

Exploration of Energy Issues C&I findings

Prepared for:

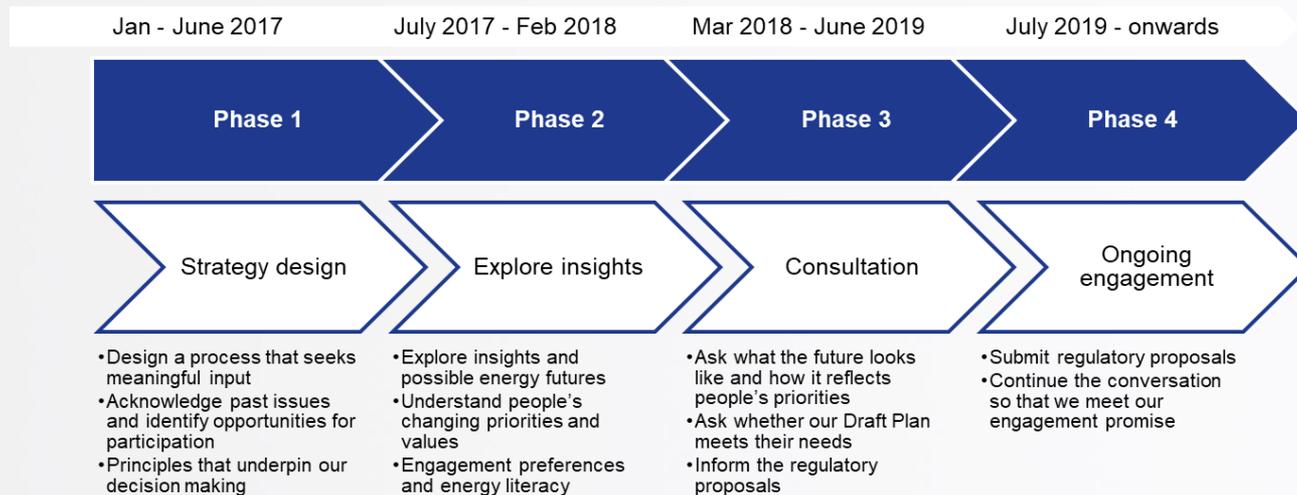


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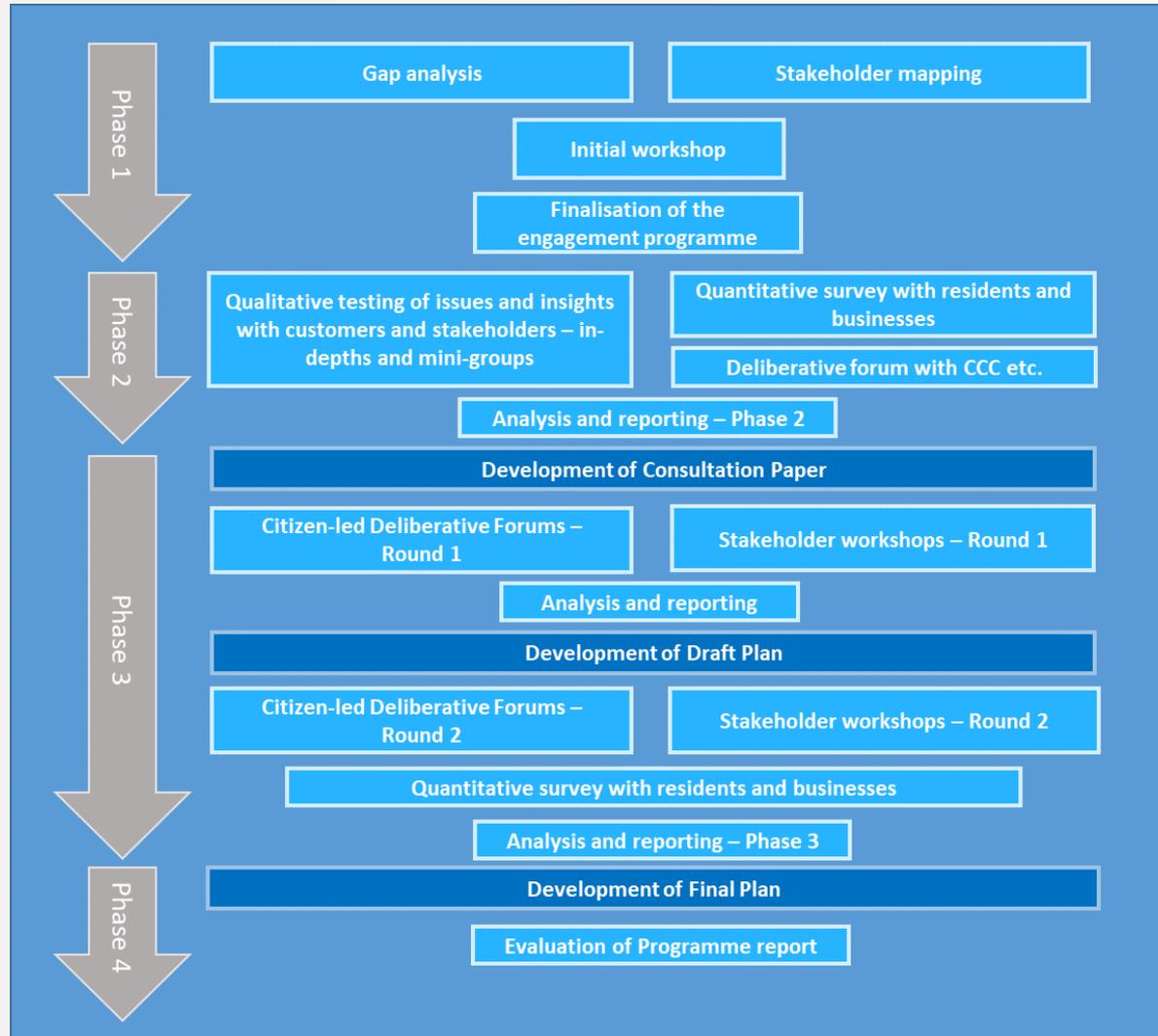


Research Background and Objectives

- CitiPower, Powercor and United Energy are required to submit to the Australian Energy Regulator (AER) a regulatory proposal and tariff structure statement on a five year basis.
- This regulatory proposal is due to be submitted for the 2021-25 period by July 2019.
- Woolcott Research and Engagement has been commissioned to conduct the customer and stakeholder engagement in input into the preparation of the regulatory proposal.
- We are currently in phase 2 of the programme.



Engagement methodology



Research Design

- This presentation provides the findings of 13 in-depth interviews amongst a cross section of key C&I large customers across the three network areas.
- The interviewees all had some involvement in decisions relating to their corporate electricity bills and covered a range of industries:
 - ANZ
 - Coca-Cola
 - Crown
 - Department of Education
 - Digital Reality
 - Epworth Hospitals
 - Flowserve
 - IXOM
 - MCG
 - Melbourne Water
 - Metro Trains
 - Telstra
 - Woolworths
- The interviews were mainly conducted on the telephone and ran for approx. 35-45 minutes.
- Many companies had multiple sites across the 3 network areas.



Detailed Research Findings



1. Electricity Usage

- By definition, all of the C&I customers within the research were big users of electricity, the biggest of which stated that they spend \$50million a year on electricity.
- Most had contracts across the three network areas, with some having a contract across all sites and some individual contracts for each site.
- Many saw themselves as unique in terms of their energy requirements:
 - There were those who needed high voltage connections;
 - Those with peak demands that can't easily be controlled/shifted, e.g. offices, stores, hospitals, schools, data centres.
 - Those with lower voltage connections but a consistent profile - 24 hour a day/ 7 days a week needs, e.g. 24 hour refrigeration.
- Some had managed to shift some processes to off peak times to flatten demand where possible, e.g. sewerage treatment now at off peak times.



2. Behavioural Changes in the Last 5 Years

- Without exception, all stakeholders complained about the rising price of electricity, with some quoting increases of 20% through to 75% in the last couple of years.
- In that regard, many had been looking seriously at their usage and putting in place strategies to try and reduce consumption.
- Some of the strategies mentioned by C&I customers included:
 - Regularly shopping around for better deals/negotiating with retailers (often through a third party);
 - Installing solar systems (where possible);
 - Using automated systems to measure consumption;
 - Switching to power factor correction;
 - Staggering their use of electricity (not turning on everything at once/running things at night);
 - Experimenting with batteries/solar combinations;
 - Utilising LED lighting.

“We had a 75% increase in our electricity bill in the last 1-2 years.”

3. Decision Making Process

- Most had a system for procurement of an electricity retailer, with some employing specialist consultants and entering into energy performance contracts.
- While in the past most were happy to shop around once every 3-4 years for a provider, the impact of price rises saw many of them negotiating on an annual basis now.

“We have a procurement team in Head Office that negotiates retailers on a 12 monthly basis.”

“It is a portfolio approach as we have several hundred stores. There is a tariff review 1st Jan every year. See if there is the potential to switch tariffs. It’s all automated.”

“We engage a consultant to negotiate with retailers to get the best deal once a year.”

4. Distributor Relationship

- The majority were reasonably happy with the relationship with their account manager, however many suggested that relationships had not been as positive in the past.
- There was a feeling that there was still some room for improvement, in terms of responsiveness and the level of consideration given to the special needs of the organisation.
- The main reason for contact with the distributor was outages. In this situation sometimes it was believed that more information would be useful because of the massive impact that outages have on large C&I customers, e.g. the reason for the outage - what is failing and why?
- There was also a desire to have one point of contact as some had several or had to go through the call centre for some issues (e.g. separate contact for communication about maintenance work on the network, new connections, questions about meters).

“Relationships have improved in the last few years. They have raised the bar.”

“New connections is a flawed process. There are too many different people involved.”

“Some bureaucracy that gets things stuck. He understands and helps with this.”

5. Renewables

- There was varied use of renewables currently with some using none and others using solar in particular.
- Most had done some investigation into renewables and expected to use more in the future due to:
 - government legislation/targets,
 - cost savings (in the long term), and
 - simply because *“they are the future”*.
- However, some were not considering renewables for various reasons:
 - Solar thought not to be enough to drive high voltage equipment,
 - Batteries not seen to be suitable for usage pattern, e.g. need to use all power immediately.

“Most sites are very dependent on the grid currently but we would like to move to renewables.”

“We have looked into solar but the return on investment is not attractive.”

- There were some concerns about the current cost and reliability of renewables but it was expected that these would both improve in the future.
 - One had solar but no battery back up and was experiencing surges when the solar goes on and off on cloudy days. It was thought that the network should help to manage this.

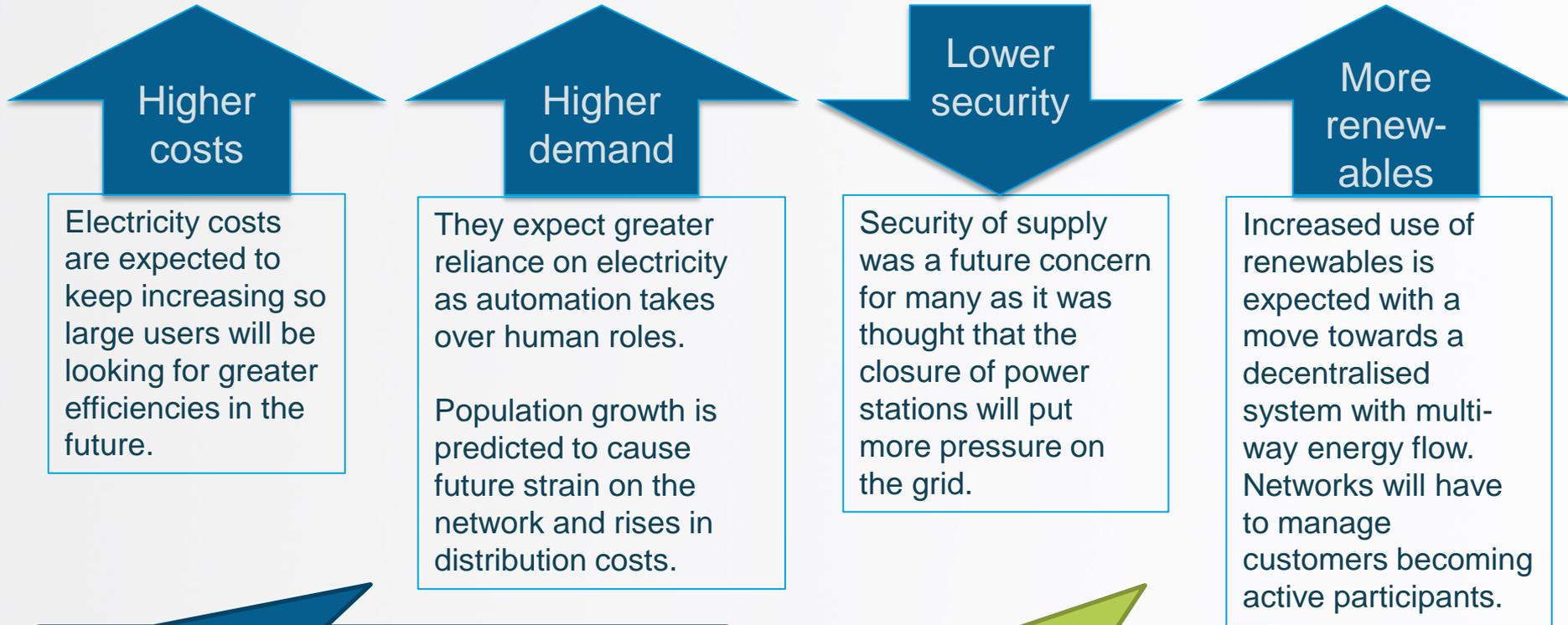
5. Renewables

- Mainly it was solar being considered for the future but one was also considering wind and another hydro and biogas (from sewerage).
- Batteries were not really being used yet but were expected to be considered further in the future due to better technology and cheaper prices.

“Lithium ion batteries are not as good as they should be but I expect that the issues will be resolved in the next 2-3 years, then 12% of the national load could move onto this.”



6. Future Challenges



“Computers will be diagnosing, CT scans and x-rays will be interpreted by computers against a database and there will be hybrid operating theatres where images are x-rayed at the same time as operating.”

“If we don't use 100% of the generation it feeds back into the grid. I can't use it for the next building - I have to send the extra back into grid and buy it back again for next door.”

7. Energy Values

Thinking ahead to the year 2035 and what C&I customers want from future distributors, priorities were similar to residential customers...

- 1. Reliability/security of supply** was the top value for all C&I customers
 - Quality - uninterrupted supply and minimal brownouts;
 - Security of supply – concerns about general network capacity because of the Hazelwood closure;
 - Availability – capacity of distributors in specific areas is a consideration, particularly when deciding where to build new centres/hospitals/plants;
 - Number of outages was not so much of an issue as thought to be good currently;
- 2. Cost** will always be a core value (also because prices are increasing).

“We won't be 100% self sufficient by 2035 so will still have to rely on the network.”

“We need to build additional data centres but need to know where to build. Some distributors don't have the capacity. Having to change plans to suit the grid inhibits business growth.”

“Guaranteed supply is the no. one priority. Without electricity we can't function.”

“Cost of electricity is a major risk to our business. There has been a 70-80% increase in one year!”

7. Energy Values

3. **Renewables** are gaining in interest and will continue to do so.
4. **Greater customer control** – e.g. in response to price signals, being able to use excess electricity for their own needs or trading peer to peer.
5. **Customer service** – having a single dedicated point of contact. Good communication of planned outages, with specific location down to NMI level.
6. **Responsiveness** – distributors reacting to and trying to resolve issues in a timely manner.
7. **Partnership working** – large customers have a large impact on the network so recognise that they will need to work with distributors in the future to control load and shape demand.

“If something needs to be addressed just react in a reasonable time, that’s all you can ask for really.”

“Figure how potential changes we are considering might impact the network. Want to be part of the solution not part of the problem.”

“We would love the opportunity to work with a distributor for smarter solutions for the customer (forecasting, utilisation of big data, usage patterns/ performance).”

8. Reliability

- C&I customers interviewed were happy with the current level of reliability in terms of the frequency and duration of outages.
- However, quality of supply was more of an issue for many large customers - brown-outs are particularly problematic as all equipment has to be restarted. Thought to be an average of 12 brownouts a year which was deemed too many.
- There did not appear to be much difference between the three distributors, if anything CitiPower was thought to be the most reliable and UE the least (but still pretty reliable).

“We have brown out/blips for a few seconds which are not good because they reboot the gaming machines.”

“If there is planned maintenance activity we need to know as it shuts our plant down. They should give us a schedule for the year if they want to shut down.”

- Communication about planned outages was reported as being generally good although there was some criticism of both Powercor and United Energy for not giving enough notification.
- Email notifications of planned outages would be preferred.
- On the whole customers were happy with the responsiveness of the distributors for unplanned outages.
- Would not accept more outages to reduce cost; nor pay extra to gain better reliability.

9. Pricing and Tariffs

- Those interviewed had a good understanding of their bills and the tariffs they are on - information on bills was thought to be sufficient.
- Most thought that the network charges made up around 50% of the bill.
- In general interviewees wanted tariffs to be available that suited individual customers and allowed the customer more control.
 - CitiPower and Powercor were not thought to have a business tariff that is customer controlled whereas UE does.
- For demand tariffs in general they requested that the time periods are shortened, e.g. customers see the benefits of behaviour changes and efficiencies quicker and the impact of one off peaks is not still felt 12 months down the line.
- They requested more innovative tariffs that incorporate newer technology or co-investment, e.g. if the customer installs a battery that will flatten demand so the company is not putting as much strain on the network – then distributor should share this saving with the customer.

“We’re in favour of customers being able to change behaviours due to price signals. Should structure tariffs so customers can make informed decisions about usage.”

“We can throttle our demand based on choice of equipment usage, but we want the right to say yes or no.”

9. Pricing and Tariffs

Demand charges

- Demand charges were supported in principle but there was some criticism of the way they are calculated – i.e. should not be based on one annual peak.
- Most liked the idea of the demand charge being based on maximum demand measured on 5 days of the year, however they preferred a longer time period (over the whole year ideally).
- They were also not so supportive of the distributor nominating the days.
- One mentioned that their peak period is different to the norm (so is not really impacting on the network's peak demand) but they still get charged a large demand charge.

"We take power when every one else is not using power so charging us a demand charge without considering we are using in off peak is unfair."

"Would prefer an average over the 12 months rather than suffer because of 1 massive day."

"5 days is not reasonable to judge demand, look at peaks and minutes and average it out."

9. Pricing and Tariffs

Seasonal tariffs

- Response to this was dependent on the usage patterns of the business, e.g. hospitals are less occupied in the summertime so a summer loading tariff fits their pattern.
- Others mentioned that UE's summer demand covered a very long period of time so was hard for large customers to manage their costs.
 - It was suggested that the period should be shorter blocks of time or days of a certain temperature in summer instead of the whole summer period, as this would enable more behaviour change.

"Flattening demand is a win win for both sides so it should be easy for the customer to manage."



9. Pricing and Tariffs

Critical peak demand tariff

- Many would also consider a scheme where they would be paid for reducing demand on up to 5 four hour periods a year, with those days nominated by the distributor the day before.
 - However, some needed more notice than the day before.
- Ausnet was thought to have this tariff which does lead to demand shedding.
- Most had suggestions for how they would reduce demand:
 - Increasing on-site generation,
 - Switching to standby generation (although can be dangerous to do too much as these are not base load generators),
 - Choosing to use different equipment,
 - Removing non-critical load,
 - Reducing load (half lighting, reducing A/C, cycling on reduced settings)

“We could, and would, respond (to scheme).”

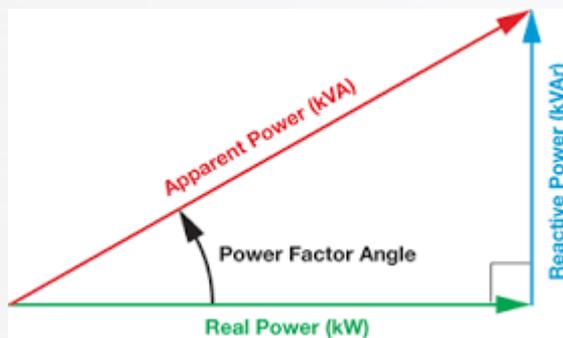
“We would need at least a month’s notice.”

9. Pricing and Tariffs

Power factor correction

- Those who had changed from a kW to kVA network tariff seemed happy with the change.
- They reported a good power factor of close to 1.
- However, one reported that it had impacted on them negatively.
- Others were actively considering power factor correction but were not yet doing it.

“Moving to kVA has been good. It gives customers incentives to improve the load profile.”



Summary of Themes

- The **reliable supply of electricity** is the number one priority for C&I customers as large businesses depend on it - uninterrupted, continuous and high quality supply.
 - Any interruption in supply results in a major disruption and cost to the business.
 - Although in general the frequency and duration of outages was seen as acceptable, they were not always happy with the quality of supply.
- The rising cost of electricity was highlighted so **keeping bills down** as much as possible is also a priority – through efficiencies by the distributors and clear price signals so that customers can control their demand.
- C&I customers see their usage and needs as unique and as such would like **tailored tariffs/solutions**, e.g. a tariff that suits schools.
- They review their plans and shop around for the best deal more frequently than before so distributors need to **regularly review their tariffs and ensure they are well matched to customers needs**.
- They expect **great customer service** because of the amount they are paying – including a strong relationship with **one point of contact** who is **responsive** and **transparent** regarding issues, provides **substantial notice** of planned outages, understands the **individual needs and priorities** of each customer and **provides advice** regarding efficiencies and tariff options.

Summary of Themes

- Most expected to **use more renewable sources** in the future due to government legislation/targets and reduced costs although there were concerns about current security of supply and reliability.
- They are looking to the distributors to assist in the transition to renewables and management of demand with an emphasis on **partnership working** so that large customers become part of the solution not the problem.
- They expect more **flexibility and innovation** from distributors in the future to facilitate multi-way energy flow and allow users to benefit from any excess electricity they generate by using it for other buildings (rather than having to sell it to the grid and buy it back again).
- Demand charging is supported in principle but they wanted **peaks to be averaged over a longer time period** and summer loading tariffs to be in shorter blocks or only on days over a certain temperature.
- There was support for a **critical peak demand tariff**, with many suggesting ways they could respond to this, as well as a positive response to power factor correction.

