Draft Decision

Multinet Gas Networks
Access Arrangement 2023 to 2028

(1 July 2023 to 30 June 2028)

Attachment 12
Demand

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AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on the access arrangement that will apply to Multinet Gas Networks (MGN) for the 2023–28 access arrangement period. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Services covered by the access arrangement

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency carryover mechanism

Attachment 9 – Reference tariff setting

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Attachment 13 – Capital expenditure sharing scheme

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12 Demand

This Attachment sets out our assessment of the demand forecasts for MGN for the 2023–28 access arrangement period. Demand is an important input into the derivation of MGN's reference tariffs. This is because tariffs are set by dividing total revenue by forecast demand. It also affects operating expenditure (opex) and capital expenditure (capex), which are linked to network growth via new connections.

12.1 Draft decision

Our draft decision is to accept MGN's proposed demand forecasts for the 2023–28 period. We are satisfied that MGN's proposed demand forecasts, as applied by its consultant CORE Energy & Resources (CORE), comply with rule 74(2) of the National Gas Rules (NGR).

12.2 MGN's proposal

MGN has provided two forecasts of demand for the 2023–28 period. The first was submitted as part of its access arrangement proposal. MGN subsequently updated this forecast to include the impact of the Victorian Gas Substitution Roadmap (the Roadmap). MGN engaged CORE to prepare demand forecasts for its Victorian network for the 2023–28 period. A summary of the key aspects of MGN's demand forecasts is set out in Table 12.1 (Tariff R and C – residential and commercial) and Table 12.2 (Tariff D – industrial).[1]

In summary, CORE forecasts:

- combined residential and commercial demand to fall by an average of 3.7% a year, driven by fewer new residential customer connections, increased disconnections, and falling usage per connection
- industrial demand to remain relatively steady, based on the difficulty in electrifying this load, and uncertainty of the impact of the Roadmap on usage in this sector.

[1] Tariff D is a gas customer who consumes more than 10 terajoules per annum.

Table 12.1 MGN's demand forecasts for Tariff R and C for the 2023–28 access arrangement period

	2023–24	2024–25	2025–26	2026–27	2027–28
Total residential connections (average)	695,977	687,177	674,772	657,566	636,712
Residential consumption per connection (GJ)	51.6	50.1	48.5	46.7	45
Residential demand (TJ)	**35,912**	**34,416**	**32,729**	**30,715**	**28,678**
Commercial connections	14,804	14,352	14,322	14,292	14,262
Commercial consumption per connection (GJ)	381.7	377.9	374.1	370.4	366.7
Commercial demand (TJ)	**5651**	**5424**	**5358**	**5293**	**5229**

Source: MGN Victoria – Revisions to Final Plan 2023-28 – Attachment 13.4 – GSR Response – Revision to Demand - Public

Table 12.2 MGN's demand forecasts for Tariff D (Industrial) for the 2023–28 access arrangement period

	2023–24	2024–25	2025–26	2026–27	2027–28
Connections	272	272	272	272	272
Maximum Hourly Quantity (GJ)	3545	3501	3457	3413	3370

Source: MGN Final Plan_Attachment 13.1_Demand Forecasting Report_PUBLIC

MGN's initial demand forecast was submitted before the release of the Roadmap. This forecast was developed using a standard approach of trending forward a weather corrected historical demand dataset. MGN revisited the forecast in light of the Roadmap. The Roadmap contains policies to reduce gas consumption, most notably:

- expansion of the Victorian Energy Upgrades (VEU) scheme with enhanced incentives to switch to electric appliances
- phasing out existing rebates for the installation of natural gas appliances by the end of 2023
- changes to Victoria Planning Provisions in 2022 to remove the requirement for new housing developments to be connected to gas

- adopting the 7-Star Standard for new home construction in the new National Construction Code which takes account of home energy appliances in addition to the thermal shell of the building.[2]

To address these changes, MGN adjusted its forecast of residential connections (which reflects the number of new customer connections, minus the number of customer disconnections), and the demand per connection for residential and commercial customers. As the Roadmap represents a change in the operating environment for gas network service providers, there is no observable historical trend to inform the forecast changes. In order to reflect the changes, MGN has estimated the likely impact of the Roadmap, and applied post-model adjustments to its original forecast.

MGN's amended demand forecast shows a fall in residential demand of 12.7% per connection, and 20% in total consumption over the five-year period. Pre-Roadmap, MGN had forecast residential consumption per user to fall by 10% and total consumption to fall by 9%.

MGN has forecast consumption per commercial connection will fall by around 4% over the period with total consumption falling by 7.4%. Pre-Roadmap, MGN forecast use per connection to remain stable, and total consumption to fall by 3.6%.

Industrial demand is not forecast to change in response to the Roadmap. This is due to industrial gas load being more difficult to electrify.

12.3 Assessment approach

Under the NGR, MGN must submit, as part of its access arrangement information:

- usage of the pipeline over the earlier access arrangement period showing minimum, maximum and average demand; and customer numbers in total and by tariff class;[3]
- to the extent that 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.[4]

The NGR also require that forecasts and estimates:[5]

- be supported by a statement of the basis of the forecast or estimate;
- are arrived at on a reasonable basis; and
- represent the best forecast or estimate possible in the circumstances.

There are two important considerations in assessing whether these are achieved:

- the appropriateness of the forecast methodology – this involves consideration of how the demand forecast has been developed; and

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2 MGN, MGN Victoria – Revisions to Final Plan 2023-28 – Attachment 13.4 – GSR Response – Revision to Demand – Public, p.4.

5 NGR, rule 74.

- whether or not relevant factors have been considered in developing demand forecasts.

To determine whether MGN's proposed demand forecasts were arrived at on a reasonable basis and are the best possible forecasts in the circumstances, we reviewed:

- information provided by MGN
- the data inputs used to implement the forecasting methodology.

In making our draft decision, we had regard to:

- information provided by MGN as part of its proposed access arrangement
- additional information provided by MGN in response to the Roadmap
- stakeholder submissions.

12.3.1 Interrelationships

We have considered the relevant interrelationships between the different components of MGN's access arrangement as part of our analysis.

Several interrelationships exist. This includes the effect of forecast demand on the efficient amount of capex, opex and tariffs in the 2023–28 period. In particular, the demand forecasts impact:

- residential and commercial connections capex – the number of new connections drives the volume of connections capex
- opex – the forecast total connections volume and total consumption (output growth) are used to determine additional opex required to service a larger network
- reference tariffs – prices are based on forecast consumption (demand) per connection. Tariffs are determined by dividing the service provider's efficient cost (revenue) by quantity of service delivered (demand per connection). This means that an increase in demand per connection will reduce the tariff price (provided revenue stays the same).

12.4 Reasons for draft decision

Rule 74(2) of the NGR requires forecasts in access arrangement proposals to be arrived at on a reasonable basis, and to represent the best forecast possible in the circumstances.

12.4.1 MGN's forecast methodology and assumptions

We consider MGN's pre-Roadmap demand forecast methodology and assumptions are a reasonable starting point to forecast future demand. In particular, they:

- are based on the analysis of historic trends in gas volumes and key drivers of demand
- utilise a weather normalisation method that is well established and that has previously been accepted by the AER.

We consider that, in response to the Roadmap, it was reasonable for MGN to revise this forecast with post model adjustments. The Roadmap contains measures designed to influence customer fuel choice and behaviour. In particular, it will:

- reduce the number of new customers connecting – new building energy efficiency standards will disincentivise new residential dwellings from installing gas appliances

- reduce the amount of gas each user consumes – the incentive program that subsidised the purchase of new gas appliances will end, and a new incentive program to encourage electrification will commence. This would be expected to lead to the progressive change of heat load from gas to electricity, and to a greater number of disconnections from the network.

There remains significant uncertainty regarding the extent to which demand will change in Victoria in response to the Roadmap. Consequently, there is also much uncertainty around whether these post model adjustments are sufficient to capture the change, or conversely, whether they overstate a likely fall in demand. MGN's consultant, CORE, acknowledged this in their revised demand forecast documentation, stating:

> CORE acknowledges that the Revised forecast is based on a series of inputs which cannot be specifically analysed against an actual historical data series. This is due to the fact that the Revision is attributable to a rapidly changing energy industry, influenced by new policy settings and defined programs to achieve legislated national and State GHG [Greenhouse gas] emission and other targets and National Construction Code Standards. Therefore CORE has used techniques which are based on best practice, to develop forecasts which result in the "best forecast or estimate possible in the circumstances" in accordance with the NGR.[6]

CORE further noted that it:

> … is not aware of any single reference which defines best estimate under the specific circumstances which are faced by the MGN Vic network. Therefore, CORE has considered ISO Standards and approaches adopted by leading global organisations to guide best practices used to develop estimates of future energy and gas demand.[7]

CORE's approach to developing post model adjustments attempts to estimate the impact of the Roadmap by considering the proposed electrical appliance incentive, allocations for other programs within the Victorian Budget, changes to the National Construction Code, AEMO's 2022 Gas Statement of Opportunities (GSOO) and survey results from the Roadmap and Energy Consumers Australia.

We note that similar issues arose in our recent access arrangement decision for Evoenergy's gas network. In that decision, the ACT Government implemented changes to disincentivise gas consumption. As in Victoria, this included incentive programs aimed at replacing gas appliances with electric equivalents. In our final decision, the average annual fall in consumption per connection was forecast at approximately 6.8%[8], whereas MGN's proposal is around 2.6% a year.

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6 MGN, Revised Demand Forecast | MGN Vic & Albury Access Arrangement – 2023-24 to 2027-28, p.10.

7 MGN, Revised Demand Forecast | MGN Vic & Albury Access Arrangement – 2023-24 to 2027-28, p.10.

8 AER, AGN SA access arrangement 2021-26, final decision, Attachment 12, p.20.

It is also worth noting that MGN's forecast falls between AEMO's two central scenarios for gas consumption in the future, being progressive change[9] and step change scenario.[10] MGN's forecast is largely in line with progressive change for the first two years of the upcoming period, after which it trends more towards the step change scenario. This is indicative of an implementation lag for Roadmap policies.

We consider MGN and CORE took into account a range of inputs in an attempt to estimate and validate its post model adjustments, in the face of significant uncertainty. We note that the post model adjustments are consistent with, albeit slightly lower than those applied to Evoenergy. We also note that the changes result in a forecast that is between AEMO's two central scenarios. We consider this constitutes the best forecast under the circumstances, and propose to accept MGN's demand forecast.

Notwithstanding this, we consider MGN should update its demand forecast in the revised proposal to take account of any material changes in assumptions or data between now and the revised proposal, and should also update the forecast to take account of AEMO's 2023 GSOO.

We are open to MGN submitting an application mid-period to vary its 2023–28 access arrangement if the trajectory of its demand is substantially different to our final decision. We would expect MGN to engage with its customers if actual demand turns out to be materially higher than our final decision by mid-period.

12.4.2 Tariff D demand forecast

We are satisfied that MGN's forecasts for Tariff D demand represents the best forecast under the circumstances. In particular, we accept that the methodology is consistent with recent AER decisions, and AEMO's forecasting approach.

Demand for industrial customers is forecast on:

- the maximum amount of capacity that industrial customers are expected to require on a day (MDQ); and
- the total amount of gas industrial customers are expected to consume in a year (ACQ).

To support the forecast methodology, MGN also conducted a survey of its industrial customers to better understand their future requirements. MGN adjusted MDQ and ACQ forecasts using a 10-year historical trend, adjusted for responses to its survey.[11]

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9 The Progressive Change scenario represents a future that delivers action towards net zero emissions through technology advancements and based on current state and federal government environmental and energy policies. Key drivers include energy efficiency savings schemes and a continuing increase in the number of new connections during the outlook period.

10 The Step Change scenario represents a future with rapid consumer-led transformation of the energy sector, and a coordinated economy-wide approach that efficiently and effectively tackles the challenge of rapidly lowering emissions (including electrification of gas heating load), driven by consumer-led change with a focus on energy efficiency, digitalisation and step increases in global emissions policy above what is already committed.

11 MGN, MGN Final Plan_Attachment 13.1_Demand Forecasting Report_PUBLIC, p.39.

Overall, MGN is forecasting a small decline in the MDQ over the 2023–28 access arrangement period, stable customer numbers and a small increase in overall consumption.

We note that, unlike smaller customers, there is currently not a clear path to electrify industrial load, so we consider the Roadmap will not impact Tariff D forecast outcomes.

We are satisfied with MGN's forecast Tariff D for industrial numbers and associated demand.

12.4.3 Minimum, maximum and average demand

The NGR requires that access arrangement information includes minimum, maximum and average demand for each receipt or delivery point for the earlier access arrangement period.[12] MGN's access arrangement information and its response to our regulatory information notice (RIN) satisfy these requirements.

12.4.4 Forecast pipeline capacity and utilisation

The NGR requires that, to the extent it is practicable to forecast pipeline capacity over the access arrangement period, the access arrangement information should include forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period.[13]

MGN did not provide this information in its access arrangement information. However, MGN's distribution network is a meshed network made up of interconnected pipes, meaning that calculating forecast capacity and utilisation is not practicable.

12 NGR, r. 72(1)(a)(iii)(A).

13 NGR, r. 72(1)(d).

Glossary

Term	Definition
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGN	Australian Gas Networks (Victoria and Albury)
Capex	Capital expenditure
CORE	CORE Energy & Resources
GSOO	Gas Statement of Opportunities
MGN	Multinet Gas Networks
NGR	National Gas Rules
Opex	Operating expenditure
RIN	Regulatory information notice
The Roadmap	Victorian Gas Substitution Roadmap
VEU	Victorian Energy Upgrades