

Attachment 4B

Additional Support for Commercial and Industrial Demand Forecasts

June 2018

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Attachment 4B – Additional Support for Commercial and Industrial Demand Forecasts

1 Industrial and Commercial Forecasts

This Attachment provides additional support for our commercial and industrial demand forecasts.

1.1 Base and extension case energy mix assumptions

The base and extension case energy mix and consumption reflects current development, building and consumption trends in Mount Barker and South Australia.

1.2 50 GJ MDQ connections – Monarto South and Mount Barker

We have forecast a total of four 50GJ MDQ industrial connections over the next 30 years. We have conservatively forecast all four of these connections at the minimum demand of 50 GJ/day.

The first two are located in Monarto South and are expected to connect in 2023 and 2025. These connections reflect discussions with businesses already in the area that they would connect to natural gas, as well as the planned expansion which will bring new large businesses to the area.

The second two are located in Mount Barker and are expected to connect in 2031 and 2040. These connections reflect the statewide ratio of industrial to residential customers, which is the same forecasting methodology applied for commercial connections in Mount Barker (see *Attachment 4A: Core Energy – AGN Mt Barker Final Report* and *Attachment 5: Core Energy – Mt Barker Model*).

We engaged Core Energy Group (CE) to conduct an independent forecast of natural gas customers for the Mount Barker region. CE determined the average network-wide ratio of industrial connections to residential connections (which is 0.03%) best represents the characteristics of the region and was appropriate to forecast demand connections for the Mount Barker growth area.

These connections reflect the anticipated organic growth in industry and employment driven by population growth. The connections forecast also recognises that the economic development and the creation of new employment opportunities in the region is a key strategic priority of the District Council of Mount Barker.¹

1.3 Estimated use of chicken growers – Monarto South

[REDACTED] The main use of LPG in hatching and growing is for heating as young chickens require high temperatures to stay healthy and grow quickly. [REDACTED]

¹ District Council of Mount Barker, Strategic Plan 2012-2017, <http://www.mountbarker.sa.gov.au/webdata/resources/files/DCMB%20StratPlan%202012-17.pdf>

[REDACTED]

In addition to the hatchery, there are currently nine chicken growing sites with 26 sheds in Monarto South. Based on discussions with industry, we estimate a gas requirement of 1.2 TJ p.a. per shed, and therefore a total LPG load across these sites of around 31 TJ p.a.

There are also additional sites in nearby areas, with further growth underway on the back of Ingham's \$275m investment in new breeder farms at Monarto and Yumali, a hatchery expansion at Murraylands, new contract grower farms, an upgrade of the primary processing plant at Bolivar, and a new feedmill at Murray Bridge.² These expansions will have significant energy requirements.

Given the significant expansion of the industry in the area, as well as the existing industry already present, we consider the forecast of five connections at [REDACTED] is likely to be conservative.

1.4 Commercial Penetration – Mount Barker

As with Residential Penetration, there are difficulties with comparing our customers to statewide datasets of dwellings, population, lots or building activity as our network does not cover all areas.

As the AER is aware, we engaged CE to conduct an independent forecast of natural gas customers for the Mount Barker region. CE determined the average network-wide ratio of commercial connections to residential connections (which is 2.54%) best represents the characteristics of the region and was appropriate to forecast commercial connections within Mount Barker.

This is a different approach to the forecast developed for our earlier revised AA proposal which had regard to information provided by the Council about its plan for commercial hubs and retail and employment precincts and identifying existing local businesses likely to connect.

Table 1 below compares the commercial connections forecast in our current business case to those in our revised AA proposal.

² *Ingham's on investment track in South Australia*, Media Release, 16 May 2016, <https://inghams.com.au/inghams-on-investment-track-in-south-australia/>.

Table 1: Comparison of commercial connections approaches

	Approach	2020/21	2021/22	2022/23	2023/24	2024/25	2029/30	2039/40
Current Business Case	Top down approach based on expected number of residential connections	5	13	21	28	36	78	165
Revised proposal	Bottom up based on Council plans and existing customers	11	22	33	44	48	48	48

The bottom-up approach produced 48 connections by year five and assumed no additional connections beyond 2025, despite continued residential growth to 2040. The top-down approach provides a slower uplift with continued growth in line with residential growth.

We note reticulating natural gas to the existing Mount Barker CBD could result in a different profile of connections, with more connections earlier, compared to CE’s forecast. However we would still expect the total number of commercial connections to reflect residential growth over the period consistent with that observed across the state.

The alternative approach is to consider commercial connections within the new development suburbs used to forecast residential penetration. This approach would not provide the best possible forecast of commercial connections in the circumstances for a number of reasons.

The development estates in Mount Barker have the Mount Barker town centre in close proximity, which is also a hub for other towns in the Adelaide Hills (the Greater Mount Barker and Adelaide Hills area is circled in Figure 1). The addition of nearly 8,000 homes in Mount Barker over the next 30 years will require additional schools, restaurants, cafes, shopping centres, health and recreational facilities.

Also, the proposal includes reticulation into the Mount Barker CBD which will drive uptake of gas by existing businesses which support the existing developed area. ABS Counts of Australian Businesses for June 2017 show there are 202 businesses with five or more employees in the District Council of Mount Barker.³ This confirms our forecast of 165 commercial connections and 2 industrial connections by 2040, some 22 years away, is reasonable.

The new development suburbs are reasonably dispersed within, or on the close outskirts of, metropolitan Adelaide (as depicted in Figure 1 below) and therefore have significant, existing infrastructure and town centres in close proximity. While the individual development estates in these suburbs are of a comparable size and development type to individual development estates in Mount Barker, many of the growth areas are much smaller in comparison to the Mount Barker growth area.

³ ABS, 8165.0 - Counts of Australian Businesses, including Entries and Exits, Jun 2017.

Figure 1: Recent residential developments

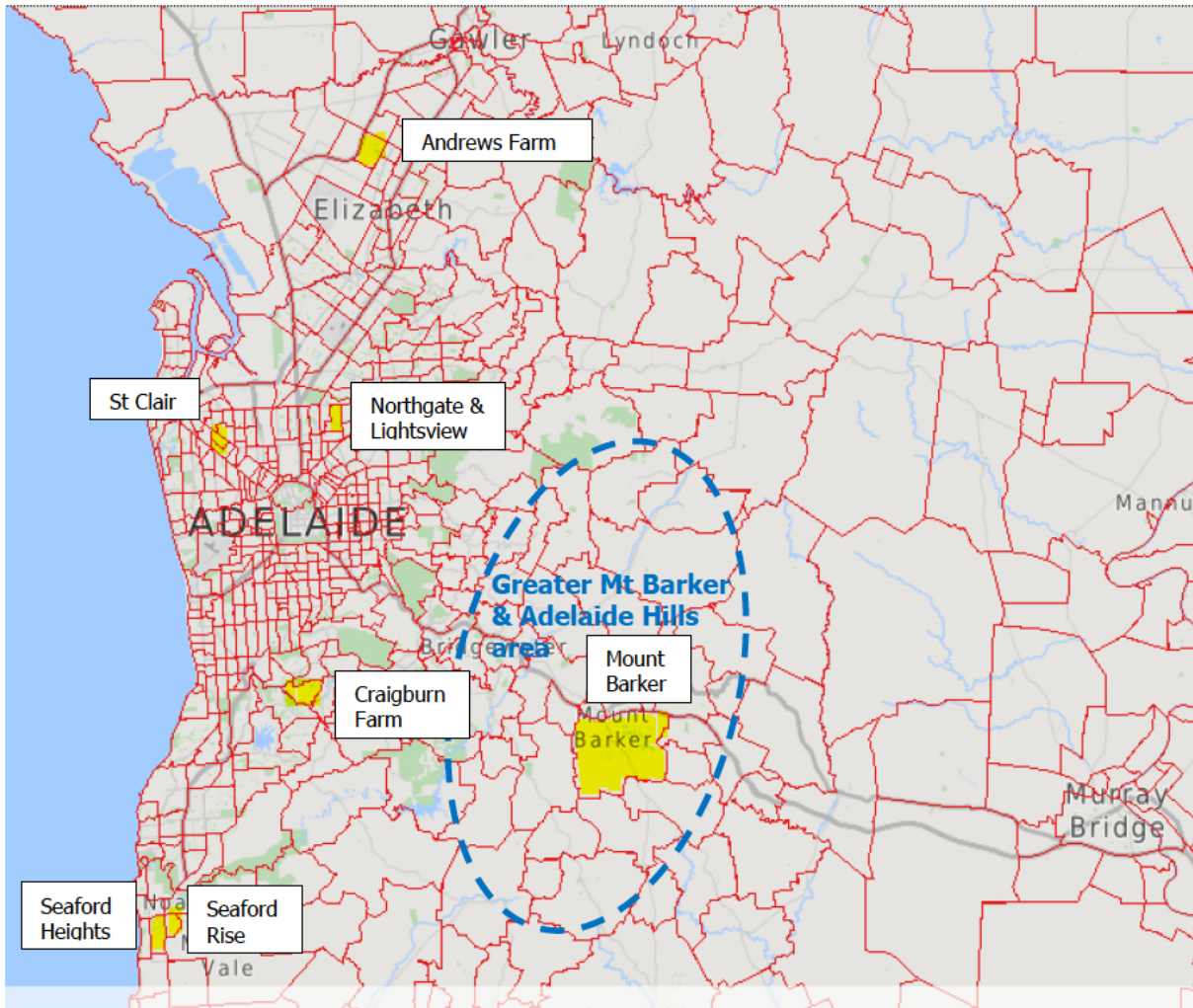


Table 2 below compares the ratio of commercial to residential connections for new development suburbs, network wide and other regional centres in SA.

Table 2: Proportion of business to residential connections

Suburb	Residential connections	Business connections	Ratio
Total new development suburbs	14,022	94	0.71%
Total network wide	425,081 [^]	10,805 [^]	2.54%
Mount Gambier*	8,720	309	3.62%
Nuriootpa	1,022	37	3.62%
Port Pirie*	4,803	136	2.83%
Whyalla*	4,090	134	3.28%

[^]Average of 3 years (2014/15 to 2016/17)

*Mount Gambier includes the suburbs of Mount Gambier and Worrolong; Port Pirie includes the suburbs of Port Pirie, Port Pirie South, Port Pirie West, Risdon Park and Risdon Park South; Whyalla includes the suburbs of Whyalla, Whyalla Jenkins, Whyalla Norrie, Whyalla Playford and Whyalla Stuart

Table 2 shows there are some additional commercial customers within new development suburbs, however they are not to the same scale as network wide or the regional centres of Mount Gambier, Nuriootpa, Port Pirie and Whyalla.

Economic development and the creation of new employment opportunities in the region is a key strategic priority of the District Council of Mount Barker.⁴ Therefore we expect the mix of domestic, commercial and industrial customers to mirror the network wide ratios in South Australia. We also note that the forecast a commercial to residential ratio in Mount Barker is relatively conservative when compared to those ratios in in Mount Gambier, Nuriootpa, Port Pirie and Whyalla.

The existing 202 commercial businesses in Mount Barker, particularly in the town centre where we plan to reticulate, also suggest that our forecast is conservative.

1.5 Summary

Based on the analysis we have undertaken, we consider the assumptions used in our modelling are valid. In particular we consider that:

- The industrial and commercial forecasts of connections and demand for Mount Barker are consistent with state-wide ratios, and conservative when considered alongside similar areas and the existing 202 businesses in Mount Barker; and
- The industrial and commercial forecasts are relatively conservative as they do not include all facets of the significant expansion in the region.

⁴ District Council of Mount Barker, Strategic Plan 2012-2017, <http://www.mountbarker.sa.gov.au/webdata/resources/files/DCMB%20StratPlan%202012-17.pdf>