1st October 2015

Mr Warwick Anderson
General Manager - Network Finance and Reporting
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Copied to
Mr John Bradley
Energy Networks Australia
Level 1, 110 Giles Street
Kingston ACT

Dear Mr Anderson

ATA wishes to take the opportunity to respond to the ENA's letter to the AER, dated 3rd September 2015, regarding ATA's submission to ActewAGL's Access Arrangement proposal. We intend that this letter assists the AER in assessing ActewAGL's proposal, and we ask that it be published on the AER website accordingly.

ATA is supported by Energy Consumers Australia to represent users of gas and electricity.

ATA thanks the ENA for their attention to our submission dated 10th August 2015. We value a collegial relationship with the ENA and other stakeholders, and are always willing to discuss our research and advocacy in any forum.

This letter contains our responses to the specific concerns raised by the ENA in their letter. References to our research references page numbers in our report *"Are we still Cooking with Gas"* (supplied to the AER and available from the ATA website).

1. Discounted Capital Cost for RCACs in Warmer Climate Zones

The ENA is correct in that we attributed some of the value, and therefore capital cost, of Reverse Cycle Air Conditioners (RCACs), to cooling in warmer climate locations.

In our experience, this reflects typical consumer purchasing behaviour, as described in Section 7.2.8 on page 76:

> *"RCAC also provides the benefit of cooling – indeed many consumers are more familiar with this function of RCAC than heating. In warmer climates, cooling is often the sole motivator for a consumer to purchase an RCAC.*
>
> *"To account for the different value placed by consumers on cooling in certain locations, ATA chose a portion, ranging from 0 to 100%, to reflect the capital value attributable to the heating function of RCAC for each location.*
>
> *"For example, where 50% is attributable, half of the capital cost of the RCAC is attributable to heating and included in the analysis, while the other half is attributed to cooling –* ***a function that is not provided by equivalent gas-fuelled appliances."*** *(page 76)*

In 'Balanced Moderate Demand' climates like Sydney and Adelaide, we attributed 50% of the capital cost of RCACs to cooling, to be consistent with observed consumer purchasing motivations. It is pretty clear that until recent times, the majority of consumers, particularly in warmer climate locations, have purchased RCACs for the express purpose of cooling only – with only a small value being placed on their ability to provide heat. In this context, our attribution of only 50% of the capex value for cooling would be considered by many (including us) to be conservative.

ATA would be happy to consider an alternative capex methodology (that takes into the account the distinction between the value that energy consumers place on RCACs for cooling and heating in different climate zones) if the ENA wish to provide one and substantiate why it is a more appropriate representation of consumer preferences.

Ultimately however, this matter is irrelevant in the context of the ActewAGL proposal, as ATA attributed 100% of the capex value of RCACs to heating in that climate location.

2. Reverse Cycle Air Conditioners Co-efficient of Performance

The ENA suggest in their letter that the Co-efficient of Performance (CoP) chosen by ATA for RCACs, and our de-rating for cold climates, was *'arbitrary'*.

We find this assertion somewhat perplexing, given that five pages of the report (pages 69-73) is dedicated to explaining in detail the methodology that underpins the selection of CoPs for relevant locations.

As our report notes on page 75, the CoP of RCACs varies with ambient temperature conditions. We undertook extensive research of available data regarding how CoP's vary with temperature and found a *"marked drop in the CoP associated with RCAC when the ambient air temperature falls below four (4) degrees Celsius"* (Figure 7.5, page 75).

Across most of Australia's population centres, very little of the heating load occurs when outdoor temperatures are below 4 degrees Celsius. To account for where this is not the case – eg, Tullamarine (Melbourne), Canberra and Orange - we chose to de-rate the CoP of RCACs by 0.5 for the annual heating loads, as described on page 76.

In our view (and that shared with us by many others), our approach was quite conservative, hence noting on page 73 that:

> *"Arguably, an indicative efficient commonly-available small RCAC system could be assumed to have a CoP above 5."*

We note also that if the CoP de-rating in cold climates (including the ACT) was removed in response to the ENA's concern, the results would further favour electricity over gas, failing to support ENA's suggestion that ATA's assumptions *"disadvantage the competitive position of gas appliances in the comparative analysis"*

If the ENA would substantiate why a materially different CoP should be used, we would be happy to consider this and adjust our modelling as appropriate.

3. Gas Price Forecasts

The ENA suggests that our gas price outlook was *"unbalanced and aggressive"*. They then compare our forecast of 16% for the ACT to Core Energy's forecasts of 12%.

Firstly, given the range of gas price forecasts that exist – including a number of other recent forecasts that are higher than that used by ATA - *"unbalanced and aggressive"* does appear to be a somewhat over-stated to describe a difference of only 4%. In any case, given that Core Energy sources ATA's report in the same document that the ENA refers to in their letter, it would Core Energy do not share the ENA's lack of confidence on ATA's findings.

Section 10.1.2 (p102) of our report describes the process that ATA used for incorporating gas price forecasts. ATA did not attempt to forecast gas prices, but relied on a range of forecasts as compiled in October, 2013 by the Consumer Utilities Advocacy Centre (CUAC). We adopted a conservative approach by using a gas price outlook that was below median price forecasts.

Secondly, we note Chapter 3.0, which is largely devoted to assessing the sensitivity of results to factors including different retail gas price forecasts. Sensitivity analysis was undertaken to test the results against a range of forecast gas prices for Victoria and NSW (chosen for having large populations of gas users and a broad range of prices respectively). As a result of this sensitivity analysis:

> *"ATA found that the results were not particularly sensitive to different gas price trajectories –whilst they changed the magnitude of the numbers, they largely did not change an uneconomic investment into an economic one (or vice versa); hence, had little impact on the findings or advice." (page 18)*

The lowest gas price trajectory ATA tested for model sensitivity was essentially no greater than CPI: as such, the Core Energy's forecast falls within the range of sensitivities tested, which effectively showed that using Core's forecast would have made no difference to the findings.

Finally, ENA's suggestion that ATA's outlook is "*likely to understate the relative competitive position of gas"* fails to take into account the relationship of gas and electricity prices. Lower electricity prices have a similar impact on the results to higher gas prices.

ATA's report was published in November, 2014, based on information and fuel prices available at that time. Core Energy's forecast was published in June, 2015. Given that electricity prices in the ACT are now notably lower than 12 months ago (and lower than the AEMC's forecast used by ATA), using more up-to-date information (such as Core's forecasts and current prices) would only strengthen the results in favour of electric appliances over gas appliances. In other words, gas appliances are actually marginally less favourable today than the energy price forecasts used by ATA predicted they would be.

In this context it would appear misguided that that ENA sees ATA's energy price outlook as *"unbalanced and aggressive"*, and plainly incorrect that our assumptions "*disadvantage the competitive position of gas appliances in the comparative analysis".*

4. Whole of House Heating

The ENA claims that the ATA was *"inconsistent"* when comparing the heated areas of homes for gas and RCACs. This claim may arise from a misunderstanding on ENA's part, either of how consumers choose to operate appliances in the real world, or of how our methodology reflects these consumer behaviours.

ATA's methodology is based on a like-for-like approach: the overall conditioned area, whether using gas or RCACs, remains the same. Section 7.1.2 (page 68) details the required heating loads for each Household Scenario. Section 7.2 outlines the methodology for meeting those loads with RCACs; and Section 7.3 with gas.

Consumers using RCACs for whole of house heating do not tend to install them in every room - nor do they need to, to meet their whole-of-home heating needs. (Some consumers only use one RCAC to heat for their home: ATA did not consider that particular arrangement to be like-with-like however and did not consider it in our report). Table 7-12 details the number and size of RCAC units assumed for each Household Scenario (page 77).

ATA confirmed that the heating capacity and configuration of installed RCACs was sufficient for the home and climate zone using standard industry rules for heating. As we noted on page 77, *"ATA used these benchmarks as a check that adequate RCACs for heating are installed for the households."*

Separate split systems do have a natural 'zoning' effect, whereby consumers typically do not turn them all on at once to achieving the same end-use heating requirements. This results in lower energy use, which we did take into account (page 77).

The approach outlined in ATA's report is consistent with consumers' purchasing and usage behaviours today. Consumers are not homogenous. As noted in our report, some consumers prefer to heat with gas heaters for amenity or other reasons. Some consumers prefer to heat with electricity for any of a range of reasons. For most consumers, purchasing decisions are heavily influenced by economic considerations.

ATA's analysis clearly shows that consumers who make decisions on an economic basis will increasingly choose RCACs for space heating, and this is backed up by observed behaviours in, for example, South Australia.

Appendix 3.01 of ActewAGL's own submission, by Core Energy, on p95 of cited ATA's report in making a case that there is declining gas demand for space heating.

> *"A widely sourced study entitled Are We Still Cooking with Gas? conducted by the Alternative Technology Association (ATA), and supported by the energy market's Consumer Advocacy panel study found that houses already connected to the gas network could steadily withdraw from using gas for space heating in favour of using reverse-cycle air conditioners, on economic grounds"*

Core Energy's report says nothing to suggest they share the ENA's view that *"the cost of Reverse Cycle Air Conditioning would clearly be greater on a like for like basis. ".*

5. Independent Review

We agree wholly with ENA's observation that the ATA's report was not well received by the gas network sector – naturally, it is not good news for these businesses - however, we challenge the

ENA's assertion that *"The ATA's report has not been subject to an independent peer review analysis to provide stakeholders with confidence in its findings."*

The contributions of 40 organisations and individuals, many of whom reviewed part or all of ATA's report during drafting, is acknowledged on page 10. This included two gas distribution businesses - both ENA members - feedback from whom was welcomed and incorporated into the report, regardless of whether they supported the findings.

The draft report was also reviewed by two research institutions, and in keeping with Consumer Advocacy Panel funding requirements, the was submitted to COAG Energy Council for fact checking and review before its final publication.

Since the release of the report, AEMO, Melbourne Energy Institute and Grattan Institute have all undertaken their own modelling and analysis (noted below) into residential fuel switching, based directly on the outputs and findings of the ATA report, and their general findings corroborate.

As noted above, of ActewAGL's own Access Arrangement submission (Appendix 3.01) cites ATA's report as evidence of declining gas demand.

ATA's report has been widely acknowledged in the media, and has been promoted on social media by the ACT government.

ATA's report stands as the definitive independent study on the economics of fuel choice in Australian homes.

6. ENA's feedback on ATA's Report

Respectfully, we believe ENA may have misunderstood the intention of the statement which they highlight. In its full context, our statement was:

> *"Our report has been well received. Individual gas distributers engaged with us in producing the report, and it has been extensively reviewed by the Energy Networks Association. On the basis of our research, one gas retailer and one academic institution commissioned us (separately) to build a forecasting model of gas demand."*

To be clear, we do not intend to suggest that ENA support the findings of the report.

We did however greatly appreciate the ENA's extensive scrutiny of our report, and for taking the time to work through their concern in an intensive half day meeting held 25th May 2015 to discuss a number of matters of detail in the report. In that meeting, the ENA's close attention to the details of the report revealed one inconsequential[1] error in our work.

[1] ATA had considered the Tumut gas pricing zone to be a *"heating dominated"* climate zone for the purposes of space heating. As Tumut does not have its own weather station reporting temperatures, we had based space heating loads on Gundagai. The ENA was of the view that Tumut would be a *"heating dominated- high demand"* zone, consistent (for example) with Cooma. This view, while valid, does not materially alter the findings of the report. ATA would be happy to provide more information on request.

A number of other ENA concerns were discussed and to our understanding, more or less resolved, at that meeting. As such, we were surprised to see some of them rehashed in the ENA's recent letter to the AER. We reiterate that we would welcome the opportunity to address any matters that the AER or ENA wish.

Thank you for your time, and should you have any queries, please do not hesitate to contact me on 0412 223 203 or craig@ata.org.au or myself on 03 9639 1500.

Yours sincerely,

Craig Memery

Senior Energy Consumer Advocate
Alternative Technology Association