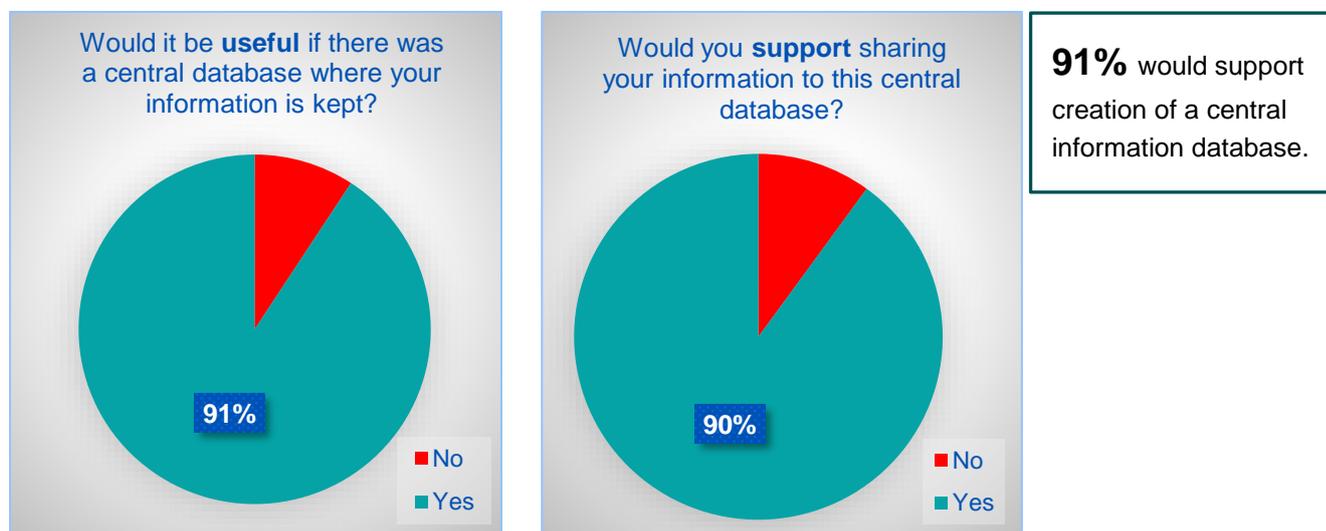


Figure 28: Views from consumers on sharing information to a central database

Those few individuals opposed to sharing information to a central database cited data security concerns and possible misuse of their information i.e., energy companies could share it with other third parties. Others did not believe this database was necessary as they do not expect to move interstate or change retailers.

9.6. Practices or regulations that have a negative impact on customers

Survey participants were asked to identify any current practices, rules, regulations, policies, or business processes that have made their experience as people who use life support equipment more complex than it needed to be. Most consumers identified the concession / rebate reapplication process as being an unnecessary, costly time-consuming requirement. The tables below list processes and practices by the distributor, the retailer or both, identified by consumers as having a negative impact on them.

Table 4: Distributor practices with a negative impact on consumers

Impact on customers	Examples of negative impacts
Poor customer service	<ul style="list-style-type: none"> ▪ Unhelpful advice given by staff during an outage. ▪ Slow response times ▪ Failure to notify customers of every outage ▪ Lack of sincerity in customer service (e.g., outage notifications seem obligatory than out of any real concern for the customer)
Poor operational performance	<ul style="list-style-type: none"> ▪ Random power outages ▪ Long power outages ▪ Inconvenient outage scheduling (e.g., during lockdown)

Table 5: Retailer practices with a negative impact on consumers

Impact on customers	Examples of negative impacts
Inadequate concession scheme	<ul style="list-style-type: none"> ▪ Complex policies and processes for accessing benefits. ▪ Rigid concession qualification criteria ▪ Varied criteria for accessing concessions across states ▪ Concession reapplication process places an undue burden on customers ▪ Difficult to register and receive concessions for multiple Life Support Customer users at one property
Poor customer service	<ul style="list-style-type: none"> ▪ Veiled threats of electricity discontinuance for non-compliance with registration requirements and reapplication timelines ▪ Delays in retailers sending concession renewal forms, resulting in customers losing concessions ▪ Retailers mishandling customer records & rebates and expect customers to fix their mistakes. ▪ Retailers being pedantic about information being supplied which it already has or could request directly from distributors.
Poor energy plans	<ul style="list-style-type: none"> ▪ Retailers do not offer discounts to Life Support Customers or offer very low discounts. ▪ Retailers make it more difficult for Life Support Customers to access discounts (e.g., requiring customers to call them with each bill). ▪ Complexity and lack of transparency of energy plans (not unique to Life Support Customers)

Table 6: Retailer & distributor practices with a negative impact on consumers

Impact on customers	Examples of negative impacts
Poor customer service	<ul style="list-style-type: none"> ▪ Call centre outsourcing (offshore or outside distributor service area) <ul style="list-style-type: none"> ○ Staff do not understand jurisdictional requirements. ○ Staff are slow to interpret needs of- and send support to Life Support Customers during an outage. ▪ Lack of sincerity in customer service (<i>“energy companies believe that once they have notified a customer of an outage then it is no longer their concern”</i>). ▪ Never feeling or having confidence that one’s information is noted and/or acted upon. ▪ Lack of understanding of one’s situation and inflexibility to deal with uniqueness of that situation.
Inefficiencies of dealing with both retailers & distributors	<ul style="list-style-type: none"> ▪ Navigating different processes and forms used by different companies intra- and interstate. ▪ Retailers not informing network providers of their consumers’ life support status (and vice versa). ▪ Consumers not sure who to talk to between retailer and distributor. ▪ Dealing with both retailer and distributor makes for a complicated consumer experience. ▪ Not knowing what services or benefits are available for people using life support equipment.
Unnecessary bureaucracy	<ul style="list-style-type: none"> ▪ Too much paperwork which people do not have time and energy to deal with. ▪ Forms are far too complex, not user-friendly (<i>“standardise and digitise”</i>). ▪ Information required on forms is largely irrelevant to some customers (<i>“try customisation”</i>). ▪ Completed forms not accepted for simple errors such as missing date information or one signature.

Would it be beneficial if the medical form your doctor fills out clearly states that you require the machine / equipment for your whole life?

In some states, customers are required to reapply to access their energy rebates / concessions. The concession reapplication process is one of the most unfavourable experience in the overall Life Support Customer journey. Many customers who have had to go through this reapplication process were dissatisfied with the process citing multiple visits to their doctors to have the necessary paperwork completed as an undue burden on their finances and time (for them and their doctors).

Below are comments from customers in this regard.

"The rebate application process is inefficient & paper based. It is also expensive".

"I used to claim a rebate but have not renewed for a while because the rebate was not worth the trouble".

"Biggest headache has been the renewal of the concession with energy retailer. I need this for life."

"The visit to the GP costs as much as the rebate itself".

"I cannot afford hospital parking and cost of seeing my specialist just to fill in paperwork".

"Renewal each year is time-consuming for me and my GP. My health problem is not going to improve".

"Please don't respond with, 'It's a government requirement' Use some common sense, and get the rules changed."

Because many customers were identifying the reapplication process as an issue for them, we asked whether it would help if, at the initial application stage, there was a section or checkbox on the forms where their doctor could indicate that they required the machine for their whole life, with a view to possibly phase out the reapplication requirement.

95% of customers would support such a change, particularly if it meant the reapplication process would be repealed. Many customers would like the reapplication requirement to be cancelled or at the very least for the renewal period to be extended.

Customers believe that energy companies and government should trust that the need for the life support equipment remains until informed otherwise by the customer themselves.

Many customers conflate the onerous concession reapplication process with their overall experience with the Life Support Customer registration process. They do not differentiate between the two processes (concessions and Life Support Customer registration) as most customers register on the Life Support Customer database with their retailer who also facilitate the concession application process.

9.7. Information about an unplanned outage

Please select the types of information that would be important to you in an unplanned outage.

One of the main challenges that distributors face is in providing effective communication ahead of and during outages. Knowing the type of information that customers need to plan for their life support needs is important to ensuring better outcomes. Figure 29 shows the three most important information in an unplanned outage

97% of customers want to receive information on the estimated length of an unplanned as this informs their resulting actions e.g., switch on back-up power, relocate elsewhere, change sleep schedule etc.

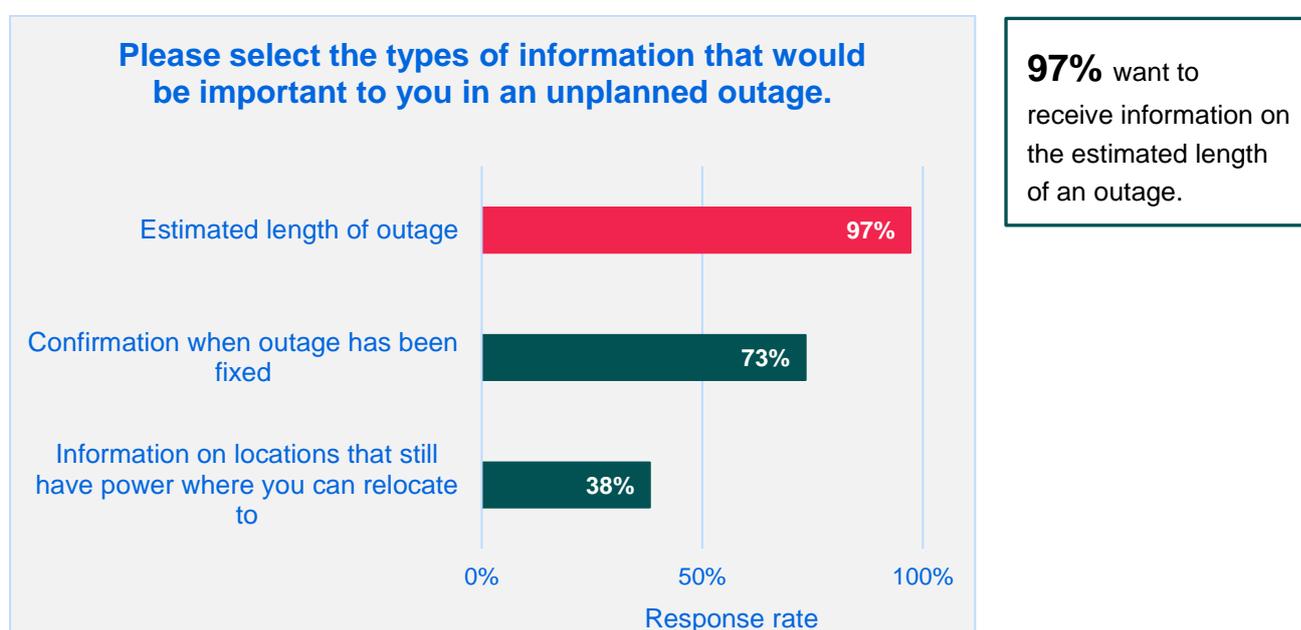


Figure 29: Please select the types of information that would be important to you in an unplanned outage

73% of customers want to receive confirmation when the outage has been fixed so they know when it will be safe to connect their life support equipment. Others may have relocated elsewhere temporarily and would want to know when it would be safe to return home. 38% of customers want information on locations that still have power where they can relocate to. Some customers found that hospitals fill up quickly during a crisis, particularly over a long outage and would like to know whether their distributor could recommend other suitable, alternative areas.

Other types of information important to customers include:

- Cause of outage, how widespread it is and whether it could lead to subsequent outages.
- Confirmation that outage is being attended to (including how it will be attended to).
- Actions that customers should be taking during an outage.
- Advice on accessing compensation for costs associated with relocation.
- Maps of the affected and surrounding areas.
- List of areas to relocate to (e.g., Fire Rescue procedures)

If you have ever needed to find out more information about an unplanned power outage, was it easy to find?

On average, 39% of customers surveyed found it difficult to find out more information about an unplanned outage (see Figure 30). Many of these customers suggested their distributor should send an SMS to confirm the outage, then provide useful information about the status of the outage.

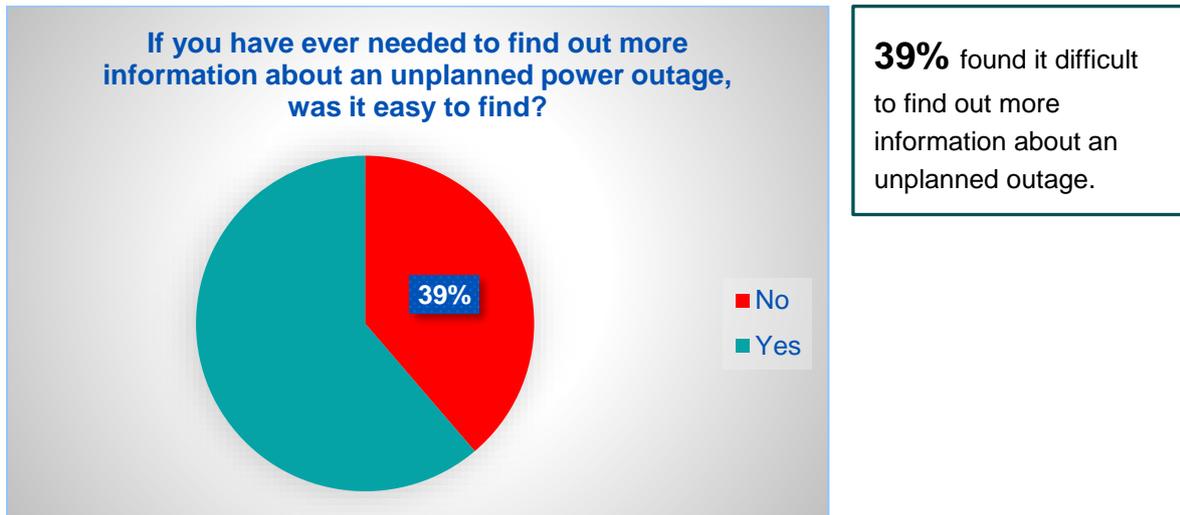


Figure 30: If you have ever needed to find out more information about an unplanned power outage, was it easy to find?

Customers provided suggestions for improving accessibility of information about an unplanned outage as shown below.

<p>Call centre performance</p> <ul style="list-style-type: none">❖ Improve staff training and knowledge❖ Allow enough capacity for customers to talk to a human operator❖ Provide a dedicated phone number❖ Improve content of automated messages	<p>Provide timely, informative notifications</p> <ul style="list-style-type: none">❖ Provide timely updates on your website❖ Improve accessibility of information on your website❖ Develop an app to share real-time updates❖ Provide notifications on electricity retailer apps
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Method of communication

- ❖ Provide direct links to website information via SMS or email
- ❖ Phone call / Email / SMS
- ❖ Social media post
- ❖ Radio bulletin

Miscellaneous

- ❖ Glow-in-the-dark fridge magnets with key contact information
- ❖ List of phone numbers / website links for emergency services
- ❖ List of localised areas with power to relocate to
- ❖ Pamphlet with suggestions for dealing with the situation

9.8. Information about a planned outage

If you wanted to find out more information about a planned power outage, was it easy to find?

On average, about 30% of customers found it difficult to find out more information about a planned outage compared to 39% for an unplanned outage. Although customers were generally satisfied with the advance notifications for planned outages, areas for improvement include:

- Sending reminder text messages, a day before the outage.
- Providing informative updates during the outage, particularly if the outage is cancelled/postponed.
- Sending confirmation once an outage is complete.

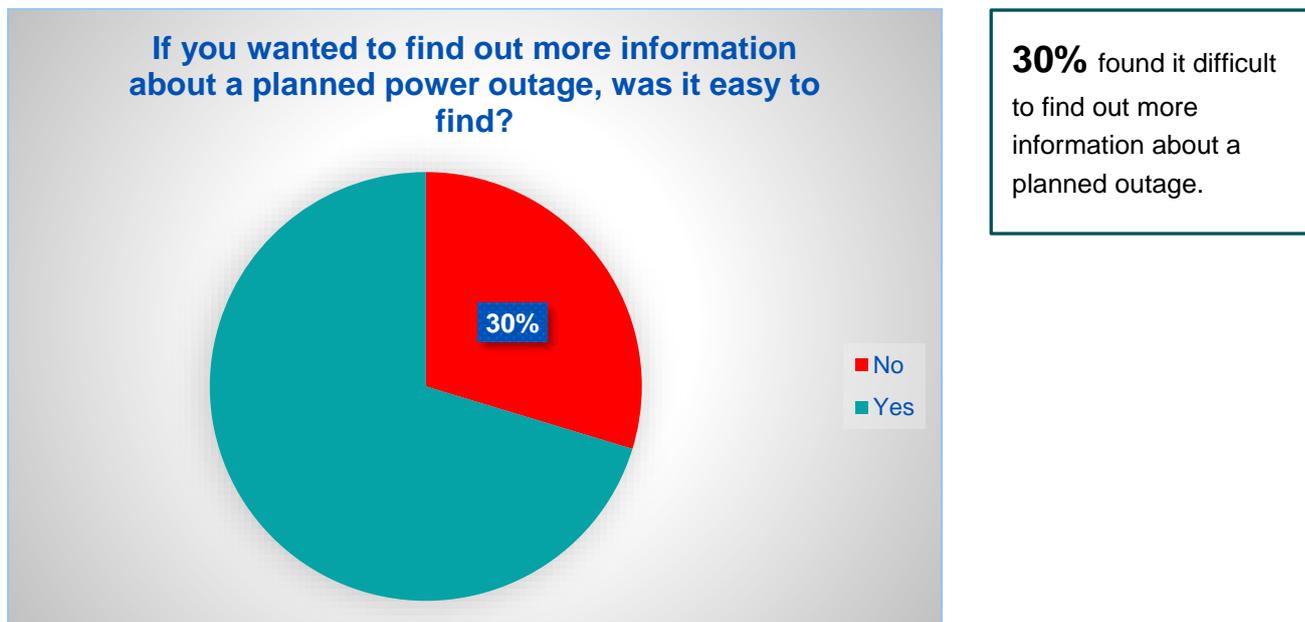


Figure 31: If you wanted to find out more information about a planned power outage, was it easy to find?

Suggestions for improving accessibility of information:

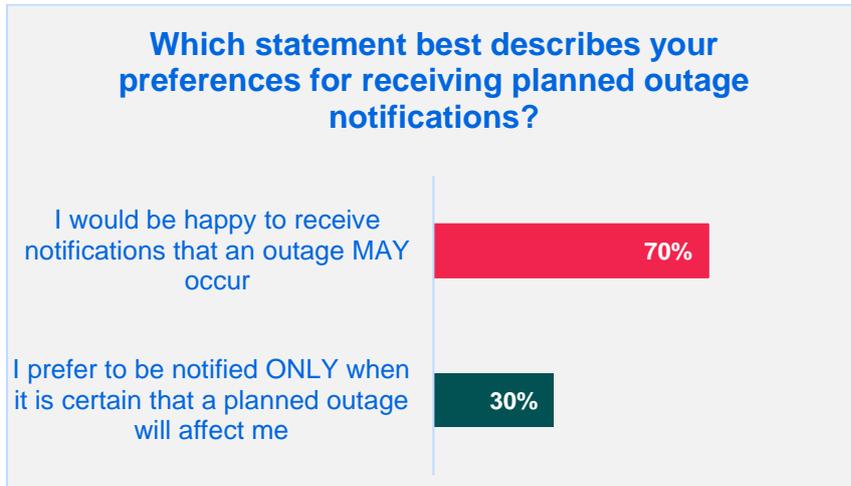
For the most part, suggestions for improving accessibility of information about a planned outage were similar to those for unplanned outages. Customers further suggested the following for improving accessibility of information:

- Broadcasting information (timing and advice) through local newspapers and television.
- Distributors should ensure they have the best contact information for Life Support Customers (including nominated contact persons) and preferred communication channels (SMS or phone call).
- Letterbox drops.

9.9. Planned outage notification preferences

Which statement best describes your preferences for receiving planned outage notifications?

Managing the electricity network is complex and distributors cannot always be 100% certain if a planned outage will impact a Life Support Customer's property. It was important to ascertain whether customers would be happy to receive notifications that a planned outage may occur (even if it meant false alarms) or only when it is certain that an outage would affect them. Most customers (~70%) are happy to receive notifications that an outage may occur as shown in Figure 32. For these customers, their action plans are generally not affected by the type of notification they receive. If the outage does not go ahead, they would have used the opportunity to test their level of preparedness.



70% are happy to receive notifications of a potential outage (even it meant false alarms).

Figure 32: Which statement best describes your preferences for receiving planned outage notifications?

Below are some comments from customers who are happy to receive notifications for a potential outage.

“Forewarned is forearmed”

“At least this way I would be prepared either way”

“Makes it possible to make alternative arrangements”

“Living on my own with a power outage is quite frightening. Notice is always good if possible”.

30% of customers prefer to be notified only when it is certain that a planned outage will affect them. Most of these customers either do not need a plan for daytime outages or prefer to enact their plans only when it is required of them as there are costs associated with implementing their action plans.

Below are some comments from customers in this regard.

“Too much information can be as bad as not enough”

“I would hope I was never in this situation”

“This is silly, as I cannot afford to be relocating every time simply because of a possibility. I need to know for certain”.

“There is no action we can take”

If you were informed of an outage near your property that may impact you, would you take any action to prepare for this potential outage?

It was important to understand what customers did in response to receiving notifications of a potential outage. Figure 33 shows that about 75% of customers take some form of action to prepare for a potential outage after receiving a notification that an outage may affect them.

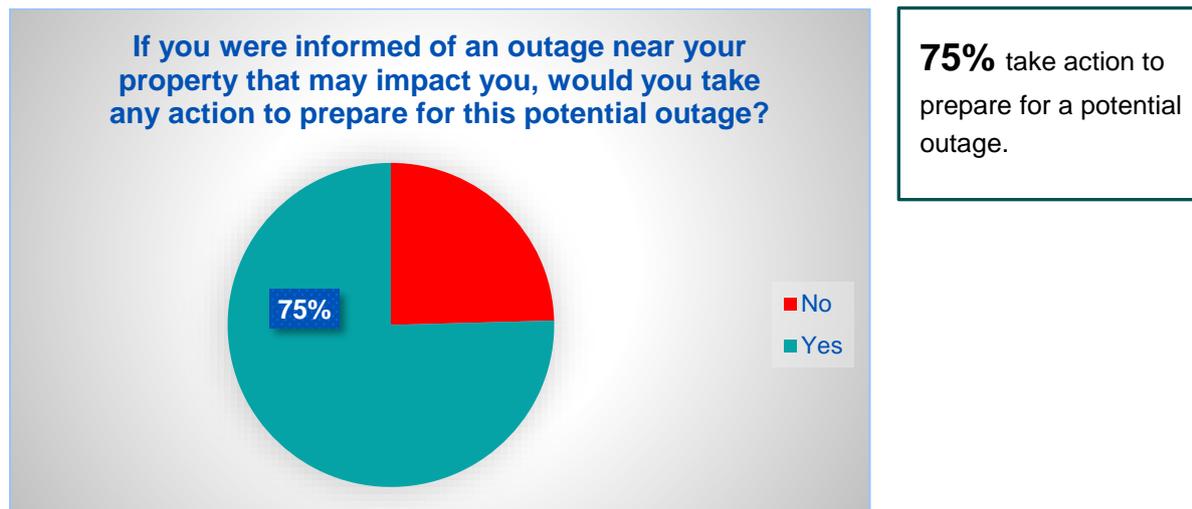


Figure 33: If you were informed of an outage near your property that may impact you, would you take any action to prepare for this potential outage?

Examples of actions customers take include:

- Charging battery systems and stocking up fuel for generators
- Relocating to wherever there is power
- Ensuring emergency life support equipment is accessible
- Charging mobile phones
- Disconnecting life support equipment and other appliances
- Informing family members or carers of the situation

Reasons why customers do not plan for potential outages

On average, 25% of customers do not take any action to prepare for a potential outage. Many of these customers use their life support equipment exclusively at night and are unaffected by planned outages that typically take place during the day.

Below is a summary of reasons why some customers do not prepare for a potential outage.

- The use of their life support equipment is not affected by daytime outages or short outages.
- Lack of information on actions they could take.
- The belief that preparing for outages normalises their occurrence, making distributors more complacent.

- Do not believe it is their responsibility. For example:
 - Customers plan for their health needs, but some do not believe that extends to securing power supply.
- Experienced too many false alarms in the past they don't plan anymore. For example:
 - A few customers expressed frustration at having implemented their action plans in the past (and incurred costs in doing so) only for the outage to be rescheduled or cancelled.

9.10. Focus on customers using CPAP machines

If you use a CPAP machine, would you be willing to purchase a battery for it?

From the initial of surveys, we learnt that most customers use continuous positive airway pressure (CPAP) machines and that very few customers in general had access to back-up power. It was important to find out through the follow-up surveys (i) how many of those customers who use CPAP machines would be willing to purchase a battery system for it and (ii) if they were willing to, what type of information they required to do so.

450 customers who participated in the follow-up survey use CPAP machines at home. As shown in Figure 34, three times as many customers are willing to purchase a battery system for their CPAP machine than those unwilling.

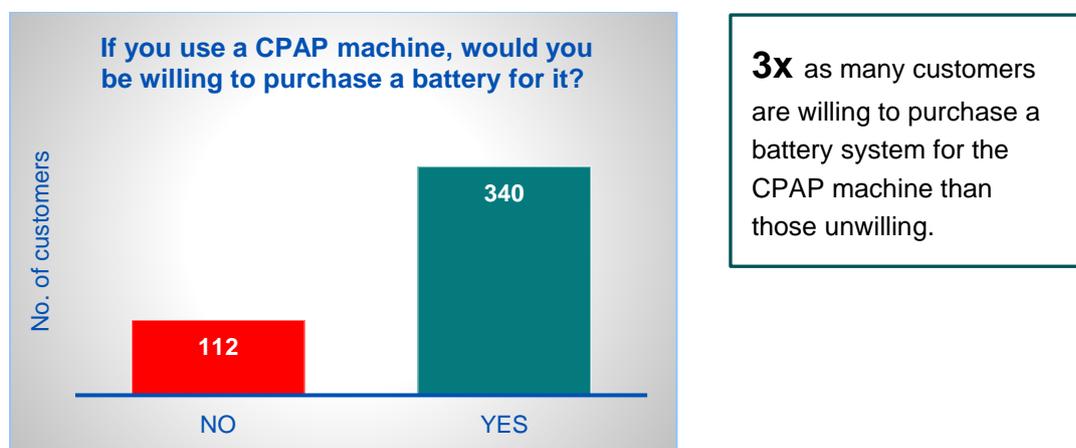


Figure 34: If you use a CPAP machine, would you be willing to purchase a battery for it?

Reasons customers are unwilling to purchase battery systems

- Infrequent outages do not justify the expense
- Associated capital and maintenance costs
- Associated replacement costs
- Their CPAP machines are not battery compatible (particularly older models).

If you wanted to access such a battery system for your CPAP, what support do you require?

An overwhelming majority of customers would like to receive information about types of battery systems, where to purchase one and how to connect it to their CPAP machine as seen in Figure 35.

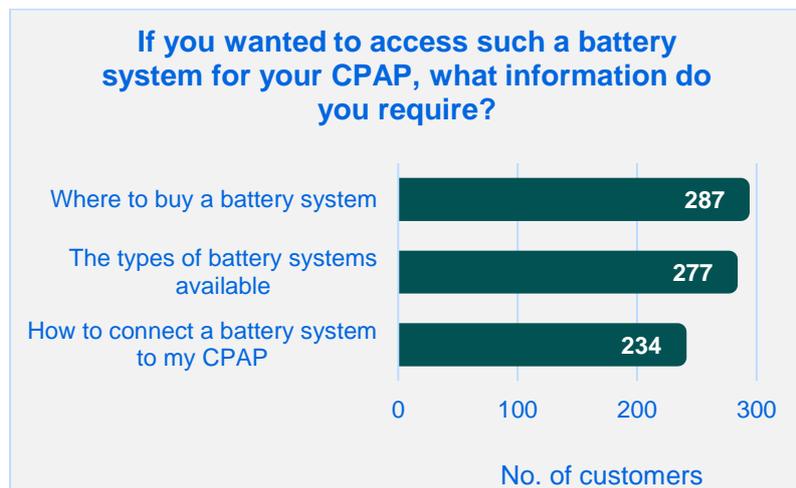


Figure 35: If you wanted to access such a battery system for your CPAP, what information do you require?

Additional information required includes:

- Ideal battery life that corresponds to customer energy needs
- The cost of battery systems
- Best available financing options

9.11. Information customers require to develop their action plans

What information do you think your distributor should provide to make your life easier in developing your action plan?

We learnt from both customer surveys that many customers do not have a prearranged plan for their life support needs during an outage. Because Life Support Customers are a diverse group of people who require similarly diverse solutions, understanding their specific information needs will ensure their issues are addressed in the simplest and most effective ways.

Customers were asked to list the information that would make it easier for them to develop an action plan. Most customers do not require any additional information as they either (i) already had plans in place, (ii) do not believe a plan was necessary, (iii) would consult medical professionals and carers instead to develop those plans, or (iv) current information they received from their distributor was

sufficient for their needs. Figure 36 shows a list of the most popular responses from customers about the information they require to develop their action plans.

Generally, customers want the following information:

- Expected timing and length of the outage.
- Back-up power options, including:
 - Uninterruptible Power Supply (UPS)
 - Best deals or available discounts for back-up power
 - Compatible battery systems
 - Appropriate battery life for customers' energy needs
 - Battery durability and associated maintenance costs
 - Types of generators which can power their equipment safely
- Checklist of items to arrange or put in place (including example action plans).
- List of localised areas to charge their equipment.
- Suggestions for coping during extended outages.

Some customers were not sure of the information they needed and would benefit from distributors providing any information they deemed appropriate and useful.

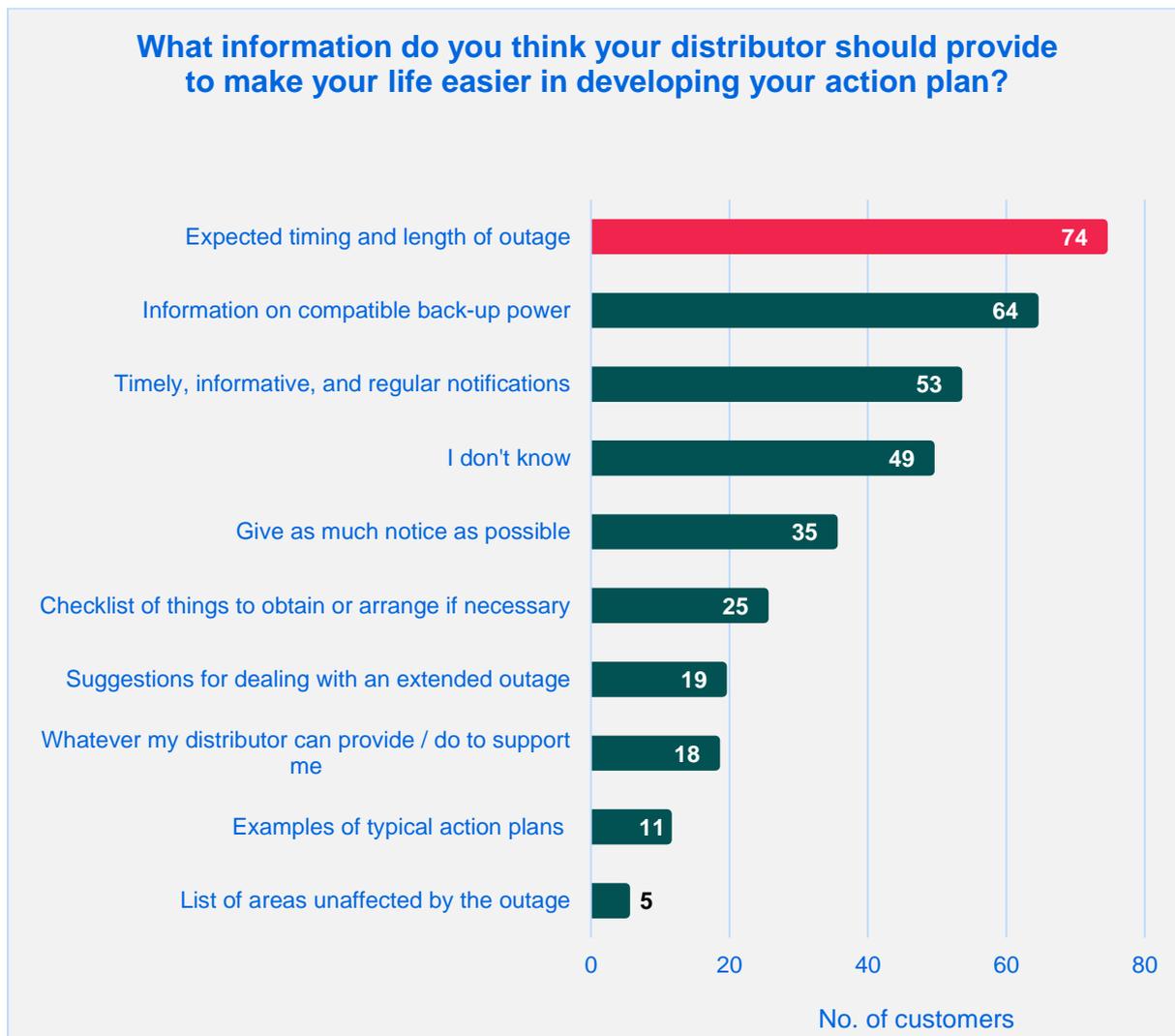


Figure 36: What information do you think your distributor should provide to make your life easier in developing your action plan?

In addition to the above, the following information would be useful in helping customers develop their plans:

- Information on more advanced equipment being developed (i.e., life support equipment, emergency (back-up) life support equipment, and back-up power).
- Tips for increasing utilisation of solar power and battery storage.
- List of localised areas where one can charge their equipment.
- List of phone numbers / website links for emergency services.
- Distributor's plan to restore power for both short and extended power outages.

9.12. Support customers require to implement their action plans

What assistance do you require to make your life easier in implementing your action plan?

Scheduling planned maintenance as early during the day as possible is important to customers implementing their contingency plans. Most customers indicated they did not require any assistance with implementing their action plans as the agency to do so belongs to customers themselves and their carers. Some believe that they will receive priority attention (including restoration), invalidating the need for or assistance with implementing an action plan. Other customers merely do not intend to develop a plan (or do not have one yet) and therefore do not require any assistance with implementation thereof. Figure 37 shows a list of the most popular responses from customers regarding the support they require to implement their action plans.

Generally, customers want assistance with:

- Accessing back-up power. Some examples include:
 - Their distributor could loan/provide compatible battery systems or backup power.
 - Their distributor could help with coping during extended outages.
 - Their distributor could assess suitability of customers' existing backup power (how it would last them).
- Timely and informative notifications (as this will determine whether customers temporarily relocate).
- As much advanced notice of planned outages as possible.
- Expected timing and duration of outage.

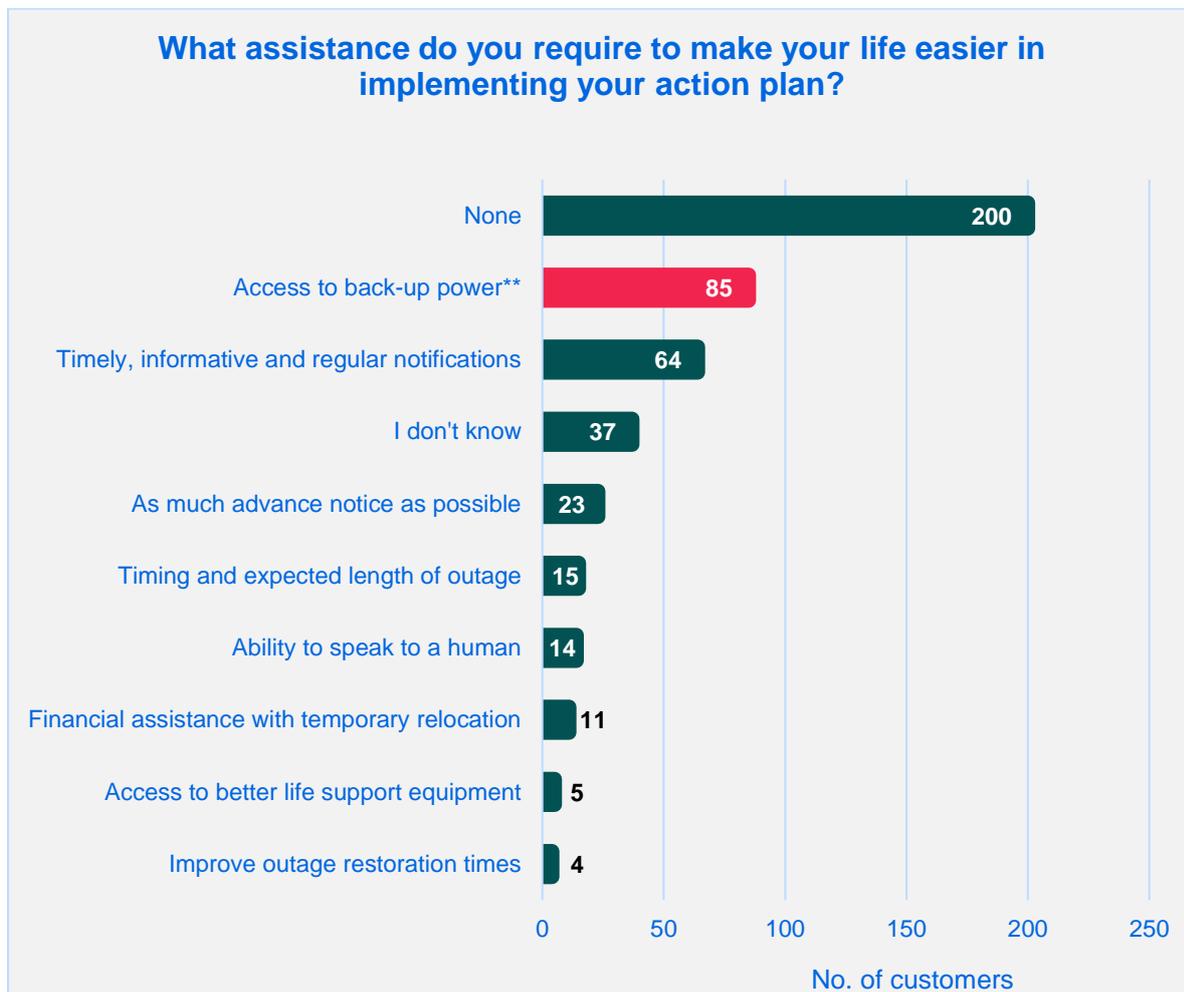


Figure 37: What assistance do you require to make your life easier in implementing your action plan?

In addition to the above, customers identified the following support they need from their distributor:

- Lifting generator / equipment into position.
- On site assistance with setting up generator.
- List of best evacuation routes out of outage-affected areas.
- Notifying health authorities & public housing staff.
- Assistance with getting to a hospital.
- Triage power restoration to those customers that require 24hr life support.
- Creating a website / portal for Life Support Customers which would work as a one-stop-shop for information on strategies, products, among others.

9.13. 'Nice-to-have' service that distributors (or others) can offer customers

In a perfect world what would be a 'nice to have' service that your distributor could provide to you?

Customers were asked to list what would be a “nice to have” service that their distributor could provide. We asked them to be as liberal as possible with those answers. The purpose of this question was to identify all support that customers would like that might not yet have been considered. The Figure 38 below shows a list of the most popular responses from customers on type of additional support they required.

Continuity of electricity supply

In general, most customers want continuous and safe supply of electricity which can be achieved, in their view, through a number of ways:

- Providing them with access to free, compatible back-up power or uninterruptible power supply (UPS) at their homes.
- Assistance with purchasing backup power through direct financial support or information on available financial incentives.
- Curtailing unplanned outages by implementing better maintenance practices, proactive tree felling and installing more underground electricity infrastructure.
- Setting up equipment charging stations within communities (as hospitals fill up quickly).
- Installing community scale batteries.

Cheaper electricity prices

- Higher discounts, concessions, solar feed in tariffs.
- Ensuring life support concessions are accessible to all Life Support Customers.
- Free power for every Life Support Customer.

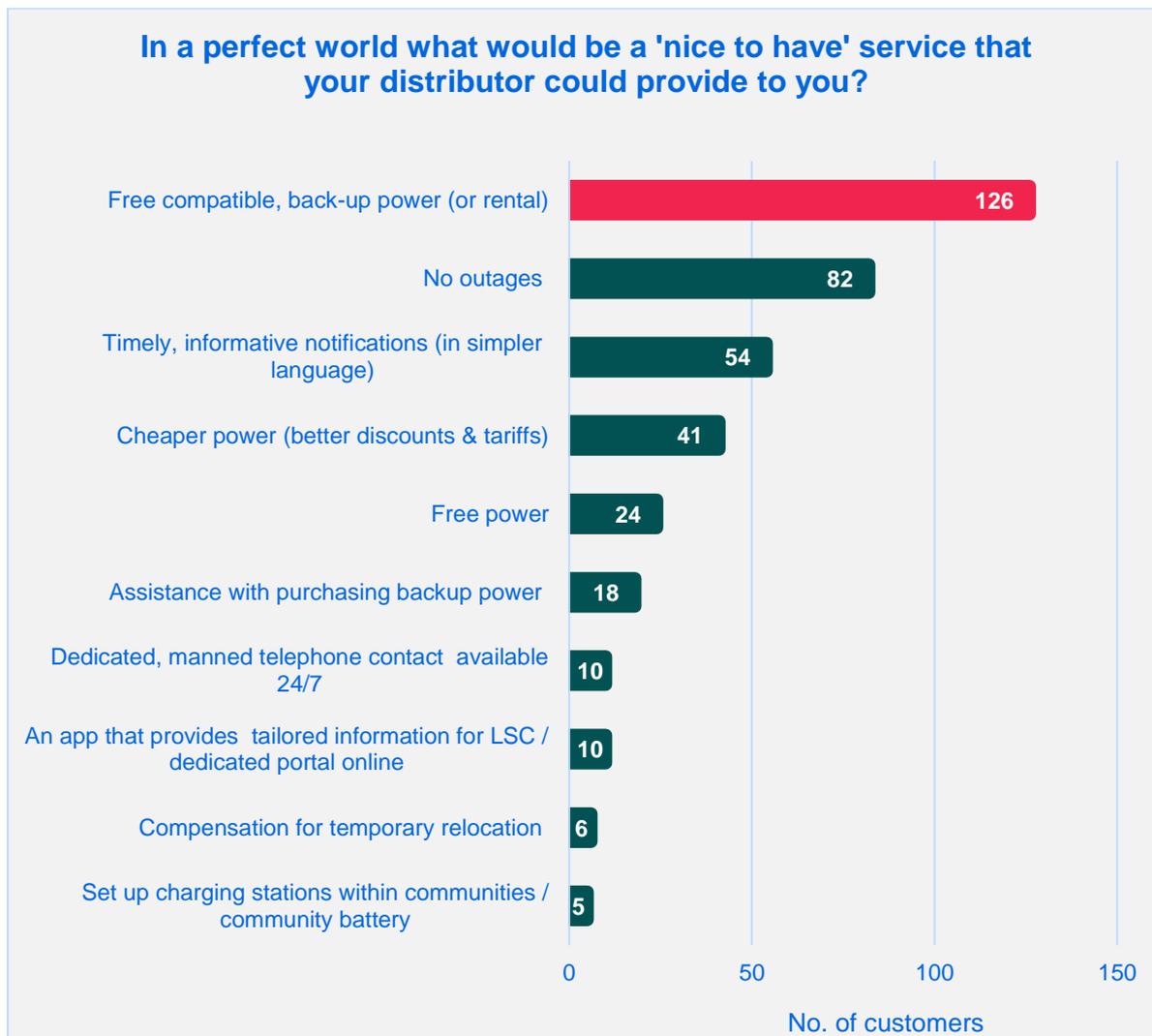


Figure 38: In a perfect world what would be a 'nice to have' service that your distributor could provide to you?

Other suggestions provided by customers include:

- Ability to view/track real-time daily energy consumption (for example, using an In-home Device (IHD)).
- Free / affordable life support equipment upgrades (increased efficiency).
- Supply emergency life support equipment (e.g., bottled oxygen).
- One primary contact for bills and outage information.
- Information on additional entitlements, including available rebates.
- Initiate contact with customers during outages.
- Make it easier for customers to install solar in their homes (meter upgrades).
- Pay for maintenance costs of life support equipment, emergency life support equipment and back-up power.

- On site assistance with developing and implementing action plan.
- Centralised online registration and management system linking electricity distributor, retailers, doctors, Life Support Customers, and the government.
- Robust communication systems and network (unaffected by outages).
- Better customer service on the part of distributors and retailers.
- Assistance with accessing (and changing) energy efficient lightbulbs.
- Better solar feed-in tariffs.
- Free energy efficiency advice.
- Remove requirement to reconfirm registrations to access concessions

10. Appendix C – Report on roundtable discussions

Challenges industry faces in supporting Life Support Customers

Distributors and retailers expressed wide-ranging views on what they believed were the biggest challenges or opportunities in managing Life Support Customers. These views, categorised below, include communications to Life Support Customers and between industry (i.e., retailer to retailer, retailer to distributor), data accuracy and management, and cooperation among industry participants.

1. Retailer & Distributor Communications

Below are challenges and opportunities raised related to inter- and intra-communications.

- Accessing better information about the most critical individuals using life support equipment and supporting their back-up plans effectively.
- Simplifying consumer experience – making it clear who consumers should talk to, how and when.
- Understanding the inter-relationships and obligations on consumers, retailers, and distributors under both national and jurisdictional rules.
- Reducing complexity of registration process, which requires coordination with government and industry.
- Ensuring the requirements for life support registration and concession requirements complement each other.
- Meeting customer expectations around interruptions, including sharing effective communication ahead of and during outages.
- Managing different expectations around planned outages between people who require life support equipment and other consumers (who do not require life support).
- Engaging with consumers to provide support during outages (both planned and unplanned).
- Reducing effort made in reconciling registration status between retailers and distributors.

2. Data integrity

Below are challenges and opportunities raised related to data integrity.

- Lack of consistency of services and data across the industry.
- Ongoing maintenance of consumer data post- registration.
- Ensuring accurate data for people using life support equipment and their equipment types so that distributors and retailers can effectively manage these consumers and meet their service needs.

3. Industry Cooperation

Below are challenges and opportunities raised related to cooperation among industry participants.

- Having a shared understanding of obligations to best manage varying rules across jurisdictions and between electricity / gas.
- Having a consistent and shared understanding of how distributors and energy retailers should work and communicate with each other.
- Setting up and participating in industry forums to resolve issues distributors and retailers face with implementing Life Support regulations.

4. Life Support Terminology

Below are challenges and opportunities raised related to life support terminology.

- Lack of a clear definition of life support equipment (vs. medical equipment) makes expectations and registrations complex. Key areas to address include:
 - How large numbers of people using continuous positive airways pressure (CPAP) machines could be supported, contrasted with people using other types of life support equipment.
 - Exploring criteria for people using life support equipment to determine whether the scope should be narrowed down or expanded (e.g., to include mental health issues)

The increasing number of registered consumers makes servicing them more difficult. For example, distributors are concerned with needing to differentiate between life threatening and health threatening in prioritising restoration of power

*LSC Roundtable:
13 August 2020*

11. Appendix D – Initial survey questionnaire

The Australian Energy Foundation (AEF) is conducting research in partnership with Distributor X, with customers who are registered as requiring life support equipment at home. Distributor X's records indicate that someone at your house requires the use of life support equipment.

To ensure we, at Distributor X, continue to improve our service to support registered Life Support Customers with critical need for electricity supply, we would value your participation in this important survey.

All information you provide within the survey will be kept private and your identity will remain anonymous.

Your feedback is valuable and will allow Distributor X to provide the best possible service in meeting the needs of life support customers.

Thank you for your time and participation.

Thank you for taking the time and providing your feedback.

SECTION 1: HOUSEHOLD INFORMATION

1. Do you understand who Distributor X are, what they do and why we are contacting you? *

- Yes
- No

(Select one response)

2. We have your property listed as a life support address. Is there still someone living there who requires life support equipment? *

- Yes
- No

(Select one response)

3. How did you find out about registering as a Life Support Customer? *

- From a medical practitioner
- From my energy retailer
- From my distributor
- Not sure
- Other (please specify)

(Select one response)

4. Who is the person using life support equipment? *

- I am
- My partner who I care for
- A child who is a family member who I care for
- My parent who I care for
- Someone who I care for in a professional capacity
- Prefer not to say
- Other (please specify)

(Select one response)

5. Please indicate the age range of the person using life support equipment. *

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64

- 65+
- Prefer not to say

(Select one response)

6. What is the work status of the person using life support equipment? *

- Working part-time
- Working full-time
- Self-employed working from home
- Self-employed working out of home
- Seeking work
- Not seeking work due to ill health
- Retired
- Prefer not to say
- Other (please specify)

(Select one response)

7. Does the person using life support equipment have a partner/carer? *

- Yes
- No
- Other (please specify)

(Select one response)

8. What is the work status of partner / carer of the person using life support equipment?

- Working part-time
- Working full-time
- Self-employed working from home
- Self-employed working out of home
- Retired
- Other (please specify)

(Select one response)

9. How have Distributor X contacted you in the past?

- Received a letter
- Received an email
- Spoken on the phone
- Received an SMS
- Never interacted with Distributor X
- Not sure
- Other (please specify)

(Select multiple responses if needed)

10. How have you personally contacted Distributor X in the past?

- Written to Distributor X
- Email to Distributor X
- Spoken on the phone
- Via Distributor X online services
- Via social media
- Never interacted with Distributor X
- Not sure
- Other (please specify)

(Select multiple responses if needed)

11. Which language would you prefer to receive communications in? *

- English
- Italian
- Mandarin
- Greek
- Vietnamese
- Arabic
- Nepali
- Other (please specify)

(Select one response)

SECTION 2: LIFE SUPPORT EQUIPMENT INFORMATION

12. What type of Life Support equipment (s) is required? *

- Oxygen concentrator
- Intermittent peritoneal dialysis machine
- Kidney dialysis machine
- Continuous positive airways pressure respirator (CPAP)
- Crigler Najjar syndrome phototherapy equipment
- Ventilator for life support
- Wheelchair Feeding pump
- Emergency response system (e.g., panic button)
- Heart remote monitoring equipment
- Air conditioning system for blood circulation
- Bed/Chair lift
- Refrigeration for insulin
- Nebulizer

- Deep brain stimulation equipment
- Prefer not to say
- Other (please specify)

(Select multiple responses if needed)

13a. At what time of day does your life support equipment require power? *

- Day only
- Night only
- Day & Night
- Other (please specify)

(Select one response)

13b. How frequently do you use your life support equipment? *

- During the Day (continuously)
- During the Day (intermittently)
- During the Night (continuously)
- During the Night (intermittently)
- Day & Night (continuously)
- Day & Night (intermittently)
- Other (please specify)

(Select multiple responses if needed)

14. Does your life support equipment have back up power? *

- Yes
- No
- Not sure

(Select one response)

15. How long has this equipment been required? *

- The person's whole life
- Over ten years
- Between three and ten years
- One to three years
- Less than one year
- Prefer not to say
- Other (please specify)

(Select one response)

16. Do you expect any changes to your life support registration within the next year? *

- Yes – I expect to be moving to a new residence
- Yes – the medical condition is temporary
- No
- Not sure

(Select one response)

17. How easy was the process to register your life support equipment with your energy company?

- Very Easy
- Easy
- Neither easy nor difficult
- Somewhat difficult
- Very difficult

(Select one response)

SECTION 3: IN THE EVENT OF AN OUTAGE

An unplanned outage can be caused by various reasons, for example severe weather, storms, trees falling on a power line or a car running into poles. Distributor X will always endeavour to get power back on as quickly as possible.

A planned power outage is when the power needs to be turned off for vital works to be conducted.

18. In the event of an unplanned power outage (caused by weather events etc.) what do you think is a reasonable amount of time for the power to be out?

- Less than 1 hour
- 1-2 hours
- 2-4 hours
- 4-6 hours
- 2.5-3 hours
- More than 6 hours
- Other (please specify)

(Select one response)

19. In the event of a power outage do you have a plan for how best to address your life support needs? *

- Yes
- No

(Select one response)

20. What is your action plan in the event of a power outage? *

- Call the ambulance
- Call Distributor X
- Check in with my neighbour
- Call family members or friends
- Relocating to wherever there is power
- Connect battery systems
- Use portable oxygen equipment
- Other (please specify)

(Select multiple responses if needed)

21. Has your action plan been updated due to Covid-19 restrictions?

- Yes
- No but it will need to be
- No - there is no need
- Not sure
- Other (please specify)

(Select one response)

22. Do you expect Distributor X to contact you in an unplanned outage? This is an outage caused by external factors such as severe weather (not routine maintenance work) *

- Yes
- No
- Other (please specify)

(Select one response)

23. Who would you like Distributor X to contact with information about an unplanned power outage? *

- The person requiring life support equipment
- Their carer (or spouse)
- Both the person requiring life support equipment and their carer / spouse
- Multiple carers
- Multiple cares and the person requiring life support equipment
- Other (please specify)

(Select one response)

SECTION 4: SHORT-TERM AND LONG-TERM POWER OUTAGES

Short-term and long-term unplanned power outages

An unplanned outage can be caused by various reasons, for example extreme weather, bushfires, a tree falling on a power line or a car running into poles. Some outages are resolved in a short space of time while others can last for days.

24. As a Life Support Customer, how long after you have lost power in a short unplanned outage would you expect to be contacted? (this is an outage typically lasting up to 4 hours) *

- Within 30 minutes
- 30 – 60 minutes
- 1-2 hours
- 2-4 hours
- I wouldn't need to be contacted for a short outage
- Other (please specify)

(Select one response)

25. How frequently would you expect updates while the power is out for a short outage? *

- Every 30 minutes
- Every hour
- Every 2 hours
- I wouldn't need updates for a short outage
- Other (please specify)

(Select one response)

26. You've been informed the power outage is severe and may last longer than a day. How frequently would you expect updates while the power is out for a long outage? *

- Every 3 hours
- Every 4 hours
- Every 6 hours
- I wouldn't need updates
- Other (please specify)

(Select one response)

27. What method would you prefer communication about an unplanned power outage to be made in order of preference with one being most preferred? *

- SMS
- Phone call
- Distributor X Website
- Email

SECTION 5: MANAGING YOUR COMMUNICATIONS

28. In the case of a planned outage (i.e., for routine maintenance) Distributor X is required to notify Life Support Customers at least four business days in advance. Does this notice period meet your needs? *

- Yes
- No
- Other (please specify)

(Select one response)

29. You have indicated that the regulated 4-day notice period for planned outages does not meet your needs. How much notice is preferable? – Please provide your reasons.

30. What method would you prefer communication about a planned power outage to be made in order of preference with one being most preferred? *

- SMS
- Phone call
- Distributor X Website
- Email
- Letter in your mailbox

SECTION 6: MANAGING YOUR BILLS

31. How are you managing the cost of your energy bills?

- With great difficulty
- With some difficulty
- With little difficulty
- With no difficulty

(Select one response)

Comment (optional)

SECTION 6: CLOSE OUT

32. You have indicated that there is no life support equipment at your home. If this is correct, please provide your contact details so we can contact you and de-register your home.

- Name
- First Last
- Address
- Address Line 2
- City State/Region/Province Postal Code
- Phone
- Email

33. Would you like to be contacted for additional research on Life Support Customers and their power supply needs?

- Yes, I would like to be contacted
- No, I do not wish to be contacted anymore

(Select one response)

Thank you for your time. Do you have any other comments, questions, or concerns?

12. Appendix E – Follow-up survey questionnaire

FOLLOW-UP QUESTIONS FOR DISTRIBUTOR X LIFE SUPPORT CUSTOMERS

A few months ago, you assisted us by completing a survey into your experiences as a Life Support Customer. You had previously indicated that you would like to be contacted for additional research to help us better understand your challenges and preferences as a Life Support Customer.

In this later stage of the research, your insights are crucial to identify improvements so Distributor X can provide the best possible service in meeting the needs of Life Support Customers.

All information you provide within the survey will be kept private and your identity will remain anonymous.

Thank you for your time and participation.

SECTION 1: LIFE SUPPORT CUSTOMER REGISTRATION

Life Support Customers can use a variety of different kinds of equipment to support many different needs and circumstances. Some customers require their equipment occasionally (as and when required). Other customers' lives depend on their equipment on a daily basis. For these reasons, the level of service required by Life Support Customers varies greatly.

1. If we were to ask you the purpose of your life support machine / equipment, which of the following best describes your needs? *

- Using my equipment makes my life more comfortable
- Using my equipment sustains my life

(Select one response)

1b. Please provide your reasons or any other comments *

2. In order of preference, what do you see as the benefit of registering as a Life Support Customer, with one being the most preferred? *

- Accessing discounts from my electricity retailer
- Receiving power outage notifications
- Priority restoration after a power outage

2b. Please specify any other benefits of registering as a Life Support Customer that you can think of.

3. Categorising customer information has the benefit of assisting electricity distributors to prioritise outages and provide support to customers in an outage. If customer information were categorised based on energy needs or equipment type to help Distributor X to prioritise service, what could that mean to you? *

NB: This question is for research purposes only in an attempt to gather information to improve services Electricity Distributors provide Life Support Customers. We have no ability to change the level of service you require.

3b. Would this positively or negatively impact you or should all Life Support Customers be given the same level of service. Please provide reasons. *

3c. Could such a categorisation create a level of anxiety for you? Please provide comments*

Information on life support registration is shared between electricity retailer and electricity distributor.

4. Would it be useful if there was a central protected database where your information is kept reducing the need to provide your details to multiple companies? *

- Yes
- No

(Select one response)

4b. Would you support sharing your information to this central database? *

- Yes
- No

(Select one response)

4c. If you would not support sharing of your information to a central database, please give reasons why.

5. How satisfied are you with the renewal process to confirm your registration? *

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

(Select one response)

5b. Please provide reasons for your answer above. *

5c. Would it be beneficial if the medical form your doctor fills out clearly states that you require the machine / equipment for your whole life? *

- Yes
- No

(Select one response)

6. When dealing with energy companies, have there been any rules, regulations, policies, or business processes that have made your experience as a Life Support Customer more complex than it needs to be? Please provide examples *

SECTION 2: COMMUNICATION PREFERENCES

7. As a Life Support Customer, what information from your electricity distributor would be useful to you? *

An unplanned power outage can be caused by various reasons, for example severe weather, storms, trees falling on a power line or a car running into poles.

8. Please select the types of information that would be important to you in an unplanned outage? *

- Estimated length of outage
- Information on locations that still have power where you can relocate to
- Confirmation when outage has been fixed

(Select multiple responses)

9. What information do you want to receive from Distributor X when contacted in an unplanned outage?

10. If you have ever needed to find out more information about an unplanned power outage, was it easy to find? *

- Yes
- No

(Select one response)

10b. How can we improve this? *

A planned power outage is when the power needs to be turned off for vital works to be conducted.

11. If you wanted to find out more information about a planned power outage, was it easy to find? *

- Yes
- No

(Select one response)

11b. How can we improve this? *

12. Due to the complex nature of electricity networks, Distributor X cannot always be 100% certain if a planned outage will impact your property. As a Life Support Customer, would you be happy to receive notifications that an outage may occur (even if meant false alarms), or do you prefer to be notified only when it is certain that a planned outage will affect you? *

- I prefer to be notified ONLY when it is certain that a planned outage will affect me
- I would be happy to receive notifications that an outage MAY occur

(Select one response)

Please provide additional comment if necessary

12b. If you were informed of an outage near your property that may impact you, would you take any action to prepare for this potential outage? Please provide reasons. *

SECTION 3: POWER OUTAGE PREPARATION

Many customers do not have a plan in place for addressing their life support needs in the event of a power outage. Having a plan in place for a power outage will minimise the effect it has on your ongoing life support needs.

13. Do you use a Continuous Positive Airway Pressure machine (CPAP)? *

- Yes
- No

(Select one response)

13b. If you use a CPAP machine, would you be willing to purchase a battery for it? *

- Yes
- No

(Select one response)

13c. If you wanted to access such a battery system for your CPAP, what support do you require? *

- More information about types of battery systems you could purchase to suit your needs
- Information about where to purchase a battery system
- Information on how to connect a battery system to your CPAP
- Other (please specify)

(Select multiple responses)

14. Do you have a plan in place for addressing your life support energy requirements when you are in an outage? *

- Yes
- No

(Select one response)

14b. What is your plan in the event of a power outage? *

14c. Does this plan change if you are in an unplanned outage compared to a planned outage? Please specify reasons where relevant. *

15. What information do you think Distributor X should provide to make your life easier in developing your action plan? *

16. What assistance do you require to make your life easier in implementing your action plan? *

SECTION 4: ADDITIONAL SUPPORT REQUIRED

17. In a perfect world what would be a 'nice to have' service that Distributor X could provide to you? *
