



Economic Regulation Authority

Draft decision on revisions to the access arrangement for the Mid-West and South-West Gas Distribution Systems

Attachment 2: Demand

24 April 2024

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Contents

Attachment 2. Summary	iii
Regulatory requirements.....	1
ATCO's proposed demand for AA6	2
Submissions	4
Draft decision	6
AA5 demand	6
AA6 demand forecast	6
Haulage reference services	6
Ancillary reference services.....	17
Demand forecast.....	17

List of appendices

Appendix 1 List of Tables	20
Appendix 2 National Gas Rules	21

Note

This attachment forms part of the ERA's draft decision on proposed revisions to the access arrangement for the Mid-West South-West Gas Distribution Systems. It should be read in conjunction with all other parts of the draft decision, which is comprised of the following document and attachments:

Draft decision on revisions to the access arrangement for the Mid-West and South-West Gas Distribution Systems – Overview, 24 April 2024

- Attachment 1: Access arrangement and services
- Attachment 2: Demand (this document)
- Attachment 3: Revenue and tariffs
- Attachment 4: Regulatory capital base
- Attachment 5: Operating expenditure
- Attachment 6: Depreciation
- Attachment 7: Return on capital, taxation, incentives
- Attachment 8: Other access arrangement provisions
- Attachment 9: Service terms and conditions

Attachment 2. Summary

Demand forecasts are an important component in determining the necessary levels of capital and operating expenditure, as well as setting the reference tariff for AA6. Demand forecasts encompass projections for haulage reference services and ancillary reference services, for ATCO's AA6 5-year access arrangement period from 2025 to 2029.

ATCO proposed a haulage reference services demand forecast of 147,053TJ for the AA6 period based on average customer numbers and gas consumption per customer. ATCO has projected an average customer base of 839,460 in 2029, at the end of AA6, compared to a forecast of 794,637 in 2024, at the end of AA5. ATCO anticipates slow growth in new customer connections and a fast decline in gas consumption during the AA6 period. Notably, ATCO's demand forecast for AA6 declines faster, at 0.80 per cent each year, compared to 0.43 per cent decline each year as set out in the AA5 final decision.¹ ATCO's forecast of ancillary reference services demand was based on the forecast of the average number of residential and small business connections (B3 tariff class).

The ERA engaged National Institute of Economics and Industry Research (NIEIR) to review ATCO's proposal and to provide an independent demand forecast. NIEIR applied econometric analysis to the haulage reference services demand forecast, in addition to the historical trend analysis. NIEIR's demand forecast for haulage reference services is higher than ATCO's forecast. NIEIR applied historical trend analysis for the ancillary reference services demand forecast, which is lower than ATCO's forecast in most service classes.²

The ERA also engaged Patterson Research Group to conduct a customer survey targeting residential gas customers in the B3 tariff class. The survey results indicated that residential customers are most likely to connect to and remain in the ATCO's distribution network, with a slow gas consumption decline rate, during AA6.³

The ERA has examined ATCO's proposed demand forecast for haulage reference services and ancillary reference services. The ERA notes that ATCO's demand forecast for haulage reference services heavily relies on the analysis of historical demand trends. ATCO also made some other qualitative observations to project demand growth for commercial and residential customer groups.⁴ ATCO relies on survey data as well as historical demand trends for large industrial and commercial customers.⁵

In this draft decision, the ERA reviewed ATCO's survey results of customers in A1 and A2 tariff classes, feedback from stakeholders, NIEIR's econometric analysis and the results from the customer survey conducted by Patterson Research Group. The ERA considers that natural gas is still widely perceived as a cost-effective energy source, with maximum residential gas pricing still set by the Western Australian Government. Additionally, there are no government policies in place restricting natural gas connections in new residential areas or those requested by a customer in an existing residential area. There has been no announcement that the State Government will change its policies on emission reduction during AA6.

In summary, the ERA anticipates an increase in gas consumption for industrial and commercial customers over the AA6 period driven by economic growth, while projecting a

¹ Final decision on proposed revisions to the Mid-West and South-West Gas Distribution Systems access arrangement for 2020 to 2024, p. 59, Table 19.

² NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 58-63.

³ Survey of ATCO gas connected clients – Undertaken for the Economic Regulation Authority (ERA).

⁴ Tariff classes B1, B2 and B3.

⁵ Tariff classes A1 and A2.

decline in consumption among residential customers. This decline is attributed to factors such as new customer connections without gas heating appliances and the gradual replacement of gas appliances with more efficient appliances utilised over time. The ERA considers that it is reasonable to forecast ancillary reference services based on haulage reference services' tariff class B3 customer connections given these residential and small business customers comprise most of the demand for ancillary services.

The ERA has forecast an average customer base of 853,843 in 2029, at the end of the AA6 period, which is 1.71 per cent higher than ATCO's forecast. The ERA's demand forecast for haulage reference services is 156,701TJ for the AA6 period, 6.56 per cent higher than ATCO's forecast. Table 2.1 compares the ERA's and ATCO's demand forecast for haulage reference services. The ERA's forecast for ancillary reference services is based on the ERA's customer connection forecast for B3 tariff class. The ERA's demand forecast for ancillary reference services is higher than ATCO's, which is mainly due to the ERA's higher average customer forecast for B3 tariff class compared to ATCO's average customer forecast. Table 2.2 compares the ERA's and ATCO's demand forecast for ancillary reference services. The ERA's haulage reference services demand forecast is relatively in line with AEMO's gas demand forecast for its distribution category in 2023 Western Australia Gas Statement of Opportunities December 2023 (2023 GSOO). AEMO has forecast an increase in the gas demand at 0.91 per cent per year during the AA6 period (without significant electrification in the community), compared to the ERA's forecast at 0.34 per cent per year.⁶

Table 2.1: Haulage reference services demand forecast comparison between ATCO proposal and ERA draft decision⁷

Tariff Class	ATCO proposal	ERA draft decision	Variance	Variance (%)
A1 – Major industrial > 35 TJ				
Average customer base (2029)	76	77	1	1.32
Demand (AA6 total TJ)	74,868	76,331	1,463	1.95
A2 – Large customers 10 to 35TJ				
Average customer base (2029)	105	107	2	1.90
Demand (AA6 total TJ)	9,586	10,492	906	9.45
B1 – Medium customers < 10TJ				
Average customer base (2029)	2,370	2,082	(288)	(12.15)
Demand (AA6 total TJ)	10,051	11,396	1,345	13.38

⁶ 2023 Western Australia Gas Statement of Opportunities December 2023 (2023 GSOO). Note that AEMO's demand forecast for distribution has been adjusted to include industrial customers in the ATCO's distribution network classified to the industrial category in 2023 GSOO. AEMO noted in 2023 GSOO that the gas demand for the distribution sector would decline at 1.5 per cent per year between 2023 and 2033 if electrification is included. However, AEMO did not provide information on the electrification effects on gas demand for the distribution sector between 2025 and 2029.

⁷ The average customer base is calculated as the average customer number at the beginning of the year and the customer number at the end of the year.

Tariff Class	ATCO proposal	ERA draft decision	Variance	Variance (%)
B2 – Small-use commercial or large residential				
Average customer base (2029)	14,173	13,702	(471)	(3.32)
Demand (AA6 total TJ)	6,327	6,800	473	7.48
B3 – Small use customers				
Average customer base (2029)	822,736	837,875	15,139	1.84
Demand (AA6 total TJ)	46,221	51,682	5,461	11.81
Total				
Average customer base (2029)	839,460	853,843	14,383	1.71
Demand (AA6 total TJ)	147,053	156,701	9,648	6.56

Source: 16.001A – ATCO Gas Tariff Model; ERA demand analysis.

Table 2.2: Ancillary reference services demand forecast comparison between ATCO proposal and ERA draft decision

Ancillary reference services	ATCO proposal	ERA draft decision	Variance	Variance (%)
Applying a Meter Lock	44,215	50,620	6,405	14.49
Removing a Meter Lock	43,249	43,525	276	0.64
Deregistering a delivery point	17,927	18,177	250	1.39
Disconnecting a delivery point	18,892	19,641	749	3.96
Reconnection a delivery point	15,676	15,684	8	0.05
Permanent disconnection	10,235	10,152	(83)	(0.81)
Special meter reads	522,539	555,455	32,916	6.30

Source: ATCO Gas 2025-2029 Plan September 2023, p.93, Table 7.7; ERA demand analysis.

Summary of required amendments

- 2.1 ATCO must amend its forecast haulage reference service demand to reflect the ERA's forecast demand in Table 2.20.
- 2.2 ATCO must amend its forecast ancillary reference service demand to reflect the ERA's forecast demand in Table 2.21.

Regulatory requirements

1. Further to preparing an access arrangement proposal for approval, the Nation Gas Rules (NGR) requires the service provider to prepare and submit Access Arrangement Information (AAI).⁸ AAI is information that is reasonably necessary for users (including prospective users) to understand the background to the access arrangement; and the basis and derivation of the various elements of the access arrangement.⁹
2. AAI must include any information that is specifically required by the NGL and NGR. Rule 72 sets out specific requirements for AAI relevant to price and revenue regulation and includes the following information needs related to demand:
 - Where the access arrangement period commences at the end of an earlier access arrangement period, AAI for a distribution pipeline must include the following usage information over the earlier access arrangement period:
 - minimum, maximum and average demand
 - customer numbers in total and by tariff class.
 - To the extent it is practicable to forecast pipeline capacity and use of pipeline capacity over the access arrangement period, AAI must include a forecast of pipeline capacity and use of pipeline capacity over that period and the basis on which the forecast has been derived.
3. Where forecasts and estimates are provided, they must adhere to the requirements set out in rule 74:
 - The forecast or estimate must be supported by a statement that sets out the basis for the forecast or estimate.
 - The forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.
4. Additionally, any information that is inferred or derived from other information must be supported by the primary information on which the extrapolation or inference is based (rule 75).

⁸ NGR, rule 43.

⁹ NGR, rule 42.

ATCO's proposed demand for AA6

5. ATCO's proposal includes demand forecasts for haulage reference services and ancillary reference services for AA6.
6. Haulage reference services include:
 - A1 Service to deliver gas to major industrial customers using 35TJ or more of gas per year, at high or medium pressures.
 - A2 Service to deliver gas to large customers using between 10TJ or more but less than 35 TJ of gas per year, at high or medium pressures.
 - B1 Service to deliver gas to medium sized customers using less than 10TJ of gas per year, at high or medium pressures.
 - B2 Service to deliver gas to small-use customers with a standard meter with capacity from 12m³ /h to less than 18 m³ /h, typically commercial or large residential, supplied at medium or low pressures.
 - B3 Service to deliver gas to small-use customers with a standard meter capacity less than 12m³ /h, typically residential or small business customers, supplied at medium or low pressures.
7. ATCO expects the minimum and maximum pipeline usage to remain unchanged from the AA5 period, with the average pipeline usage marginally decreasing by 0.80 per cent during the AA6 period.¹⁰ ATCO adopted the demand forecasts developed by its consultant, Core Energy (Core).¹¹
8. Core has forecast a haulage reference service demand for each tariff class (A1, A2, B1, B2 and B3). The haulage reference service demand is derived from the forecast for average customer numbers and gas consumption per customer of the distribution system. The proposed average customer numbers will increase from 794,637 at the start of AA6 to 839,460 at the end of AA6, representing a compound annual growth rate (CAGR) of 1.10 per cent. The proposed haulage reference services demand for AA6 will be 147,053TJ.¹² The A1 and B3 tariff classes have the most gas consumption, accounting for 51 per cent and 31 per cent of the total gas consumption during the AA6 period. The detail of the demand forecast is in ATCO's proposal document.¹³
9. Core has forecast a marginal decline in haulage reference services demand of 0.28 per cent¹⁴ per year and 0.06 per cent¹⁵ per year for A1 and A2 tariff classes (large industrial and commercial customers) during the AA6 period. The decline in gas demand is driven by the marginal decline in the consumption per customer for both tariff classes. The customer numbers for A1 and A2 tariff classes are forecast to remain unchanged during the AA6 period. Core developed its demand forecast by using the results from ATCO's customers survey, with anticipated consumption adjustments for customers that responded to the survey, and analysed historical trends at both the customer and

¹⁰ ATCO Gas 2025-2029 Plan September 2023, p. 94, Table 7.8.

¹¹ Attachment 07.001, Core Energy – Gas Demand Forecast.

¹² Published numbers for B2 and B3 tariff class demand in ATCO Gas 2025-2029 Plan September 2023, p. 92, Table 7.6. are different to the numbers in 16.001A – ATCO Gas Tariff Model. Numbers used in this report are from 16.001A – ATCO Gas Tariff Model.

¹³ ATCO Gas 2025-2029 Plan September 2023, p. 92, Table 7.6.

¹⁴ Attachment 07.001, Core Energy – Gas Demand Forecast p. 45, Figure 7.4.

¹⁵ Attachment 07.001, Core Energy – Gas Demand Forecast p. 47, Figure 7.8.

industry levels for customers that did not respond to the survey and non-surveyed customers.¹⁶

10. Core has forecast a decline in haulage reference services demand of 0.97 per cent¹⁷ and 0.30 per cent¹⁸ per year for B1 and B2 tariff classes (medium industrial and commercial customers) during the AA6 period. The customer numbers are forecast to grow at 2.89 per cent¹⁹ and 1.90 per cent²⁰ each year for the B1 and B2 tariff classes. The effects of customer growth on demand are offset by the decline in the forecast for consumption per customer at 3.76 per cent²¹ and 2.16 per cent each year for B1 and B2 tariff classes.²² To forecast gas demand, Core considered economic circumstances, business mix, government policy and cost, but found no single factor provided a statistically reliable basis for forecasting. As a result, Core relied on historical trends with adjustments based on qualitative factors to account for potential variations from history. Core included weather normalisation in the demand forecast.²³
11. The haulage reference services demand declined by 1.80 per cent per year for the B3 tariff class (small commercial and residential customers). Most customers in the B3 tariff class are residential customers. To develop the demand forecast, Core considered historical trends and expectations of future macro and micro drivers not in the historical data trend.²⁴ Core used Housing Industry Association's (HIA) information on the housing commencements to forecast dwelling completions, which served as a basis for the new customer forecast. The number of customers in the B3 tariff class will grow by 1.09 per cent per year. However, the effect of this growth on gas demand is offset by a decline in consumption per customer of 2.85 per cent each year. The decline in consumption per customer is higher than experienced prior to the COVID pandemic. The consumption forecast includes weather normalisation.²⁵
12. Core has forecast that demand for ancillary reference services will return to pre-COVID levels during AA6. Core developed an ancillary reference service forecast which was based on the customer numbers in the B3 tariff class, given that most services (>95 per cent) are related to B3 customers. Core anticipated that activities across all categories of ancillary reference services would recover post-COVID, following an increased trajectory between 2023 and 2024, and then reaching pre-COVID levels for each ancillary reference service during AA6.²⁶

¹⁶ ATCO Gas 2025-2029 Plan September 2023, p. 87.

¹⁷ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 37

¹⁸ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 38

¹⁹ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 37

²⁰ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 38

²¹ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 41, Figure 6.12.

²² Attachment 07.001, Core Energy – Gas Demand Forecast, p. 42, Figure 6.13.

²³ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 14–16, p. 34–42.

²⁴ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 25

²⁵ 16.001A – ATCO Gas Tariff Model. Note, there are differences for demand forecast in 16.001A – ATCO Gas Tariff Model, ATCO Gas 2025-2029 Plan September 2023, p. 92, Table 7.6 and Attachment 07.001, Core Energy – Gas Demand Forecast. The demand forecast in 16.001A – ATCO Gas Tariff Model is quoted.

²⁶ ATCO Gas 2025-2029 Plan September 2023, p. 93, Table 7.7; Attachment 07.001 CORE Energy – Gas Demand Forecast, p. 49–53.

Submissions

13. The ERA noted comments on ATCO's demand forecast for AA6 from eight stakeholders.
14. Kleenheat considered that the weather normalised gas usage per connection decline rate proposed by ATCO was high. Kleenheat noted its average customers' usage "is declining at around half the rate of that proposed by ATCO."²⁷
15. Alinta Energy (Alinta) did not foresee a significant decrease in gas demand for B3 customers in the short term. It considered ATCO's demand forecast for B3 customers "to be significantly underestimated."²⁸
16. AGL Energy (AGL) stated that "experience in other jurisdictions (except Victoria) presently show a strong preference for gas by consumers. Without a policy decision (such as Victoria's) impacting gas usage, AGL would expect gas connections and consumption to continue to grow."²⁹
17. Origin Energy (Origin) stated that "in the absence of information to the contrary, we consider it reasonable to rely on historic trends to develop forecasts of gas customer consumption and connections for the forthcoming regulatory period."³⁰
18. The Housing Industry Association (HIA) stated:

The international pricing pressures for gas in WA is somewhat shielded with the Domestic Gas Policy. WA's forward demand for gas in manufacturing is therefore more favourable to use than coal-fired or diesel plant power generation; and with gas evolving as a genuine transitional option for WA's energy policy, means its future use and need is more certain than not.³¹
19. The Urban Development Institute of Australia WA (UDIA) stated:

the overall view that natural gas in the Perth Metropolitan region is still viewed as a cost -effective energy source in Perth homes. Whilst we anticipate that gas reticulation, overall, will continue to be installed in new land developments this may not necessarily equate to ongoing demand from residential customers in the same way as would have been the case during earlier years of the WA Domestic Gas Policy due to an increasing movement towards electrification of households.³²
20. UDIA further noted that national developers are increasingly considering not including gas within developments across all of Australia, including Western Australia, and that consumer demands and attitudes towards gas appliances and gas more broadly, are shifting. It stated: "... for cost sensitive buyers on the urban fringe in new land

²⁷ Kleenheat, *Submission on ATCO proposal and ERA issues paper*, 24 November 2023, p. 3.

²⁸ Alinta Energy, *Submission on ATCO proposal and ERA issues paper*, 30 November 2023, p. 4.

²⁹ AGL Energy, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023, p. 3.

³⁰ Origin Energy, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023, p. 2.

³¹ Housing Industry Association, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023.

³² Urban Development Institute of Australia, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023, p. 2.

developments, it is likely that gas and appliances that use gas will continue to be in demand whilst the price remains comparatively cheaper than the alternative.”³³

21. Synergy supported the ERA’s view in the issues paper “in relation to the long-term market decline for natural gas.” Synergy requested the ERA to review ATCO’s proposed 0.8 per cent decline in the gas usage rate for B3 customers and whether it “is reasonable and whether it should be greater over the AA6 period.”³⁴
22. WA Expert Consumer Panel stated that “the forecast network penetration rate ATCO has applied is overly optimistic”, “the forecast trend in the network penetration rate should instead follow a declining trend” and “the forecast trend in disconnections should follow an increasing trend, rather than flatten as forecast by Core Energy.”³⁵

³³ Urban Development Institute of Australia, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023, p. 2.

³⁴ Synergy, *Submission on ATCO proposal and ERA issues paper*, 27 November 2023, p. 2.

³⁵ WA Expert Consumer Panel, *Submission on ATCO proposal and ERA issues paper*, November 2023, pp. 7-8.

Draft decision

AA5 demand

23. For the AA5 period, ATCO disclosed minimum, maximum and average demand, and customer numbers for A1, A2, B1 and B2 tariff classes.³⁶
24. For the AA5 period, the period-to-date actual total demand at the end of 2022 was 82,264TJ, 1.94 per cent higher than the final decision of 80,697TJ; and the expected demand at the end of 2024 was 140,337TJ, 5.13 per cent higher the final decision of 133,489TJ. ATCO provided forecast demand for the two final years of AA5, 2023 and 2024. Table 2.3 illustrates the demand for all tariff classes by year during the AA5 period. The actual demand for 2023 is expected to be available in the middle of 2024 to support the forecast in the final decision.

Table 2.3: AA5 demand for all tariff classes (TJ)

	2020	2021	2022	2023	2024
AA5 final decision forecast	26,815	27,115	26,767	26,430	26,362
Actual 2020 – 2022 Forecast 2023 – 2024	26,657	28,093	27,514	27,979	30,094
Variance	(158)	978	747	1,549	3,732

Source: Final decision on proposed revisions to the Mid-West and South-West Gas Distribution Systems access arrangement for 2020 to 2024, p. 59, Table 19; 2022 ATCO RIN Template; Supporting information, 16.001 – ATCO Gas Tariff Model; ATCO Gas 2025-2029 Plan September 2023, p. 92, Table 7.6.

AA6 demand forecast

25. The ERA assessed ATCO's haulage reference services and ancillary services demand forecast. The ERA engaged NIEIR to review and to provide an independent demand forecast for ATCO's haulage reference services and ancillary services. NIEIR's forecast was developed within an econometric model of the Western Australian gas sector, with historical data provided by ATCO.³⁷ The ERA also engaged Patterson Research Group to conduct a customer survey targeting residential gas customers in B3 tariff class to understand customer preference on the future use of gas among other issues.³⁸

Haulage reference services

A1 and A2 services

26. According to NIEIR's analysis, the majority of customers in the A1 tariff class are industrial customers, accounting for about 70 per cent of the total customers in the A1 tariff class. The remaining 30 per cent of customers in the A1 tariff class are large

³⁶ ATCO Gas 2025-2029 Plan September 2023, p. 49-50, Table 5.2, Table 5.3.

³⁷ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 22.

³⁸ Survey of ATCO gas connected clients – Undertaken for the Economic Regulation Authority (ERA), p. 10.

commercial customers. Industrial and commercial customers each account for half of the total customers in the A2 tariff class.

27. ATCO conducted a survey on expected gas consumption for A1 and A2 tariff classes at end of 2022.³⁹ The customers which responded represent 55 per cent of the customer base in the A1 tariff class, and 47 per cent of the customer base in the A2 tariff class. The survey results represent 73 per cent of the combined gas consumption for A1 and A2 tariff classes.⁴⁰ The survey result was adjusted by advised changes from ATCO in developing the forecast. For non-surveyed customers and non-responding surveyed customers, the demand forecast was developed by Core, driven by the forecast for customer numbers and average consumption per customer. Core did not anticipate an increase in customer numbers for the A1 and A2 tariff classes. Core has forecast consumption per connection based on an average declining rate between 2009 and 2019 at 0.93 per cent for A1 tariff class and 1.12 per cent for A2 tariff class.⁴¹ Core did not include weather normalisation in the consumption forecast for A1 and A2 tariff classes.
28. NIEIR noted that Core did not model customer growth and economic drivers, and it was unclear whether the forecast included new private and public sector projects. The weather normalisation should have been included in the forecast for A1 and A2 tariff classes.⁴² NIEIR found that A1 and A2 tariff classes are temperature sensitive, and included weather normalisation in its forecast.⁴³ NIEIR analysed gas price elasticity and economic growth on business activities for industrial groups to derive econometric multipliers, which in turn drive the customer connection and consumption growth.^{44, 45} NIEIR did not use ATCO's consumption survey results as it considered that the results were not current. Thus, NIEIR applied its forecast method across all customers in the A1 and A2 tariff classes.
29. The ERA considers that it is not appropriate to forecast consumption per connection to derive demand as in Core's forecast. This is because both A1 and A2 tariff classes include commercial customers that have a diverse range in business size and nature of business activities. Moreover, the sensitivity towards change in economic conditions and consumer spending varies. Thus, the historical average consumption per connection is not a reliable variable for the demand forecast in A1 and A2 tariff classes.
30. In the ERA's view, economic growth and gas price elasticity should be considered for demand forecasts. The ERA agrees with NIEIR's method of using econometric variables to forecast customer numbers and gas consumption, which should apply to non-surveyed customers and non-responding surveyed customers. The ERA expects ATCO to update its demand forecast in its response to the draft decision, with a more recent survey result reflecting a revised gas consumption expectation by its customers post 2022.
31. The ERA conducted an internal assessment on demand for A1 and A2 tariff classes by adopting ATCO's demand forecast for customers that responded to the 2022 survey,

³⁹ ATCO Gas 2025-2029 Plan September 2023, p. 87, Table 7.2.

⁴⁰ ATCO Gas 2025-2029 Plan September 2023, p. 87.

⁴¹ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 45, p. 47

⁴² NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report Findings on NIEIR report p. 6–7, p. 33

⁴³ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 27.

⁴⁴ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 15.

⁴⁵ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 44.

and applied NIEIR's econometric multipliers to forecast demand for non-surveyed customers and non-responding surveyed customers.

32. The demand forecast comparison for the A1 tariff class are in Table 2.4 to Table 2.6 below. The total demand forecasts by NIEIR and ERA are higher than ATCO by 1.33 per cent and 1.95 per cent.

Table 2.4: Comparison of forecast average customer numbers for A1 tariff class

	2024	2025	2026	2027	2028	2029	AA6 net addition	CAGR (%)
ATCO	76	76	76	76	76	76	0	0.00
NIEIR	76	77	77	78	78	77	1	0.26
ERA	76	76	76	77	77	77	1	0.26

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 58, Table 8.1; ERA demand analysis.

Table 2.5: Comparison of forecast consumption per customer for A1 tariff class (GJ)

	2024	2025	2026	2027	2028	2029	CAGR (%)
ATCO	198,000	200,276	197,013	196,711	195,842	195,276	(0.28)
NIEIR	198,184	197,636	200,571	199,949	191,500	190,545	(0.78)
ERA	196,763	200,487	200,105	199,130	198,558	198,234	0.15

Source: Derived from 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 58, Table 8.1; ERA demand analysis.

Table 2.6: Comparison of forecast gas demand for A1 tariff class (TJ)

	2024	2025	2026	2027	2028	2029	AA6 total	CAGR (%)
ATCO	15,048	15,220	14,973	14,950	14,884	14,841	74,869	(0.28)
NIEIR	15,062	15,218	15,444	15,596	14,937	14,672	75,867	(0.52)
ERA	14,954	15,237	15,208	15,333	15,289	15,264	76,331	0.41

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 58, Table 8.1; ERA demand analysis.

33. The demand forecast comparison for the A2 tariff class are in Table 2.7 to Table 2.9 below. The total demand forecast by NIEIR and ERA was higher than ATCO by 6.37 per cent and 9.45 per cent.

Table 2.7: Comparison of forecast average customer numbers for A2 tariff class

	2024	2025	2026	2027	2028	2029	AA6 net addition	CAGR (%)
ATCO	105	105	105	105	105	105	0	0.00
NIEIR	104	106	106	107	108	109	5	0.94
ERA	105	106	107	107	107	107	2	0.38

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 59, Table 8.1; ERA demand analysis.

Table 2.8: Comparison of forecast consumption per customer for A2 tariff class (GJ)

	2024	2025	2026	2027	2028	2029	CAGR (%)
ATCO	18,210	18,410	18,286	18,248	18,200	18,152	(0.06)
NIEIR	18,933	18,755	19,066	19,112	19,093	19,092	0.17
ERA	19,210	19,443	19,430	19,636	19,785	19,944	0.75

Source: Derived from 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 59, Table 8.1; ERA demand analysis.

Table 2.9: Comparison of forecast gas demand for A2 tariff class (TJ)

	2024	2025	2026	2027	2028	2029	AA6 total	CAGR (%)
ATCO	1,912	1,933	1,920	1,916	1,911	1,906	9,586	(0.06)
NIEIR	1,969	1,988	2,021	2,045	2,062	2,081	10,197	1.11
ERA	2,017	2,061	2,079	2,101	2,117	2,134	10,492	1.13

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 59, Table 8.1; ERA demand analysis.

B1 and B2 reference service

34. According to NIEIR's analysis, the majority of customers in B1 and B2 tariff classes are commercial customers. The remaining customers are small industrial customers.
35. The ATCO's demand forecast for B1 and B2 tariff classes was developed by Core, driven by the forecast for customer numbers and average consumption per customer. Core based the customer number forecast on growth factors of 2.90 per cent for B1 tariff class, and 1.90 per cent for B2 tariff class.⁴⁶ Core assumed customer growth based on a low Gross State Product (GSP) that is not specified in its analysis. Core based its consumption per connection forecast on an average decline rate over a three-year period between 2017 and 2019 at 3.76 per cent for B1 tariff class, and an average

⁴⁶ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 10–11.

decline rate over a four-year period between 2016 and 2019 at 2.16 per cent for B2 tariff class.⁴⁷

36. NIEIR noted that Core did not model economic drivers, new customer growth was lower than historical growth, and the demand forecast for B1 tariff class seemed lower compared to historical growth. In its demand forecast for B1 and B2 tariff classes, NIEIR analysed gas price elasticity and economic growth on business activities for industrial groups to derive econometric multipliers, which in turn drive the customer connection and consumption growth.^{48, 49}
37. The ERA notes that Core's customer growth forecast did not explain how the customer growth factor was derived, and the reason for using a lower economic activity assumption was not explained. The ERA considers that it is not appropriate to use consumption per connection to derive demand. The consumption per connection fluctuates widely between the historical years. The ERA considers this fluctuation is attributed to the diverse range in business sizes and the nature of the business activities. Moreover, the commercial customers' sensitivity towards change in economic conditions and consumer spending varies. Thus, the average consumption per connection is not a reliable variable for forecasting demand in B1 and B2 tariff classes.
38. In the ERA's view, economic growth and gas price elasticity should be considered for demand forecasting. The ERA agrees with its consultant's method to use econometric variables to forecast demand and customer numbers.
39. The ERA conducted an internal assessment of demand for B1 and B2 tariff classes by adopting data provided by ATCO and applied NIEIR's econometric multipliers to forecast customer connection and consumption growth.
40. The demand forecast comparisons for the B1 tariff class are in Table 2.10 to Table 2.12 below. The total demand forecast by NIEIR and ERA was higher than ATCO by 13.40 per cent and 13.38 per cent.

Table 2.10: Comparison of forecast average customer numbers for B1 tariff class

	2024	2025	2026	2027	2028	2029	AA6 net addition	CAGR (%)
ATCO	2,055	2,114	2,175	2,238	2,303	2,370	315	2.89
NIEIR	2,180	2,198	2,221	2,247	2,271	2,295	115	1.03
ERA	1,999	2,012	2,029	2,048	2,066	2,082	83	0.82

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 60, Table 8.1; ERA demand analysis.

⁴⁷ Attachment 07.001, Core Energy – Gas Demand Forecast, p. 36

⁴⁸ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 15.

⁴⁹ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 44.

Table 2.11: Comparison of forecast consumption per customer for B1 tariff class (GJ)

	2024	2025	2026	2027	2028	2029	CAGR (%)
ATCO	1,007	970	933	898	864	832	(3.76)
NIEIR	1,009	1,010	1,014	1,016	1,016	1,017	0.17
ERA	1,100	1,103	1,110	1,114	1,117	1,122	0.39

Source: Derived from 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 60, Table 8.1; ERA demand analysis.

Table 2.12: Comparison of forecast gas demand for B1 tariff class (TJ)

	2024	2025	2026	2027	2028	2029	AA6 total	CAGR (%)
ATCO	2,070	2,050	2,030	2,010	1,990	1,971	10,051	(0.98)
NIEIR	2,199	2,221	2,253	2,282	2,307	2,335	11,398	1.21
ERA	2,199	2,220	2,253	2,281	2,307	2,335	11,396	1.21

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 60, Table 8.1; ERA demand analysis.

41. The demand forecast comparison for B2 tariff class are in Table 2.13 to Table 2.15 below. The total demand forecast by NIEIR and ERA was higher than ATCO by 8.91 per cent and 7.48 per cent.

Table 2.13: Comparison of forecast average customer numbers for B2 tariff class

	2024	2025	2026	2027	2028	2029	AA6 net addition	CAGR (%)
ATCO	12,899	13,145	13,395	13,649	13,909	14,173	1,274	1.90
NIEIR	12,778	12,885	13,059	13,285	13,495	13,702	924	1.41
ERA	12,778	12,884	13,059	13,285	13,495	13,702	924	1.41

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 61, Table 8.1; ERA demand analysis.

Table 2.14: Comparison of forecast consumption per customer for B2 tariff class (GJ)

	2024	2025	2026	2027	2028	2029	CAGR (%)
ATCO	99.00	96.84	94.74	92.68	90.73	88.76	(2.16)
NIEIR	104.55	104.38	104.37	103.80	103.30	102.90	(0.32)
ERA	103.15	103.00	102.99	102.45	101.96	101.52	(0.32)

Source: Derived from 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 61, Table 8.1; ERA demand analysis.

Table 2.15: Comparison of forecast gas demand for B2 tariff class (TJ)

	2024	2025	2026	2027	2028	2029	AA6 total	CAGR (%)
ATCO	1,277	1,273	1,269	1,265	1,262	1,258	6,327	(0.30)
NIEIR	1,336	1,345	1,363	1,379	1,394	1,410	6,891	1.08
ERA	1,318	1,327	1,345	1,361	1,376	1,391	6,800	1.08

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 61, Table 8.1; ERA demand analysis.

B3 reference service

42. Most customers in B3 tariff class are residential customers, with the remaining customers being small commercial customers.

Analysis of ATCO's demand forecast

43. ATCO's demand forecast for B3 tariff class was developed by Core, driven by the forecast for new customer connections, customer disconnections and average consumption per customer.

New customer connections

44. Core has forecast new customer connections based on estimated dwelling completions during the AA6 period. Core's dwelling completion forecast did not include multi-unit developments. Additionally, Core did not use actual dwelling completions to perform trend analysis, which would affect the robustness of the connection penetration analysis. Core applied a connection penetration rate on the forecast dwelling completions to forecast new connections.⁵⁰ The connection penetration rate was based on an average rate over a five-year period between 2017 and 2021 at 79.6 per cent. This rate aimed to illustrate the historical decline in the gas connection penetration, but it disregarded the historical decline observed from 2014 to 2016. Core reduced the five-year average penetration rate between 2017 and 2021 (79.6 per cent) by a historical trend factor of 6.6 percentage points. The reasons for this further reduction are unclear and the reduction seems high compared to the average decline rate of 2.48 per cent per year between 2014 and 2021. Also, Core did not explain a further reduction in its forecast penetration rate of 1 percentage point based on non-trend factors.⁵¹ Core used a flat penetration rate of 72 per cent to forecast new connections over the AA6 period, without considering the potential for a gradual connection decline, which is evidenced by a historical declining penetration trend between 2014 and 2021.

Customer disconnections

45. For customer disconnection analysis, Core used an average decline rate of 0.54 per cent over a three-year period between 2018 and 2020. This rate is higher than the long-term average decline rate of 0.39 per cent each year between 2009 and 2020, with two out of the three years the highest between 2009 and 2020. While Core has noted that disconnections have been increasing in absolute terms since 2009,⁵² the disconnection rate has only increased from 2014 onwards. The average disconnection rate is 0.49 per

⁵⁰ Connection penetration rate is percentage of new dwellings connected to the network.

⁵¹ Attachment 07.001, CORE Energy – Gas Demand Forecast, p. 31.

⁵² Attachment 07.001, CORE Energy – Gas Demand Forecast, p. 32.

cent on average each year between 2014 and 2020, compared to 0.26 per cent each year between 2009 and 2013. Although the disconnection rate displayed an upward trend in later years, it is lower than Core's forecast. Core did not distinguish disconnections for legacy customers⁵³ and new customers⁵⁴, nor did it account for the likelihood that new customers would be unlikely to disconnect in the short-term. Core did not explain how the trend analysis was applied to different types of forecasts such as permanent disconnections, disconnecting a delivery point and deregistration.

Average consumption per customer

46. Core has forecast a decline rate of 2.80 per cent⁵⁵ for consumption per customer during the AA6 period. The forecast did not account for the difference in the gas consumption profile between legacy customers and new customers. Core assumed that the consumption per customer for all customers would decline at the same rate. However, historical consumption data between 2012 and 2022 showed a different trend. The consumption per customer for legacy customers declined overtime. In contrast, the consumption per customer for new customers remained stable once consumption ramped up, typically from the third or fourth year of the connection.

ERA's consultant findings

NIEIR noted that Core's demand forecast for the B3 tariff class was materially low compared to past changes in average gas usage, and the forecast did not consider disposable income or gas prices.⁵⁶ NIEIR separately analysed consumption for legacy customers and new customers, optimised weather normalisation, and incorporated the impact of gas price elasticity and household disposable income on gas consumption.⁵⁷ The ERA notes that NIER used a top-down method, which used net connections and net dwelling additions to forecast new connections and disconnections. However, the ERA considers that it is preferable to use a bottom up forecast, because there are separate underlying drivers for forecasts for gross dwelling completions, gross new connections and disconnections which will allow a better forecast to be derived.

ERA's customer research

47. Patterson Research Group's survey results showed that:⁵⁸
- 27 per cent of surveyed customers currently use a gas space heater. When this appliance is due for replacement, 39 per cent would keep their gas space heating, while 27 per cent would replace it with electric alternatives. The remaining 34 per cent are undecided or would base their choice on cost considerations.
 - 63 per cent of surveyed customers currently use a gas hot water system. When this appliance is due for replacement, 56 per cent would retain their gas hot water systems, while 19 per cent would switch to the electric alternatives. The remaining 25 per cent are undecided or would base their decision on cost considerations.

⁵³ Total customers at the start of 2009.

⁵⁴ Customer additions since 2009.

⁵⁵ Attachment 07.001 CORE Energy – Gas Demand Forecast, p. 33, Figure 5.15. The demand forecast in Core's demand model is different to the forecast in the tariff model 16.001 – ATCO Gas Tariff Model.

⁵⁶ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 7.

⁵⁷ NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 15-21, p. 26-45.

⁵⁸ Survey of ATCO gas connected clients – Undertaken for the Economic Regulation Authority (ERA).

- 73 per cent of surveyed customers currently use a gas cooktop, and when this appliance is due for replacement, about 68 per cent of these customers would replace it like for like if required.
 - 76 per cent of surveyed new homes buyers rated gas connection as important, while 18 per cent rated it as not important, with 6 per cent were undecided.
48. The survey results indicate most new home buyers would like to use gas in the home and current residential customers are more likely to remain on ATCO's distribution network. Based on the survey result, the ERA concluded that it is reasonable to assume that:
- The customer base for gas space heating has significantly decreased during the pre-AA6 period and the rate of replacing gas heating with an alternative would be lower compared to the pre-AA6 period. The decline in gas consumption due to gas heating abandonment among existing gas heating customers would be at a slower rate compared to the pre-AA6 periods.
 - Among the existing gas hot water system customers, gas consumption would decline marginally for the AA6 period.
 - Among the existing gas cooktop customers, consumption would decrease marginally for the AA6 period.
 - The average gas connection rate for new home builds would be at the high 70 per cent rate during the AA6 period.

ERA's B3 forecasts

49. The ERA conducted an internal assessment of the B3 tariff class forecast with data provided by ATCO. The ERA has adopted the dwelling completion forecast from Core for this draft decision. However, the ERA would have expected a more robust forecast of dwelling completion data to assess ATCO's forecast.
50. The ERA used an average connection penetration rate between 2014 and 2021 compared to Core's average rate between 2017 and 2021,⁵⁹ coupled with a declining trend for the new connection forecast in AA6. The ERA's connection penetration rate starts at 80.56 per cent at the start of the AA6 period in 2025, then gradually declines to 78 per cent at the end of the AA6 period in 2029. In comparison, over the past five years to 2021, the connection penetration rate has averaged 79.59 per cent.
51. The ERA has used an average disconnection rate of 0.49 per cent each year during AA6, applicable to the legacy customers and new customers added prior to AA6 that are more than ten years into the connection. This rate was based on the average disconnection rate between 2014 and 2020.⁶⁰ The ERA assumed that new customers would not disconnect until after the 10th year of connecting to the network, so disconnections are not applied to the new connections added during AA6.
52. The ERA separately forecast consumption for legacy customers and new customers. It is anticipated that there will be an increase in efficient gas appliance installations, resulting in a lower but relatively stable average consumption among new customers. The ERA expects that new customer demand will remain stable from the third year of connecting to the network. Legacy customers have had a trend of decline in consumption, likely reflecting the replacement of gas appliances with other types of appliances or more efficient gas appliances. The ERA's forecast consumption per

⁵⁹ Paragraph 44.

⁶⁰ Paragraph 45.

customer will decline for legacy customers at a rate of 1.51 per cent per year. The ERA considers that residential customers demand for gas is sensitive to gas prices and household incomes, particularly for those customers using gas heating and gas hot water appliances. Thus, the ERA incorporated the effects of gas price elasticity, and household disposable income from NIEIR's analysis into the ERA's consumption forecast.

53. In the ERA's haulage reference services demand forecast for B3 tariff class, the ERA has also considered feedback from stakeholders. The ERA's assessment aligns with the view from gas retailers that the demand for AA6 should be higher than forecast by ATCO. The ERA's analysis showed a historical declining connection penetration trend.⁶¹ Thus, the ERA has forecast a declining connection trend for AA6 which reflects the concerns raised by stakeholders. The ERA has reviewed the stakeholders' feedback regarding an expected faster growth rate in household gas disconnections due to energy policies such as Small-scale Renewable Energy Scheme that encourage household electrification.⁶² Given that the WA government does not have policies in place restricting gas connections, and there is no indication of a change in the short-term, the ERA considers it is appropriate to forecast disconnections by following the historical trends and has not assumed an acceleration in disconnections for B3 tariff class customers.
54. The demand forecast comparison for B3 tariff class are in Table 2.16 to Table 2.18. Total new customer additions forecast by NIEIR and the ERA were higher than ATCO's proposal by 59.20 per cent and 25.78 per cent. Compared to ATCO's proposal, the forecast consumption per customer declined slower for NIEIR and ERA at 0.44 per cent and 1.53 per cent. As a result, the total demand forecast by NIEIR and ERA was higher than ATCO by 17.55 per cent and 11.81 per cent respectively.

Table 2.16: Comparison of forecast average customer numbers for B3 tariff class

	2024	2025	2026	2027	2028	2029	AA6 net addition	CAGR (%)
ATCO	779,503	786,470	794,293	803,215	812,819	822,736	43,233	1.09
NIEIR	779,263	789,774	803,208	818,168	833,129	848,090	68,827	1.71
ERA	783,497	792,779	802,861	814,032	825,837	837,875	54,378	1.35

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 62, Table 8.1; ERA demand analysis.

⁶¹ Paragraph 44.

⁶² [Small-scale Renewable Energy Scheme | Clean Energy Regulator](#)

Table 2.17: Comparison of forecast consumption per customer for B3 tariff class (GJ)

	2024	2025	2026	2027	2028	2029	CAGR (%)
ATCO	12.56	12.19	11.83	11.49	11.16	10.86	(2.85)
NIEIR	13.43	13.39	13.36	13.29	13.22	13.14	(0.44)
ERA	13.32	13.08	12.88	12.67	12.50	12.34	(1.53)

Source: Derived from 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 62, Table 8.1; ERA demand analysis.

Table 2.18: Comparison of forecast gas demand for B3 tariff class (TJ)

	2024	2025	2026	2027	2028	2029	AA6 Total	CAGR (%)
ATCO	9,787	9,585	9,397	9,226	9,074	8,939	46,221	(1.80)
NIEIR	10,467	10,578	10,727	10,874	11,014	11,142	54,335	1.26
ERA	10,440	10,373	10,339	10,314	10,320	10,336	51,682	(0.20)

Source: 16.001A – ATCO Gas Tariff Model; NIEIR Demand and Customer Number Forecasts – ATCO Network Final Report, p. 62, Table 8.1; ERA demand analysis.

55. The ERA requires ATCO to adjust its AA6 haulage reference services demand to the ERA's forecast. In making the draft decision for AA6, the ERA assumed there is no change in the current government policy settings. To ensure a robust forecast, the ERA has considered feedback from stakeholders and the results from the customer survey conducted for the ERA, adopted the effects of NIEIR's econometric analysis on the demand, and optimised historical trend analysis based on data provided by ATCO.

56. ATCO's demand forecast should incorporate the following changes:

- The demand forecast for A1, A2, B1 and B2 tariff classes should be based on econometric variables, taking into account the demand profile of the industrial and commercial customers.
- The demand forecast for A1 and A2 tariff classes should be updated with a more recent customer demand survey result reflecting a revised gas consumption expectation.
- Weather normalisation should be incorporated into the demand forecast for A1 and A2 tariff classes.
- The demand forecast for new customers in B3 tariff class should use the historical trend of actual dwelling completions, and connection penetration should be based on historical trends between 2014 and 2021. ATCO needs to provide evidence if it considers that the decline in the connection forecast is faster than the historical trend.
- For B3 tariff class, the effect of permanent disconnections and temporary disconnections on the disconnection forecast should be assessed, and a robust trend analysis including, but not limited to, a separate forecast for legacy customer connections and new customer connections.

- For B3 tariff class, a robust trend analysis is required to forecast consumption separately for legacy customers and new customers, and econometric variables such as household disposable income and gas price elasticity should be incorporated into the consumption forecast.
57. If ATCO proposes a revised demand forecast in response to this draft decision, then the ERA would require that it incorporates new information that affects gas demand during AA6, including 2023 actual demand.

Ancillary reference services

58. The ATCO's ancillary reference services demand forecast was developed by Core. According to Core, most of services (>95 per cent) are related to B3 tariff class customers. Core has forecast ancillary reference services demand based on the historical relationship with B3 tariff class customer connections. Core applied a service rate which represents the percentage of B3 connections. Core estimated that each ancillary reference service would recover from COVID related lower rates, with an increasing trend between 2023 and 2024 towards pre-COVID average rates.⁶³
59. The ERA assessed the historical trend of ancillary reference services using data provided by ATCO. The ERA agrees with Core that ancillary reference services are correlated with B3 tariff class customer connections. Additionally, the ERA agrees that the average service rate prior to COVID, that is, between 2015 and 2019, is appropriate for the forecast.
60. The ERA considers that the level of ancillary reference services should revert to pre-COVID levels from 2024. The forecast for the AA6 period should use the average service rate between 2015 and 2019, which is illustrated in Table 2.19.

Table 2.19: Ancillary reference services – average rate between 2015 and 2019

Ancillary reference services	Average service rate (%)
Applying a Meter Lock	1.243
Removing a Meter Lock	1.068
Deregistering a delivery point	0.446
Disconnecting a delivery point	0.482
Reconnection a delivery point	0.385
Permanent disconnection	0.249
Special meter reads	13.636

Source: Attachment 07.001, CORE Energy – Gas Demand Forecast, p. 49 – 53; ERA demand analysis.

Demand forecast

61. The draft decision demand forecast of haulage reference services is shown in Table 2.20. The average customer forecast for all tariff classes of the haulage reference services at the end of AA6 is 853,843, reflecting an increase of 1.71 per cent compared to ATCO's proposal (Table 2.1). Total demand forecast for all tariff classes of the

⁶³ Attachment 07.001 CORE Energy – Gas Demand Forecast, pp. 49–53.

haulage reference services for AA6 is 156,701TJ, reflecting an increase of 6.56 per cent compared to ATCO's proposal (Table 2.1).

62. The draft decision demand forecast for ancillary reference services are shown in Table 2.21.

Table 2.20: Haulage reference services demand forecast

Tariff class	2024	2025	2026	2027	2028	2029	AA6 addition	CAGR (%)
A1								
Average customer base	76	76	76	77	77	77	1	0.26
Demand (TJ)	14,954	15,237	15,208	15,333	15,289	15,264	76,331	0.41
A2								
Average customer base	105	106	107	107	107	107	2	0.38
Demand (TJ)	2,017	2,061	2,079	2,101	2,117	2,134	10,492	1.13
B1								
Average customer base	1,999	2,012	2,029	2,048	2,066	2,082	83	0.82
Demand (TJ)	2,199	2,220	2,253	2,281	2,307	2,335	11,396	1.21
B2								
Average customer base	12,778	12,884	13,059	13,285	13,495	13,702	924	1.41
Demand (TJ)	1,318	1,327	1,345	1,361	1,376	1,391	6,800	1.08
B3								
Average customer base	783,497	792,779	802,861	814,032	825,837	837,875	54,378	1.35
Demand (TJ)	10,440	10,373	10,339	10,314	10,320	10,336	51,682	(0.20)
Total								
Average customer base	798,455	807,857	818,132	829,549	841,582	853,843	55,388	1.35
Demand (TJ)	30,928	31,218	31,224	31,390	31,409	31,460	156,701	0.34

Source: ERA demand analysis.

Table 2.21: Ancillary reference services demand forecast

Ancillary services	2024	2025	2026	2027	2028	2029	AA6 addition	CAGR (%)
Applying a Meter Lock	9,737	9,852	9,977	10,116	10,263	10,412	50,620	1.35
Removing a Meter Lock	8,372	8,471	8,579	8,698	8,824	8,953	43,525	1.35
Deregistering a delivery point	3,496	3,538	3,583	3,632	3,685	3,739	18,177	1.35
Disconnecting a delivery point	3,778	3,823	3,871	3,925	3,982	4,040	19,641	1.35
Reconnection a delivery point	3,017	3,053	3,091	3,134	3,180	3,226	15,684	1.35
Permanent disconnection	1,953	1,976	2,001	2,029	2,058	2,088	10,152	1.35
Special meter reads	106,839	108,105	109,480	111,003	112,613	114,254	555,455	1.35

Source: ERA demand analysis.

Required Amendment

- 2.1 ATCO must amend its forecast haulage reference service demand to reflect the ERA's forecast demand in Table 2.20.
- 2.2 ATCO must amend its forecast ancillary reference service demand to reflect the ERA's forecast demand in Table 2.21.

Appendix 1 List of Tables

Table 2.1:	Haulage reference services demand forecast comparison between ATCO proposal and ERA draft decision	iv
Table 2.2:	Ancillary reference services demand forecast comparison between ATCO proposal and ERA draft decision	v
Table 2.3:	AA5 demand for all tariff classes (TJ).....	6
Table 2.4:	Comparison of forecast average customer numbers for A1 tariff class	8
Table 2.5:	Comparison of forecast consumption per customer for A1 tariff class (GJ)	8
Table 2.6:	Comparison of forecast gas demand for A1 tariff class (TJ)	8
Table 2.7:	Comparison of forecast average customer numbers for A2 tariff class	9
Table 2.8:	Comparison of forecast consumption per customer for A2 tariff class (GJ)	9
Table 2.9:	Comparison of forecast gas demand for A2 tariff class (TJ)	9
Table 2.10:	Comparison of forecast average customer numbers for B1 tariff class	10
Table 2.11:	Comparison of forecast consumption per customer for B1 tariff class (GJ)	11
Table 2.12:	Comparison of forecast gas demand for B1 tariff class (TJ)	11
Table 2.13:	Comparison of forecast average customer numbers for B2 tariff class	11
Table 2.14:	Comparison of forecast consumption per customer for B2 tariff class (GJ)	11
Table 2.15:	Comparison of forecast gas demand for B2 tariff class (TJ)	12
Table 2.16:	Comparison of forecast average customer numbers for B3 tariff class	15
Table 2.17:	Comparison of forecast consumption per customer for B3 tariff class (GJ)	16
Table 2.18:	Comparison of forecast gas demand for B3 tariff class (TJ)	16
Table 2.19:	Ancillary reference services – average rate between 2015 and 2019	17
Table 2.20:	Haulage reference services demand forecast	18
Table 2.21:	Ancillary reference services demand forecast.....	19

Appendix 2 National Gas Rules

The National Gas Law (NGL) and National Gas Rules (NGR), as enacted by the *National Gas (South Australia) Act 2008*, establish the legislative framework for the independent regulation of certain gas pipelines in Australia. The *National Gas Access (WA) Act 2009* implements a modified version of the NGL and NGR in Western Australia.

The legislative framework for the regulation of gas pipelines includes a central objective, being the national gas objective, which is:

... to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to—

- (a) price, quality, safety, reliability and security of supply of natural gas; and
- (b) the achievement of targets set by a participating jurisdiction—
 - (i) for reducing Australia's greenhouse gas emissions; or
 - (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

Note—

The AEMC must publish targets in a targets statement: see section 72A.⁶⁴

The following extracts of the NGR, as they apply in Western Australia, are provided for information to assist readers.

42 General requirements for access arrangement information

- (1) Access arrangement information for an access arrangement or an access arrangement proposal is information that is reasonably necessary for users and prospective users:
 - (a) to understand the background to the access arrangement or the access arrangement proposal; and
 - (b) to understand the basis and derivation of the various elements of the access arrangement or the access arrangement proposal.
- (2) Access arrangement information must include the information specifically required by the Law.

43 Requirement to provide access arrangement information

- (1) A service provider, when submitting an access arrangement proposal for the [ERA's] approval, must submit, together with the proposal, access arrangement information for the access arrangement proposal.

Note:

This subrule is classified as a civil penalty provision under the National Gas (South Australian) Regulations. See clause 6 and Schedule 3 of the National Gas (South Australian) Regulations.

⁶⁴ NGL, section 23.

The national gas objective has changed since the last review of ATCO's access arrangement. The amended objective came into effect in Western Australia on 25 January 2024. See: *Western Australian Government Gazette 24 January 2024 No.8* ([online](#)) (accessed April 2024).

- (2) If particular information (sensitive information) is confidential, and its public disclosure could cause undue harm to the legitimate business interests of the service provider, a user or prospective user, the AER may permit the service provider to submit access arrangement information in a form, approved by the [ERA], in which the sensitive information:
 - (a) is aggregated or generalised so as to avoid disclosure of the elements that make it sensitive; or
 - (b) if that is not possible – is entirely suppressed.
- (3) If information submitted as access arrangement information is, in the [ERA's] opinion, deficient in its comprehensiveness or in any other respect, the [ERA] may require the proponent:
 - (a) to make the revisions necessary to correct the deficiency and to re-submit the access arrangement information; or
 - (b) to submit further access arrangement information as an addendum to the information already submitted.

...

72 Specific requirements for access arrangement information relevant to price and revenue regulation

- (1) The access arrangement information for a full access arrangement proposal (other than an access arrangement variation proposal) must include the following:
 - (a) if the access arrangement period commences at the end of an earlier access arrangement period:
 - (i) capital expenditure (by asset class) over the earlier access arrangement period; and
 - (ii) operating expenditure (by category) over the earlier access arrangement period; and
 - (iii) usage of the pipeline over the earlier access arrangement period showing:
 - (A) for a distribution pipeline, minimum, maximum and average demand and, for a transmission pipeline, minimum, maximum and average demand for each receipt or delivery point; and
 - (B) for a distribution pipeline, customer numbers in total and by tariff class and, for a transmission pipeline, user numbers for each receipt or delivery point;
 - (b) how the capital base is arrived at and, if the access arrangement period commences at the end of an earlier access arrangement period, a demonstration of how the capital base increased or diminished over the previous access arrangement period;
 - (c) the projected capital base over the access arrangement period, including:
 - (i) a forecast of conforming capital expenditure for the period and the basis for the forecast; and
 - (ii) a forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method;
 - (d) to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period, a

- forecast of pipeline capacity and utilisation of pipeline capacity over that period and the basis on which the forecast has been derived;
- (e) a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived;
- (f) [Deleted];
- (g) the allowed rate of return for each regulatory year of the access arrangement period;
- (h) the estimated cost of corporate income tax calculated in accordance with rule 87A, including the allowed imputation credits referred to in that rule;
- (i) if an incentive mechanism operated for the previous access arrangement period—the proposed carry-over of increments for efficiency gains or decrements for efficiency losses in the previous access arrangement period and a demonstration of how allowance is to be made for any such increments or decrements;
- (j) the proposed approach to the setting of tariffs including:
 - (i) the suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs; and
 - (ii) a description of any pricing principles employed but not otherwise disclosed under this rule;
- (k) the service provider's rationale for any proposed reference tariff variation mechanism;
- (l) the service provider's rationale for any proposed incentive mechanism;
- (m) the total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.
- (2) The access arrangement information for an access arrangement variation proposal related to a full access arrangement must include so much of the above information as is relevant to the proposal.
- (3) Where the [ERA] has published financial models under rule 75A, the access arrangement information for a full access arrangement proposal must be provided using the financial models.

...

74 Forecasts and estimates

- (1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.
- (2) A forecast or estimate:
 - (a) must be arrived at on a reasonable basis; and
 - (b) must represent the best forecast or estimate possible in the circumstances.

75 Inferred or derivative information

Information in the nature of an extrapolation or inference must be supported by the primary information on which the extrapolation or inference is based.