Service Cost Trade-off
Customer Research
Summary Report of Key Findings

March 2014
To help inform Ergon Energy’s regulatory proposal for 2015-2020, Colmar Brunton was commissioned to conduct ‘service cost trade-off’ research across Ergon Energy’s regional Queensland customer base, both residential and business.

The research was required to better understand customers’ expectations and preferences, and build on the insights gained from other research that has been tracking customers’ perceptions of value since 2001.

Ergon Energy is considering the findings from this research, as well as feedback from their broader customer and community engagement program, in determining future investment priorities. The findings will also support further development of its customer engagement strategies.

A combination of qualitative and quantitative research was conducted. The methodology used trade-off analysis to assess customers’ willingness to pay for a number of electricity supply and service elements.

Qualitative Research
- 4 focus groups with residents
- 6 depth interviews with businesses
- Review and consolidation of past Ergon Energy customer research
  Conducted in August 2013

Quantitative Research
- 25 minute online survey
  n=1,822 residents
  n=513 businesses
  Conducted in November 2013
Key insights summary

1. The cost of electricity is a significant issue for our customers. Many feel they have done all they can to reduce their usage, and others are investing in technologies, such as solar, to reduce their bill.

2. Customers have reached a tipping point where they are no longer willing to pay more for further improvement in the reliability of electricity supply. Most would even accept more frequent and longer outages, if it meant a decrease in their bill.

3. A customers’ reliance on electricity, their current reliability experience and their geographical location can impact willingness to pay for different reliability standards:
   - Customers have a preference not to be impacted at certain times: for business generally their most critical hours are 7am-1pm and for residential customers it is 5pm-8pm.
   - Those who feel that they are ‘frequently impacted’ by outages consider both ‘price’ and ‘length of outage’ as important, while those ‘barely impacted’ see ‘price’ as most the significant concern.
   - Looking at residential customer preferences, customers inland from the coastal population centres, who typically experience more outages, have a slightly higher willingness to pay for reliability improvement.
Despite price being a major concern, customers still support expenditure to varying degrees across a range of Ergon Energy’s core service areas.

- The findings showed particularly strong support for maintaining the current number of local depots and improving the network’s resilience to severe weather.
- There is support for Ergon Energy transitioning towards a smart network in order to allow customers to take up emerging technologies (however, there was less willingness to pay for smart meters).
- There is general support for Ergon Energy taking reasonable endeavours to minimise the community impact of new infrastructure, if this has a minimal impact on their electricity bill.
- There is strong support for the introduction alternative communication channels, including SMS, social media and online self-service (especially as this could reduce costs).

Customers would like one week’s notice before Ergon Energy conducts a planned outage. And for unexpected outages, they would like updates on restoration times to be available within the hour. However, few believe funds should be prioritised to deliver improvements in these areas.
The cost of electricity is a significant issue for our customers. Many feel they have done all they can to reduce their usage, and others are investing in technologies, such as solar, to reduce their bill.

Customers have become increasingly frustrated by substantial year-on-year electricity price rises.

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/10</td>
<td>+11.8%</td>
</tr>
<tr>
<td>2010/11</td>
<td>+13.3%</td>
</tr>
<tr>
<td>2011/12</td>
<td>+6.6%</td>
</tr>
<tr>
<td>2012/13</td>
<td>+7.6%</td>
</tr>
<tr>
<td>2013/14</td>
<td>+22.6%</td>
</tr>
<tr>
<td>2014/15</td>
<td>+13.5%</td>
</tr>
</tbody>
</table>

1. Higher bills for customers – far greater than CPI
2. Increasing bill concern
3. Try to reduce usage but see less / no impact on bill
4. Feel they can’t do more themselves to reduce their bills
5. Don’t understand why price rises are occurring
6. Lack of control over bills – when will price increases stop?
In Ergon Energy’s tracking research the ‘cost / affordability’ of electricity is now the most important driver of value for residential customers and is the lowest performing attribute, while ‘supply’ is seen as the least important and the highest performing.

Source: Value to Customer Research December 2013
The tracking research is almost identical for business customers, with ‘cost / affordability’ the most important driver of value and the lowest performing attribute, while ‘supply’ is the least important and highest performing.

Source: Value to Business Research December 2013
Customers are looking for ways to reduce their electricity bills. This is contributing to the strong rise in the take up of solar PV systems throughout regional Queensland.

Regional Queenslanders are trying to reduce their electricity use to save on their bills

87% have consciously tried to reduce their electricity consumption in the last 12 months.

89% to reduce the size of their bill (or for those with solar, to maximise their feed in tariff).

11% for environmental or other reasons.

The number one reason regional Queenslanders are going solar is to save money

36% currently have or intend to purchase a solar PV system.

76% to reduce the size of their bill.

34% for environmental or other reasons.

The ‘trade-off analysis’ elements of the service cost trade-off’ research study were used to gain the following insights. An explanation of this methodology and the detail of the insights gained follow.

**Insight 2**

Customers have reached a tipping point where they are no longer willing to pay more for further improvement in the reliability of electricity supply. Most would even accept more frequent and longer outages, if it meant a decrease in their bill.

**Insight 3**

A customers’ reliance on electricity, their current reliability experience and their geographical location can impact willingness to pay for different reliability standards.
Respondents were shown 12 screens online, such as the one below, presenting them with two unique supply reliability scenarios (including a price impact) from which they had to choose the ‘most acceptable scenario’ to them personally.

In total there were 724 scenarios shown across 1,822 residents and 513 businesses.

Modelling was then used to calculate the attributes (length of outage, frequency, time of day, impact on bill) customers find most important, and hence their willingness to pay for different reliability standards.
Both residential and business customers selected scenarios based predominantly on the ‘price’ – or the impact on their bill.

For residential customers, the next most important attribute was ‘length of outage’. For business customers it was the ‘frequency of outage’.

![Supply Attribute Table]

<table>
<thead>
<tr>
<th>Supply Attribute</th>
<th>Residents</th>
<th>Businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (Impact on Bill)</td>
<td>38%</td>
<td>34%</td>
</tr>
<tr>
<td>Length of Outage</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>Frequency of Outage</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>Time of Outage</td>
<td>17%</td>
<td>23%</td>
</tr>
</tbody>
</table>
Residential customers are looking for prices to stabilise, and would accept more frequent and longer outages to achieve this. Businesses are looking for price relief, and would accept a reduction in supply reliability for this.

**Insight 2 (cont.)**

- **Most Preferred Option**
  - Residential: Keep prices stable, Reduce supply reliability
  - Businesses: Reduce prices, Reduce supply reliability

- **2nd Preferred Option**
  - Residential: Keep prices stable, Keep supply stable
  - Businesses: Keep prices stable, Keep supply stable

- **3rd Preferred Option**
  - Residential: Reduce prices, Reduce supply reliability
  - Businesses: Keep prices stable, Reduce supply reliability

- **Least Preferred Option**
  - Residential: Increase prices, Keep supply stable
  - Businesses: Increase prices, Keep supply stable

The design of this exercise did not allow customers to choose a reduction in price for increased supply reliability, and very few opportunities to select a reduced price for same quality of supply or a higher quality of supply for no change in price. These scenarios are therefore not presented in the above preference order.
The choice modelling produced a ‘points’ acceptance score for the range of scenarios. This showed that residential customers are wanting prices to stabilise.

The most commonly chosen scenarios were those where the bill remained the same (10 points). They would also accept reduced supply reliability, if it meant a decrease in their bill.
Businesses are more actively looking for price relief. They would accept more frequent and longer outages, if this resulted in decreases in their electricity bill.

This is a higher preference than keeping prices as they currently are or keeping the current supply standards.

Businesses are unwilling to pay more for an improvement in the supply reliability.
The outage scenario most selected by residential customers, when presented with the appropriate price impacts, was three hours, every month, occurring overnight. This a lower supply reliability than the 2012/13 Minimum Service Standard.
The outage scenario most selected by business customers, when presented with the appropriate price impacts, is the same (three hours, every month, occurring overnight). This is also a lower supply reliability than the 2012/13 Minimum Service Standard.
Here we have mapped the 724 reliability scenarios shown in the study, grouped into preferences. It shows, given the importance of electricity prices remaining stable, residential customers are willing for outages to occur more frequently and for longer duration (compared to current standards) to ensure prices do not rise.
Businesses are currently willing to accept lower supply reliability (frequent outages) for a significant price decrease. This matrix is useful for visualising the differences between customers reliability preferences, remembering that the scenarios were presented with the appropriate price impact. It is also important to note that it does not mean that if customers actually experienced the most frequently selected reliability standards shown here that they would remain satisfied.

**BUSINESSES**

**Duration of Outages**

<table>
<thead>
<tr>
<th>Frequency of Outages</th>
<th>Short Outages</th>
<th>Moderate Outages</th>
<th>Long Outages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 minutes</td>
<td>1 hour</td>
<td>2 hours</td>
</tr>
<tr>
<td>Frequently</td>
<td>2 hours</td>
<td>3 hours</td>
<td>6 hours</td>
</tr>
<tr>
<td></td>
<td>12 hours</td>
<td>24 hours</td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>2 Months</td>
<td>3 Months</td>
<td>4 Months</td>
</tr>
<tr>
<td></td>
<td>6 Months</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrequently</td>
<td>6 Months</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Most frequently selected**
- **Second most frequently selected**
- **Third most frequently selected**
- **Second Most Infrequently selected**
- **Most infrequently selected**

**2012/13 MSS (rounded)**
- Urban – Every 6 months for 1hr 15min
- Short Rural – Every 3 months for 1hr 45min
A customers’ willingness to pay for a level of reliability of supply is influenced by the time of day the outages occurs.

Businesses prefer outages to occur outside of 7am-1pm and residential customers 5pm-8pm, as these are seen as the most critical times to have a consistent supply of electricity. In some scenarios, customers are willing to pay more when the outages occur overnight, as this is the least critical time for electricity to be supplied to residents and businesses.
The industry sector a business is in can have a major impact on the time of day where it is most critical that they can rely on the reliability of electricity supply.

**Insight 3 (cont.)**

![Graph showing the most critical time to have electricity for different industry sectors.](chart-image)
Different residential customer segments have been created within the data, with particular segments having a greater reliance on electricity and a willing to pay for increased services and supply than others.

### Six Customers Segments

**Modern Family (26%)**
- Young families
- Price sensitive
- High interest in new technology

“Smart meters must also give direct information to the customer, not just to Ergon”

**Seeking Stability (13%)**
- Young singles
- Want focus on increasing resilience

“I think that extending the infrastructure so we have less outages in severe weather situations will benefit everyone”

**Back to Basics (21%)**
- Older workers
- Willing to forgo services for price decreases

“The infrastructure is your commercial problem. Requiring your customers to pay will generate resentment”

**Care for Community (13%)**
- Older workers
- Keep local jobs

“Don’t cut services. Don’t cut jobs. That’s how the economy suffers”

**Keep it Steady (20%)**
- Older workers
- Low incomes
- Want things to stay as they are

“It is very important to keep the cost of electricity to a minimum, so I would rather not have to deal with the problems of smart meters”

**Self-Sufficiency (7%)**
- Retired
- Have solar PV
- Negative towards retailer

“We have a gas stove and also gas/solar back-up for our refrigerator and freezer in times of extended blackouts”
Price is still the most important attribute for each segment, however, supply reliability preferences differ by segment.

‘Back to Basic’s’ and ‘Modern Family’ segments are the most focused on price overall and have a reduced focus on supply reliability.

‘Seeking Stability’ and ‘Keep it Steady’ still consider price to be important. However less so than other segments, so more importance is placed on length and frequency of outage.

<table>
<thead>
<tr>
<th>Care for Community</th>
<th>Back to Basics</th>
<th>Modern Family</th>
<th>Seeking Stability</th>
<th>Keep it Steady</th>
<th>Self-Sufficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>16%</td>
<td>22%</td>
<td>20%</td>
<td>26%</td>
<td>27%</td>
</tr>
<tr>
<td>Frequency</td>
<td>20%</td>
<td>17%</td>
<td>17%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Time</td>
<td>22%</td>
<td>14%</td>
<td>17%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Price</td>
<td>43%</td>
<td>46%</td>
<td>46%</td>
<td>32%</td>
<td>36%</td>
</tr>
</tbody>
</table>

- Older workers
- Keep local jobs
- Older workers
- Willing to forgo services for price decreases
- Young families
- Price sensitive
- High interest in new technology
- Young singles
- Want focus on increasing resilience
- Older workers
- Low incomes
- Want things to stay as they are

N/A – Sample size too small
Looking at frequency of outages, residential customers who claim to have experienced an outage once a year or less are more price sensitive and would accept a lower supply reliability to achieve price relief.

Those who claim to have experienced an outage at least quarterly (frequently) consider price as almost as important as length of outage.

### Most important attribute by frequency of outage experienced

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequently Impacted (At least quarterly)</td>
</tr>
<tr>
<td>Length</td>
<td>28%</td>
</tr>
<tr>
<td>Frequency</td>
<td>21%</td>
</tr>
<tr>
<td>Time</td>
<td>21%</td>
</tr>
<tr>
<td>Price</td>
<td>31%</td>
</tr>
</tbody>
</table>

Note: This is based on self-reported outage information and not on actual outages.
For residential customers region has a minor impact on supply preferences. However, regardless of where a customer resides price is still the most important attribute.

Inner Regional residents consider all the reliability attributes as almost equally important. However, Outer Regional and Remote customers consider frequency of outages as more important than length or time of day.

There are no differences between Outer Regional and Remote customers.

<table>
<thead>
<tr>
<th>Residents</th>
<th>Inner Regional</th>
<th>Outer Regional &amp; Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>Frequency</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Time</td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td>Price</td>
<td>44%</td>
<td>41%</td>
</tr>
</tbody>
</table>

Note, insufficient sample to report separately on Remote and Very Remote.
Business customers frequently impacted by outages still place more importance on price and reducing the frequency of outages. Business barely impacted are less focused on price.

The region a business operates from has a minor impact on supply preferences.
Despite price being a major concern, customers still support expenditure to varying degrees across a range of Ergon Energy’s core service areas.

This section asked customers for their opinions on how important particular services areas are to them, and what impact on their bill they were willing to accept for the service. Although we do not expect customers to understand how money is currently spent by Ergon Energy, the vast majority of customers indicated that the network was the most important area for Ergon Energy to invest in.

**Allocation of Funding**

- **Residents**
  - Support for Ergon Energy’s investment in **Supply** areas: 65%
  - Support for Ergon Energy’s investment in **Non-Supply** areas: 35%

- **Businesses**
  - Support for Ergon Energy’s investment in **Supply** areas: 67%
  - Support for Ergon Energy’s investment in **Non-Supply** areas: 34%

Includes investment in long term supply, short term supply and investing in new technologies

Includes investment in demand management programs, customer service and education programs
The following ranking, which is based on a range of questions, shows what customers would be most willingness to pay for (if required).

Customers are most willing to pay for services that are supply or response related, rather than improvements in other areas.

**Recommended Investment Priorities for Ergon Energy**

*Customers believe Ergon Energy should…*

1. Maintain Local Depots
2. Expansion in Network Resilience
3. Maintain Current Network Reliability
4. Transition Towards a Smart Network
5. Minimise Community Impact of New Infrastructure
6. Rolling Out of Smart Meters
7. Improve Outage Notifications
8. Invest in Communication Channels
The findings showed particularly strong support for maintaining the current number of local depots and improving the network’s resilience to severe weather.

Customers also support Ergon Energy transitioning towards a smart network in order to allow customers to take up emerging technologies (however, there was less willingness to pay for smart meters).

Customers believe Ergon Energy should…

1. Maintain Local Depots

   This was the area customers were least willing to forgo to receive bill decreases. Even when offered a 5% decrease, less than half were willing to take the decrease if this meant a reduction in the number of local depots.

2. Expand Network Resilience

   Enhancing network resilience to severe weather events was rated an important investment area. For a 2% bill increase, 70% of customers wanted to see this expanded to non-disaster prone areas.

3. Maintain Current Network Reliability

   While generally, not willing to pay for increased reliability, customers still want funds to be allocated to maintaining the current reliability standards.

4. Transition Towards a Smart Network

   At a 2% bill increase, a moderately high proportion of customers (66%) want to see Ergon Energy modernising the network. There is stronger willingness to pay amongst businesses and the younger demographic.
There is general support for Ergon Energy taking reasonable endeavours to minimise the community impact of new infrastructure, if this has a minimal impact on their electricity bill.

There is strong support for the introduction alternative communication channels, including SMS, social media and an online self-service account (especially where this could reduce costs).

Customers believe Ergon Energy should to some degree…

5. Minimise the Community Impact of New Infrastructure

Most are willing to pay a 2% increase to support reasonable endeavours to minimise the impact of new infrastructure. However, for a 5% bill decrease most would support a purely functional approach to network development.

6. Roll out Smart Meters

This area of investment has the lowest willingness to pay. However, 56% of respondents were willing to support Ergon Energy upgrading the metering system if it only has a small impact on their overall bill.

7. Improve Outage Notifications

As performance is below expectations in this service area, this is seen as an appropriate area to target improvement. However, it was rated by customers as the second lowest area in which to prioritise investment funds.

8. Invest in Communication Channels

Maintaining current communication methods was rated by customers as the top area they are willing to forgo in order to receive a bill decrease. A significant 70% of customers support a shift towards alternative communication methods (such as online options) for only a 2% bill decrease.
Customers would like one week’s notice before Ergon Energy conducts a planned outage. And for unexpected outages, they would like updates on restoration times to be available within the hour. However, few believe we should prioritise funds to deliver improvements in this area.

**Planned Outage Notifications**

Ergon Energy currently provides at least 48 hours notice. Over half of customers believe this is NOT enough notice. However, only 7% would prefer Ergon Energy prioritise funds to this service area.

- **Residents**
  - 48 hours notice or less is acceptable notice: 45%
  - Require at least one week’s notice: 55%

- **Businesses**
  - 48 hours notice or less is acceptable notice: 34%
  - Require at least one week’s notice: 66%

Customers who have recently experienced a planned outage are significantly more likely to believe that they require at least one week’s notice (80%).

**Unplanned Outage Notifications**

This data is for an outage caused by a localised incident. Customers expect information about the restoration time to be available more quickly for these outages, compared to those caused by severe weather.

- **Expect information to be available within:**
  - 30 minutes: 28% (Residents) vs. 34% (Businesses)
  - 1 hour: 55% (Residents) vs. 64% (Businesses)
  - 3 hours: 82% (Residents) vs. 89% (Businesses)