Highlights Paper

ATA Consumer Gas Preferences Survey

March 2016

1.0 Document Information

Document Version	Date	Prepared By	Reviewed By	Comments
Gas Survey v1	18th February 2016	Kate Leslie – Energy Analyst	Damien Moyse – Policy & Research Manager	Initial Version
ATA Gas Pref Survey – Draft Report 190216 v0.2	19th February 2016	Damien Moyse – Policy & Research Manager	Kate Leslie – Energy Analyst	Second Draft
ATA Gas Pref Survey – Draft Report 010316 v0.3	1st March 2016	Kate Leslie – Energy Analyst	Damien Moyse – Policy & Research Manager	Third Draft
ATA Gas Pref Survey – Draft Report 020316 v0.4	2nd March 2016	Damien Moyse – Policy & Research Manager		Consultation Draft
ATA Gas Pref Survey – Report 240316 v0.5	24th March 2016	Kate Leslie – Energy Analys		Final report

Prepared for Energy Consumers Australia

ATA Energy Projects Team
Prepared by: Kate Leslie, Damien Moyse
Cover photograph:

Alternative Technology Association
Level 1, 39 Little Collins St, Melbourne VIC 3000
+61 3 9639 1500
+61 3 9639 5814
www.ata.org.au

This project was funded by Energy Consumers Australia (www.energyconsumersaustralia.com.au) as part of its grants process for consumer advocacy projects and research projects for the benefit of consumers of electricity and natural gas. The views expressed in this document do not necessarily reflect the views of Energy Consumers Australia.

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2.0 About the Survey

With support from Energy Consumers Australia, the Alternative Technology Association (ATA) undertook a consumer survey, collecting information and responses regarding residential gas preferences from small energy consumers in the National Energy Market.

The purpose of the survey was to better understand consumer preferences in this area, in order to inform ongoing consumer advocacy by ATA as well as by other consumer organisations.

The survey was electronic, using the online tool Survey Monkey[1].

Design

Many people and organisations, including consumer advocates and the gas industry, were consulted at the survey design and prototyping stages. Nearly all of the feedback provided was able to be incorporated. (The errors and flaws remain ATA's.)

Criteria

Energy consumers who met the following criteria were welcomed to take the survey:

- Adults living in Australia;
- Home connected to mains gas;
- Homes considering connecting to mains gas;
- Homes currently using bottled gas (LPG);
- Consumers with some awareness of the household's energy bills;
- Consumers with some say over the household's choice of appliances.

Promotion

The survey was promoted through ATA's existing networks (e-bulletin, Facebook and Twitter) and via other consumer and community organisations that we partner with. The gas industry and local government were also given the opportunity to promote the survey.

Length

The survey took around ten minutes to complete. There were additional optional questions for enthusiastic respondents and many were generous with providing additional details regarding their experiences and preferences.

A total of 955 respondents started the survey; with 867 respondents completing it. The balance dropped out at some point along the way, which is unsurprising being a voluntary online survey which asks some relatively difficult questions.

Currency

Responses occurred largely between the end of October and December 2015. The survey remains open at the time of writing (February, 2016) as there is no compelling reason to close it off[2]. People who meet the criteria are welcome to take the survey to share their gas preferences.

[1] ATA accesses a free version of Survey Monkey, which does not include reporting statistical significance.
[2] The web address is https://www.surveymonkey.com/r/LPLZKF5.

This paper provides a high level overview of the survey findings – focussing mainly on the headline results and distinguishing where different results were registered by ATA and non-ATA members. The latter group is a proxy for the general public. There are many other respondent segments which could be evaluated in the future.

Finally, ATA wishes to sincerely thank all those who participated in the survey. We cannot claim that the results are broadly representative of all residential energy consumers, however ATA wishes to reassure those who may want to use the results that every effort was made to reach out to a broad range of people.

2.1 About the Respondents

The profile of the first 955 respondents (as at February, 2016) is as follows:

- Weighted towards Victorians (two thirds of residential gas demand is from Victoria), with 54% of respondents;
- Weighted towards home-owners (90%)[3] and males (66%);
- Nearly two thirds (65%) ATA members;
- 61% live in a capital city;
- 86% live in a separate house;
- Nearly half (45%) say their household comprised of two people;
- There is a diversity of age groups other than young people (only 2% aged 18-30 years);
- 20% have a pensioner concession card, health care card or DVA gold card; and
- 75% of respondents were born in Australia.

On some demographic characteristics the profile of ATA members is very different to non-members[4]:

- ATA members are more likely to be male (73%) than non-members (54%);
- ATA members are more likely to be older;
- Just under half of ATA members (48%) live in a two person household, compared to 39% of non-ATA members. The household sizes of non-ATA members are more diverse;
- ATA members were much more likely to own their home outright (63%) compared with non-ATA members at 47%.

Generally the respondents to this survey are engaged energy consumers – Rooftop PV runs at 60% of ATA members, and 45% of non-members.

[3] A disproportionate share of respondents were home-owners, partly reflecting survey design and partly reflecting the fact that typically it is only home-owners that have agency over appliance choice.

[4] 'Non-ATA members' include those who didn't know whether they were members.

3.0 Summary of Results

3.1 Energy Use

74% of all respondents have a mains gas connection, and 23% use bottled gas. Non-ATA members were more likely to be connected to mains gas (83%), with 17% using bottled gas.

62% say they are either "much less likely" or "less likely" to choose a gas appliance now compared with 5 or 10 years ago:

- This view is the majority view of non-ATA members (53%);
- It is more common in ATA members (68%), who also hold the view more strongly.

Slightly more than half of all respondents (55%) use "about the same" amount of gas as 3 years ago:

- Non-ATA members are less likely to use about the same (52% compared with 60% ATA members); and
- Non-ATA members were more likely to be using "more" gas (9% versus 14%)[5].

There is a great diversity in main reasons for using less, and more, gas. Of the 29% using "less" or "much less", the most common answer was:

- "Other" (25%) with a spectrum of explanations. Of the respondents who do nominate one of the given explanations, two answers are most common:
  - installing electric appliances (18% non-members, 26% ATA members); and
  - moving into a new home that uses less gas (12% both groups).
- Other common responses were:
  - 9% installed more efficient (gas) appliance(s);
  - 8% improved the thermal efficiency of their home;
  - 8% installed solar hot water; and
  - 6% decreased household size.

3.2 Space Heating

About half of respondents (49%) use mains gas to heat their homes:

- The most common gas appliance is ducted gas (43%)
- 36% also have a reverse cycle air conditioner (RCAC) with which to heat their home.

When asked all the reasons why they chose their main heater the most common answers are comfort/convenience and it came with their home (both 38%). Among gas space heating home owners (n=567), 45% said it came with their home and 41% said comfort/convenience.

[5] The survey question clarified that "note, your gas bill may have changed as a result of different prices. We want to know just about the quantity of gas." It is possible that some respondents may have had trouble distinguishing between quantity demanded and bill size. The options were "much less", "less", "about the same", "more", "much more", "not applicable" and "don't know". Only 1% of respondents answered "don't know".

3.2.1 System Replacement

64% report being "confident" or "very confident" that they could access information comparing running costs of space heating appliances:

- More ATA members were "very confident" (23%) than non-members (16%).

One third (33%) of non-ATA members have some degree of confidence in knowing how much longer their main space heater was likely to last[6]. 43% were not confident, with just under half of the ATA members (49%) expressing some level of confidence.

When their main heating appliance fails, the most common plan is to investigate options at that time (38%). Deferring the decision until later is more likely among non-ATA members (41%).

Among those who have investigated their options:

- 24% say they have a plan to replace it with something different;
- compared with 14% who plan to replace it with the same.

Among home-owners relying on gas for space heating (mains or LPG) who have investigated their options:

- 33% plan to replace it with something different;
- compared with 7% who plan to replace it with like-for-like.

When those in this group who intend to make a change are asked to specify what they plan to switch to, the most common answer is efficient electric appliances (RCAC/heat pumps).

3.2.2 Savings Expectations

Expectations of savings required to switch from gas space heating to electricity (among gas users[7]) are:

- The largest group, 39%, (37% of ATA members/43% of non-ATA members) of respondents are able to select a dollar figure from the choices (ranging from $100 annually to $1000);
- A significant proportion, 28%, answer "$0" (no savings required) (31% ATA members/24% non-ATA members);
- One quarter of respondents (25%) answer "don't know";
- 7% answer "wouldn't use".

[6] The question was phrased as agreement/disagreement with the statement "I know how much longer my main space heater will last for."

[7] One of the options to this question was "not-applicable - not heating with gas". ATA's reporting, for this question and others like it, excludes the respondents who chose this answer.

For switching from electricity for space heating to gas (among electricity users):

- The largest group, 35%, answer “wouldn't use” (42% ATA members, 23% non-members);
- One third of respondents are able to select a dollar figure from the choices (30% of ATA members/39% of non-ATA members);
- A substantial share of respondents (25%) answer “don't know”;
- Only 7% answer “$0” (no savings required).

Concerns about switching to gas or electricity for space heating were open ended questions and we received many and varied responses.

3.3 Hot Water

80% of respondents rely on mains gas or solar as their main fuel to heat water:

- Among non-ATA members 61% rely on mains gas and 22% have solar;
- Just under half of ATA members (46%) rely on mains gas and more (one-third) have solar;
- Gas instantaneous and gas hot water tank are the most common hot water appliances (26% and 24% respectively).

Respondents were asked the reasons for their choice of hot water system:

- 41% said their heating system came with the home;
- followed by 37% who said environmental reasons factored in their choice.
- 'Use less energy/efficiency' is also nominated by 37%.

These are the top 3 reasons from both ATA members and non-members.

3.3.1 System Replacement

8% of respondents replaced a hot water system in the previous 12 months (n=71). Among this group:

- Most replaced their hot water system with something different (79%).
- Gas instantaneous and electric heat pumps are the most popular appliances (28% and 27% respectively);
- Solar has a 21% market share (about the same proportion have gas boosting as electric boosting);

Among ATA members, heat pumps are the most common appliance (33%).A substantial proportion, one-third of respondents, disagreed to some degree with the statement “I know how much longer my main hot water system is likely to last for”. 45% “agreed” or “strongly agreed”.

Surprisingly, 72% of respondents report some degree of confidence in how to access information comparing costs of running appliances. Confidence is higher among ATA members, at 76%.

When their hot water system fails:

- just over a third of respondents have a plan to replace it with something different (35%);
- One third (33%) plan to investigate their options at the time;
- Non-ATA members were more likely to defer investigating options until the time (37%); and
- Non-ATA members were less likely to have planned to replace it with something different (however even that proportion was material at 30%).

There was a fairly even spectrum of how long respondents were prepared to wait for a new system, up to one week.

3.3.2 Savings Expectations

Expectations of savings required to switch from gas hot water (among gas users) to electricity:

- A substantial proportion (41% of non-ATA members/35% of members) of respondents are able to select a dollar figure from the choices ($100-$500 annually);
- 29% answer “$0” (33% ATA members/24% non-ATA members);
- 22% answer “don't know”;
- 12% answer “wouldn't use”.

For switching from electricity powered hot water systems (among electricity users) to gas:

- 41% answer “wouldn't use” (46% ATA members/30% non-ATA members);
- A substantial proportion (27% of ATA members/39% of non-ATA members) of respondents is able to select a dollar figure from the choices;
- 18% answer “don't know”;
- 10% answer “$0”.

3.4 Cooking

81% of respondents regularly use a gas cook top/stove. Only 8% regularly use electric induction cook tops.

There is a general enthusiasm for induction cooking. It would be the first choice of 44% (and only 31% have tried cooking with it):

- ATA members were more enthusiastic about induction cooking, with 50% nominating it as their first choice;
- This compares with one third of non-ATA members.

There is still a substantial segment that preferred cooking with gas. 36% said that a gas cook top would be their first choice (30% ATA members/46% non-ATA members).

4.0 Discussion

ATA's Gas Preferences survey demonstrates that residential consumer preferences regarding gas and electricity choices are changing – and not just within the 'early adopter' market:

- 62% say they are either "much less likely" or "less likely" to choose a gas appliance now compared with 5 or 10 years ago.
- Among home-owners relying on gas for space heating (mains or LPG) who have investigated their options, 33% have a plan to replace their main appliance when it fails with something different (mostly efficient electric), compared with 7% who plan to replace it with like-for-like.
- 79% of those who replaced a hot water system in the previous 12 months replaced it with something different, often heat pumps. Only 34% of people who replaced their hot water system continue to rely mainly on gas (mains or LPG) for heating water, compared to 54% who didn't replace their hot water system.
- There is considerable enthusiasm for electric induction cooking.

A significant share of gas users are making plans to switch appliances away from gas, although relatively few have already done so.

Previous ATA research demonstrates that for a large number of existing dual-fuel homes, switching some appliances (particularly space heating) from gas to efficient electric as they reach the end of their asset life is more cost effective than staying on gas over the medium to longer term.

As such, the trends identified above should be considered as households acting in their economic best interest. Climate action was also mentioned in comments by many respondents.

The results of this survey indicate that the current reduction in gas usage per residential connection that most gas networks are experiencing is likely to continue. This may also accelerate given the increasing economic attractiveness of electricity for space heating and water heating in most jurisdictions.

ATA believes more research is needed into how much of the existing gas demand is the result of market failures, such as rental homes and low economic resource households. It is common for the gas networks to claim that gas is a "fuel of choice". These households face significant barriers to fuel switching and as such, their continued gas demand should not be considered as "expressing rational choice".

There is confidence among respondents in understanding how long their appliances are likely to last and in their ability to access information required to make rational choices – such as appliance running costs.

ATA strongly advocates for programs that make available the best information possible to inform the efficiency labelling. There is also a role for regulatory oversight over misleading gas advertising[8].

[8] Until very recently it was common for the gas industry to advertise that the running costs of gas appliances were cheaper than electric appliances. There is now a trend for industry to advertise that on an equivalent energy unit basis (e.g. MJ) gas is cheaper than electricity. This is true, but misses the issue of the difference in what can be achieved with joules of electricity compared with joules of gas. One joule of electricity can be turned into 4-5 joules of heat (using heat pump technology). Whereas one joule of gas can only be turned into 0.9 joules of heat at best (by burning).

In our view, consumers need simpler and more targeted information that is relevant to their specific situation. Assistance should be provided to disadvantaged and vulnerable households to deal with capital cost barriers where a demonstrated longer term economic benefit exists.

With per connection gas use already in decline, and the potential for this trend to accelerate, it is time to consider how gas businesses, regulators and governments can plan for gas market contraction in an efficient, orderly and equitable way.