AusNet Gas Services Pty Ltd

Gas Access Arrangement Review 2018–2022

Appendix 5E: Energy Research Study 4 Report

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AusNet Services.

Energy Research.
Study 4: Report.

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Contents.

Background and methodology.

Background and context

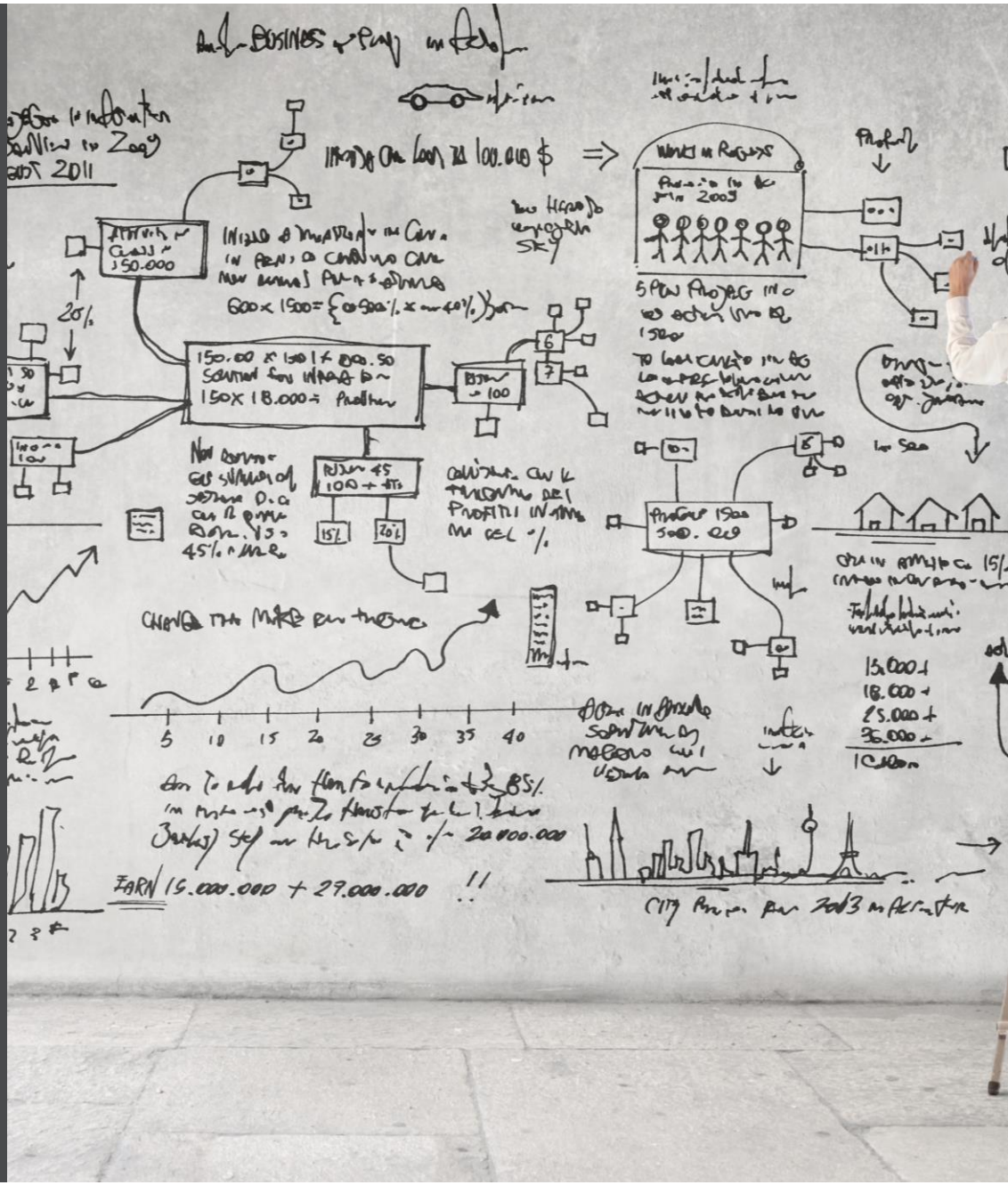
There is limited research on the reference and views of existing gas customers in Victoria. To address this a series of studies is planned to facilitate customer and other stakeholder engagement for the gas network. The purpose of this program of research is to:

- Provide a greater understanding of the attitudes and perceptions of customers towards the gas network services, as well as investigating customer preferences in relation to service delivery and communications; and

- Understand customer and other stakeholder views on trade-offs that are most important to them in the context of gas network services.

In the short term, the information gleaned from this research will be used to inform the development of AusNet Services' upcoming Gas Access Arrangement Review (GAAR) proposal. In the long term, however, it is hoped that the findings inform network planning and the future vision of the gas network.

This report summarises the findings from Phase 4, the focus of which was to better understand the areas of key concern for Small to Medium sized Business (SM Business), Big Business, Land Developers and Councils.



Four (4) focus groups were held with AusNet Services SM Business customers in South Melbourne and Bendigo.

Fieldwork was conducted between 17th and 25th May, 2016.

Group	Description	Specifications	Location
1	Small to medium sized businesses	• Mix of industry types • Fewer than 200 employees • Median annual average gas bill less than $10,000	**Regional** Ballarat
2	Small to medium sized businesses	• Mix of industry types • Fewer than 200 employees • Median annual average gas bill less than $10,000	**Metro** South Melbourne
3	Small to medium sized businesses	• Mix of industry types • Fewer than 200 employees • Median annual average gas bill less than $10,000	**Metro** South Melbourne
4	Small to medium sized businesses	• Mix of industry types • Fewer than 200 employees • Median annual average gas bill less than $10,000	**Metro** South Melbourne

In addition, thirteen in-depth interviews were conducted with Land Developers, Councils and a Big Business representative.

Fieldwork was conducted between 16th May and 1st June, 2016

N	Description	Specifications	Location
1	Big Business*	• Large manufacturing industry	**Geelong**
4	Local Councils	• Mix of metro and regional Councils	**Melbourne, Ballarat, Grampians**
8	Land Developers	• Commercial and/or Residential Land Developers • Mix of metro and regional customers.	**Melbourne and Ballarat**

Big Businesses are traditionally challenging to engage with in research project of this nature and as such this meant that only one Big Business accepted the invitation to engage in the consultation process. However, this business represents AusNet Services' largest commercial user of gas, consuming approximately 2.5% of Victoria's overall gas supply. Therefore this business provided sophisticated and comprehensive feedback on the issues involved in gas supply from the perspective of a Big Business.

Research Approach Rationale

Focus Groups

Why Focus Groups?

Focus group discussions with SM Businesses were recommended due to the ability to deliver detailed context and understanding of customer knowledge, attitudes, perceptions and preferences relating to gas network issues.

Focus group discussions enabled complex concepts and industry language to be broken down by group moderators and explained to participants through the use of two way dialogue and stimulus boards. This ensured participants were given opportunities to respond to, and clarify key discussion topics, allowing them to be informed and provide meaningful feedback and opinion.

Through this approach, we were able to generate rich context through a series of guided discussions with AusNet Services' customers.

Research Approach Rationale

In-depth Interviews

Why Interviews?

Interviews were conducted with Big Business, Land Developers and Councils as they allow researchers to probe participants on key areas of interest, experience and concern with the gas network.

It was expected that Big Business, Land Developers and Councils may have relatively greater knowledge of the industry and gas supply chain, and therefore be able to provide meaningful feedback with less explanation and guidance from the moderator.

Further, given the extensive geographical area covered by AusNet Services and therefore distance between potential participants' local areas, in-depth interviews were considered a more practical way to reach customers across the network.

Through this approach we were able to focus on key issues relevant to each individual respondent to generate rich insights across audiences.

Report summary and key themes.

Report summary and key themes

Background.

This report details key insights from the initial exploratory study in AusNet Services' planned program of research amongst its gas customers and other stakeholders. This study was designed to capture customer attitudes and perceptions towards, and understanding of, the gas network.

Methodology.

Four (4) focus groups were conducted between 17th and 25th May 2016 with SM Business customers in South Melbourne and Ballarat. These locations were selected to ensure representation across both Melbourne Metropolitan and Regional customers.

In addition, thirteen (13) in-depth interviews were conducted with other key customer and stakeholder groups: 1 Big Business representative, 4 Local Councils and 8 Land Developers. These interviews were conducted over the phone and participants were recruited using a combination of AusNet Services' customer and stakeholder lists and Colmar Brunton research panels.

Objectives.

The main objectives of this study, and the wider program of research, are to:

- Provide a greater understanding of the attitudes and perceptions of customers towards the gas network, as well as investigating customer preferences in relation to service delivery and communications; and
- Understand customer and other stakeholder views on trade-offs that are most important to them in the context of gas network services.

Key topics.

The report is structured around the key topics of discussion:

- Role and value of gas in the lives of customers and stakeholders;
- Awareness and understanding of the gas supply chain and the role of AusNet Services in this context;
- Customer and stakeholder attitudes and perceptions in relation to safety and reliability;
- Expectations around the future consumption of gas; and
- Pricing and investment scenarios.

Report summary and key themes

General Themes

SM Business customers tend to respond to questions similarly to residential customers, that is, from the perspective of an end-user of gas. Overall however, SM Business customers appeared to be more price sensitive than residential customers.

In some cases this leads to stronger objections to scenarios suggestive of price increases – driven in part by threats to profit margins associated with increased costs, and in part associated with an expectation that AusNet Services have been investing in their network over time and that proposing to pass on additional costs for this work at this time are unreasonable and likely to reflect poor planning.

Big Business, Councils and Land Developers tended to have a more sophisticated understanding of the gas market and gas pricing as well as how this might affect future capital expenditure. They tended to consider the potential long-term industry impacts as well as the end-user impacts in their responses to questions regarding potential investment trade-offs. For Councils, some tension exists between their appreciation of the realities of the gas network and potential investment priorities, and the end-user impacts of purely objective investment strategies.

Role and value of gas.

Across audiences, gas is a highly valued energy source. Compared to electricity, gas has a number of benefits. It is highly reliable and supply interruptions are rarely if ever experienced. This reliability forms part of the key value of gas. It is also seen as cleaner, more efficient and more economical than electricity. Importantly from a SM Business customer perspective, gas is sometimes a critical utility. Consequently gas is the fuel of choice, particularly for functions such as heating and cooking.

Awareness of the gas supply chain and the role of AusNet Services.

SM Business customers have some level of familiarity with gas retailers yet there is limited knowledge of gas production and processing, or other key players in the market. Due to the highly reliable and consistent nature of the gas supply there is little impetus for customers to consider the supply chain or to interact with AusNet Services. From the SM Business customer perspective, AusNet Services plays a behind the scenes role in the provision of gas.

Report summary and key themes

By contrast, Big Business, Councils and Land Developers tend to have a more sophisticated understanding of the supply chain and are likely to have direct dealings with AusNet Services. In particular, Big Business and Councils generally see that a mutual relationship exists between their business/activities and the activities and services provided by AusNet Services.

- **While Councils, Land Developers and Big Business, are satisfied with operational communication, high level strategic sharing of information is perceived to be lacking. More open and transparent two-way communication is desired by these stakeholders. They would value better working relationship with AusNet Services involving both operational and high-level strategic information sharing to benefit both parties.**

Attitudes and perceptions in relation to safety and reliability.

Customers and key stakeholders view gas as a safe and reliable energy source. The concepts of reliability and safety are closely linked in customers minds - by default, issues that impact on safety are expected to impact reliability and vice versa. Aside from the incident at the Longford Plant in the 1990s, experience of either safety or reliability issues is rare.

Although safety-related incidents are not common, safety is a major concern due to the potential seriousness of the outcome of safety breach: explosion or death from inhalation. In general, customers are not willing to compromise safety or reliability in return for reduced costs.

Expectations around the future consumption of gas.

Gas is a valued energy source which customers and stakeholders envisage using into the future. However, in a residential and SM Business context, gas consumption is expected to decrease over time as new technologies are further developed and adopted. For Big Business, the costs associated with implementing alternative energy solutions are perceived as prohibitive. Consequently limited change in demand is predicted in the foreseeable future.

It was difficult for customers to conceptualise and understand hypothetical trade-offs involving current and future consumption scenarios. Those who were able to form an opinion tended to favour the position that the costs of gas infrastructure should be spread evenly over the lifetime of the asset, regardless of the level of usage at a particular point in time. This therefore suggests that the notion of accelerated depreciation would not be well supported among customers.

Report summary and key themes

Pricing and investment scenarios.

The costs of ongoing maintenance and providing consistent reliability across the network are expected to be factored into the existing pricing structure. From the customer perspective, there should be no need to raise prices to cover these activities.

Investment activities associated with preserving safety or responding to safety incidents are prioritised. Activities associated with maintaining reliability are expected to be prioritised next. Activities related to growth and metering are of a lower priority from the customer perspective.

It is generally expected that:

- **Assets that service a large number of customers should be prioritised.** The rationale here is based on minimising inconvenience to the maximum number of people. While this was the overriding theme in response to this question, some customers and stakeholders show preference for a more equity based approach.
- **Deteriorating assets should be maintained in order to preserve safety and reliability.** In principle, customers are not prepared to compromise on reliability to keep costs down, particularly if this means that their businesses will suffer as a result.
- **Variations in reliability are expected across a vast network.** This response is underpinned by an understanding that variations in demand and location based factors will impact on network reliability. The caveat to this is that critical services (e.g. hospitals) must be prioritised. While this was the overriding theme in response to this question, some customers and stakeholders show preference for a more equity based approach. This is particularly true for those who experience lower reliability.

Detailed findings.

General Themes

- SM Business customers tended to respond to questions similarly to residential customers, that is, from the perspective of an end-user of gas.
- Big Business, Councils and Land Developers tended to have a more sophisticated understanding of the gas market and gas pricing as well as how this might affect future capital expenditure. They tended to consider the potential long-term industry impacts as well as the end-user impacts in their responses to questions regarding potential investment trade-offs.
- Overall, Business customers were more price sensitive than residential customers. In some cases this leads to stronger objections to scenarios suggestive of price increases – this is driven in part by threats to profit margins associated with increased costs, and in part associated with an expectation that AusNet Services have been investing in their network over time and that proposing to pass on additional costs for this work at this time are unreasonable and likely to reflect poor planning.

Role & Value of Gas.

Key theme

- Gas is highly valued as an instantaneous and reasonably priced energy source. The responsive and immediate nature of gas is a key benefit for heating and cooking.
- It is typically viewed as clean and reliable and as a result, remains the fuel of choice for many end-users.

Gas is highly valued as an energy source, providing instantaneous and readily controllable heat.

SM Business	Big Business	Councils	Land Developers
➙ For hospitality based businesses, a consistent supply of gas for cooking is often vital to the business' short and long term economic success. ➙ For businesses who provide accommodation services, heating and hot water for showering are the most highly valued functions of gas in their business. ➙ In other businesses where gas is not required to carry out the primary business function – gas for heating was perceived to be the most important aspect of the service.	➙ In the context of Big Business, gas can be critical to the operation of primary business functions and therefore seen as an essential service.	➙ From the Council perspective, gas is seen as a clean energy source and one that is more economical than electricity. ➙ Importantly, gas is a critical energy source for some businesses. Where towns within the area governed by the Council do not have access to mains gas, this can be seen as a limiting factor in the economic and social growth of the community.	➙ From Land Developers' perspective, buyers preferences for gas cooking and heating continues to drive demand for gas in many new developments. ➙ Gas for cooking is a clear preference for commercial developments that will house food tenants.

Interruptions to gas supply have different implications for different customers and stakeholders. The biggest concern for Business is the economic impact of interrupted supply.

SM Business	Big Business	Councils	Land Developers
➙ For SM Businesses, if gas is relied on to carry out their day-to-day operations, gas outages are of concern due to the potential short and long term economic impacts.	➙ Like SM Businesses, if gas is relied on to carry out their own day-to-day functions, gas outages can have significant long term economic impacts. ➙ In the case of manufacturing businesses, outages may also have significant safety implications in the workplace.	➙ Concerns around the comfort and safety of their constituents, particularly older/more vulnerable members of the community, are paramount.	➙ Land Developers' day-to-day operations are less likely be impacted by interruptions in the regular supply of gas. ➙ Rather, their concerns relate to timely and efficient connection processes that limit interruption to building schedules.

Gas is viewed as a clean and reliable energy source by end-users.

SM Business	Big Business	Councils	Land Developers
➙ Compared to electricity, gas is viewed as cleaner and more reliable. ➙ Customers have generally put little thought into considering how gas is extracted/generated. ➙ Despite significant recent media coverage of the issue, only one or two SM Business customers raised concerns about the methods used to extract gas and environmental impacts of this process. ➙ For most, images of emissions from electricity generation plants are more salient and by comparison, gas is viewed as a cleaner option.	➙ Gas is seen as clean, low emissions energy source. ➙ The sustainability / environmental friendliness of gas extraction and processing methods required to deliver gas to the business is not considered when they evaluate how clean/dirty an energy source gas is.	➙ Compared to electricity, gas is viewed as cleaner and more reliable.	➙ Compared to electricity, Land Developers believe that customers view gas as a cleaner and more reliable energy source.

It's the lesser of two evils. Land Developer

From the perspective of a residential user, gas is seen as a more economical choice than other readily available energy options. For some Business customers, the price of gas is seen as unreasonable, particularly in light of recent cost increases.

SM Business	Big Business	Councils	Land Developers
➙ A few negative comments around the cost of gas were spontaneously mentioned during the focus groups. This was perceived to be due to the fact that for SM Business customers, gas forms a more significant proportion of their expenses when compared to residential customers. ➙ Many businesses have noticed that the price of gas has increased over time, with some customers viewing this as unreasonable. ➙ Nonetheless, gas is generally believed to be cheaper than electricity. It seems that customers reach this conclusion by comparing bill totals as opposed to per unit comparisons. It was acknowledged, however, that gas may be perceived as cheaper simply because it is used less.	➙ Gas can be a large expense for those involved in the manufacturing industry. Significant increases in the overall cost of gas in the past five years, and the corresponding impact on outgoings/profit margins, are particularly salient. ➙ For these customers, the rate of return sought by utility companies through their regulatory approval processes are perceived as too high and not reflective of the realistic business cost of running their assets.	➙ From the Councils' perspective, desire for gas is driven at least in part by the perception that it is a more economical energy source. ➙ For areas of lower socioeconomic status, regardless of whether gas is more economical than electricity, affordability may still be a concern.	➙ Land Developers report that most of their customers see gas as a cheaper option than electricity. ➙ Strong preferences for gas heating, cooking and hot water are observed. ➙ Economy of gas for these functions is perceived to be particularly important for tenants as they tend to be more price sensitive than owner-occupiers. ➙ There is awareness that the overall cost of gas has been increasing over recent years. Gas ducted heating in particular, can be relatively expensive. For smaller spaces customers are beginning to appreciate the benefits of reverse cycle heating.

For Land Developers, perceptions of current contribution levels are variable.

Land Developers do expect variation in connection costs due to differences in existing infrastructure, prospective usage, geographical layout or geological features of the site being developed.

However, given that they are unable to choose the contractors who undertake connections, they are conscious that there is no scope to negotiate costs.

When no mains extension is required:

- Some Land Developers consider the connection fees charged to be fair and reasonable.
- For others, to the extent that new connections are considered to be generating an additional income stream for companies involved in gas supply, charging a connection cost is seen as an unreasonable profit generation exercise.
- There was no clear sense that Land Developers are familiar with the how costs are shared between distributor/developer/customer.

When mains extension is required:

Perceptions of how reasonable or otherwise the contribution level is seemed to depend on the size of the development:

- Where no contribution is required due to the size of the development, this is seen as reasonable given the expectation that over time, AusNet Services will recoup costs from the new customers being connected.
- When the Land Developer is responsible for paying some or all of the cost, Land Developers can perceive that the costs charged exceed the cost of materials and labour should they be able to tender the work out independently, and that they have little ability to influence these prices. In some cases, this is a barrier to connecting new developments and serves as a further incentive to consider alternative energy sources.

Gas remains the fuel of choice for heating, cooking and hot water in many residential and commercial buildings.

SM Business	Big Business	Councils	Land Developers
➙ When asked about their energy priorities, most Businesses indicated that they would prefer premises with gas access. ➙ Businesses without gas are seen as less desirable. However, no strong overall objections to buying a premises without gas were expressed by SM Businesses who do not rely on gas for cooking. ➙ When asked what energy mix would be considered for new builds, solar power is noted by many as a consideration. The desire or intent to consider solar power as an alternative/adjunct energy source is largely motivated by potential long-term costs savings.	➙ In the manufacturing industry, replacing gas is not an option for some operational functions. For those functions where it is possible to employ alternative energy sources, these options may not actually be feasible given the large capital investment that would be required to implement a change.	➙ While their constituents may prefer to be connected to mains gas, it does not play a major role in decision making around permits and they do not reject new developments based on the availability or otherwise of gas. ➙ Those areas without mains gas either rely entirely on electricity or on both electricity and bottled gas. ➙ Gas is particularly important to local businesses and industrial areas.	➙ In addition to end-user perceptions of gas as clean, reliable and economical, the range, quality and relative economy of gas appliances also influences decisions regarding the energy mix in new homes. ➙ Consequently, including gas in new builds may not be a choice for Land Developers but rather a requirement of their clients. ➙ In order to achieve the required energy rating for new builds, gas is used alongside solar when other options (e.g. water tanks) are seen as less worthwhile due to problems with long-term maintenance. ➙ Despite the majority preference currently, some Land Developers are seeing a trend away from gas as the fuel of choice for new homes. For example, gas is sometimes installed alongside electricity and solar with smart technologies designed to switch between sources based on price fluctuations across these options throughout the day.

Perception of gas as a clean energy source, and the relatively small number of appliances that run on gas compared to electricity, appears to limit the pressure users feel to reduce their consumption. Where measures are taken to limit usage, these are primarily motivated by a desire to minimise costs.

SM Business	Big Business	Councils	Land Developers
➙ Measures taken to reduce gas consumption are driven by concern about overall outgoings, rather than general concern about the environmental or other impacts of consumption. ➙ Turning hot water services off during the day, or turning the temperature down during off-peak times appear to be the main strategies that SM Business customers are using to reduce their consumption. ➙ Reducing gas consumption can also be seen as more difficult to implement than reducing electricity.	➙ For our representative, in order to improve cost efficiencies within the business, reducing gas consumption is an area of interest. ➙ Nonetheless, in a manufacturing industry where consumption is linked closely with production, it was expected that overall requirements would increase in the coming years regardless of the efficiencies put in place.	➙ Compared to electricity, gas is seen as more affordable and clean. Therefore, efforts to reduce energy consumption tend to be concentrated on electrical appliances rather than gas.	➙ Preferences for appliances that help to reduce consumption (e.g. instant hot water services) are common, and largely associated with keeping long-term usage costs to a minimum.

There is little interest in receiving information about gas usage or other gas-related issues over and above that already included in gas bills. Those who monitor their gas consumption over time do not generally feel the need to receive information more frequently.

SM Business

- End users rely on the graphs provided on their bills to compare current usage with previous bills and at similar times from the previous year. Where there is a discrepancy this may indicate a change in usage patterns (which may require review) or a fault with the meter (requiring further investigation if the issue persists).
- Businesses with high gas consumption, because they rely on gas for the day-to-day running of their business, are more likely to use comparison websites such as iSelect. The aim of these comparisons is to ensure they have the most cost effective service in order to manage their bottom line.

Awareness and Knowledge of Gas Supply Chain & AusNet Services.

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Key themes

- SM Business customers have some level of familiarity with gas retailers yet there is limited knowledge of gas production and processing, or other key players in the market. Little thought is given to the process by which gas reaches the business and among this audience, awareness of both the AusNet Services brand name and the organisation's responsibilities is very limited. Due to the highly reliable and consistent nature of the gas supply there is little impetus for customers to consider the supply chain or to interact with AusNet Services. From the SM Business customer perspective, AusNet Services plays a behind the scenes role in the provision of gas.
- By contrast, Big Business, Councils and Land Developers tend to have a more sophisticated understanding of the supply chain and are likely to have direct dealings with AusNet Services. Big Business and Councils in particular, can see that a mutual relationship exists between their business/activities and the activities and services provided by AusNet Services. Consequently, they desire a better working relationship involving both operational and high-level strategic information sharing to benefit both parties.

For Councils , Land Developers and Big Business, while operational communication is generally seen as adequate, high level strategic sharing of information is perceived to be lacking. More open and transparent two-way communication is desired by these stakeholders.

SM Businesses' awareness of the gas supply chain tends to be limited to gas retailers. Big Business, Councils and Land Developers are likely to have direct dealings with AusNet Services as well as with gas retailers.

SM Business	Big Business	Councils	Land Developers
➙ In general, SM Business customers have limited knowledge of how gas is supplied to their business and the total supply chain. ➙ They are familiar with gas retailers and able to identify several by name. ➙ They may also have a vague notion that the supply of gas includes functions such as maintaining the pipes used to transport gas, but cannot confidently say whether or not this falls under the remit of retailers or not. ➙ When prompted with logos, some respondents indicated having seen or heard of AusNet Services, but are largely unable to articulate what they do.	➙ Big Business customers involved in manufacturing are likely to have a good understanding of the gas supply chain and AusNet Services' role specifically.	➙ Likely to have had dealings with AusNet Services in addition to energy retailers. ➙ Tend to have a good understanding of the role and responsibility of AusNet Services as the gas distributor. ➙ Familiarity with other players in the supply chain is limited but Councils typically demonstrate an appreciation that the companies they deal with are separate to the companies that are involved in the extraction/production of gas.	➙ Likely to have had dealings with AusNet Services in addition to energy retailers, either themselves or through service consultants employed to advise on and liaise with utility suppliers. ➙ Tend to have a good understanding of the role and responsibility of AusNet Services as the gas distributor. ➙ Familiarity with other players in the supply chain is limited but demonstrate an appreciation that the companies they deal with are separate to the companies that are involved in the extraction/production of gas.

In general, Big Business, Councils and Land Developers desire a stronger working relationship with AusNet Services.

Big Business

- From the perspective of a large manufacturing industry, a closer relationship with AusNet Services is desired. High volume customers, where the supply of gas is critical to economic success and safety of the business, perceive that a working relationship needs to be established through ongoing direct contact. As with other utility services, it is expected that (without any commercial obligation) both parties share plans for short and long term asset maintenance as well as any threats to availability and integrity of the system, with the aim that both parties can effect changes as smoothly as possible.

Councils

- From the perspective of a Council, planned works are reported to be carried out quickly with minimal disruption.
- Although operational communication is good, high level strategic sharing of information is felt to be lacking. Some open and transparent two-way communication would assist Councils in planning major developments/capital works.
- Some Councils are also keen to have a better understanding of the innovations occurring in the gas industry, and consequently, how this may help them in their own planning.

Land Developers

The majority of Land Developers report having positive day-to-day dealings with AusNet Services. Nonetheless, a few negative comments were expressed regarding process efficiency. Specifically:

- The time taken to receive quotes for new developments can sometimes mean that quotes are not delivered in time to incorporate these costs into budgeting processes;
- Delayed timings for carrying out works can cause delays to the development and other difficulties coordinating services on-site;
- Follow-up from AusNet Services can also be lacking and the resulting feeling is that they are a low priority, despite the presumed value of their work in adding new customers to the network;
- Work supervisors can be inflexible and therefore difficult to deal with on-site; or
- Being incorrectly informed about existing infrastructure, resulting in a costly quote for connection.

We don't want to be in a situation where we lay a new road and then AusNet Services have to dig up that road to lay new pipes". Local Council.

While Small to Medium Sized Businesses are satisfied with the type and frequency of communication from AusNet Services, for other stakeholders, additional information needs are identified.

SM Business	Big Business	Councils	Land Developers
➙ AusNet Services very much operates in the background from the SM Business customers' perspective. ➙ As such, it is difficult for Business to identify reasons they would need to hear from or deal directly with AusNet Services on a day-to-day basis. ➙ All customers expect to be notified regarding any leaks/safety concerns/outages. However, given that they do not deal directly with AusNet Services, they may think that their energy retailer is the most appropriate source of this information.	➙ As outlined, the Big Business representative indicated that it would be beneficial to have regular ongoing contact with AusNet Services to discuss any threats to supply. ➙ Additionally, specific plans and protocols for dealing with outages impacting the business need to be developed.	➙ Overall, Councils appear to be satisfied with the level and type of communications currently received. ➙ However, although the notice provided to them regarding planned works is appreciated, to assist with efficient planning, there is some desire to receive more notice prior to the start of any works.	➙ In general, Land Developers believe that the process for arranging a new service with AusNet Services is sufficient. Land Developers are typically comfortable with initiating contact as needed. ➙ Nonetheless, given the concerns expressed regarding the timings of quotes, installation works and follow up process, greater follow up and communication from AusNet Services would be valued. ➙ Further information about what to do if there is an incident on site would also be valued by some Land Developers. ➙ Additional communication about changes to requirements or standards may also be needed to ensure that developments in progress proceed according to the most up to date regulations.

End users typically have limited knowledge of the proportion of their bill allocated to the various companies involved in the supply of gas to their business.

SM Business	Big Business
➙ Consistent with limited familiarity with the total supply chain, SM Businesses lack understanding of how the money they pay for gas is distributed amongst key players in the supply chain. ➙ In general, while there is some expectation that part of the money they pay is assigned to upgrading and maintaining the network, these customers have typically thought little about it.	➙ Our representative appeared to have detailed understanding of how costs are allocated among key players and how pricing in the gas market is set.


Gas safety.
Customer comprehension and priorities.

Safety:
Overarching messages

- Although safety-related incidents are not common, safety is a major concern due to the potential seriousness of the outcome of a safety breach: explosion or death from inhalation.
- At present, there are no concerns regarding the safety of AusNet Services' gas network.
- The concept of safety is also closely linked to reliability – by default, issues that impact on safety are expected to impact reliability and vice versa.
- Customers are not willing to compromise safety in return for reduced costs.

Consumers are aware that a safety incident could have serious consequences.

SM Business	Big Business	Councils	Land Developers
➙ Gas is known to be highly flammable and toxic if inhaled. ➙ Asked outright, even a single leak is seen as intolerable given the potential for devastating outcomes. ➙ For Businesses, aside from damage caused to person or property, leaks that lead to business closure are also seen as having the potential for longer-term economic impacts. ➙ Serious incidents are also expected to reduce customers' faith in the network and quickly dissolve trust in the industry. In turn, this is expected to impact on willingness to use gas in the future.	➙ For manufacturing industries, safety is a high priority – both in their own business and across the gas network. ➙ In businesses classified as Major Hazard Facilities (where large quantities of hazardous materials are stored, handled or processed), stable, reliable gas supply can be necessary in order to minimise safety risks. ➙ While the Big Businesses representative did not perceive there to be any existing safety issues, as safety incidents could potentially disrupt their supply, they are keen to receive additional information about how safety incidents could affect them. This would assist them in managing their own internal safety procedures.	➙ While gas safety is viewed as extremely important, no current concerns regarding the safety of the network were identified. ➙ There is a high degree of satisfaction around the safety of the network – to the point that when this issue was raised with local Councils and Land Developers, neither group had any feedback to share other than to say that they are confident in the safety of the network.	

Suspected gas leaks are taken seriously due to the potential for life-threatening consequences.

SM Business	Big Business	Councils	Land Developers
➙ Several minor incidents of gas leaks in the home, office or in nearby areas were recounted in the focus groups. ➙ No personal experience of serious safety incidents (resulting in explosions or death) associated with the use of mains gas were recalled, and such incidents are believed to be rare. While the incident at the Longford plant is remembered, supply interruption rather than compromised safety is the most salient aspect of this memory. ➙ Despite the rarity, given the potentially serious nature of gas leaks, they are reported quickly. Customers note that an option for reporting a gas leak is typically the first automated response option provided to them when they phone their retailer. ➙ In general (and as expected) reported leaks are responded to quickly and adequately.	➙ No experience of suspected gas leaks were reported during the interviews.		➙ Land Developers report that any issues caused during the course of their work are rectified quickly.

Given the serious nature of safety concerns, customers and other stakeholders are not willing to trade a reduction in the cost of gas for compromised safety.

SM Business	Big Business	Councils	Land Developers
➙ The safety of the gas network is considered to be of paramount importance given the potentially serious outcomes of safety incidents. ➙ Consequently, there is no willingness to see safety compromised in order to reduce costs.	➙ It is expected that AusNet Services has a robust risk framework in place for identifying potential areas of concern and, that AusNet Services applies resources according to this framework. ➙ It is also be expected that their prices reflect the costs required to maintain the network in line with global best practices.	➙ Community safety is a high priority for Councils and they are therefore unwilling to compromise on safety through cost reductions.	➙ The safety of the gas network is considered to be of paramount importance given the potentially serious outcomes of safety incidents.

Gas reliability.

Customer comprehension and priorities.

Reliability:
Overarching messages

- The concept of reliability is closely linked to safety – by default, issues that impact on safety are expected to impact reliability and vice versa.
- Currently, gas is viewed as a reliable energy source. Outages are rare and many of the research participants had not experienced an unplanned outage in their lifetime.
- Reliability is key to the value of gas to the end user.
- The costs of ongoing maintenance and providing consistent reliability across the network are expected to be factored into the existing pricing structure. From the SM Business customer perspective, there should be no need to raise prices to cover these activities. Overall, given the hypothetical choice between lower bills or higher/more uniform reliability the latter option is preferred.

In general, gas is perceived as being highly reliable. In part, the reliability of the network is a key reason why customers and stakeholders value gas as an energy source.

SM Business	Big Business	Councils	Land Developers
➙ Gas is perceived as one of the most reliable energy / utility services. ➙ Many SM Business customers cannot recall a time when they experienced a gas outage. ➙ Some vague recollections of short gas outages were mentioned. It can also expected that short gas outages could go unnoticed, for example, misattributing an outage to the pilot light on an appliance simply going out.	➙ Gas is seen as being highly reliable and is valued for this fact. ➙ Aside from the Longford Plant explosion, no prior experiences of outages were recalled.	➙ In general, gas is seen as highly reliable. ➙ However, for residents located at the outer edge of the network in regional areas, reliability of supply is a concern. For these customers, supply is intermittently interrupted during the winter months.	➙ Gas is clearly perceived as being a highly reliable energy source. ➙ Outages (planned or unplanned) are rarely if ever recalled, aside from the outage resulting from the incident at the Longford Plant in the 1990s. ➙ The reliability of the supply of gas is particularly salient in comparison to people's experience of electricity where outages are perceived to occur frequently.

“Its always there, even if you don't pay your bill!” SM Business

Unplanned outages are expected to be more disruptive and difficult to deal with than planned outages.

SM Business	Big Business	Councils	Land Developers
➙ Supply disruptions are primarily viewed as an inconvenience by SM Business customers whose primary activities do not rely on gas for their operation. ➙ For SM Businesses who rely on gas to conduct their primary business activity (e.g. kitchens and to a lesser extent, accommodation services) both planned and unplanned outages are expected to be disruptive and difficult to manage. Planned outages are nonetheless preferred because they allow businesses to notify their customers and schedule around it as far as possible.	➙ In general, planned or unplanned outages are viewed as completely unacceptable to Big Businesses who cannot function without gas supply.	➙ Planned works in Local Council areas are perceived to be carried out quickly and efficiently and with minimal disruption to residents. ➙ No Councils had experienced unplanned outages but such outages are expected to cause more disruption to local residents given their unpredictable nature.	➙ In their roles, planned and unplanned outages have limited impact on their work. ➙ Nonetheless, on questioning, planned outages are clearly preferred because they allow people to schedule their time and activities around such outages thus limiting the disruption caused.

The reliability of gas supply is highly valued by all customers and stakeholders and in general, there is little to no appetite for reduced reliability, even if this results in cost reductions. This is particularly true amongst highly gas dependent businesses and amongst councils who have vulnerable constituents.

SM Business	Big Business	Councils	Land Developers
➙ The inconvenience of no hot water, cooking or heating is perceived to be unacceptable by some. From this perspective, customers are unwilling to accept outages for any cost reductions. ➙ For a small minority, assuming outages would not be frequent or lengthy, some customers indicate a willingness to consider lower reliability for small reductions in gas costs. ➙ However, compromised reliability is sometimes viewed as an indicator of reduced safety and therefore likely to reduce customers' trust in the network. ➙ Overall, independent of safety, there is no strong sense that customers would accept lower reliability for reduced cost.	➙ Supply interruptions were identified as being completely unacceptable to Big Businesses who cannot function without gas supply.	➙ Areas with lower than average reliability represent a point of contention among Councils. Specifically, Councils believe that in light of uniform costs, all customers should receive the same level of reliability.	➙ In some cases, Land Developers believe the impact of no hot water, cooking or heating would be unacceptable to their customers. From this perspective they do not expect their customers would be willing to accept more outages for cost reductions.

"You're not getting the full service. If I'm paying a daily rate to get gas then I expect that."
SM Business.

It is expected that current charges include provisions for ongoing maintenance of the network, and that additional charges for improving or maintaining the network are unwarranted.

SM Business	Big Business	Councils	Land Developers
➙ Suggestions that ongoing maintenance of the network would be passed on to customers invoked some scepticism. ➙ It is expected that the gas network is maintained at a high enough standard and that ongoing maintenance has been planned and costed for across the life of the network. ➙ Given that customers are accustomed to high levels of safety and reliability, the necessity of increasing costs to improve safety or reliability is unclear.	➙ In general, Big Business is sceptical of suggestions that additional costs associated with the ongoing maintenance of the network might be passed onto customers. ➙ It is expected that every effort is made to ensure that supply is not disrupted and that the price charged by AusNet Services includes provisions for ensuring that no customers supply is compromised by known reliability risks.	➙ Tend to have a pragmatic view and expect that appropriate investment is made to maintain the entire network to ensure a stable supply, now and into the future.	➙ Given that the network is perceived as being highly reliable, it is difficult for Land Developers to appreciate why additional resources would need to directed toward improving reliability.

Future Demand for Gas.

Future demand:
Overarching messages

- Gas is a valued energy source which customers and stakeholders envisage using into the future. However, in a residential and SM Business context, gas consumption is expected to decrease over time as new technologies are further developed and adopted. For Big Business, the costs associated with implementing alternative energy solutions could be seen as prohibitive. Consequently, limited change in demand is predicted in the foreseeable future.
- It was difficult for customers to conceptualise and understand hypothetical trade-offs involving current and future consumption scenarios. Those who were able to form an opinion tended to favour the position that the costs of gas infrastructure should be spread evenly over the lifetime of the asset, regardless of the level of usage at a particular point in time. This therefore suggests that the notion of accelerated depreciation would not be well supported among participants.

Expectations regarding how reliant customers and stakeholders will be on the gas network in the future is variable.

SM Business	Big Business	Councils	Land Developers
➙ In general, SM Business customers expect to be using gas in the foreseeable future. ➙ Gas is strongly preferred for instantaneous hot water, and for cooking. ➙ Some SM Business owners indicated an interest in solar power in order to reduce outgoings. However, the capital investment required remains a barrier at this stage. ➙ While gas remains a relatively cheap option, it is likely to continue to be preferred. However, changes in the relative costs of gas could cause customer preferences to shift.	➙ While the participant may have plans to make changes to the energy efficiency of their processes, projected increases in production are expected to offset reductions in consumption, resulting in a net increase in demand.	➙ In general, Councils expect to see little significant change in demand for new gas connections in the near future. Gas is clearly preferred for some functions (e.g. cooking, heating, hot water). ➙ Given the perception of gas as a clean, economical / efficient energy source, Councils may predict increased usage in the community over time. ➙ Some also expect demand to increase in line with population increases.	➙ Some Land Developers believe that it will take time for buyers to begin to understand the benefits of alternative energy sources and become familiar with how they are used. Currently this is seen as limiting demand for alternative energy sources. The large capital expense and lengthy payback periods for these technologies is also a barrier to widespread introduction. ➙ Others report actively encouraging buyers to consider renewable technologies alongside or instead of traditional energy sources. Use of solar in particular, impacts on the green star rating of the new build and therefore directs choices away from gas and electricity alone. ➙ Gas is not always connected to developments of small apartments because electricity appliance are often deemed acceptable for small spaces. Further, it may not be possible/desirable to house the energy units on the outside of these developments. This also means that the installation of renewable technologies on such housing developments is not necessarily feasible. ➙ In a commercial capacity, cafes and restaurants are not expected to move away from gas for cooking.

"The benefit of gas is that it's reliable, and cheaper than electricity." SM Business.

In general, businesses or homes without gas tend to be viewed as less attractive.

SM Business	Big Business	Councils	Land Developers
➙ Given the perceived benefits of gas (instantaneous, cost-effective, reliable, clean), businesses with existing gas connections are seen as superior. ➙ Nonetheless, there is growing awareness of alternative energy sources that are acceptable in the absence of gas.	➙ To the extent that gas is critical to day-to-day operation of the business, premises without such supply are unlikely to be considered.	➙ In some Councils there is a perception that buyers avoid areas without gas connections, preferring to wait or buy elsewhere.	➙ It is often expected that customers would be put off by homes or businesses that are not connected to gas, therefore reducing their value. ➙ This may not be the case for small apartment developments. In this case, split system heating and cooling is seen as adequate.

Regardless of future demand, in principal, it is expected that infrastructure costs should be recovered evenly across the life of an asset.

SM Business	Councils	Land Developers
➙ In general, questions about the future are difficult for these customers to answer as it is hard to envisage what their position will be in the future, and what the future population and energy market may look like. The idea of paying more now for reduced bills in the future also raises some scepticism. ➙ SM Businesses tend to assume that even if demand is reduced in the future, the entire network will still require maintenance in order to deliver gas and that these costs should be spread out evenly. ➙ It is also expected that population growth will offset the impact of declining usage and lead to net growth in demand. ➙ Increased costs could also be expected to reduce the value of gas and accelerate interest in alternative energy solutions.	➙ Councils also found it difficult to conceptualise what future demand will look like and therefore make judgments on intergenerational equity. ➙ Nonetheless, Councils tend to think that even if customers are using less gas, in order to provide this fuel the infrastructure must be in place and therefore that the cost of gas assets should be spread out evenly across the life of the asset.	➙ Given the fact that not all expect the demand for gas to be considerably lower in the near future, and population growth is expected to increase, Land Developers found it difficult to understand why customers would need to pay more now to offset the impact of reduced demand in the future. ➙ Some Land Developers also envisage that any increase in the price of gas now would have the unintended consequence of accelerating customer adoption of renewable technologies, leading to a 'death spiral' situation.

> *It becomes a self-fulfilling prophecy – if we start putting less in because there is less demand, then the installation of assets in other places are more expensive so it feeds the cycle. Wouldn't want to be in that situation."* Land Developer.

> *They still need the infrastructure in place to get it even if it used less."* SM Business.

colmar brunton.

Single point of failure scenario:

If there were areas of the network where a single point of failure could result in a significant number of customers losing supply should AusNet Services invest more heavily in those areas to ensure greater reliability? Or is the current balance between cost and reliability sufficient?

- From the SM Business and Council perspective, views on this scenario are mixed and generally consistent with residential customer responses:
  - Some see the benefit of investing more highly where more people would be affected. The rationale here is based on minimising inconvenience to the maximum number of people.
  - Others adopt a more equity-related position, believing that all customers should receive the same level of investment across the network and therefore equal levels of reliability.
- Land Developers tend to take a more pragmatic approach to investment priorities:
  - Investing more highly where more people would be affected was the preferred strategy.
- Big Business found this scenario difficult to engage with, instead believing that investments should be decided based on robust risk-based frameworks in line with world best practice.
- From a more general perspective, the ubiquitous experience of a highly safe and reliable network suggests that the current balance between cost and reliability is appropriate.

The focus should be proportionate to the number of people it services."
Land Developer.

Deteriorating assets scenario:

If the number of assets in poor condition is increasing should replacement rates rise accordingly (increasing costs) or should cost be kept stable leading to lower reliability as more assets fail?

Customer and stakeholder responses to this scenario:

- There is an expectation that a program of maintenance has been and will be in place to ensure that the network remains in good condition. AusNet Services is assumed to have planned in advance, and charged accordingly, to cover the costs of maintaining the system. Hence the idea that costs will increase to cover maintenance is not readily accepted and raises questions about previous investment priorities that might have resulted in such a situation.
- If asked to make a decision based on the scenario, reliability is preferred over cost reductions.
- In principle, customers and stakeholders are not prepared to compromise on reliability to keep costs down, particularly if this means that their businesses will suffer as a result.
- Reliability and safety are also believed to be strongly linked; if reliability is compromised then safety may also be compromised and this is not acceptable.

> *At what costs do they start to fail? We can deal with an outage but you don't want leaks."* SM Business.

> *Don't think that we should let infrastructure fail. That's where safety would start to become and issue and confidence in the network lost*." Land Developer.

Lower reliability scenario:

What about customers with lower than average reliability, would we be willing to pay more to ensure they receive the same levels of reliability?

Among each audience, views on this scenario were mixed and no clear consensus emerged:

- There is an expectation that AusNet Services has planned ahead to maintain all areas of the network to a consistent standard and provided for this within their GAAR proposal and charging structure. Therefore, it can be difficult to understand why further investment would be needed to achieve uniform reliability.
- Nonetheless, when asked to comment on the scenario, some customers and stakeholders adopt a pragmatic approach and accept that some areas will have lower than average reliability as a function of variations in demand and location based factors. The caveat to this approach is that critical services (e.g. hospitals) are prioritised.
- Some customers and stakeholders adopt a more equity based approach. This seemed to be particularly true for those who experience lower reliability.
- From another perspective, as outages are so rare, some compromise to reliability may, in reality, not be an issue. Even with less reliability those customers in lower than average areas may still only experience outages very occasionally.
- A further consideration is the perceived link between safety and reliability. If there is a possibility that safety is compromised for those customers in areas with lower reliability then further investment is warranted.

Need reliability across the network or clients lose faith in the product and will stop using it." Land Developer

In some areas, high levels of demand means you can have high reliability" Local Council.

From the SM Business customer perspective, safety-related services should have priority.

Prioritisation of AusNet Services' activities:

- Focus group participants (SM Business only) were asked to rank the importance of a range of current activities carried out by AusNet Services.
- Responses were fairly uniform across SM Business groups.

Activity	Priority	Reasoning
Repair gas leaks reported by the public	High	Possibility of safety incident if not addressed.
Identify and repair gas leaks before they are large enough to be reported by the public	High	Possibility of safety incident if not addressed.
Provide a free Dial Before You Dig service to prevent underground assets being damaged	High	A fairly well known service. Valued to maintain safety and prevent gas leaks / safety incidents.
Replace aging gas mains to reduce gas leaks	High	Possibility of safety issue if not addressed.
Undertake daily patrol of high risk/critical assets to ensure they are not damaged	High	High priority to maintain safety of the network and prevent gas leaks or safety incidents.
Efficiently connect new customers to the gas network to lower end bill to users	Medium	Expected to be routinely taking place. However, if efficiency can be improved to keep costs down this is a positive.
Connect new customers to the network	Medium	An important part of AusNet Services' role but not a safety issue.
Replace gas meters to ensure they remain accurate	Mixed	Overall, accuracy is important. However inaccuracy is not perceived to be a major issue. Correcting inaccuracy could work for or against the customer.
Extend the network to regional towns who do not have access to mains natural gas	Medium-Low	Self-interest plays a role here. As respondents were all current customers they are not personally in need of an extended network.
Provide greater transparency to gas metering data	Low	No perceived lack of transparency and little interest in more information on gas usage.
Relocate gas meters at a property to a safer location	Low	No prior awareness that some gas meters are in unsafe locations. Difficult to gauge risk.
Read your gas meter bi-monthly (every 2 months) or every three months	Low	Current frequency is acceptable. If meters were read less frequently this would not be an issue for most customers.
Increase network reliability and capacity by upgrading low pressure areas to high pressure	Low	Customers are not familiar with the concept of high and low pressure and its implications for reliability and capacity. No issues with current reliability or capacity.