A Future Energy Vision
Consumer Expectations Research

Energy Consumers Australia
Small-Medium Business Findings

Forethought Report – 2019

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Overview of Methodology

How did we design the research?

Research Objectives

Energy Consumers Australia and Forethought set out to explore businesses and the role that energy plays, what the future of energy should look like, and what businesses want from the sector; what does better look like in their eyes?

1. Explore small-medium businesses' priorities, goals and day-to-day challenges, how energy fits in and how **attitudes and behaviours toward energy** vary across different business sizes and industries;

2. Explore what the concept of **'better' in energy supply, consumption and behaviour looks like** for the future; and

3. Identify the **expectations** placed on the energy industry and the **role of different stakeholders** in driving a better energy future.

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Introduction to the Methodology

In-depth interviews with businesses from Metro and Regional areas

Speaking with a widespread mix of businesses and understanding the role of business size, industry and intensity of energy usage

Speaking to businesses across Australia: Qualitative Interviews

Understanding Small-to-Medium Australian businesses

In order to achieve a holistic understanding of companies and the role of energy within them, a breadth of businesses were spoken to across Australia.

In total, **28 x in-depth business interviews** were conducted to ensure we understood Australian businesses nationally from a range of different sizes, industries and energy usages.

The in-depth interviews included conversations with decision-makers from businesses with a mix of:

- **Metro and regional**
- **# of employees**
- **Industry**
- **Energy requirements**
- **Impact of energy on finances**

State	
QLD	7
NSW	5
SA	4
VIC	6
TAS	3
ACT	3
Total	28

Industry	
Agriculture	3
Construction	1
Manufacturing	5
Mining	1
Professional Services	8
Retail	2
Transport	3
Waste Services	1
Other	4

Size	
2-5	9
5-55	11
56-199	8

Intensity*	
Low	7
Medium	10
High	11

**Intensity was classified using a range of different variables, including cost of energy, industry and stated importance / impact of energy on daily operations.*

Overview of the discussion

Understanding Business Needs and Objectives
This section aimed to understand the business and how it works. This included a typical day in the business and challenges faced. Participants were also asked about the businesses purpose, short and long-term priorities, needs and the market environment.

Business SWOT Analysis
Each participant was asked to detail their business' strengths, weaknesses, opportunities and threats, and how these all changed over time. Lastly, these aspects were contextualised with where energy could have the greatest impact on the business moving forward (either positively or negatively).

Energy Now
Participants were asked to consider energy in their business; how they use energy, who is responsible for energy decision-making and management of energy. It also covered how often they were thinking about energy, challenges related to energy, the business' attitude towards energy, and what they would change about energy in the business if they could.

Energy Into the Future
Lastly, participants were asked about the future of energy. This included their vision for the future of energy and what they wished would happen, the business needs in the future, and which stakeholders they felt should be responsible for energy changes.

Reason for section

To gain a detailed understanding of the business and how it operates. This provided a reference when considering energy (particularly when comparing to other businesses) and context for the rest of the discussion.

To understand the position of the business within the broader market, and to get participants thinking about good and bad things within their business. Introduce the conversation about energy, and how things can improve in the future.

To comprehensively understand the role of energy in the business. This section was central to the conversation and got participants thinking about energy in relation to their business needs, priorities and goals.

To understand whether businesses were thinking about the future, and what their stance was regarding the future of the sector. This formed a large part of the discussion and was key for a number of primary objectives for this study.

Executive Summary

Overview of Findings

Business felt stuck on how to change for the better.

Energy was, for the most part, seen as a dollar value to reduce to maximise profitability.

For businesses, a better future was cheaper, more reliable, and renewable energy (primarily for cost savings, but also for CSR purposes).

One constant across all businesses was the **fundamental necessity of energy** to business operations. Energy was responsible for powering office spaces and running machines and equipment.

In short, energy was seen as the lifeblood of Australian business.

While all businesses acknowledged that energy was fundamental to basic operation, it was not high on the priority list for most businesses, due to other factors taking over and a perception that they couldn't do much with energy in the business.

There were differences by size of business, particularly in terms of broader needs and priorities, but also in regard to energy attitudes, behavior and consumption.

For example, smaller businesses felt they had more pressing and important things to deal with. Compared to basic survival, navigating cash-flow challenges and actively trying to grow, energy was not perceived to be as important, and was therefore overlooked.

While larger businesses generally thought about energy more frequently, doing so was commonly an exercise in cost-cutting. Each energy bill was perceived as another dollar value to be reduced to improve overall profitability.

Smaller businesses:
Smaller businesses, particularly those which were in an earlier stage of development, were more often preoccupied with setting up the business and overcoming challenges to do with survival and growth. They had to take things slower and think on a shorter-term relative to larger businesses.

Larger businesses:
Larger businesses were typically more established and were generally focused on optimising their operations to be more cost efficient, as well as expanding into new markets.

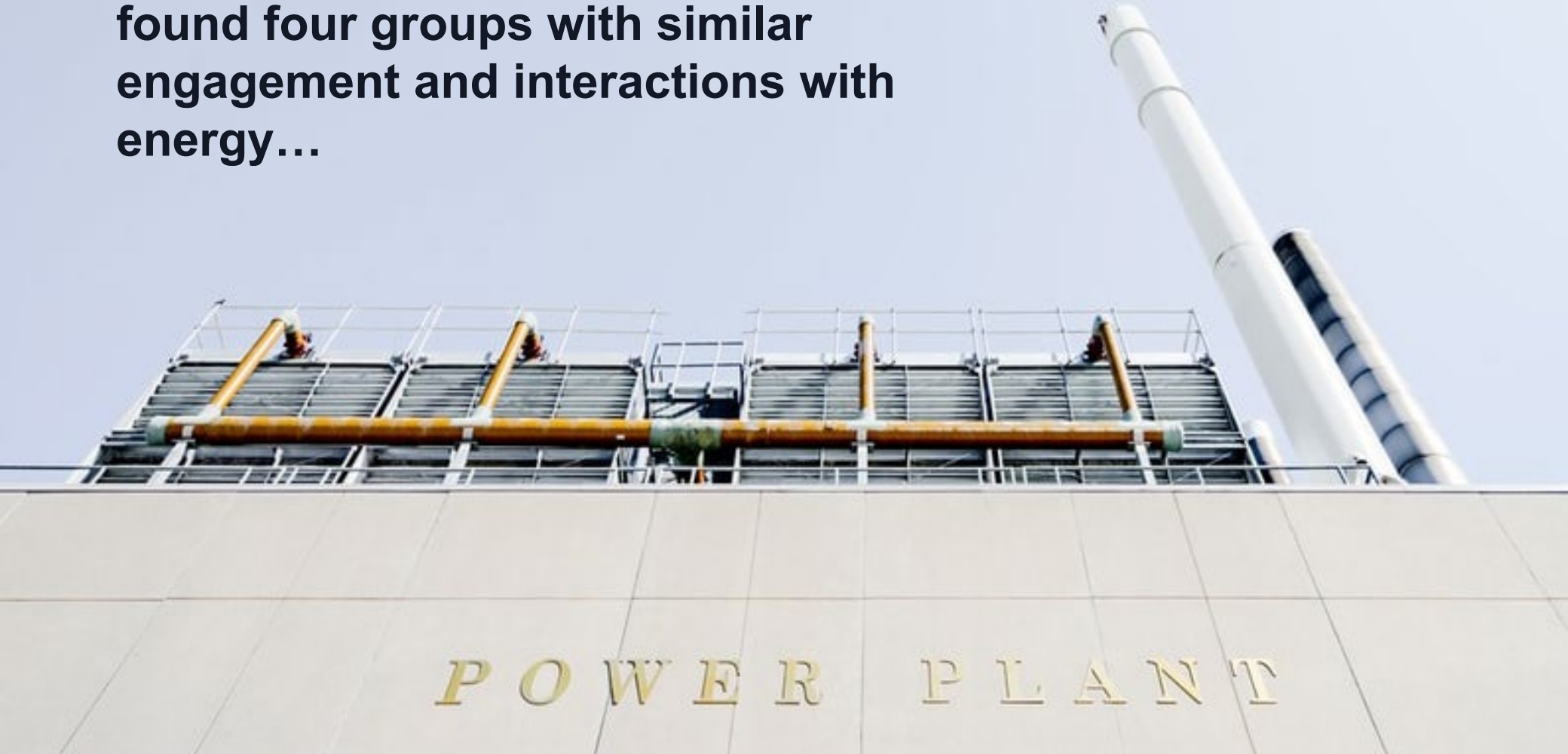
In addition to the size of a business, **the intensity of energy required impacted** energy-related attitudes and behaviours present within an organisation.

Intuitively, industry usually influenced the intensity of energy consumption within a business.

- Businesses in **high intensity** industries, such as Agriculture, Manufacturing and Mining businesses all required additional machinery to operate.

- Meanwhile, Professional Services and Retail SME businesses typically utilised office spaces and were comparatively **low intensity** businesses.

When looking at commonalities between business size and energy intensity, we found four groups with similar engagement and interactions with energy…



Businesses with similar classification of size and energy intensity typically engaged with energy in similar ways.

Through speaking to Australian businesses, four types of organisations were found:

Energy Intensity
Low - High

Smaller businesses with high energy intensity required heavy machinery and infrastructure to exist, and generally operated beyond traditional business hours. Energy often made up a majority of the expenses.

Larger businesses with high energy intensity relied on machinery and equipment which typically ran 24/7, but to a larger scale than smaller businesses. A key difference was the need for headquarters with office spaces for corporate departments to operate, warehouses and other facilities.

Smaller businesses with low energy intensity were typically only using energy to power telecommunications, lighting and other basic equipment. For those with multiple employees, management of energy was typically left up to the individual and not often spoken about.

Larger businesses with low energy intensity usually had to power basic office spaces, sometimes with employee kitchens. Automated power saving systems were commonly in place to prevent usage outside of business hours.

Business Size
Small - Large

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Small, high intensity Agriculture Technology

Fabricated indoor growing systems for crops, and had its own demonstration facility using the technology. A small team of ~10 employees managed the business, most subcontracted and worked remotely.

Energy was all-encompassing for the business, and determined the cost of operation for the business and their consumers. Two diesel engines produced electricity 24/7 to power the demonstration facility which replicated sunlight through electric lighting. Constant, unfailing energy supply was required 24/7 to run the demonstration facility.

Optimising and improving their energy efficiency was a core business challenge and priority to increase their profitability. Renewable technologies like solar had been found incapable of producing the amount of electricity required to run their operations.

Large, high intensity Mining Company

The business operated mines and had offices for their headquarters in Australia.

Energy was a substantial expense for the company which operated 24/7 with a stable load all hours of the day. Energy was supplied through the grid, and due to their long-term contracts, energy was only thought about when paying the bills.

Decreasing operating cost was an important priority for the business which relied on an extensive tender process to secure the best contract for their energy consumption. Due to safety infrastructure (oxygen ventilation in mine shafts and gas drainage) requiring energy, compromising reliability or capacity of energy was not legally feasible. This ruled out the option to move to renewable solutions which would be unable to meet their demand.

Small, low intensity Property Consultancy

Acted as a property consultancy and buyers' advocates. The business operated out of a home office and consisted of two employees.

Consumption was very low, and was therefore not a large expense for the business. While not a large expense, it was seen as an absolute necessity for the business to run lights and computers which were a requisite for operating.

Because energy was perceived to be just another necessity to operate the business, they didn't associate any challenges or priorities with energy besides keeping costs down. There were no management strategies in place, but had intentions to focus more on energy when the business expands into a commercial office space – a goal for the short-term future.

Large, low intensity Environmental Not-for-Profit

Managed and coordinated philanthropic and business funds. The business had offices nationally across Australia, operating from each of the capital cities and across some regional areas.

The company offices were 6 star energy efficient buildings, and only used computers and lights which contributed to the energy bills. Energy bills were not a large relative expense for the business, and they simply formed part of the necessary running costs.

The business didn't have any tangible challenges when it came to energy. Managing consumption was largely automated within the office spaces, and colleagues were internally motivated to use energy responsibly, given the values of the organisation as environmentally aligned. The business relied on the grid, but had plans to move to renewable energy sources – the challenge was having the funds and cash flow to invest in the technology.

When asked how businesses could change their behaviour to reach a more desired relationship with energy in the future,

Businesses felt stuck.

1. Energy technology and infrastructure for renewable energy was felt to be **too expensive upfront**.
2. Businesses felt that their **premises were restrictive** to making changes.
3. Current renewable technologies were **unable to meet the demands** of businesses, who were using more energy than could be reliably produced by solar panels on their premises.

What does a better energy future look like for businesses?

Businesses' vision of a better energy future was universal: cheaper, more reliable, renewable. These were shared across business size and intensity of energy consumption.

Cheaper, so we can be more competitive

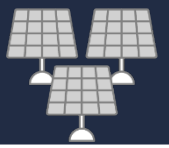
Businesses felt that energy in Australia was **more expensive** when compared to international markets. In conjunction with rising energy prices, larger businesses felt that energy prices were limiting their competitiveness in an increasingly globalised market. Meanwhile, smaller businesses felt that energy was too expensive.

Cheaper energy was desired by all businesses.

More reliable, so our operations aren't disrupted

Businesses in some states and regional areas of Australia expressed the need for **more reliable energy**. Blackouts and outages directly impacted operation and thus, the profitability of their businesses.

While reliability was desired by all businesses, high intensity businesses often had a stronger desire for this, as disruption had a relatively greater impact on profitability.



Renewable, to capitalise on long-term benefits

Renewable energy was desired and an expectation of the future, and businesses were particularly interested in taking advantage of the potential long-term savings they provided. Some businesses also saw renewable energy as a benefit to their Corporate Social Responsibility.

Businesses wanted to be able to completely rely on sustainable energy to take advantage of long-term savings. This was something that was currently not possible for high intensity businesses.

In addition to renewable technology, businesses believed that broader energy technology, including energy saving solutions, were part of a better future

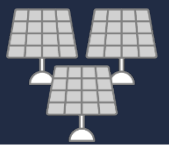
More specifically, business had desires and ideas for what this better energy future could look like for them…

Cheaper, so we can be more competitive

- Lower prices and greater control over energy companies charging high prices.
- Government support through rebates and incentives for implementing renewable technology.
- Consulting / support on implementing cost-saving initiatives.

More reliable, so our operations aren't disrupted

- Replacing outdated energy infrastructure nation-wide.
- Improved production and capacity of energy supply.
- Increased accessibility to energy batteries and backup sources.



Renewable, to capitalise on long-term benefits

- Continued investment and development of energy technology (including renewables) to cope with business demands.
- Tailored, energy solutions for commercial / rented premises.

How do businesses think we get to *better*?

Reaching this future was a goal that businesses thought Government had the power to help achieve. Businesses were comfortable with Government playing a leadership role if it was in line with their interests, such as enforcing lower energy costs and increasing rebates to make energy technology more accessible.

In their words…

Government

> The leadership of change is top to bottom. If Government leads, it will definitely improve the whole process.
> *- Medium, Medium intensity, ACT*

> I think the Government have the biggest authority about this. Without Government I don't think Australia can improve the energy sector.
> *- Large, High intensity, NSW*

> I think Government will play the biggest role making sure they're on top of energy companies and making sure we aren't paying too much.
> *- Small, Low intensity, SA*

> I think Government need to drive this to a degree. They're the ones that could offer grants or rebates to businesses. They're in charge and can put pressure on providers.
> *- Large, High intensity, NSW*

Some businesses, particularly larger ones, felt that they too had a responsibility to contribute…

There were two common positions that businesses took in describing their role in the change:

1 "Too much to worry about"

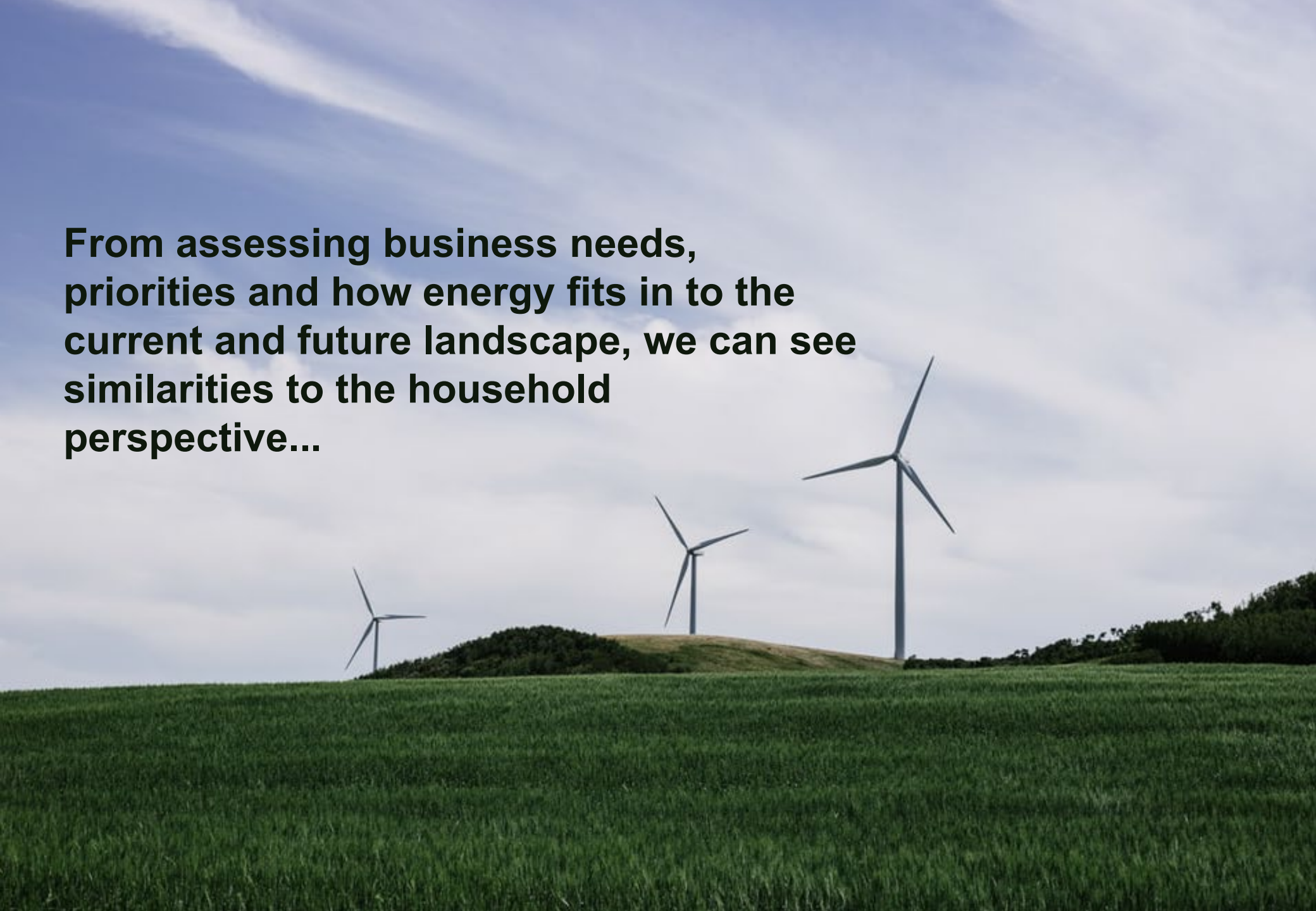
Smaller businesses felt they were too busy trying to survive in the market. A portion of this group believed that energy was 'bigger than them' and that their contributions may not be substantial enough to make a difference.

Many low intensity businesses fell into this category, in addition to most home businesses, which often engaged with energy similarly to a residential consumer.

2 "Energy can't and shouldn't be ignored"

Another group of businesses believed they had a significant role to play in shaping the future of energy.

These businesses were predominantly larger businesses and those with high energy consumption. These businesses were more reliant on energy and had a greater opportunity to focus on it, and therefore had a lot more to gain by participating in the change.

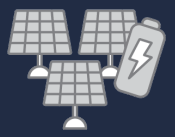

From assessing business needs, priorities and how energy fits in to the current and future landscape, we can see similarities to the household perspective...

What views did SMEs and Households share?

Both were **extremely busy**, and had other challenges and priorities.

Paying less for energy was a shared vision for the future.
Households and businesses felt they were paying too much for energy.

Government was perceived to be an **integral stakeholder** responsible for improving energy.



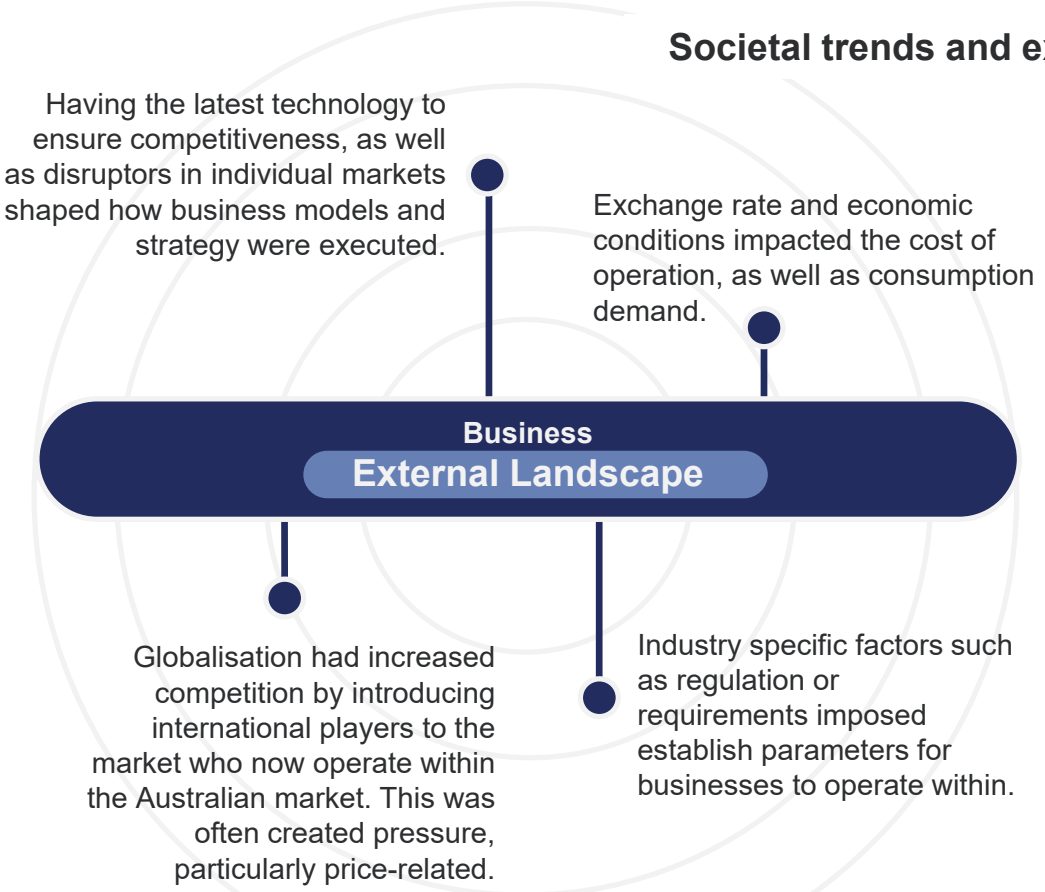
Renewable energy and other technology was linked to a better energy future due to the potential cost-savings and control, and secondly for the environmental impact.

Detailed Report

What we learned about Australian businesses

Energy was only one external factor amongst a sea of others which impacted Australian businesses on a daily basis

Societal trends and external factors



> Uber take a lot of business which means we have to cut costs all the time. We have to reduce our rate, look for cheaper cars (often secondhand) so we don't spend as much money.
> *- Medium, High intensity, NSW*

> When there's a decline in building and construction, that filters back to a decline for us. If retail spending is down, that can affect our revenue as well. We're seeing a bit of a slow down, but we had 4-5 years of really strong growth, particularly in NSW and VIC and so our business has grown in those areas with the number of homes and apartments being built.
> *- Large, High intensity, NSW*

Note: These external considerations have been summarised based on findings from the qualitative research and existing findings of macro-trends.


Size typically impacted the priorities,
challenges and goals of a business.

Within small-medium enterprise, three distinct sizes were understood and often indicated the business focus and landscape

	Small (2-5 employees)	Medium (5-55 employees)	Large (56-199 employees)
Primary business focus	• Newer businesses were setting up and establishing themselves in the market • Refining business model and strategy • Securing strong consumer/client relationships	• Having refined their offering and settling into their mode of operation, medium businesses were focusing on growth by increasing sales and expanding their product offering	• Profitability was a primary focus • Maximising internal efficiencies and optimising production and operation was the crux to increasing profitability by reducing cost
Current state of play	**Customer service** and **relationships** were often strong due to the **intimacy and personalisation** of small businesses. **Expanding** the business was a key opportunity – however, **rising costs** and the economy were felt to be the greatest threats to building success.	Offering **tailored**, **quality products** and **services** was seen as a strength for many businesses. **Increasing the scale** of operations and moving into **new markets** was a major opportunity, while **competition** was perceived to be the predominant threat.	Being **established** in the market and having **developed infrastructure** and operations was a strength leveraged by large businesses. Expanding into **new locations and markets** was often an opportunity, as well as constantly **improving supply chain** and operations to reduce costs. **International competition** was the primary threat for large, incumbent firms.
Overall Attitude / Business Outlook	"We need to sustain our growth and expand it which means putting on another two staff. We still have good relationships too." *- Small, Medium intensity, QLD*	"We're looking at expanding programs that no one else is offering… Threats are always going to be other competition, even if they are offering an inferior service." *- Medium, Medium intensity, VIC*	"We have acquired a new business site which gives us the ability to get a lot more growth. It's a new plant in Melbourne which gives us more room and machinery that will get us a lot more work." *- Large, High intensity, SA*

Smaller businesses had aspirational long-term goals, but were preoccupied with the present. Larger businesses were working towards growth strategically

Smaller Business

While smaller businesses were often quite aspirational in their longer term business goals, they often had to take things one day at a time and were caught up in daily priorities.

Common goals were:

- Move out of home office into commercial office space.
- Relieve pressure to be able to step away and have greater work/life balance.
- Expand business offering and increase employee base.
- Develop and refine formal organisational structure.

Common priorities were:

- Staying afloat – managing cash flow, resources, and the day-to-day operation of the business.
- Iterating and adapting the business strategy and vision of 'who they are' was critical for newer firms.
- Refining their products and offering, as well as their marketing strategy.

> To have a business that is financially secure and so the workload is sort of a bit more manageable so that we can have time off. To be able to streamline business practices, so that we are not always running behind. Probably increase the number of employees that we have instead of me doing almost everything myself. That kind of thing.
> *- Small, Low intensity, TAS*

Larger Business

Larger businesses were more 'realistic' with their goals for the future, often using forecasts and projections to inform planning. They had strategies in place to support their decisions, and priorities were oriented around optimisation.

Common goals were:

- To purchase the premises for their business.
- Increase profitability / reduce operational cost.
- Develop more efficient and sustainable business processes.
- Expand internationally and grow the company footprint.

Common priorities were:

- Ensuring that processes were optimized to ensure maximum profitability through efficient and effective operation.
- Continuing to align divisions to corporate strategy and vision.
- Managing risk and securing long term stability against competitors and broader, evolving market landscape.

> Longer term would be to expand our operations and move our bases into bigger properties. Maybe invest in property ourselves so it's more purpose build for what we do. Instead of having 4 factories we might end up having 2 and get more efficiencies. We want to use our distributors as a gateway to additional markets to sell more products.
> *- Large, High intensity, NSW*

Common challenges for smaller businesses were usually about customer growth and cost of operations

Typical challenges experienced by small-medium businesses were:

- Managing cash flow to ensure expenses could be paid
- Navigating competition in the market and learning how to get a foothold
- Developing new products and services to improve and refine their value proposition
- Juggling rosters and employee availability

Energy became a pain point for businesses who were already struggling to manage their cash flow, and they felt the impact of each bill. While the bills may have made up a smaller proportion of expenditure to revenue compared to larger, more energy intensive businesses, the **lack of certainty** and **security** around cash flow pronounced the perceived effect.

> Challenges would be cash flow, that's always the problem in small businesses. So when we do our fees, there's always people that are slow to pay and people that want to make payment arrangements or things like that. The rising cost of expenses is also a challenge. So rent, electricity, internet, telephone and all those sort of things and consumables.
> *- Medium, High intensity, VIC*

> Just the usual struggles of a small business which are financial struggles. Making sure there's enough money in the business account to pay our wages and pay all the bills.
> *- Small, Low intensity, TAS*

Larger businesses typically encountered challenges around growth, profitability, and operational efficiency

> Commercially, we have challenges from other companies, consumers wanting products that are cheaper than everybody else and requiring jobs to be pushed ahead of schedule so they want it done quicker. Accommodating the latest request from customers. Another challenge is being from Adelaide and trying to sell into interstate markets.
> *- Large, High intensity, SA*

Larger businesses were usually at the stage where **optimisation** and **refining** their business operations were critical to improving both growth and profitability. Businesses doing so were typically more established and had infrastructure and financial security to support them.

In this context, common challenges faced by large businesses were:

- Optimising cost and operational efficiency to increase profitability
- Moving into other markets
- Changing industry and market conditions, including enhanced competition from big business

These challenges were generally encountered when taking up opportunities, rather than obstacles to overcome where they had the infrastructure and resources to handle challenges.
In this way, challenges for large businesses were found when trying to refine and improve on an already stable level. While **energy was not a direct challenge** for large businesses, it was one expense that was a common target to be improved and made more efficient to reduce running costs.

The role of energy in Australian businesses

For businesses of all sizes and industries, energy was acknowledged as an absolute necessity to their basic operation.

From manufacturers needing power to produce their goods to home offices relying on computers and cloud servers, businesses of all shapes and sizes relied on energy to operate at a fundamental level.

> We cannot run without energy. We rely heavily on our office and the backup office which is internet based. If we don't have access to that internet base, we can't run our business at all.
> *- Medium, Low intensity, SA*

Business owners were often responsible for energy in smaller businesses, while larger businesses typically reported dedicated procurement departments

The size of a business often determined who made decisions about energy, and how many resources were employed to contribute to energy management.

	Small (2-5 employees)	Medium (5-55 employees)	Large (56-199 employees)
Business size	• **Business owner(s) and operators generally handled energy**.	• **One person (e.g. Business Manager) was typically responsible for procuring the most optimal deals for phone**, internet, energy and other direct costs.	• Procurement was a major part of the business, usually **a team is responsible for procurement**.
Who is responsible and for what?	• Most recognised they could do something to improve their usage and costs, however, most of their time and resources was taken up by core business priorities. Energy thus became deprioritised as more pressing matters demanded their time and attention.	• The focus on energy bills was greater to control direct costs and improve profitability. More time went into researching options and managing costs.	• Energy was a **more significant cost to be minimised** and more time was allocated to research and implementing energy solutions such as new technologies, suppliers and company policies.
Attitude	"I understand how quarterly costs are tracking but don't know if I'm getting the best deals. It just hits the back-burner because you're so busy. I'd know if I put the time in, but right now I don't have the time. - *Small, Low intensity, SA*"	"I look after energy since I am the director. It would be good if my staff has visibility and awareness as well - the information on the bill, to make them more accountable. - *Medium, Low intensity, VIC*"	"There's no one specific person, there are a few of us that agree on decisions. One of my roles is an environmental officer so I'll map out the amount of energy we use monthly on a chart so that everyone can see. - *Large, High intensity, SA*"

When it came to energy today, two common categories of businesses were observed:

1 Frequently thinking about energy

There was a group of businesses who were thinking about energy quite frequently. Monthly, sometimes weekly checks were done to monitor their spending. This thinking revolved almost exclusively around cost, where consumption and management was considered to reduce bills.

These were typically **larger sized businesses with moderate-heavy usage with dedicated procurement employees** who routinely audited their energy bills to ensure they were minimising their expenditure.

Energy efficiency was embed into operations – example were information provided on onboarding, shared KPIs on operational costs to increase energy efficient behaviour and energy being a topic on short and long-term planning agendas.

2 Infrequently thinking about energy

Another group of businesses were only thinking about energy when they got their bill, or during yearly reviews of their provider/contracts. These businesses were less proactive in researching alternative sources due to their business priorities or the unviability of adopting these solutions.

Smaller businesses where decision-making was run by the owners and large businesses with heavy usage who had long-term contracts in place made up this cohort. The former typically didn't have time and deprioritised energy, while the latter had extensive tendering processes to secure the best deal so that regular monitoring wasn't necessary.

It was typically low-intensity energy businesses that fell into this bucket.

What else impacted behaviour and attitude towards energy?

A) INFRASTRUCTURE

Business decision-makers working in home offices often engaged with energy in the same way a consumer would.

Businesses operating wholly within a home office, or based in a residential space commonly did **not** have a separate energy provider / contract. Rather, all energy expenses were simply part of the residential energy plan and were later claimed as a tax deduction.

These businesses were usually **less informed** about energy; it was another bill to pay and the decision-maker usually had little knowledge of deals and solutions for energy, particularly within a business context.

This was largely due to businesses being in an early stage of growth and were not at a point where optimising energy was a priority. Here, having a single energy bill was easier for them to manage and made more sense.

B) LOCATION
Regional businesses and those from particular states had unique energy challenges not found nation-wide

> We are in an older area, we still have overhead power lines. Which means obviously that comes with its own challenges with power and everything. We used to have an outage at least every two months. We've since had upgrades to the substation, but we are still getting a lot of brownouts, so even if wasn't a complete power outage, there was a part way off of the power. So most the things aren't working. Outages is always something we worry about constantly. If the power's off, we're stuffed.
> *- Small, Medium intensity, QLD*

Businesses operating in certain locations were impacted by **poor infrastructure** which contributed to negative attitudes towards energy. In particular, South Australian businesses were subject to unreliable energy supply which resulted in more **frequent blackouts and outages**. Similarly, businesses in regional areas experienced similar unreliability due to outdated infrastructure. Blackouts or power insufficiencies halted business operations, compromising their ability to be profitable, and causing **stress and frustration**.

Regional businesses were also comparatively less reliant on the grid and were closer to investing in renewables like solar if they hadn't already. Having more space onsite to take advantage was a factor observed to have contributed to this.

In states with limited or no competition of energy providers, businesses felt less engaged. With less control over their energy provider, businesses had concerns over the price they were paying. In this study, Tasmania and parts of Queensland were impacted by this.

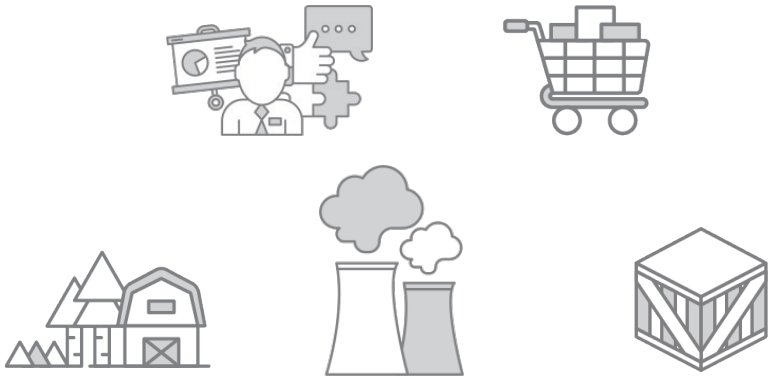
C) INDUSTRY AND ENERGY USAGE

The requirements of some industries made associated businesses heavier consumers of energy and thus impacted their energy activities and attitudes.

Businesses which required machinery or equipment outside of those found in standard office spaces usually required more energy than other businesses. **Agriculture, manufacturing** and **mining** were three industries identified as being the heaviest consumers of energy. In contrast, **professional services** and **retail** businesses which were interviewed were typically low users of energy.

In addition, businesses in energy demanding industries were often operating beyond standard business hours – some of which were operating 24/7. The combination of demanding machinery and extended operating hours meant that there was often a large discrepancy in energy consumption across industries

This translated to differences in how energy is thought about and prioritised today and the focus of the future…



So how did low and higher energy intensive businesses differ?

The Role of Energy for Low Intensity Businesses

- **Less invested in energy and researching options. Those in home offices often stuck to their plan for residential usage.**

Type of Business

Small businesses with low usage were typically home businesses, small professional service businesses and similar. Larger businesses with low usage were again dominated by professional services operating from office spaces.

Consumption Behaviour

The primary use of energy for low intensity businesses was powering office spaces, whether in commercial spaces or at home. Computers, air conditioning/heating were the largest users of energy, as well as kitchen spaces and appliances in larger companies.

Energy Challenges

Keeping costs down was a primary challenge for these businesses. While they were using a comparatively low amount of energy to operate, the impact of the energy bill was still felt. Managing their usage to reduce costs was common. Company culture was another challenge, with smaller businesses finding it hard to balance differing opinions towards being sustainable with energy within the office. Owners, or those responsible (with a vested interest) in reducing use for monetary savings or environmental reasons found it challenging to communicate these ideologies to employees with a fear of micromanaging or pushing their views and agendas.

Energy Management

Managing energy consumption was not a priority for businesses with low usage. Beyond turning off lights and appliances when not in use, these businesses felt that their consumption was necessary and fixed, something that couldn't really be impacted. Larger businesses usually had automated lighting and air conditioning / heating to reduce and control cost.

The Role of Energy for High Intensity Businesses

- **More frequently trying to optimise and improve energy efficiency to reduce their operating costs to boost profitability.**
- **Businesses typically more informed about energy and renewable solutions.**

Type of Business

Businesses with high intensity energy usage were often companies within particular industries like agriculture, manufacturing and mining where energy played a significant role in operation and production beyond computers and office spaces. While these types of businesses were typically larger in size, there were still smaller companies utilising machinery requiring a high volume of energy.

Consumption Behaviour

In addition to running commercial offices with computers, air conditioning, printers etc, high intensity businesses generally required ancillary machinery and equipment to fulfil a core business need. Industries like manufacturing, mining and agriculture all relied on specialist machinery like drills and irrigation which required a large amount of energy.

Energy Challenges

Navigating the high intensity usage was the root of energy challenges for these businesses. Cost was an important consideration where high intensity meant high costs. While conscious of the importance of renewable energy solutions for the environment and to offset the cost of energy consumption, these businesses were unwilling to transition to renewables until they were absolutely certain that they could reliably meet their heavy demands. Further, due to the heavy use, negotiating the most cost effective solution was a challenge too, sometimes requiring extensive tender processes. In addition to cost, maintaining a positive public image was important to businesses that felt pressure to be more sustainable, particularly in recent years.

Energy Management

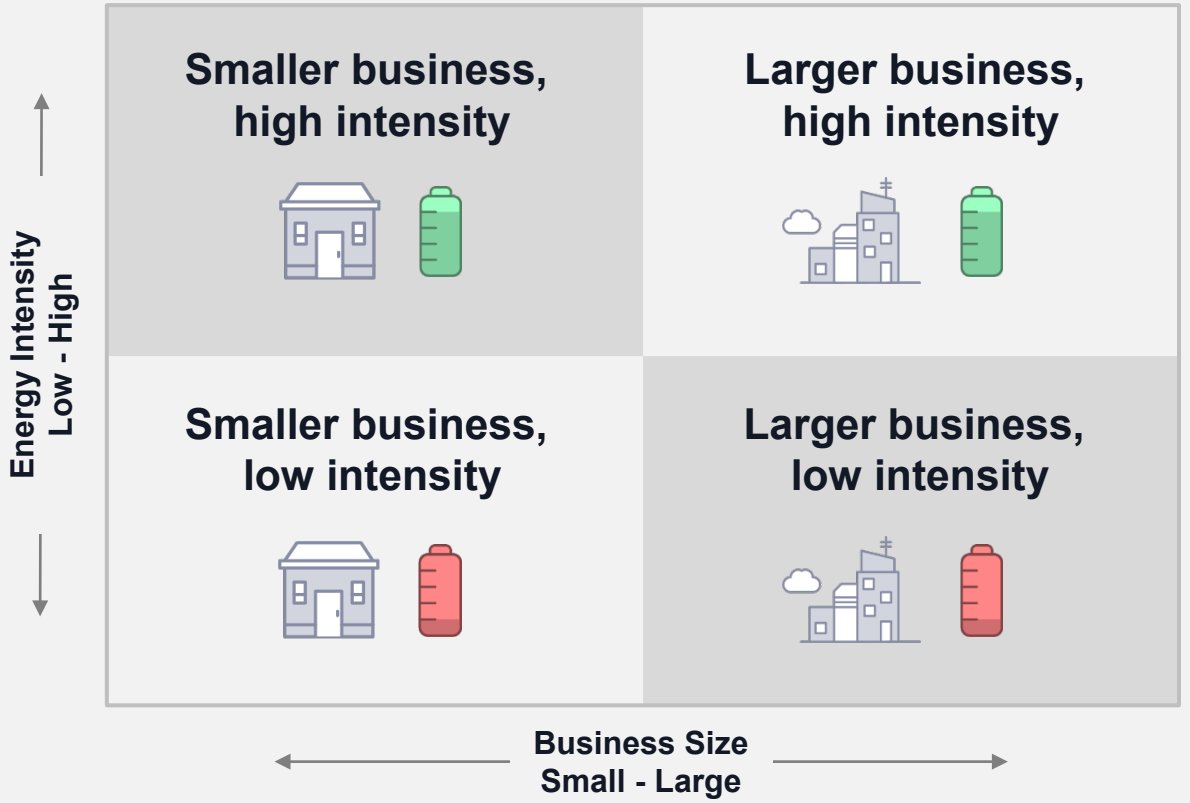
Energy management was largely automated for larger businesses, with office spaces equipped with automated lighting and air conditioning / heating to reduce use. Regular maintenance and reviews of equipment and machinery that use energy are conducted to ensure they are still operating efficiently and were set up to use the least energy possible.

Segmenting businesses according to the size of the business and intensity of energy usage revealed four distinct types of businesses when it came to energy…

Size and energy were important axes to differentiate businesses in how they engage with, and use energy

Grouping businesses based on the **size of the business** and **energy intensity** was a useful way to understand how they engaged and interacted with energy both day-to-day, and longer term. This included how they used energy, what challenges they faced regarding energy, and how they managed their energy consumption.

While the size of a business often dictated the goals and priorities, energy intensity was integral for understanding the role of energy. Larger businesses for example usually had larger footprints, and had more extensive offices to power. Similarly, the difference between high and low intensity businesses was the reliance on specialised machinery and equipment which usually consumed a lot of power to run.



Small, high intensity Agriculture Technology

Fabricated indoor growing systems for crops, and had its own demonstration facility using the technology. A small team of ~10 employees managed the business, most subcontracted and worked remotely.

Energy was all-encompassing for the business, and determined the cost of operation for the business and their consumers. Two diesel engines produced electricity 24/7 to power the demonstration facility which replicated sunlight through electric lighting. Constant, unfailing energy supply was required 24/7 to run the demonstration facility.

Optimising and improving their energy efficiency was a core business challenge and priority to increase their profitability. Renewable technologies like solar had been found incapable of producing the amount of electricity required to run their operations.

Large, high intensity Mining Company

The business operated mines and had offices for their headquarters in Australia.

Energy was a substantial expense for the company which operated 24/7 with a stable load all hours of the day. Energy was supplied through the grid, and due to their long-term contracts, energy was only thought about when paying the bills.

Decreasing operating cost was an important priority for the business which relied on an extensive tender process to secure the best contract for their energy consumption. Due to safety infrastructure (oxygen ventilation in mine shafts and gas drainage) requiring energy, compromising reliability or capacity of energy was not legally feasible. This ruled out the option to move to renewable solutions which would be unable to meet their demand.

Small, low intensity Property Consultancy

Acted as a property consultancy and buyers' advocates. The business operated out of a home office and consisted of two employees.

Consumption was very low, and was therefore not a large expense for the business. While not a large expense, it was seen as an absolute necessity for the business to run lights and computers which were a requisite for operating.

Because energy was perceived to be just another necessity to operate the business, they didn't associate any challenges or priorities with energy besides keeping costs down. There were no management strategies in place, but had intentions to focus more on energy when the business expands into a commercial office space – a goal for the short-term future.

Large, low intensity Environmental Not-for-Profit

Managed and coordinated philanthropic and business funds. The business had offices nationally across Australia, operating from each of the capital cities and across some regional areas.

The company offices were 6 star energy efficient buildings, and only used computers and lights which contributed to the energy bills. Energy bills were not a large relative expense for the business, and they simply formed part of the necessary running costs.

The business didn't have any tangible challenges when it came to energy. Managing consumption was largely automated within the office spaces, and colleagues were internally motivated to use energy responsibly, given the values of the organisation as environmentally aligned. The business relied on the grid, but had plans to move to renewable energy sources – the challenge was having the funds and cash flow to invest in the technology.

Looking Ahead: The Ideal Energy Future

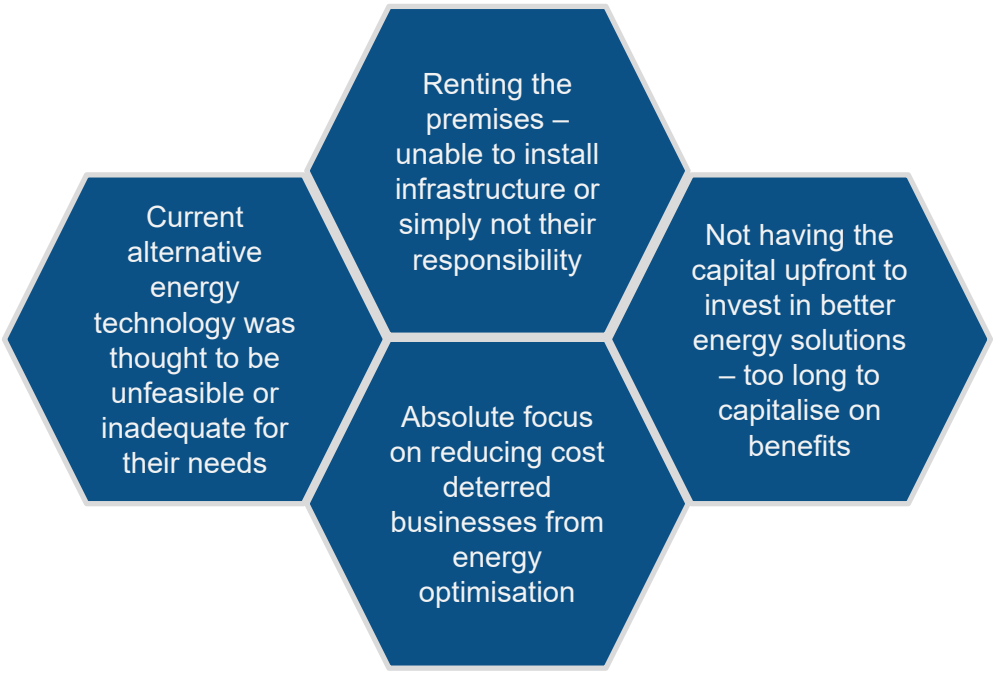
What does a better energy future look like for businesses?

Even amongst those who had a genuine desire to change their energy behavior and operations, many businesses felt ‘stuck’ in their current state…

Barriers to changing energy behaviour

The cost of energy consumption and a desire To contribute to a better environment created a common motivation and desire for a better energy future.

While most reported wanting to change their energy behaviour, there were perceived barriers preventing businesses from acting.



All businesses found it difficult to imagine what the distant future looked like, but higher intensity businesses were able to more clearly see the near future…

Because higher intensity businesses were usually more engaged with energy, where larger firms had dedicated teams conducting research and analysis on the role of energy, they were better equipped to envision the short-term future (e.g. the next 5 or so years).

In contrast, lower intensity businesses who were less invested and less involved in energy were less researched, and therefore were not sure what to expect in the future or what better could look like. Particularly smaller businesses whose owners or managers were responsible for energy, other factors were simply more important and more top-of-mind.

If nothing else, businesses knew that renewables played a key role in the future and was important for Australia.


A better energy future for businesses involved:
Cheaper, more reliable, renewable energy.

Businesses felt that the cost of energy was too high and was noticeably impacting their profitability

Cheaper

Why it needs to be better

The price of energy was a necessary expense, and for some businesses, a large one. Some businesses felt that the price of energy in Australia was considerably higher than in other countries. In an increasingly globalised market, this meant that some businesses were losing out to other players who were more competitive in the market due to having cheaper running costs.

This resulted in businesses feeling that they were being taken advantage of by providers and the wider energy sector. Being able to secure a good price for energy was a challenge, and some businesses felt that even a competitive price in the current Australian market was more than they should be paying.

> We've got the highest electricity costs in the world, that's not fair. I think it's just going to keep getting more expensive. And I think it's going to close a lot of businesses because people can afford to pay for the expenses. I don't care how we get energy, I just want it cheaper.
> *- Medium, Medium intensity, VIC*

What 'better' looks like

Lower prices

Businesses were unhappy that energy prices were increasing in recent years and were not as affordable as in other countries. Implementing standards or revising the cost of energy was something perceived to be important to help Australian businesses thrive.

More rebates and incentives for energy solutions

Moving to renewable energy sources was often not justifiable for businesses due to the high upfront costs. Small/medium businesses with smaller revenue streams felt that the initial cost was too great to invest in, regardless of the long-term savings. Increased rebates, incentives and tax breaks from Government were desired to help businesses access renewable solutions to reduce costs and contribute to a better energy future.

Cost-efficient equipment

Businesses noted difficulty with upgrading technology /equipment that they knew were inefficient because of the upfront cost. Having support, advice and/or finding ways to overcome this barrier and reduce cost in other ways (e.g. through optimisation of technology) was welcomed as a solution.

Businesses needed constant, reliable energy which is not at risk of blackouts or outages

Reliable

Why it needs to be better

Businesses rely on energy for their day-to-day operation, and some for manufacturing and safety. Whenever the supply of energy was disrupted, businesses immediately felt the pressure from an inability to keep their business moving. This directly impacted their profitability.

While state was an important factor for the consideration of blackouts and outages (with businesses in SA particularly exposed), the nature of some businesses and industries meant that even the slightest probability of losing power was reason to protect themselves.

Businesses were frustrated that an essential service, that they were paying for, had risks of poor reliability which directly halted their basic operation and profitability.

> Constant supply of energy is crucial because we do have the occasional blackout where we are doing work. There was a fair few blackouts in a normal year. So maybe three or four within a year without warning which affects the schedule of the business.
> *- Large, High intensity, SA*

What 'better' looks like

Safeguards against blackouts or outages

The impact of blackouts and outages had a significant impact on basic business operations which could not be compromised. Increasing the accessibility of batteries and similar solutions to ensure a constant supply of energy was of high priority for those who were most impacted.

Improved supply and consistency

For those needing to rely on the grid, greater capacity to produce and distribute energy was important to have greater confidence in their supply. Not needing to import energy from other states during peak times and improving support for interconnectors was an expectation from businesses who felt uncomfortable with the limitations of their local supply.

Businesses were frustrated that renewable energy wasn't always available to them, despite wanting to make a change

Renewable

Why it needs to be better

Businesses wanted to engage in more sustainable energy options. Moving to sustainable sources of energy provided the potential for long term financial savings. However, it was also seen as a necessity for businesses to contribute to negating climate change. At the moment, businesses felt restricted in their options, and despite wanting the benefits of renewable energy, felt deflated and frustrated that it wasn't viably available to them for a range of reasons:

Premise restrictions

Whether large or small, businesses in commercial premises or were renting felt they were unable to install solar panels and other infrastructure, and thus unable to use more sustainable energy. Additionally, for those with heavier usage, some felt they didn't have the space on their property to install enough panels to cover their usage.

Too expensive upfront

The initial cost of setting up infrastructure to facilitate renewable energy was a common barrier for small-medium businesses. For those struggling to manage cash flow, outlaying thousands of dollars was not feasible, and long-term savings wouldn't be felt soon enough to justify the investment.

Unable to reliably meet needs

Businesses with high intensity energy consumption felt that alternative energy sources weren't effective enough to reliably cover their usage. The risk of disrupted energy supply was something that could not be compromised for both economic and safety related reasons.

> We don't have solar power or anything like that, we're in a commercial premises. I don't own the building and we don't have that option, unfortunately.
> *- Medium, High intensity, VIC*

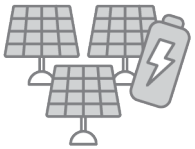
> At some point making an investment to improve our energy costs to get more efficient equipment. That would be what we're looking to do, but the costs could be quite large initially.
> *- Large, High intensity, NSW*

> The technology right now can't provide the quantity and supply we need. From a safety perspective we require adequate energy provision that won't be disrupted. It's something we require.
> *- Large, High intensity, QLD*

Businesses wanted more ways to access renewable energy that was cheaper, and could cover the totality of their energy usage

Renewable

What 'better' looks like



Able to keep up with demand

Improved performance and capacity of renewable technology to meet more demanding energy uses was a necessity for businesses with heavy energy consumption. Providing energy which could service the entire business without risk of falling short of energy requirements was necessary before businesses would consider investing in such technology.

More solutions, particularly for those in commercial / rented premises

For businesses in premises which they didn't own, more sustainable options were desired which didn't involve installing infrastructure (which was not always permitted or feasible for some premises). Off-site solutions, or improved access through a provider were potential options for businesses who couldn't be completely self-reliant. Some businesses noted the benefits of having more information on what was possible for them specifically.

Cheaper renewables

There was a common belief amongst businesses that renewable energy was too expensive to justify the investment. Lower upfront costs, as well as more rebates and incentives to install the infrastructure were necessary solutions to help businesses make the transition.

> If there were other ways to produce clean energy where it's something you can take with you – that would be fantastic. Solar is a structure that is attached to where you are which makes it a little difficult for businesses like us that don't own the property they're in.
> *-Medium, Low intensity, SA*

> Obviously we would love to go green. What we found is that essentially, the renewables are not viable in terms of our consumption rate. Also the upfront cost and where you put it. It's just not within the realms of feasibility.
> *- Small, High intensity, QLD*

Moving to sustainable sources of energy was appealing to businesses for the long-term financial savings. However, it was also seen as a necessity for businesses to contribute to negating climate change.

> The whole world is heating up with global warming, especially for Australia, so it's better to save the world by being more green energy options. That's the trend. We have a social responsibility. We make money, but we also need to help the world. That would be more important.
> *- Large, High intensity, NSW*

Long term savings

The ability for some renewable sources of energy like solar or wind was appreciated by businesses for the potential long term cost savings. The ability to produce energy off the grid, as well as storing it in batteries had the potential to make significant reductions to cost, translating directly to increased profitability.

Corporate Social Responsibility and becoming carbon neutral

Some businesses believed that climate change was of great importance – especially businesses with heavy energy consumption. Offsetting the reliance on coal and fossil fuels and moving to more sustainable energy sources was a transition that was not only inevitable, but a responsibility for their business into the future. Doing so also provided an opportunity to be more competitive and improve their value proposition, appealing to environmentally conscious consumers.

SME Perspective: The Role of the Sector

What did we find?

Introduction to overarching learnings about the perceived roles of the stakeholders

Overall, businesses believed there was wide scope for improvement within the energy sector. With a focused and shared vision for the future of energy, the role of stakeholders working towards a **cheaper**, **more reliable** and **renewable** energy future was common amongst businesses.

The **Government** was seen to be an authority in the sector with the ability to set an agenda for other stakeholders to follow through legislation and policies.

Businesses believed that they had a role to play in contributing to, and adopting more sustainable energy technology. But, they believed these were still a way off, and needed support from other stakeholders to get there. Lastly, other stakeholders which make up the sector (e.g. retailers, wholesalers and distributors) were seen as the guardians of price, and had a duty to help support sustainable energy.

Government was believed to have the greatest power and responsibility to drive change in the industry through their power to implement policies and legislation

> I think the Government have the biggest authority about this. The environmental department need to set initiatives for the energy companies to follow. The Government have authority to regulate the industry - they can say what can or can't be done. They have the power. Without Government I don't think Australia can improve the energy.
> *- Large, High intensity, NSW*

The Government were often thought to be the only stakeholder capable of delivering a widespread positive turn in the sector

Businesses foresaw a positive change to the energy industry as requiring legislative pressure to kickstart action. The Government were seen to be the only stakeholder with both the power and motive to do so. Businesses were comfortable with Government playing a leadership role if it was in line with their interests. This included enforcing lower energy costs and increasing rebates to make energy technology more accessible.

Additionally, the ability to speak on behalf of a range of other stakeholders was believed to be an ability exclusive to Government, and it made sense in aligning all relevant parties, and putting forward one vision.

Introducing regulation and legislation, in addition to supporting businesses take up more sustainable energy solutions was believed to be the duty of the Government

> Incentives from the Government. I think Government needs to drive solutions and offerings to a degree as well. Maybe offer small businesses incentives for tax free, or grants for power sources which are more cost effective.
> *- Large, High intensity, NSW*

What should be done

Offer support to adopt renewable energy solutions

Businesses felt that the initial cost of renewable energy infrastructure like solar panels and battery storage was too expensive to justify investment. Offering increased rebates, tax breaks and other incentives were all wanted from the Government to help businesses adopt sustainable energy solutions. The importance of using these technologies was felt, but businesses believed that they could only realistically uphold their responsibility with direct support from Government.

Regulate pricing

Businesses of all sizes and types felt that energy prices were too high, and some of the higher intensity businesses compared it to the price of energy internationally. Regulation and policing energy prices was a task that would be entrusted to the Government, due to other stakeholders' prerogative to maximise profits.

Certify / validate new technology

Some businesses wanted a more authoritative source to trust when it came to new energy technologies. Having potential solutions validated on effectiveness and viability, and certifying that they met industry standards was one task that businesses felt was best overseen and implemented by Government (with input from the industry).

It was common for Businesses to believe they have a role to play as well, but some were too preoccupied and perceived to be too small to matter…

> It's not up to us to have to do. We have our own challenges. that's a challenge that should be taken up by our Government… It's up to them to create and start this conversation.
> - *Medium, Medium Intensity, SA*

> Businesses I think need to show some leadership in this part and making those decisions to install solar and batteries.
> - *Large, High Intensity, SA*

1 "Too much to worry about"

There were a group of businesses, typically smaller businesses with low energy intensity, who believed they were not the best parties to drive the change.
Smaller businesses felt they were incredibly busy trying to survive in the market and believed they weren't in a position to prioritise energy within their company, let alone more broadly in Australia. A portion of this group believed that energy was 'bigger than them' and that their contributions may not be substantial enough to make a difference.
Many low intensity businesses fell into this category, in addition to most home businesses which often engaged with energy similarly to a residential consumer.

2 "Energy can't and shouldn't be ignored"

Another group of businesses believed they had a more significant role to play in shaping the future of energy. This was by actions such as investing in renewable energy to offset their consumption, engaging in energy conversations, and innovating and assisting in new technology development.

These businesses were predominantly larger businesses and those with high energy consumption. These businesses were more invested in energy, and had a lot more to gain by changing. Further, as many of these businesses were preoccupied with optimisation and reducing operating costs, energy was already a focus for long-term goals and priorities. With action and conversation already happening in this space, such businesses were already thinking about energy and working towards better outcomes.

Businesses felt that they couldn't change their usage due to the demands of operation, but thought overall that they could contribute to technology innovation and adopting solutions to offset their use

> I think private enterprise are the ones that'll bring about the changes. You look at electric cars, it was private enterprise that brought in electric cars, not Government.
> - *Small, High Intensity, NSW*

What should be done?

Some businesses were willing to engage in conversations
Businesses, usually larger businesses and those with heavy energy consumption, liked the idea of being able to vote or offer their perspectives to discussions about energy. While most were not interested in initiating the forum for discussion, they were open to entertaining a conversation and working with other stakeholders to collaborate and find mutually beneficial outcomes.

Drive innovation and develop solutions
Private businesses developing technology were thought to be an important cog in driving change, and were encouraged to continue to innovate. While these organisations were operating for profit, contributing thought leadership and investing time and resources into related technologies was perceived as crucial in accelerating change.

Invest in / test alternative sources to offset energy consumption
Investment in solar panels and batteries was seen as an important step for businesses to reduce their carbon footprint – especially for organisations with heavy energy usage. In addition, investing in other solutions like hybrid fleet vehicles and improving the efficiency of machinery and operations to consumer less power were important avenues for businesses who needed to remain on the grid.

Businesses felt that energy needed to be cheaper and cleaner, but that ultimately, regulation was the key to initiating all necessary / desired changes

> Energy wholesalers supply the power to the energy companies before it goes to you. So wholesale has the most important role. If they could switch to a more environmentally friendly approach that would be good - using solar or something.
> *- Small, Low intensity, VIC*

> Possibly the regulators. If rules are changed, policies are changed and rewritten, then that could be the basis for making it cheaper, offering better service, regulating how often you're contacted. A customer service charter - people can buy into that.
> *- Medium, High intensity, VIC*

Some businesses felt that energy wholesalers and retailers had a responsibility to **utilise more renewable energy sources** and make it **more affordable** for businesses.

Acknowledging the unlikelihood of this occurring due to energy providers' incentive to make profit, businesses thought that **regulation was a necessary first step** to achieving these outcomes. Many businesses thought that the Government was responsible for enacting this, though some believed it also fell to industry regulators.

The role of other industry stakeholders was largely overlooked or unknown to businesses when considering the future. Their perspective as a business (trying to make money while juggling running costs) coloured their view of the sector and they were fixated on pricing and supply. This perspective was common across all businesses regardless of size and energy consumption.

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