



ActewAGL Utility Qualitative Research Report

Actew-ActewAGL

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Statement of Professional Commitment

ACNielsen certifies that the information contained in this report has been compiled in accordance with sound market research methodologies developed by, or for, ACNielsen. ACNielsen believes that this report represents a fair, accurate and comprehensive analysis of the information collected.

Executive Summary

NERA and ACNielsen have been commissioned by ActewAGL and ACTEW Corporation to undertake a study to estimate customers' willingness to pay for aspects of their water, waste-water, gas network and electricity network services. A stated preference choice model was recommended as the approach to derive estimates of customers willingness-to-pay with implementation of the choice modelling being conducted in three phases.

The object of the first phase is to draw on internal ActewAGL and ACTEW Corporation expertise to draft an initial hypothesised set of attributes on which the choice modelling experiments could be based.

The object of the second phase is to refine this hypothesised list of attributes by drawing on direct customer experience while the third and final phase of the project is the actual conduct of the choice experiment survey amongst a random sample of customers.

This report presents the findings from the second phase. To achieve the objectives of the second phase, a series of exploratory, qualitative group discussions were conducted with a range of customers. In total, three focus groups were conducted with residential customers (including one group with concession card holders and people on limited incomes) and eight mini-groups were conducted with business (including government) customers. The group discussions were conducted prior to the bush-fires, during the period December 4 - 16, 2002. The group schedule is presented in Appendix A.

The primary purpose of these group discussions was to explore the perceptions and experiences of various customer sectors regarding the supply of electricity, gas, water and waste-water services in Canberra and Queanbeyan (for gas), in order to recommend the final list of attributes to be included in the choice experiment.

Interestingly, there was an extremely high level of consistency and similarity in the thoughts, perceptions and discussion points raised by respondents across the various residential and business customer sectors examined in this research. These customer sectors included small and large business organisations, government organisations, and residential (including concession card holder) consumers.

For example, across the groups, both residential (including concession card holders) and business (including government) participants had little to no knowledge or understanding regarding ActewAGL/ACTEW's supply reliability commitments in respect to any of the four utilities examined in this research (electricity, gas, water, waste-water). However, in general, ActewAGL/ACTEW was perceived to perform acceptably in respect to the reliability of supply of these utilities.

All participants noted that, relative to the four utilities examined in this research, gas was the most reliable in respect to supply and quality, but likely to have the least impact on household or business functioning in the event of a disruption. As a result, participants made significantly fewer comments about gas supply quality and reliability in comparison with the other utilities examined.

Participants' tolerance of a supply disruption in any of the four utilities varied depending on a range of factors generally related to the perceived degree of inconvenience likely to arise at the time of the disruption. Not surprisingly, participants generally noted that a disruption was likely to be tolerable if it occurred outside business hours (for business/government participants) or outside key 'domestic' periods (e.g. occurred during the middle of the day) for residential (including concession card holder) participants.

Sensitivity to disruption duration tended to be more specific to participants from particular business or industry sectors, rather than a factor related to customer type (e.g. residential, business or government), size of organisation or household, or expenditure on utilities. For example, residential participants (including concession card holders) and many participants from 'office type' organisations noted that although an inconvenience, a disruption in any of the four utilities examined would be tolerable for a period of 2 to 4 hours, provided it occurred infrequently. In contrast, business participants from sectors such as restaurants, cafes, hospitality and tourism tended to perceive utility disruptions, particularly disruptions in electricity and water supply, as a dire situation and noted that a disruption of 2 to 4 hours could bring their business to a complete halt.

During a supply disruption, participants generally preferred to be able to directly (and immediately) access a recorded message outlining the extent of the disruption and the expected timing of supply restoration. Some business (including government) participants, generally from larger businesses or businesses where a utility service was mission critical, noted a preference for direct access to a local ActewAGL duty manager during a supply disruption.

Quality of the supply of a utility tended to only be a concern in respect to electricity. In particular, participants from organisations where computers or other sensitive equipment was absolutely critical to their business operation, noted that they were concerned about quality of electricity. These participants generally noted that they had invested in equipment to ensure voltage regularity.

Interestingly, safety of supply of a utility was not a concern amongst participants. In general, participants perceived safety in respect to their use of a utility (such as use of an appliance) and took for granted that the utility would be provided to them in a safe manner.

It became apparent during the course of these group discussions that all residential and business participants did not generally look at the section of their utility bill describing how their bill (electricity, gas, water/waste-water) amount was calculated. Participants generally noted that they held an expectation regarding a utility bill amount and provided the actual amount was inline with expectations, they did not think any further about their utility bills.

Participants held a vague notion about incremental pricing steps in utility fee structures but they were unsure of specific details. Particularly for water, participants often referred to incremental pricing as their 'excess use' bill.

During the course of the group discussion, residential (including concession card holders) and most business and government participants were provided with an information sheet on water supply in the ACT to stimulate discussion, a copy of which is provided in Appendix B. Amongst other things, the information sheet outlined that on current projections the ACT would need to expand its water supply by 2011. Participants were advised that the cost of constructing a new dam would likely result in a 30% increase in the cost of an annual water bill.

In general, both residential and business participants were accepting of the need to expand the Canberra water supply, however people were not readily accepting of the need to supply the additional demand through a new dam. Interestingly, this was not due to environmental concerns, rather there was a very strong perception amongst both residential (including concession card holders) and business participants (including government) that it would be cheaper and more efficient to meet much of the additional need for water through the use of recycled (grey) water. Participants generally preferred the idea of using grey water on their own properties rather than its use being confined to public parks and gardens.

Interestingly, throughout the group discussions, participants used the term 'grey water' in reference to any water that was not fresh (dam) supplied. Participants did not mention 'black water' nor were they 'technically' aware of the difference between grey and black water.

The notion of subsidies to customers was very strongly noted in all participants' discussion on grey water. There was a feeling that the use of grey water would alleviate the need for a new dam and therefore the money that would have been spent on a dam, could be used to subsidise the costs incurred by customers to adopt grey water use.

As part of the overall discussion on ACT water supply, participant's impressions on the frequency and extent of water restrictions was discussed. Interestingly, responses varied between business and residential respondents.

It is important to note that focus group participants were mainly familiar with 'voluntary restrictions' as water restrictions were only introduced toward the end of the period when the focus groups were being conducted. Residential participants generally believed that they could 'live with' regular enforced restrictions provided the restrictions did not exceed level three. However, a number of residential participants perceived restrictions could become a difficult chore if imposed over the long term. These participants provided a more qualified response, noting that they could live with low level restrictions, provided the restrictions were for a maximum period of six to eight weeks.

In respect to business participant opinion on water restrictions, apart from participants who were irrigators (such as market gardeners, golf clubs and sports field managers), business participants generally noted that water restrictions did not impact on the core functions of their business operation and accordingly, from their business perspective, they were not concerned about the frequency, level or duration of water restrictions.

In contrast, irrigators (such as market gardeners, golf clubs and sports field managers) were very concerned about restrictions as they generally felt it would be impossible to meet the water reduction targets. This was because they considered that their irrigation systems and design were already extremely efficient. That is, they believed they had little to no excess consumption which they could trim without having an impact on their business operation.

During the course of the discussion on the future of Canberra's water supply, all residential participants (including concession card holders) were asked whether they preferred to see Canberra 'evolve' toward a landscape dominated by native plants which use less water, or continue with Canberra's more exotic, lush green landscape. In general, participants felt that their enjoyment of Canberra's outdoors would be compromised in a native landscape. These participants generally concluded that they would prefer to see Canberra retain its current landscape. However, they were also keen to be reassured that in retaining this landscape, the appropriate authorities had investigated alternative (e.g. more cost effective) sources of water. In general, participants expected that the 'exotic' Canberra landscape could be maintained through the use of grey (recycled water). As previously noted, participants held a very strong perception that grey (recycled) water would be both plentiful and considerably cheaper to supply than fresh (dam supplied) water.

**Concession
Card Holders**

As earlier noted, there was an extremely high level of consistency and similarity in the responses provided by the range of respondents who participated in this study, including concession card holders who shared similar views with the other residential participants included in this study. Concession card holders appeared to be no more or less sensitive or concerned about utility prices than any of the other residential respondents who participated in this study.

For example, concession card holders were no different to any other residential participant in respect to not wanting a lower level of supply reliability across any of the four utilities examined in this research (i.e. gas, electricity, water, waste-water service), even if this lower level of reliability was associated with a price reduction.

Further, concession card holders were no different to any other residential participant in respect to how they perceived or monitored their expenditure on any of the utilities examined. As earlier noted, it was apparent from these group discussions that both residential and concession card holder participants did not generally look at the section of their utility bill describing how their bill (electricity, gas, water/waste-water) amount was calculated. Concession card holder participants, like other residential participants, generally noted that they held an expectation regarding a utility bill amount and provided the actual amount was inline with expectations, they did not think any further about their utility bills.

Concession card holder participants, like other residential participants, held a vague notion about incremental pricing steps in utility fee structures but they, like all other residential participants, were unsure about any specific details. Particularly for water, both concession card holders and residential participants often referred to incremental pricing as their 'excess use' bill.

Concession card holders, like other residential participants, were also quite happy with their current billing cycle and payment approach. A number of concession card holder participants reported being on 'easy plans' for their electricity bill payments, where a fixed amount was paid each fortnight to cover estimated annual consumption costs. For these participants, 'easy plans' appeared to be used as part of a 'set and forget' household budgeting strategy. However, the use of 'easy plans' was not limited to concession card holders or participants on low fixed incomes. A number of other residential participants also reported using 'easy plans' for similar reasons noted above.

Based on the themes and the discussion that emerged across this exploratory qualitative research, it is recommended that the following attributes be examined in the choice model.

Electricity Reliability

Number of times per year electricity is completely unavailable.

Length of time electricity is completely unavailable each time it is disrupted.

Time of day that electricity is completely unavailable each time it is disrupted.

Prior notification that electricity will be unavailable.

Response to phone inquiries in the event of electricity becoming unavailable.

Electricity Quality

Number of times per year electricity is momentarily unavailable.

Number of times per year lights flicker or dim.

Number of times per year power surges / spikes are experienced.

Gas Reliability

Number of times per year gas is unavailable.

Time of year gas is unavailable each time it is disrupted.

Length of time gas is unavailable each time it is disrupted.

Time of day that gas is unavailable each time it is disrupted.

Prior notification that gas will be unavailable.

Response to phone inquiries in the event of gas becoming unavailable.

Gas Quality

No attributes recommended

Water Reliability

- Number of times per year water is unavailable.
- Length of time water is unavailable each time it is disrupted.
- Time of day that water is unavailable each time it is disrupted.
- Prior notification that water will be unavailable.
- Response to phone inquiries in the event of water becoming unavailable.

Water Restrictions

- Chance that drought water restrictions will occur.
- Duration of water restrictions.
- Types of days that water restrictions apply
- Level of water restrictions.
- Appearance of urban landscape including public lawns, parks and open spaces.

Waste-water Reliability

- Number of times per year an overflow of sewerage is experienced.
- Source of sewerage overflow.
- Response to phone inquiries in the event of a sewerage overflow.
- Length of time before sewerage overflow is contained.

Water/Waste-water Quality

No attributes recommended

In addition to the core objective of refining the hypothesised attributes to be examined in the choice model, the focus groups also provided an opportunity to examine some new service ideas raised by ActewAGL. These included:

Generators in Event of a Disruption

Both business and residential participants were generally not supportive of the idea of being provided with a small electricity generator in the event of a planned extended electricity disruption. Participants expressed a number of concerns in respect to how the generator would be set up and monitored for continued operation.

Installation of Aerial Bundled Cabling (ABC)

Consistently, both business and residential customers were not interested in Aerial Bundled Cables (ABC). Further, many participants, particularly business participants, noted that trees near powerlines was not an issue for them. For those participants who noted trees near powerlines was an issue, ABC was not considered a solution. Participants were concerned about the look and durability of the cable cover. The cable was perceived to be bulky and therefore visually prominent. Further, many believed Cockatoos would readily 'chew' through the cover. They perceived that there would be an on-going maintenance cost associated with the cable (in respect to maintaining the cable cover) and, along with what was perceived as a very high installation cost, overall, the costs of ABC were considered to far out weight any benefits.

Interval Electricity Metering

Residential participants had no interest in monitoring their electricity consumption in real time. There was a feeling that electricity was used as required. Knowing the current level of consumption would not change their behaviour.

Business participants also expressed little interest in monitoring electricity consumption in real time. Business participant impressions were very similar to residential participants in respect to perceiving little ability to be able to respond to real time information on consumption. Rather, business participants believed that there was more benefit in analysing (auditing) their electricity consumption to identify the most efficient operation of their processes.

Pre-Paid Electricity Metering

Neither residential or business participants were interested in pre-paying for their electricity or using pre-paid meters. Some residential participants commented that prepaid metering was archaic reminding them of their earlier days in England.

Electricity/Energy Audit/Efficiency Advice

Business participants were asked for their opinion on ActewAGL providing an electricity/energy auditing/efficiency advisory service. Interestingly, business participants were mixed in respect to who they would prefer to rely on to conduct an electricity/energy audit of their business operation. Some participants considered ActewAGL would be a knowledgeable and credible organisation for the task as 'energy' was clearly their business.

Other business participants were more skeptical believing that ActewAGL had a vested interest in selling energy to customers and therefore, advice on how to save energy was inconsistent with this core function. These participants preferred to source energy audit advice from an independent organisation (an organisation that was not also involved in selling energy).

Gas Disruption Insurance (Pilot Light Re-ignition)

Residential participants were not supportive of the gas disruption insurance concept. The concept was explained as an insurance scheme where the annual premium covered customers for the cost of having their gas appliance pilot lights re-ignited by ActewAGL, in the event that there was a disruption to the gas flow to their property resulting in appliance pilot lights being extinguished.

Enhanced Gas Connection

Residential and business participants were also not supportive of the idea of improving the reliability of the gas connection to their residential or business premises by laying the pipe in a deeper trench and encasing it in a metal cylinder. Participants believed the current situation involving 'warning tape' was adequate to remind people about the location of underground pipes.

Water Filtering

Residential participants were asked whether they would like to see Canberra's reticulated water filtered at the dam treatment plant, rather than filtering it at their home (an activity noted by many participants).

In general, participants noted that they would prefer to filter their drinking water themselves. There was a feeling that much of the value in filtering the water at the dam treatment plant would be lost, once the water had flowed through the supply network to their homes.

Background

NERA and ACNielsen have been commissioned by ActewAGL and ACTEW Corporation to undertake a study to estimate customers' willingness to pay for aspects of their water, waste-water, gas network and electricity network services. A stated preference choice model was recommended as the approach to derive estimates of customers willingness-to-pay with implementation of the choice modelling being conducted in three phases.

The object of the first phase is to draw on internal ActewAGL and ACTEW Corporation expertise to draft an initial hypothesised set of attributes on which the choice modelling experiments could be based.

The object of the second phase is to refine this hypothesised list of attributes by drawing on direct customer experience while the third and final phase of the project is the actual conduct of the choice experiment survey amongst a random sample of customers.

This report presents the findings arising from the second phase of the study. To achieve the objectives of the second phase, a series of exploratory, qualitative group discussions were conducted with a range of customers. In total, three focus groups were conducted with residential customers and eight mini-groups were conducted with business (including government) customers.

The purpose of these group discussions was to explore the perceptions and experiences of customers regarding the supply of electricity, gas, water and waste-water services in Canberra and Queanbeyan (for gas), and based on these perceptions and experiences, recommend the final list of attributes to be included in the choice experiment. The focus groups also provided an opportunity to examine some new service ideas raised by ActewAGL.

The group discussions were conducted during the period December 4 - 16, 2002, which was prior to the recent, severe bush-fires in the ACT. The group schedule is presented in Appendix A.

The findings emerging from the research are presented in respect to the utilities that are each to be examined in the choice model. Specifically:

- Detailed Findings – Electricity;
 - Detailed Findings – Gas; and
 - Detailed Findings – Water and Waste-Water.
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Detailed Findings – Electricity

Supply Reliability

Residential (including concession card holders) participants and most business (including government) participants had little to no knowledge or understanding regarding ActewAGL's supply reliability commitments.

In general, ActewAGL was perceived to perform acceptably in respect to electricity supply reliability. Almost all business (including Government and large organisations) and residential (including concession card holders) participants spoke of incidents and experiences where their electricity supply had been disrupted. Invariably, participants attributed these disruptions to accidents (e.g. storms, power boxes knocked over, cockatoos chewing insulation) which were noted as being beyond the control of ActewAGL.

Among all residential participants, there was a general perception that a disruption of less than four hours was 'tolerable', although an inconvenience. Residential participants main concern in respect to the duration of an electricity supply disruption was the thawing of frozen food in their freezer. There was a general feeling that food would begin to thaw after a period of four hours.

Business participants held more varied opinion in respect to a 'tolerable' duration of a supply disruption. In general, participants from sectors such as hospitality, tourism and entertainment held the lowest level of tolerance toward an electricity supply disruption, if the disruption occurred during their hours of business operation. These participants noted that their entire business ground to a halt during a disruption, creating an extensive range of problems that extended well beyond the period of the disruption. Some examples are depicted in the following extracts.

“Most of our revenue is through gaming machines. No power means no machines. And people complain they are in the middle of a game. They have credits and often you just have to believe them (and pay them the credit) or you have to mark each machine and read the credit owed (on each machine in order to later pay the customer) when the power comes on again.”

“When the power is gone, the till is closed and you can't use credit cards. You have to rely on customers coming back to pay, or just letting them go (without payment).”

**Supply
Reliability
Continued**

Although business participants noted that reliability was important to their business operations (some noted it was critical), most participants had no back-up generator and most were not intending to install one. The exceptions were business participants from very large organisations, or organisations where technology was critical to their operation (This is discussed later in this section). Interestingly, the idea of a back-up generator was never conceived by participants in the residential or concession card holder discussion groups.

Participants from restaurants, cafes and other hospitality venues were also highly concerned about food thawing in their freezers during an electricity disruption. Integrity of frozen food was a fundamental business concern for these participants. They noted that if they had any doubt regarding the integrity of their frozen food, they would have to dispose of the food. Interestingly, these participants could not specify a disruption duration which would lead them to question the integrity of their frozen food. However, they all agreed that it would be a duration considerably less than the four hours noted by residential participants. In contrast, supermarket retail participants with deep freezers believed that their frozen food would be unaffected for up to two days, in the event of an extended electricity disruption.

Participants from some other business sectors tended to not perceive an electricity disruption as such a dire situation. For example, those from ‘office type’ environments (including government) noted that, although being an inconvenience, they could weather a disruption of up to a couple of hours (not on a frequent basis) with out too much of an impact on their business operation.

“There is always plenty of things to do for 2 hours or so if the power went out. Anything more and I’d have to send people home.”

“There is always things you can do, manual filing or stocktaking. So on a one-off basis you could handle it, but not on a regular basis.”

Perhaps surprisingly, business participants from very large organisations, or organisations where technology was critical to their operation noted that they could also ‘tolerate’ an electricity disruption, and indeed had planned for such an event. These plans usually involved a back-up electricity generator to ensure continued supply of electricity to critical areas of operation.

“I have a back-up. If we don’t have power we’re open to everything, even a holdup. So we are covered when the power goes out.”

Interruption Information

In the event of an unplanned electricity disruption (generally referred to as an ‘accident’ by respondents), all residential and business participants noted that they would refer to their Electricity Bill or phone book to identify a number to call to obtain information about the disruption.

However, residential participants (including concession card holders) noted a general disinclination to call ActewAGL if they could readily determine that the disruption was wide spread (e.g. lights were out across the whole neighbourhood). There was a perception that during a disruption, *“it was impossible to get through”* and they would spend considerable time waiting on hold in a call centre queue.

In contrast, most business (including government) participants noted that they would call (or at least organise for one of their subordinates to call) ActewAGL. Primarily, these participants noted that they wanted to know the likely duration of the disruption in order to plan their contingencies.

“The re-supply is important, as to when it’s coming back on. If you’ve got 50 customers waiting in the dark, they want you to tell them how long it will be. You have to know.”

All residential and business participants noted that what would be helpful during an unplanned disruption was the ability to call directly (without having to wait in a queue) to a recorded information line. This service would provide a recorded message acknowledging the areas disrupted (this provides peace of mind that ActewAGL is aware of the situation and addressing it) and outlining the likely restoration duration. Participants noted that it would be preferable that, following the recorded message, there was an option to stay on-line and be transferred to an ActewAGL operator. It should be noted that in calling a utility company in general, residential participants noted a preference to speak to a person rather than an IVR.

“Communication is the key, so we are not just sitting around, not knowing what to do. Now in an emergency, I wouldn’t expect them to call all of Canberra, but I would expect that there would be a number I could call, which would say - in the civic area, there’s a black-out in Allara Street and we expect it to come back at such and such time.”

Business participants (including Government and large organisations) for whom electricity or other utilities (e.g. water) were mission critical noted a preference for access to a local ‘ActewAGL duty manager’ to keep them informed of the disruption and assist them with contingency planning.

Planned Interruptions

A number of residential (including concession card holders) participants had experienced planned electricity supply interruptions. Most noted that they had received a letter prior to the interruption although one participant noted that the letter arrived the day following the interruption. Participants wanted to be advised of any planned disruptions in order to be able to plan their contingencies for the disruption period. Two to five days notice, by letter, was generally preferred by residential participants, provided the disruption was for a period of four hours or less (for the reasons previously noted regarding the time taken for food to thaw in a freezer).

Some residential participants suggested that to ensure customers received their disruption warning, it might be better to 'letter box' drop, rather than rely on Australia Post.

With the exception of a few retailers, most business (including government) participants could not recall a planned interruption to their electricity supply. In general, these participants preferred a longer period of advanced warning regarding a planned disruption, unless the disruption was to occur outside the hours of their normal business operation. For a disruption planned during their operating hours, participants generally noted a preference for one to two weeks advanced warning.

“As long as we have plenty of advanced notification. We notify residents when we do work in people’s streets which might require them to move their cars, and we give them plenty of notice. So if we had a week or twos notification, we could plan our day around it (planned electricity disruption).”

In general, business participants preferred to receive an advanced warning via letter or fax with a follow-up telephone reminder just before the event. Some business (retailer) respondents noted receiving a 'door knock' reminder just prior to the planned disruption. Where this occurred it was very much appreciated.

Sensitivity to disruptions was more industry specific rather than a factor related to organisation size or expenditure on utilities. For example, participants from restaurants, cafes and the tourism/entertainment sector (e.g. Golf Clubs, Sports Clubs and Hotels) noted a preference for up to four weeks advanced notice, particularly for a planned disruption of greater than two hours. Primarily, the reason noted for this length of warning was to be able to adequately forewarn their own customers and to facilitate their frozen food/freezer planning. For example, participants noted that they might:

- Plan to run down their stock (not re-order stock) in the freezer; or
- Plan to move frozen stock to another premises to ensure integrity of the product.

**Planned
Interruptions
Continued**

The supply of portable generators to run freezers was investigated amongst these participants as an alternative to a long duration of advanced warning (refer New Service Perceptions). While some participants liked the idea (provided it was free or nominal cost), a number were not supportive of the concept. These participants had concerns about the reliability of this service. For example, questions were raised regarding whether someone would be frequently monitoring the generators to ensure their continued and correct operation. In general, these participants preferred to oversee and control their electricity supply disruption contingency plans rather than rely on other people, whom they perceived to have little or no control over.

**Planned
Interruption
Timing**

Residential (including concession card holders) participants generally preferred that disruptions were conducted during the period 10:00am – 4:00pm weekdays. A planned disruption during this time band was considered to have the least impact on household functioning.

Not surprisingly, business participants were unanimous in preferring a planned disruption to electricity supply occurring outside the normal hours of their business operation. However, participants could not agree on the actual time period this equated to, as participants conducted their business at different times, or had different times of the day where reliability was more critical than others. Some business participants suggested that the most suitable time for a planned interruption would be after midnight and before 4:00am.

Participants concluded that ActewAGL needed to appreciate the diverse needs of different businesses and schedule planned disruptions such that they minimised the impact on businesses in the area concerned.

“They should definitely have detailed knowledge of their (business) clients so they would know what times are suitable for planned outages.”

They also concluded that ActewAGL should be flexible in scheduling planned disruptions and offering businesses the opportunity to negotiate planned disruption times, should the proposed timing have a significant impact on business customers.

It should be noted that participants generally perceived that ActewAGL already fulfilled the above two conditions.

“I know with meter upgrades they are pretty good with that (being flexible). The tone of the letter concludes with – ‘if this presents a problem, contact us on this number’. So I suppose they are flexible.”

**Interruption
Duration**

Consistently, all focus group participants noted that tolerance and inconvenience associated with an electricity disruption was inversely related to the frequency and regularity of disruptions. Participants noted that they would prefer a single longer electricity disruption duration (e.g. 1 x 3 hour duration) rather than a number of smaller duration disruptions (e.g. 3 x 1 hour durations) of equivalent overall disruption time. The reason being that the inconvenience associated with a disruption was not solely confined to the period without electricity. For example, participants noted that following a disruption, they had to re-set all their appliances that relied on electricity for the control of their automated functioning.

“No question, one long one (electricity disruption) rather than lots of little ones. Its all the resetting you have to do afterwards.”

**Changes to
Current
Reliability
Level**

Consistently, across all residential and business (including government) focus groups, participants noted that they did not want a lower level of electricity supply reliability than they were currently experiencing, even if this lower level of reliability was associated with a price reduction. This was the case irrespective of whether an individual had an income limitation (e.g. concession card or low fixed income). Indeed, participants noted quite adamantly that they did not want a lower level of supply reliability across any of the four utilities examined in the research (i.e. electricity, gas, water, waste-water service).

“We don’t want the New Zealand experience, with privatisation, and that dropped service. Its an essential service and no-one wants a savings of 2 cents a kilowatt or whatever at the expense of supply.”

Participants consistently noted that their lifestyles and business operations were integrally based on the current levels of utility service reliability. Any changes in reliability would have a fundamental impact on how they currently conducted their lives and/or managed their businesses.

“Its (electricity, gas, water and waste-water supply reliability) an expectation that is set and you can’t do anything about it. Its like having water, it exists, its an amenity that you are heavily reliant on. You have structured your business in a certain way because these things (electricity supply) are available.”

Conversely, business and residential participants did not show a high level of interest in being prepared to pay for a higher level of electricity, gas, water or waste-water service/supply reliability, with the exception of a few businesses in respect to electricity. For these particular businesses, computer (or other electrical appliance) operations were “mission critical”. These participants noted a range of back-up equipment, including UPS and diesel generators, which were installed in their premises to ensure uninterrupted and consistent flow of electricity supply to their mission critical equipment: one participant noted spending \$16,000 per annum to maintain a back up for their business equipment. It was noted that a more reliable supply of electricity could reduce the need for, and costs associated with this back-up equipment and therefore some participants noted a willingness to pay for improved supply reliability in preference to purchasing and maintaining backup equipment.

**Changes to
Current
Reliability
Level
Continued**

However, not all participants in this situation noted a willingness to pay for improved supply reliability. Some noted that from a risk strategy perspective, it would be inappropriate to rely on only one source of electricity, no matter how low the probability of a supply disruption.

“In our risk management, we look at the likelihood of loss of supply and the impact of the loss. From our perspective, the likelihood of an extended loss of power is very small, but the impact is huge. For us, its too much of a risk to rely on only one source, no matter how remote (the chance of a supply disruption). That’s why we have identified critical areas and purchased generators to cover essential load in those important areas.”

Utility back-up was on the minds of some participants in the hospitality sector as increasingly, international tourism contracts were requiring them to fully (100%) guarantee the delivery of basic services (e.g. hot water for showers).

**Quality
Perceptions**

Residential (including concession card holders) and business (including government) participants noted that they had few issues or concerns with quality (e.g. voltage consistency), although many participants noted that they had at some stage experienced dimming of lights. Some participants even mentioned surges or spikes.

Further, residential and most business participants had little to no knowledge or understanding regarding ActewAGL's electricity supply quality commitments and many participants noted that they had rarely thought about the topic.

Two café owner participants noted that their customers perceived the lights flickering/dimming at their café to be a café problem, not a problem caused by the supply of electricity.

A number of business and residential participants noted that voltage irregularities had occasionally tripped their computer into re-booting. There were a few business participants who noted that this had been a concern or impacted on their business. These participants were generally from businesses where computers and other sensitive equipment were absolutely critical to their business operation. These participants generally noted that they were concerned about the quality of electricity and as a result, they had invested in equipment to ensure voltage regularity.

“I've been told by a professional that 98% of all computer problems are related to supply with power, so quality is incredibly important. But for us, we treat it as a user thing, because I think there can be other factors (other than electricity supplier related) that effect your equipment, like turning on your fluorescent lights.”

Metering and Pricing

Residential (including concession card holders) participants and small business participants generally perceived their expenditure on electricity in respect to the quarterly billing cycles.

Participants from larger businesses (including government) generally perceived their expenditure in respect to annual spend. These participants generally referred to their electricity budget allocation when discussing their consumption and expenditure. In contrast, residential and small business customers tended to refer to their 'last bill' or 'their bill this time last year'.

Residential (including concession card holders) and business (including government and large organisations) participants referred to their use of, and expenditure on gas and electricity in the context of two separate entities. There was no sense of participants 'pooling' gas and electricity and referring to them as 'energy'.

In respect to monitoring their use and expenditure, residential and business participants generally noted that they reviewed the bill amount and provided there were no surprises (i.e. inline with expectations), they thought no more about their bill and made payment. Participants noted that where consumption graphs were provided (e.g. gas bill, Telstra bill), these were very much appreciated and used to validate bill amount expectations. Provided the graphs depicted a fairly consistent level of use between the current billing cycle and the same period last year, participants noted that they were unlikely to take any further interest in monitoring consumption.

It was apparent from the discussion that both residential and business participants did not generally look at the section of their bill outlining how the bill amount was calculated. Those who were on contestable tariff structures noted that their bills were extremely difficult to read and comprehend.

A small number of business participants were already able to choose their supplier. These participants noted their bills were long and complex and excessively itemised to the point where they felt that the transparency was lost in the detail.

Opinion was polarised in respect to incremental pricing steps. Most residential participants (including concession card holders) and some small business participants perceived that utility pricing, where price per unit increases over a certain level of consumption, was preferred and more socially responsible than pricing which reduced or offered a discount per unit over certain threshold levels. Not surprisingly, large electricity consumers, particularly large business consumers were the opposite in respect to their preferences and supported the idea of lower costs for the more that was consumed. It should be noted that participants generally did not know any specific details regarding pricing steps, other than a vague notion that at some point, pricing changed.

**Metering and
Pricing
Continued**

From the group discussion, it was clear that most participants did not study their bill. Indeed for a number of business and residential participants, the focus group discussion was the first time they had examined their bill in detail. It appeared that on receiving a bill, most participants first looked at the bottom line. If it was in line with expectations, participants might simply put it aside for payment, or quickly glance at the consumption graph (where applicable) to confirm that consumption was similar to the same period last year before putting the bill aside for payment.

Residential (including concession card holders) participants tended to be quite happy with their current billing cycle and payment approach. A number of residential participants reported being on 'easy plans' where they paid a fixed amount each fortnight to cover their estimated annual consumption. 'Easy plans' appeared to be used by participants to assist them manage their budget for regular household bills. Use of 'easy plans' was not limited to concession card holders or participants on low fixed incomes.

Both business and residential (including concession card holders) participants generally preferred to have their meter read each quarter rather than estimating quarterly consumption and only having the meter read once a year. It was perceived that it would be better to identify any metering problems (or other unusual consumption issues) on a quarterly basis rather than waiting for a whole year to discover a problem and receiving a 'surprisingly' excessive bill.

Safety

All business and residential participants were generally not concerned about the safety of overhead cables. Indeed, when discussing safety, participants generally considered safety within the context of 'safe use of appliances' in their business or residential premises. It was assumed, or even taken for granted that electricity was provided to their premises in a safe manner.

"Its such a minimal thing. How often do you hear about problems (safety issues) with poles and wires."

The only exception was one group of business respondents who, without dwelling on the matter, commented during the course of the focus group that there was a sense of complacency in respect to overhead power cables.

"I think there is some complacency. That ad where the kid got electrocuted as he was trying to retrieve his frisbee from a tree was good (at keeping people aware)."

Preference for Electricity versus Gas

Across all the residential and business focus groups, participants perceived electricity as being distinctly different from gas. As earlier noted, no participant conveyed the impression that they considered electricity and gas as a more holistic and interchangeable entity (e.g. energy).

A few participants noted that gas had environmental benefits over electricity, although most participants did not consider gas and electricity in this context. For most participants, gas and electricity were distinctly different concepts which were generally not interchangeable except in respect to heating.

In respect to heating, participants noted that in comparison with electricity, gas was relatively instant, inexpensive, and provided what was described as a “*more pleasant heat*”. Participants noted that as a general rule, gas was preferred for heating tasks such as space heating, boiler heating and cook-top heating. Further, as a general rule, participants noted that gas was not preferred for oven heating as it was considered that gas often left a ‘taste’ in food that had been baked in a gas oven.

**Customer
Service**

During the course of the focus groups, participants were asked about their impressions or experiences with customer service issues such as:

- the promptness of new customer connections;
- response time in the event of a problem or concern;
- time taken to respond to customer query or complaint; and
- timeliness of keeping appointments.

Participants generally noted that these customer service issues, although important, were generally perceived as an obvious part of any service. In this respect, participants noted that they would not be willing to pay for improvements in these services. Participants generally noted that in respect to responding to service issues like those outlined above, they generally did not expect ActewAGL to adhere to a strict target (e.g. respond within 24 hours). Rather, participants noted that they were generally satisfied if they could see that ActewAGL was acting ‘reasonably’ in response to the issue or request and could be considered as ‘doing its best’ under the circumstances.

**Concession
Card Holders**

As earlier noted, there was an extremely high level of consistency and similarity in the responses provided by the range of respondents who participated in this study, including concession card holders who shared very similar views with the other residential participants included in this study. In comparison with any of the other residential respondents who participated in this study, concession card holders appeared to be no more or less sensitive or concerned about utility prices, billing, or any other aspect discussed during the course of the focus group.

For example, concession card holders were no different to any other residential participant in respect to not wanting a lower level of electricity supply reliability, even if this lower level of reliability was associated with a price reduction.

Further, concession card holders were no different to any other residential participant in respect to how they perceived or monitored their expenditure on electricity. As earlier noted, it was apparent from these group discussions that both residential and concession card holder participants did not generally look at the section of their electricity bill describing how their amount was calculated. Concession card holder participants, like other residential participants, generally noted that they held an expectation regarding a utility bill amount and provided the actual amount was inline with expectations, they did not think any further about their utility bills.

Concession card holder participants, like other residential participants, held a vague notion about incremental pricing steps in electricity fee structures but they, like all other residential participants, were unsure about any specific details.

Concession card holders, like other residential participants, were also quite happy with their current billing cycle and payment approach. A number of concession card holder participants reported being on 'easy plans' for their electricity bill payments, where a fixed amount was paid each fortnight to cover estimated annual consumption costs. For these participants, 'easy plans' appeared to be used as part of a 'set and forget' household budgeting strategy. However, the use of 'easy plans' was not limited to concession card holders or participants on low fixed incomes. A number of other residential participants also reported using 'easy plans' for similar reasons and convenience as noted above.

New Service Perceptions

ABC

Consistently, both business and residential customers were not interested in Aerial Bundled Cables (ABC). Further, many participants, particularly business participants, noted that trees near powerlines was not an issue for them. For those participants who noted trees near powerlines was an issue, ABC was not considered a solution. Participants were concerned about the look and durability of the cable cover. The cable was perceived to be bulky and therefore visually prominent. Further, many believed Cockatoos would readily ‘chew’ through the cover. They perceived that there would be an on-going maintenance cost associated with the cable (in respect to maintaining the cable cover) and, along with what was perceived as a very high installation cost¹, overall, the costs of ABC were considered to far out weigh any benefits.

“It is a lot of money and you are still going to have poles and wires.”

“I don’t notice the over-ground poles, so I wouldn’t notice if they changed (installed ABC). And if I got a bill for it, I wouldn’t like it.”

A number of participants noted that installing ABC prior to when the overhead cables actually required replacement, would be *“like fixing something that was not broken”*.

“Surely you would only do this (install ABC) when the poles and cables need to be replaced.”

Interestingly, many residential participants felt that installing ABC would actually lower ActewAGL’s labour costs and therefore, it should represent a reduction in the cost of electricity to consumers, rather than being a cost to consumers.

“The cost for them (ActewAGL) would go down because they don’t need as many staff to check (the poles and wires) all the time.”

In general, participants noted that they would prefer to have electricity cabling underground, although participants made it very clear they were not prepared to pay the costs associated with laying underground the overhead cables located near their premises. Rather, a number of participants noted that underground cabling would be a consideration in deciding where they might next choose to live. For example many noted that they would consider moving to a newer Canberra suburb where the cabling was underground.

¹ Participants were advised that it would cost \$7,000 to install ABC between two poles. Assuming this benefited 4 properties, participants were advised to assume it would cost each household approximately \$1,750 to install ABC.

New Service Perceptions Continued

Interval Metering

Residential (including concession card holders) participants had no interest in monitoring their electricity consumption in real time. There was a feeling that electricity was used as required. Knowing the current level of consumption would not change their behaviour.

“What’s it matter knowing how much you are using at a particular time. Its not going to make you suddenly stop what you are doing!”

Business participants also expressed little interest in monitoring electricity consumption in real time. Business participant impressions were very similar to residential participants in respect to perceiving little ability to be able to respond to real time information on consumption. Rather, business participants believed that there was more benefit in analysing (auditing) their electricity consumption to identify the most efficient operation of their processes. Implementing the outcomes of an energy audit was perceived as being more useful in managing (minimising) electricity consumption than monitoring real time consumption.

Pre-Paid Metering

Neither residential (including concession card holders) or business participants were interested in pre-paying for their electricity or using pre-paid meters. Some residential participants commented that prepaid metering was archaic reminding them of their earlier days in England.

Electricity/Energy Audit/Efficiency Advice

Business participants were asked for their opinion on ActewAGL providing an electricity/energy auditing/efficiency advisory service. Interestingly, business participants were mixed in respect to who they would prefer to rely on to conduct an electricity/energy audit of their business operation. Some participants considered ActewAGL would be a knowledgeable and credible organisation for the task as ‘energy’ was clearly their business.

Other business participants were more skeptical believing that ActewAGL had a vested interest in selling energy to customers and therefore, advice on how to save energy was inconsistent with this core function. These participants preferred to source energy audit advice from an independent organisation (an organisation that was not also involved in selling energy).

“My concern is that a company like ActewAGL whose idea is to make money has a separate agenda and is into the more we use the merrier because they get more income. I’d be suspicious.”

**New Service
Perceptions
Continued****Generators**

Both business and residential participants were generally not supportive of the idea of being provided with a small electricity generator in the event of a planned extended electricity disruption. Participants expressed a number of concerns in respect to how the generator would be set up and monitored for continued operation. Participants generally assumed that the disruption would impact on a number of households or businesses and therefore ActewAGL would be 'stretched', providing this service to customers simultaneously.

Participants were concerned that there would be insufficient staff to ensure all households and businesses were simultaneously supplied with generators and continuously monitored to ensure they were operating correctly. In general participants preferred to plan their own contingencies for an extended disruption rather than rely on ActewAGL.

Participant Suggestions

In general, across all the residential and business customer focus groups, participants could not identify any new electricity supply related services or initiatives they would like ActewAGL to introduce. Although generally regarding ActewAGL's customer service as satisfactory, a number of business participants noted that they would like ActewAGL to improve communications with customers. Participants generally preferred communications through hardcopy such as a pamphlet, although some larger business consumers (including government and businesses for whom utilities were mission critical) noted a preference for face-to-face communications through an account manager.

"I think they (ActewAGL) are very approachable. Yeah, they're a warm and friendly organisation as far as I perceive. I've had to call them once from work and once from home in the last year."

"The majority of clients in Canberra would be happy with the supply side of things. But its extremely important to maintain open communication with clients. Letting people know what's going to happen, when its going to happen, who they call if something goes wrong, all that sort of thing. It makes people feel respected and valued as a client."

Detailed Findings - Gas

Supply Reliability

Consistently, across business and residential participants, the gas network was noted as being ‘totally’ dependable. Participants noted that it was a relatively new network and therefore, they did not expect that there would be any problems.

Interestingly, all participants noted that, relative to the four utilities examined in this research, gas was the most reliable in respect to supply and quality, but likely to have the least impact on household or business functioning in the event of a disruption. As a result, participants made significantly fewer comments about gas supply quality and reliability in comparison with the other utilities examined.

Participants had not experienced any gas supply disruptions that could be attributed to the network. In fact, only one participant had experienced an issue with the gas supply to their premises. This issue arose from vandalism of their gas meter and was not a gas network problem.

Both residential (including concession card holders) and business (including government) participants mentioned a number of issues they had experienced with their gas appliances, however, they all acknowledged that these issues were appliance problems and not issues with the supply of gas to their premises.

“Like everyone with gas, the pilot light goes out occasionally and it can be a real pain. Its not the supply though, it’s the technology that is the problem.”

Across all focus groups, participants noted that they considered the gas supply to be so reliable, that in the event of a gas appliance not working, they would most likely call a plumber/gas appliance repairer to examine the appliance (perceiving the appliance to be at fault not the gas supply), rather than call ActewAGL to query whether the gas supply had been disrupted.

Similar to the findings reported for electricity, residential and business participants had little to no knowledge or understanding regarding ActewAGL’s gas supply reliability commitments to its customers.

Interestingly, no participant reported having a back-up gas supply or contingency plan in the event of a gas disruption.

**Supply
Quality**

Both residential (including concession card holders) and business (including government) participants also noted that they had not experienced any issues with gas supply quality (pressure).

Further, similar to the findings reported in respect to gas supply reliability, residential and business participants had little to no knowledge or understanding regarding ActewAGL's gas supply quality commitments to its customers.

**Preference for
Gas versus
Electricity**

Both residential and business participants perceived gas as being distinctly different from electricity. No participant conveyed the impression that they considered electricity and gas as a more holistic and interchangeable entity (e.g. energy).

A few participants noted that gas had environmental benefits over electricity, although most participants did not consider gas and electricity in this context. Rather, participants often spoke of the heating benefit of gas. That is, for residential and business participants who had gas, gas was noted as being preferred for heating. For example space heating, boiler heating and cook-top heating. Gas was not preferred for oven heating. It was noted that gas often left a 'taste' in food that had been baked in a gas oven.

Participants noted that they preferred gas for heating because it was instant, relatively inexpensive, and provided what was described as a *'more pleasant heat'*.

**Planned
Interruptions**

As earlier noted, gas was noted by both residential and business participants as the most (supply) reliable of all the utilities examined in this research. It was also noted as the utility that would have the least impact on business and residential customers in the event of a short disruption (for example 2 to 4 hours). In general, both business and residential participants noted that they could “make do” without gas for a number of hours if they had to.

“For our business (café), we could do with no gas for a day, but couldn’t operate without electricity or water.”

Participants noted that as gas was mainly used for winter heating, ideally, planned interruptions should be scheduled in the warmer months when the impact of gas disruption was likely to be minimal.

In general, similar to planned electricity disruptions, residential participants generally noted a preference for two to five days written (Mail) warning in advance of a planned disruption. Unlike planned electricity disruptions, most business participants generally shared similar opinions with residential participants in respect to gas disruption notification. Specifically, most business participants noted that two to five days written (Mail) warning in advance of a planned gas disruption would be adequate.

**Changes to
Current
Reliability
Level**

Consistently, across both residential (including concession card holders) and business (including government) customers, participants noted quite adamantly that they did not want a lower level of gas supply reliability. Conversely, participants tended to not show any level of interest in being prepared to pay for a higher level of supply reliability. The supply was considered to be highly reliable.

Pricing and Metering

Similar to the findings in respect to electricity, residential (including concession card holders) and small business participants generally discussed their expenditure on gas on a per bill basis (e.g. average bill of \$150), where as participants from larger businesses (including government) generally discussed their expenditure on gas in respect to annual spend (e.g. annual budget of \$100,000).

As earlier noted, residential and business participants referred to their use and expenditure of gas and electricity in the context of two separate entities. There was no sense of participants ‘pooling’ gas and electricity and referring to them as ‘energy’.

In respect to monitoring their use and expenditure, both residential and business participants generally noted that they relied on the cost shown on the bill as well as the consumption graphs (where applicable) provided on the bill. Provided the costs and graphs depicted a level of use consistent with their expectations, participants noted that they were unlikely to take any further interest in monitoring their consumption. Similar to electricity, residential (including concession card holders) and business participants generally noted that their consumption expectations were shaped by the graphs provided on the bill, along with their perception of recent use. For example, if participants felt it had been particularly cold over the period of the past billing cycle, they would expect a high gas bill and for the consumption to possibly be higher than for the same period 12 months earlier.

Similar to the findings reported regarding electricity bills, participants noted that their gas bills were easy to read and it was easy to comprehend how the bill amount was calculated. Although again, similar to the findings reported regarding electricity bills, it was apparent from the discussion that most participants did not generally look at the section of their gas bill outlining how the bill amount was calculated.

During the discussion on gas billing, a number of participants noted a degree of dissatisfaction with the gas supply charge payment, particularly during the summer months when for many participants, little to no gas was used. The main issue was in respect to receiving and having to pay a bill which principally comprised of only a supply charge. Participants noted that there was considerable inconvenience in receiving and paying a bill that only comprised of a supply charge. Some participants noted that they refused to pay a bill that only comprised of the supply charge. These participants noted that they preferred to let the bill rollover until it was of an amount that warranted their time and effort in making a payment.

“I find the supply fee a bit steep in summer. That gets up my nose. Every month they send you an account for \$15 supply. I don’t ring up every month for a \$15 bill. I wait until 2 or 3 months and then pay them together. I don’t have time to wait on the phone.”

**Pricing and
Metering
Continued**

Similar to the findings reported for the discussion on electricity, opinion was mixed in respect to incremental pricing steps. Some business and residential participants preferred that price per unit increased the more you used, reflecting what was perceived as an increased environmental impact of higher energy consumption. Other business and residential participants thought the price per unit of gas should decrease, reflecting a discount pricing structure for higher consumers. Still others thought it should remain constant and could not understand why price per unit varied.

Business and residential (including concession card holders) participants were also mixed in respect to preference for frequency of meter reading. Some participants liked having their meter read each billing cycle as it ensured their bills accurately reflected their consumption. Others liked the idea of having their meter read once a year, with estimated accounts issued throughout the remainder of the year, provided the savings were passed onto the customer. One group of residential participants suggested that customers should read their own meters each billing cycle with ActewAGL reading the meter only once a year to validate the reading. However it is important to note that these customers expected that adoption of this suggestion would lead to cost savings being passed onto the customer.

Safety

Although residential and business participants were not unduly concerned, gas was generally considered to be relatively less safe than electricity due to the ‘flame’ associated with the use of this fuel.

“I don’t think gas is safer (than electricity). Today all new (electric) appliances have cut-out switches. I’m still concerned that you have a flame with gas. So probably gas is more dangerous than electric.”

Customer Service

During the course of the focus groups, participants were asked about their impressions or experiences with customer service issues such as:

- the promptness of new customer connections;
- response time in the event of a problem or concern;
- time taken to respond to customer query or complaint; and
- timeliness of keeping appointments.

Participants generally noted that these customer service issues, although important, were generally perceived as an obvious part of any service. In this respect, participants noted that they would not be willing to pay for improvements in these services. Participants generally noted that in respect to responding to service issues like those outlined above, they generally did not expect ActewAGL to adhere to a strict target (e.g. respond within 24 hours). Rather, participants noted that they were generally satisfied if they could see that ActewAGL was acting ‘reasonably’ in response to the issue or request and could be considered as ‘doing its best’ under the circumstances.

**Concession
Card Holders**

As earlier noted, there was an extremely high level of consistency and similarity in the responses provided by the range of respondents who participated in this study, including concession card holders who shared very similar views with the other residential participants included in this study. In comparison with any of the other residential respondents who participated in this study, concession card holders appeared to be no more or less sensitive or concerned about gas prices, billing, or any other aspect discussed during the course of the focus group.

For example, concession card holders were no different to any other residential participant in respect to not wanting a lower level of gas supply reliability, even if this lower level of reliability was associated with a price reduction.

Further, concession card holders were no different to any other residential participant in respect to how they perceived or monitored their expenditure on gas. As earlier noted, it was apparent from these group discussions that both residential and concession card holder participants did not generally look at the section of their gas bill describing how their bill amount was calculated. Concession card holder participants, like other residential participants, generally noted that they held an expectation regarding a gas bill amount and provided the actual amount was inline with expectations, they did not think any further about their gas bills.

New Service Perceptions

Pilot Light Re-ignition

Residential (including concession card holders) participants were not supportive of the gas disruption insurance concept. The concept was explained as an insurance scheme where the annual premium covered customers for the cost of having their gas appliance pilot lights re-ignited by ActewAGL, in the event that there was a disruption to the gas flow to their property resulting in appliance pilot lights being extinguished.

Fundamentally, participants believed that the likelihood of a gas disruption was extremely low and accordingly, the need for this type of insurance was negligible.

“When the pilot light goes out, it doesn’t take long to fix. Its just an annoyance when you get in a cold shower.”

Enhanced Gas Connection

Residential and business customer participants were also not supportive of the idea of improving the reliability of the gas connection to their residential or business premises by laying the pipe in a deeper trench and encasing it in a metal cylinder. Participants believed the current situation involving ‘warning tape’ was adequate to remind people about the location of underground pipes. Further, a number of participants noted that ActewAGL provided an excellent advisory service on the location of underground infrastructure, such as gas pipes. These features, coupled with a perception that it would be extremely difficult and costly to dig a two meter trench in Canberra soils led participants to conclude that this idea was unnecessary, and the cost would far out-weight any benefit.

“They would never be able to get it down there (2 meters). Canberra is built on rock. They have enough trouble getting down 1 meter.”

**New Service
Perceptions
Continued****Gas/Energy Audit/Efficiency Advice**

In general, business participants noted that they had not considered auditing their gas use to determine if they were using gas efficiently. On discussing this topic, most business participants noted an interest in receiving advice on efficient gas use, however they generally preferred to receive this advice from a government agency or consultant who was independent of the gas supply industry.

“I’d go to a private consultant rather than ActewAGL, or a government organisation. Not someone from ActewAGL who has a vested interest.”

Detailed Findings – Water and Waste Water

Supply Reliability

In comparison with electricity and gas, participants displayed a considerably higher level of interest in discussing water and waste water (grey water). This is not surprising given a general social consciousness about water, and the press and publicity on the pending introduction, or introduction, of water restrictions, that occurred during the period when the focus groups were being conducted. At the time of research, level one water restrictions had only just been introduced in the ACT in response to drought conditions.

Interestingly, throughout the group discussions, participants used the term ‘grey water’ in reference to any water that was not fresh (dam) supplied. Participants did not mention ‘black water’ nor were they ‘technically’ aware of the difference between grey and black water. For participants, anything that went down their drains was considered ‘grey water’.

Similar to gas and electricity, residential and most business participants had little knowledge or understanding of ACTEW-ActewAGL water supply and waste-water service reliability commitments. In addition, the majority of participants saw no distinction between the roles/titles of ActewAGL or ACTEW. In general, ActewAGL was perceived to perform very well in respect to water and waste water service reliability. Some participants spoke of incidents or experiences where their water supply had been disrupted. These incidents were described as accidents or pipe breakages and generally acknowledged as being beyond ActewAGL control. Participants noted that during these incidents, ActewAGL had been very responsive in rectifying the problem. There was one exception. One business participant noted a waste-water incident where sewerage had flowed into their business carpark. ActewAGL had taken four days to attend to the problem, despite the participant calling ACTEW-ActewAGL at least once per day.

“We had a sewerage line that burst. Now this was during normal working hours. We rang and we’re told that it was high priority and that someone would come out. It took four days for them to fix it, even though we rang them every day. To me, it’s just like ‘the cheque is in the mail’. Someone should have been there within an hour.”

Participants’ ‘tolerance’ of water supply/waste-water service disruptions tended to parallel their thoughts on electricity disruptions. For example, most residential (including concession card holders) participants believed they could tolerate a disruption of between two and four hours, although the experience would be an inconvenience. Residential participants main concern in respect to duration of a water supply/waste-water service disruption was household hygiene. There was a feeling that the need for toilet flushing and washing would become very critical after four hours.

**Supply
Reliability
Continued**

Similar to the findings reported for electricity, business participants held more varied opinion in respect to a ‘tolerable’ duration of a supply disruption. Again similar to the findings reported for electricity, business participants from hospitality, tourism and entertainment sectors, along with irrigators (in respect to a water supply disruption) noted the lowest level of tolerance toward a water supply/waste-water service disruption. These participants noted that their entire business would need to stop/close during a disruption.

Irrigators (such as market gardeners, golf clubs and sports field managers) noted that if the water supply disruption occurred at a critical time, they could lose significant quantities of their asset (turf, seedlings etc) which would have consequences for the profitability of their business.

Business participants from cafes and restaurants noted that they had limited crockery and table settings and relied on continuously washing their sets to supply customer needs. Without their ability to wash (and dispose of the washing water), their business would quickly come to a halt, if for no other reason than not having a setting to serve customers on. These participants were also worried about hygiene and the inability for customers or staff to use toilets and wash.

In contrast, participants from business sectors other than hospitality, tourism, entertainment and irrigators (such as market gardeners, golf clubs and sports field managers) noted a degree of tolerance for water supply/waste-water service disruption. These participants, although noting the interruption as an inconvenience, believed that they could tolerate a disruption of one to two hours at their business. Similar to residential participants, their principal concern was hygiene and the inability for staff to use toilets/wash.

Apart from some irrigators (such as market gardeners, golf clubs and sports field managers) who had dams or tanks on their property, no residential or business participant noted that they had a back-up or contingency plan in the event of a water supply or waste-water service disruption.

**Supply /
Service
Knowledge**

Interestingly, both residential (including concession card holders) and business (including government) participants were very aware of the sources of Canberra's fresh/tap water (i.e. location of Canberra's dams). However, few had any knowledge or awareness of Canberra's waste-water infrastructure, and where the waste-water from their kitchens, bathrooms and laundries 'disappeared' to.

**Interruption
Information**

In the event of an unplanned water supply/waste-water service disruption, participants generally noted that they would refer to their water bill or the phone book to identify a number to call for information about the disruption.

Generally, residential (including concession card holders) participants were of the perception that if there was a disruption, it would likely be due to a breakage or accident near to their premises and therefore, they were more than likely to see the event and ActewAGL attending the site. Most participants noted that if they did see ActewAGL attending a breakage, they would be unlikely to call ACTEW-ActewAGL.

Similar to the findings reported for electricity, business (including government) participants noted that they would be likely to call ACTEW-ActewAGL, if the disruption occurred during the hours of their business operation. The purpose of the call would be to ascertain the duration of the disruption and subsequently plan their business response.

Also similar to the findings reported for electricity, both residential and business participants noted that it would be helpful during an unplanned disruption for ACTEW-ActewAGL to have a recorded information line. This line would enable customers to directly and immediately access information about the extent of the disruption and the likely disruption duration. Participants noted that it would also be preferable that, following the recorded message, there was an option to stay on-line and be transferred to an ActewAGL operator. It should be noted that in calling a utility company in general, residential participants noted a preference to speak to a person rather than an IVR.

Business participants (including government, large organisations and irrigators) for which water was considered mission critical, noted a preference for access to a local 'ActewAGL duty manager' to keep them informed of the disruption and assist them with contingency planning.

**Planned
Interruptions**

Most residential and business customer participants could not recall a planned disruption to their water supply or waste-water service.

Participants' preferences for a planned water supply/waste-water service disruption was similar to that reported for electricity. Specifically, residential participants noted a preference for 2 to 5 days warning of the disruption, either by mail or letter box drop. Also similar to the electricity findings, residential participants noted a preference for the disruption to be conducted during the period 10:00am to 4:00pm in order to minimise the impact on household functioning.

Not surprisingly, business participants had a preference for disruptions to be conducted outside of business operating hours. If the disruption was to occur within business hours, most business participants preferred advanced warning of 1 to 2 weeks. The exception being businesses from the restaurant, café, tourism and entertainment sectors and irrigators (regarding a water supply disruption). These participants noted a preference for up to 4 weeks warning for any disruption that was likely to be more than a half hour duration. The primary reason for this length of warning was to be able to adequately forewarn their own customers and to enable them to adequately plan contingencies for the period of the disruption.

“You definitely need warnings. In a motel, you have people who need a shower at a certain time, and they’re paying for a service. We would absolutely require adequate notice to plan how we would manage.”

A few business participants noted that in the past, ACTEW-ActewAGL had asked them when the least inconvenient time would be to disrupt the water supply to their business premises. This approach was very much appreciated and set their expectations for the future.

Quality

Both residential and business participants noted that they had few, if any, concerns with the quality of Canberra's water.

"Canberra water is great."

Residential and business participants noted that they were satisfied with the colour and appearance of the water although some noted a degree of concern with the taste and odour of chlorine in the water. Generally, these participants noted that they would prefer Canberra water to have less chlorine. Supporting this, these participants noted that they preferred to drink bottled or filtered water rather than the water straight from their tap.

"We freeze water, and when you do that, you can smell the chlorine off it."

However, invariably, participants always qualified their comments regarding the quality of Canberra water by noting that from their experience, Canberra water quality was very high. Indeed, many participants noted that the water quality in Canberra was superior to many other capital cities, particularly Sydney and Adelaide.

"Sydney water you can actually taste the dirt."

Both residential and business participants were prompted for their opinion on fluoride levels in water. Participants could not note any concerns with the level of fluoride in Canberra water.

One business participant noted that they experienced significant water pressure problems when all the businesses in their area were simultaneously accessing the water supply. Some residential participants noted a drop in water pressure when *'everyone was watering the garden at the same time'*. However, in general, water pressure was not raised as a serious issue or concern amongst residential and business participants.

"If everyone's watering at the same time, you just know and accept the water pressure will be less."

**Quality
Continued**

Both residential and business participants noted that they did not have any concerns with the quality of the waste-water service, nor did they have concerns with odour from sewer vents.

“I don’t think I have ever really thought about it (waste-water service quality), so I don’t think there can be any problems. I thought the service is generally good.”

“You mean those tall stacks you see, I’ve never noticed any problems.”

**Changes to
Current
Reliability
Level**

As previously reported, both residential (including concession card holders) and business (including government) participants noted quite adamantly that they did not want a lower level of water supply or waste-water service reliability, even if this was associated with a price reduction.

“I think in this day and age, particularly in Canberra, I expect the best. They provide a service and you don’t want anything less.”

Conversely, participants tended to not show any level of interest in being prepared to pay for a higher level of water supply or waste-water service reliability. The supply/service was considered to currently be highly reliable.

Perceptions on the Future of Water Supply in the ACT

Residential (including concession card holders) and most business and government participants were provided with an information sheet on water supply in the ACT to stimulate discussion, a copy of which is provided in Appendix B. Amongst other things, the information sheet outlined that on current projections the ACT would need to expand its water supply by 2011. Participants were advised that the cost of constructing a new dam would likely result in a 30% increase in the cost of an annual water bill.

In general, both residential and business participants were accepting of the need to expand the Canberra water supply, however people were not readily accepting of the need to supply the additional demand through a new dam. Interestingly, this was not due to environmental concerns, rather there was a very strong perception amongst both residential and business participants that it would be cheaper and more efficient to meet much of the additional need for water through the use of recycled water (generally referred as grey water by participants). Consistently, participants noted that the current water supply was drinking quality, yet only a small portion of the water supplied was used for this purpose. Amongst participants there was strong support to use lower quality water (recycled water) for uses such as garden watering and toilet flushing.

“Surely one of the big problems is that only about 2% of water is used for human use (drinking), but 100% of water has to be produced at that standard. There is no system for grey water.”

Interestingly, participants preferred the idea of using grey water on their own properties rather than its use being confined to public parks and gardens. In addition to grey water, participants also noted that residents and business where feasible, should be encouraged to install tanks for collection and use of rainwater to supplement demand from the reticulated system. In general, participants expected that customers who installed a tank or installed infrastructure for use of grey water should be subsidised for ‘doing the right thing’ as their action was alleviating the need for, and costs associated with, the construction of a new dam.

“New houses should have a grey water system and existing houses could get a subsidy to gradually implement one (install a grey water system).”

This notion of a subsidy was noted very strongly in all participant’s discussion on grey water. There was a feeling that use of grey water would alleviate the need for a new dam and therefore the money that would have been spent on a dam, could be used to subsidise the costs incurred by a customer to adopt grey water use.

**Perceptions on
the Future of
Water Supply
in the ACT
Continued**

However, it is important to emphasise that participants had little to no knowledge or understanding of the infrastructure and costs involved in a grey water system. There was a very strong prevailing perception that the cost of recycled (grey) water would be significantly less than the cost of fresh water supplied from a dam. Partly, this impression came from a perception that grey water did not require treatment. There was an impression that wastewater was immediately available for re-use. This impression was often based on current experience with things such as pouring washing water directly on the garden.

“Why can’t we all use grey water? I collect the washing up water for the garden.”

Although some participants noted it would be more environmentally sustainable to use recycled water or tank water, most of the interest in these alternative sources of water was driven by a perception of it being lower cost. When asked whether they would still prefer to use recycle water or tank water if it cost more than fresh water from a dam, participants generally noted that they would naturally prefer the cheapest (dam) option.

Perhaps not surprisingly, participants strongly preferred to source drinking water from a dam, rather than a recycling plant.

“I don’t think I want to drink recycled water. I’d be concerned about something going wrong, because it could be devastating for the community.”

As part of the overall discussion on ACT water supply, participants impressions on the frequency and extent of water restrictions was discussed. Not surprisingly, responses varied between business and residential respondents.

Residential (including concession card holders) participants generally believed that they could ‘live with’ regular restrictions provided the restrictions did not exceed level three. Interestingly, restrictions (at least the low level restrictions), were not perceived as lowering water supply service standards. Rather, restrictions were perceived as the ‘smart and sensible’ way of doing things. Enforcing water restrictions was perceived as reinforcing good (non-waste full) behaviour by forcing customers to not water their gardens during the ‘heat of the day’ when it was least efficient to do so. In this context, restrictions were perceived as actually saving customers money by not using (and paying for) water unnecessarily.

**Perceptions on
the Future of
Water Supply
in the ACT
Continued**

Interestingly, most participants seemed to initially discuss restrictions as though they were a bit of a novelty and something that could be enjoyed. It is important to emphasise that at the time of the focus groups, participants were generally only familiar with the experience of abiding by ‘voluntary restrictions’.

“Its good to get outside at that time of the evening anyway (referring to level 3 restriction watering time). If you have to get outside every night to water, so be it.”

However there were some participants who foresaw that living with water restrictions would soon become a difficult chore. These participants often qualified the initial ‘acceptance’ of water restriction by stating that you would not want to endure restrictions for a long period of time. Six to 8 weeks of restrictions was noted as the desired maximum restriction period by these participants.

Interestingly, after participants had time to contemplate the idea of regularly living with water restrictions, and discussing the infrastructure required to source water from alternative sources (such as rainwater tanks and grey water including treated grey water delivered to private properties), many participants concluded that construction of a new dam was preferable and acceptable as a significant additional cost on their current annual water bill.

“Seems to me we need the dam.”

In respect to business participant opinion on water restrictions, apart from participants who were irrigators (such as market gardeners, golf clubs and sport fields), business participants generally noted that water restrictions did not impact on the core functions of their business and accordingly, from their business perspective, they were not concerned about the frequency, level or duration of water restrictions.

In contrast, irrigators (such as market gardeners, golf clubs and sport fields) were very concerned about restrictions as they generally felt it would be impossible to meet the water reduction targets. This was because they considered that their irrigation systems and design were already extremely efficient. That is, they believed they had little to no excess consumption which they could trim without having an impact on their business operation. In general, the irrigator participants were concerned about the prospect of restrictions and noted that they would discuss the issue with ACTEW-ActewAGL.

**Perceptions on
the Future of
Water Supply
in the ACT
Continued**

“We’ve already implemented Stage 1. The thing we don’t like about their restrictions policy is the jumps, we don’t think they are practical. And it lumps all these things (irrigators) together. Some golf courses and racecourses and even public gardens have inefficient and manual irrigation systems and we feel there is no reward for us having an extremely efficient operation. So we are saying its not fair that we’re dealt with the same as everyone else. We are doing the right thing by operating efficiently under normal conditions and we don’t get any benefit from it.”

Overall, in summing up their thoughts and responses to the discussion on the future of the Water Supply in the ACT, across all focus groups, participants noted that they expected a solution which represented the lowest cost and least inconvenience. As noted, grey water was perceived as a viable solution to Canberra’s future water supply needs, particularly in respect to public and private garden watering, sports field irrigation and so forth. Grey water was considered to be a solution because it was perceived as being readily available and would be significantly cheaper to supply than water sourced from a new dam.

Consistent with their desire for a low cost solution, participants believed that the money that would be used to build a new dam could be used to subsidise customers who implemented actions to alleviate their demand on Canberra’s water supply by implementing grey water systems or installing rain water tanks.

Finally, water restrictions, beyond low levels, were perceived as being an inconvenience and were not generally accepted as a long term solution to Canberra’s future water needs. In contrast, low level water restrictions were perceived as being acceptable as these restrictions were perceived to reinforce good ‘watering’ behaviour which ultimately benefited the customer by ensuring they did not use (and pay for) water unnecessarily.

**Perceptions on
Canberra
Landscape**

During the course of the discussion on the future of Canberra's water supply, residential participants were asked whether they preferred to see Canberra 'evolve' toward a landscape dominated by native plants which use less water, or continue with Canberra's more exotic, lush green landscape. Participants' initial response was generally that Canberra's landscape was too water thirsty and greater use should be made of native vegetation. However as the discussion ensued, a number of participants often changed their minds. The primary factor which appeared to drive this change of mind was the perceived lower amenity value of a native landscape. In particular, participants felt that their enjoyment of Canberra's outdoors would be compromised in a native landscape, particularly in the warmer drier months. These participants generally concluded that they would prefer to see Canberra retain its current landscape. However, they were also keen to be reassured that in retaining this landscape, the appropriate authorities had investigated alternative (e.g. more cost effective) sources of water. In general, participants expected that the 'exotic' Canberra landscape could be maintained through the use of grey (recycled water). As previously noted, participants held a very strong perception that grey (recycled) water would be both plentiful and considerably cheaper to supply than fresh (dam supplied) water.

“Green grass is nice to sit on. Canberrans do a lot outdoors. So if it looked brown, less people would go out, so we would loose something. That's why we pay our rates. We choose to have them (Canberra landscape) nice.”

Pricing and Metering

Similar to the findings reported for gas and electricity, residential (including concession card holders) and small business participants generally discussed their expenditure on water and waste-water on a per bill basis. Participants from organisations that used a large quantity of water (e.g. irrigators) discussed their expenditure in respect to their annual spend or annual budget.

Both residential (including concession card holders) and business participants tended to be aware that there was an incremental pricing step for water, often referring to it as the ‘excess water bill’. Possibly because of the drought and the media discussion on water at the time the focus groups were conducted, both residential and business participants appeared to readily accept the current incremental pricing step, where water became more expensive the more that was used. It should be noted that, similar to the findings reported in electricity, participants generally did not know any specific details regarding pricing steps, other than a vague notion that at some point, pricing changed. Some residential participants (not concession card holders) noted that pricing steps needed to be fairer and take account of larger families and the ability of certain families to be able to pay for water.

During the group, many residential participants noted that they had not been aware of the proportion of the bill that comprised the fee for waste-water.

In contrast, some business participants tended to be quite aware of the fee they paid for waste-water and how the fee was calculated. For some business participants, particularly sports clubs, there was a feeling that the calculation was quite unfair. These participants supported the idea of metering waste-water and accurately charging for the service used.

“Using the number of fixtures is not right. Like we pay more for a four man urinal even though we don’t need it or necessarily use all. Or a 60 fixture toilet block that may not be used for 2 months but we get an enormous bill. That’s where it doesn’t work, where its not like an office block in use regularly.”

Other business participants tended to be more indifferent to the notion of metering waste-water. These participants held an impression that the costs (participants believed that the customer would pay) to install a meter would probably not be off-set by any benefits gained.

Overall, all residential and business participants concluded that their water/waste-water bill was clear and easy to comprehend. Although similar to the findings reported for gas and electricity, it was clear from the manner in which participants reviewed their bills in the focus groups, that most participants did not study their bill, particularly the rear of the bill that outlined how the bill amount was calculated.

**Customer
Service**

During the course of the focus groups, participants were asked about their impressions or experiences with customer service issues such as:

- the promptness of new customer connections;
- response time in the event of a problem or concern;
- time taken to respond to customer query or complaint; and
- timeliness of keeping appointments.

Participants generally noted that these customer service issues, although important, were generally perceived as an obvious part of any service. In this respect, participants noted that they would not be willing to pay for improvements in these services. Participants generally noted that in respect to responding to service issues like those outlined above, they generally did not expect ActewAGL to adhere to a strict target (e.g. respond within 24 hours). Rather, participants noted that they were generally satisfied if they could see that ActewAGL was acting ‘reasonably’ in response to the issue or request and could be considered as ‘doing its best’ under the circumstances.

**Concession
Card Holders**

As earlier noted, there was an extremely high level of consistency and similarity in the responses provided by the range of respondents who participated in this study, including concession card holders who shared very similar views with the other residential participants included in this study. In comparison with any of the other residential respondents who participated in this study, concession card holders appeared to be no more or less sensitive or concerned about water use, water/waste-water prices, billing, or any other aspect discussed during the course of the focus group.

For example, concession card holders were no different to any other residential participant in respect to not wanting a lower level of water supply reliability, even if this lower level of reliability was associated with a price reduction. As earlier noted, low levels of water restrictions were not perceived as lowering supply reliability. Rather, low levels of restrictions were perceived as reinforcing good 'watering' behaviour which ultimately saved the customer money by not using (and paying for) water unnecessarily.

Further, concession card holders were no different to any other residential participant in respect to how they perceived or monitored their expenditure on water/waste-water. As earlier noted, it was apparent from these group discussions that both residential and concession card holder participants did not generally look at the section of their water bill describing how the amount was calculated.

Concession card holder participants, like other residential participants, held a vague notion about incremental pricing steps in water fee structures but they, like all other residential participants, were unsure about specific details. Both concession card holders and other residential participants often referred to incremental pricing as their 'excess use' or 'excess water' bill.

Concession card holders, like other residential participants, also strongly held the perception that grey water would be a significantly cheaper source to supply Canberra's future water needs, in comparison with the cost to construct a new dam.

Concession card holders also shared the view common across all participants, that they expected the responsible authorities to identify the lowest cost, least inconvenient solution to resolving Canberra's future water needs.

New Service Perceptions**Water Filtering**

Residential (including concession card holders) participants were asked whether they would like to see Canberra's reticulated water filtered at the dam treatment plant, rather than filtering it at their home (an activity noted by many participants).

In general, participants noted that they would prefer to filter their drinking water themselves. There was a feeling that much of the value in filtering the water at the dam treatment plant would be lost, once the water had flowed through the supply network to their homes.

"Its not really an issue for me, but for personal drinking maybe I'd put on a filter, but I'd do it myself. It sort of defeats the purpose filtering it and then having it come through the water pipes to your house."

Participant Suggestions

Similar to the findings reported for electricity, participants could not generally identify any new water supply or waste-water service related services or initiatives they would like ACTEW-ActewAGL to introduce. However, again similar to the findings reported for electricity, a number of business participants noted that they would like ACTEW-ActewAGL to improve communications with customers. Participants generally preferred communications through hardcopy such as a pamphlet, although some larger business and irrigator consumers noted a preference for face-to-face communications such as through an account manager.

Other Findings – General

Combined Bill Envelope A number of participants noted that it was a costly and somewhat ridiculous exercise to receive three separate bills from the same organisation. These participants were not generally interested in receiving one bill for the gas, electricity, water and waste water consumption. Rather they believed it would be more efficient (and cost effective) if ActewAGL bundled all of their bills into the one envelope.

In general, participants noted a preference for individual bills for each utility rather than a combined bill. There was a concern that a combined bill might look like a cumbersome, difficult to read, telecommunication bill.

“Why can’t you get all the bills sent out, not necessarily as one bill, but all in the same envelope.”

**Combining
Multiple
Meters (for
the same
utility) onto
the One Bill**

Some business participants from organisations that operated multiple business sites (e.g. Government or large organisations), or had multiple meters for the same utility within a business site, noted that it would be preferable if they could receive a single bill for each utility (e.g. a single water bill for the multiple water meters installed across a business site). These participants noted that consolidation of bills would enhance their business efficiency as well as enhance ActewAGL's knowledge and understanding of its customers.

Recommended Attributes for Choice Model (willingness-to-pay) Experiment

Electricity

Based on the themes and discussion that emerged across this exploratory qualitative research, it is recommended that the following attributes are examined for both residential and business respondents in the 'electricity' component of the willingness-to-pay study.

Reliability

Number of times per year electricity is completely unavailable.

Length of time electricity is completely unavailable each time it is disrupted.

Time of day that electricity is completely unavailable each time it is disrupted.

Prior notification that electricity will be unavailable.

Response to phone inquiries in the event of electricity becoming unavailable.

Quality

Number of times per year electricity is momentarily unavailable.

Number of times per year lights flicker or dim.

Number of times per year power surges / spikes are experienced.

Gas

Based on the themes and discussion that emerged across this exploratory qualitative research, it is recommended that the following attributes are examined for both residential and business respondents in the 'gas' component of the willingness-to-pay study.

Reliability

Number of times per year gas is unavailable.

Time of year gas is unavailable each time it is disrupted.

Length of time gas is unavailable each time it is disrupted.

Time of day that gas is unavailable each time it is disrupted.

Prior notification that gas will be unavailable.

Response to phone inquiries in the event of gas becoming unavailable.

Quality

No attributes recommended

**Water and
Waste-water**

Based on the themes and discussion that emerged across this exploratory qualitative research, it is recommended that the following attributes are examined for both residential and business respondents in the 'water/waste-water' component of the willingness-to-pay study.

Water Reliability

Number of times per year water is unavailable.

Length of time water is unavailable each time it is disrupted.

Time of day that water is unavailable each time it is disrupted.

Prior notification that water will be unavailable.

Response to phone inquiries in the event of water becoming unavailable.

Water Restrictions

Chance that drought water restrictions will occur.

Duration of water restrictions.

Types of days that water restrictions apply

Level of water restrictions.

Appearance of urban landscape including public lawns, parks and open spaces.

Waste-water Reliability

Number of times per year an overflow of sewerage is experienced.

Source of sewerage overflow.

Response to phone inquiries in the event of a sewerage overflow.

Length of time before sewerage overflow is contained.

Water/Waste-water Quality

No attributes recommended

Appendix A: Focus Group Discussion Schedule

Date	Time	Participant Structure
4/12/02	2:00pm	Residential Consumers – Concession Card Holders
4/12/02	6:00pm	Residential Consumers – General Households
4/12/02	8:00pm	Residential Consumers – High Utility Users
10/12/02	6:00pm	Small/Medium Business Customers (Mini-Group)
10/12/02	8:00pm	Small/Medium Business Customers (Mini-Group)
11/12/02	6:00pm	Large Commercial Electricity Users (Mini-Group)
11/12/02	8:00pm	Large Commercial Electricity Users (Mini-Group)
12/12/02	6:00pm	Large Commercial Water Users (Mini-Group)
12/12/02	8:00pm	Large Commercial Water Users (Mini-Group)
16/12/02	6:00pm	Government Organisations (Mini-Group)
16/12/02	8:00pm	Large Commercial Gas Users (Mini-Group)

Appendix B: Water Supply in the ACT: Discussion Group Stimulation Handout

Water Supply in the ACT

The ACT draws its water supply from two separate catchment systems:

- The Cotter River catchment. Wholly within the ACT, the Cotter River catchment was the first to be developed and is part of the Namadgi National Park.
- The Googong system. The Googong system was developed on the Queanbeyan River in NSW.

Three dams have been built on the Cotter River.

- Cotter Dam (1912),
- Bendora Dam (1961),
- Corin Dam, (1968).

Population projections showed that the Cotter River system would not be able to cope with the demand for water. A new dam on the Queanbeyan River, the Googong Dam was constructed in 1979.

On current projections of population growth, and assuming no change in demand for fresh water or environmental flow requirements, the water supply in the ACT will need to be expanded by 2011. The average cost to cater for this additional supply would be about an additional \$100 per annum per customer from 2011 (about a 30% increase in the bill of an 'average' customer).

Reliability of Supply

Over the past twenty five years the ACT has enjoyed a highly reliable water supply. Storage capacities have been sufficient to ensure that the ACT can endure a significant drought, such as that which occurred in 1982/83, without running out of water and without imposing severe water restrictions.

In the ACT, water supply capacity is managed to deliver a “95 percent supply reliability”, which means that, on average, water supply restrictions could be expected 1 in 20 years. When storage capacity reaches particular levels, a staged restriction process across the ACT is implemented to manage the remaining water supply in storage. The process comprises the following steps, with each to be implemented when specified monthly levels of total system storage are reached:

- an early warning notification;
- voluntary restrictions;
- stage 1 restrictions;
- stage 2 restrictions;
- stage 3 restrictions;
- stage 4 restrictions; and
- stage 5 restrictions.

Water Restriction Stage Details

Stage	Private Gardens	Overall storage level at which restrictions invoked	Estimated reduction in water demand
1	Sprinklers 6pm-8am Hand-held hoses, buckets, etc at any time	50%	5%
2	Sprinklers 7pm-11pm Hand-held hoses, buckets, etc at any time	40%	20%
3	No sprinklers Hand-held hoses 6pm-8am Buckets at any time	30%	40%
4	No sprinklers Hand-held hoses 7pm-11pm Buckets at any time	20%	55%
5	No sprinklers No hoses Outdoor watering restricted to re-use of used water only	15%	60%
<i>Other ?</i>			