

# Final decision

AusNet Gas Services  
Gas distribution access arrangement  
1 July 2023 to 30 June 2028

Attachment 12 – Demand

June 2023

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## 12 Demand

This attachment sets out our assessment of AusNet’s demand forecast for the 2023–28 access arrangement period (2023–28 period). Demand is an important input into the derivation of AusNet’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 Final decision

Our final decision is to not accept AusNet’s proposed demand forecast for the 2023–28 period, and substitute it with a demand forecast based on the Australian Energy Market Operator’s (AEMO) 2023 Gas Statement of Opportunities (GSOO). We are satisfied this approach is consistent with rule 74 of the National Gas Rules (NGR).<sup>1</sup>

Tables 12.1 and 12.2 set out our final decision for AusNet’s forecast demand.

**Table 12.1 AER’s final decision for Tariff V for the 2023–28 access arrangement period**

	2023–24	2024–25	2025–26	2026–27	2027–28
<b>Total residential connections</b>	781,161	792,591	802,844	808,824	812,193
<b>Residential consumption per connection (GJ)</b>	39.2	38.0	36.5	34.5	32.1
<b>Residential demand (TJ)</b>	<b>30,596</b>	<b>30,156</b>	<b>29,339</b>	<b>27,942</b>	<b>26,044</b>
<b>Commercial connections</b>	16,800	16,854	16,910	16,964	17,016
<b>Commercial consumption per connection (GJ)</b>	346.4	340.3	330.0	313.3	291.1
<b>Commercial demand (TJ)</b>	<b>5819</b>	<b>5736</b>	<b>5580</b>	<b>5314</b>	<b>4954</b>

Source: AER Analysis.

<sup>1</sup> Rule 74 of the NGR specifies requirements for forecasts and estimates, which must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.

**Table 12.2 AER’s final decision for Tariff D and M (Industrial) for the 2023–28 access arrangement period**

	2023–24	2024–25	2025–26	2026–27	2027–28
<b>Connections</b>	n/a <sup>a</sup>				
<b>Maximum Hourly Quantity (GJ)</b>	6996	6881	6765	6702	6672

Source: AusNet, *AusNet - Updated Demand Forecasts - GSOO 2023*, 28 March 2023.

Note: <sup>a</sup> AusNet is not required to forecast the number of connections. However, at the end of 2021, AusNet had 291 Tariff D and 35 Tariff M customers.

## 12.2 AusNet’s revised proposal

In response to the draft decision, AusNet provided two forecasts of demand for Tariff V (residential and commercial demand):

- an initial forecast that largely reiterated the position from the draft decision
- an updated forecast in response to AEMO’s 2023 GSOO.

We have reviewed the updated forecast for the purposes of this final decision. AusNet did not alter the forecast from the draft decision for industrial demand (Tariff D and M).

AusNet engaged the Centre for International Economics (CIE) to prepare the demand forecast for its Victorian network for the 2023–28 period. A summary of the key aspects of AusNet’s demand forecast (as updated in response to the 2023 GSOO) is set out in Table 12.3 (Tariff V – residential and commercial) and Table 12.4 (Tariff D and M – industrial).<sup>2</sup>

In summary, CIE forecasts:

- combined residential and commercial demand to fall by an average of 2.8% a year, driven by falling usage per connection and lower than expected connections growth
- industrial demand to remain relatively steady, based on the difficulty in electrifying this load, and the uncertainty of the impact of the 2022 Victorian Gas Substitution Roadmap (the Roadmap) on usage in this sector.

<sup>2</sup> Tariff D is a gas customer who consumes more than 10 terajoules per annum.

**Table 12.3 AusNet’s demand forecast for Tariff V for the 2023–28 access arrangement period**

	2023–24	2024–25	2025–26	2026–27	2027–28
<b>Total residential connections</b>	779,181.34	786,653.10	790,968.76	791,010.62	788,442.36
<b>Residential consumption per connection (GJ)</b>	39.0	37.9	36.8	35.6	34.4
<b>Residential demand (TJ)</b>	<b>30,350</b>	<b>29,786</b>	<b>29,083</b>	<b>28,154</b>	<b>27,130</b>
<b>Commercial connections</b>	16,800.05	16,854.18	16,909.96	16,964.06	17,016.44
<b>Commercial consumption per connection (GJ)</b>	340.7	330.3	318.3	304.4	290.0
<b>Commercial demand (TJ)</b>	<b>5,723</b>	<b>5,567</b>	<b>5,382</b>	<b>5,163</b>	<b>4,935</b>

Source: AusNet, *AusNet - Updated Demand Forecasts - GSOO 2023*, 28 March 2023.

**Table 12.4 AusNet’s demand forecast for Tariff D and M (Industrial) for the 2023–28 access arrangement period**

	2023–24	2024–25	2025–26	2026–27	2027–28
<b>Connections</b>	n/a <sup>a</sup>				
<b>Maximum Hourly Quantity (GJ)</b>	6996	6881	6765	6702	6672

Source: AusNet, *AusNet - Updated Demand Forecasts - GSOO 2023*, 28 March 2023.

Note: <sup>a</sup> AusNet is not required to forecast the number of connections. However, at the end of 2021, AusNet had 291 Tariff D and 35 Tariff M customers.

## 12.3 Assessment approach

Under the NGR, AusNet 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;<sup>3</sup>
- 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.<sup>4</sup>

<sup>3</sup> NGR, r. 72(1)(a)(iii)

<sup>4</sup> NGR, r. 72(1)(d)

The NGR also require that forecasts and estimates:<sup>5</sup>

- 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 requirements are met:

- the appropriateness of the forecast methodology – this involves consideration of how the demand forecast has been developed and
- whether or not relevant factors have been considered in developing demand forecasts.

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

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

In making our final decision, we had regard to:

- information provided by AusNet as part of its proposed access arrangement and revised proposal
- AEMO's 2023 Victorian Gas Planning Report (VGPR) and Gas Statement of Opportunities (GSOO)
- additional information provided by AusNet in response to the VGPR and GSOO
- stakeholder submissions.

### **12.3.1 Interrelationships**

We have considered the relevant interrelationships between the different components of AusNet'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, demand forecasts impact:

- residential and commercial connections capex and abolishment opex – the number of new connections drives the volume of connections capex, while the number of customers exiting the network drives abolishment opex
- opex output growth – 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 and total customer numbers. Tariffs are determined by dividing a portion of the service provider's efficient cost (revenue) by number of customers (fixed component) and the

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<sup>5</sup> NGR, r. 74.

remainder by the quantity of service delivered (variable component). This means that an increase in customer numbers or demand per connection will reduce the tariff price (provided revenue stays the same).

## 12.4 Reasons for final 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 AusNet’s forecast methodology and assumptions

We consider AusNet’s initial demand forecast methodology and assumptions<sup>6</sup> 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.

Prior to the draft decision, AusNet amended this approach to accommodate the 2022 Victorian Gas Substitution Roadmap (the Roadmap). In doing so, AusNet reduced its earlier forecast of demand using post-model adjustments to reflect falling levels of consumption predicted by the Roadmap. In our draft decision, we accepted this approach was reasonable.<sup>7</sup> However, we noted that AusNet’s revised proposal should be updated to accommodate the latest data, including the outcome of the 2023 GSOO.

AEMO had not published the 2023 GSOO at the time AusNet’s revised proposal was submitted. However, AusNet submitted a revised forecast in response to the GSOO in late March 2023. This resulted in a moderate reduction in its demand forecast over the period.

#### 12.4.1.1 AEMO’s 2023 Gas Statement of Opportunities and Victorian Gas Planning Report

On 16 March 2023, AEMO released its Gas Statement of Opportunities (GSOO) and the related Victorian Gas Planning Report (VGPR). Among other things, the GSOO provides a forecast of gas consumption over the next 20 years, while the VGPR provides a more detailed consideration of Victoria’s gas supply and demand situation over the next five years.

AEMO typically considers several different demand scenarios in its GSOO and VGPR, including a central or most probable scenario. In 2022, amid growing uncertainty in future gas demand and policy, AEMO included two very different central scenarios, called

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<sup>6</sup> That is, AusNet’s approach to demand forecasting before the release of the Victorian Gas Substitution Roadmap and the 2023 Gas Statement of Opportunities.

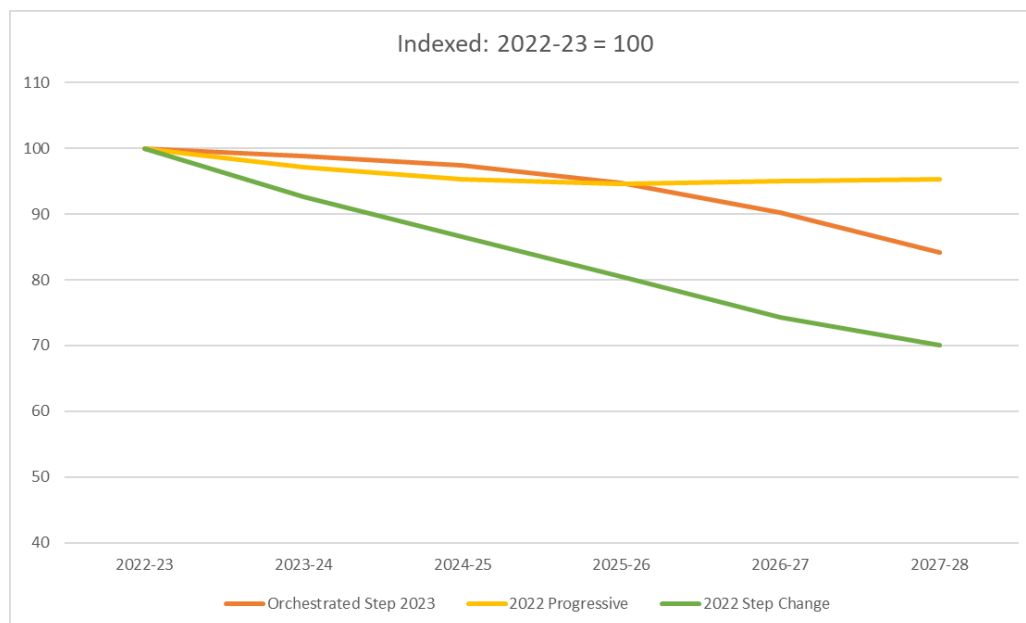
<sup>7</sup> Our full consideration of AusNet’s response to the Roadmap is provided in Attachment 12 of the draft decision.



progressive change<sup>8</sup> and step change<sup>9</sup>. These both predicted falls in gas consumption in the lead-up to 2050, with step change predicting stronger policy intervention to curb demand, while progressive change predicted a slower drop based on improving energy efficiency and changes in customer preference over time.

In the 2023 GSOO and VGPR, AEMO has reverted to a single central scenario that sits somewhere between the two 2022 scenarios. It has called this an orchestrated step change. The orchestrated step change builds on the 2022 step change scenario, but considers a slower uptake of electrification. That is, it assumes that policy intervention will ramp up, but customers will be slower to convert from gas appliances to electric equivalents. Figure 12.1 illustrates the difference between AEMO’s new central scenario, and the two central scenarios from 2023.

**Figure 12.1 – GSOO central scenarios for residential and commercial gas users in Victoria**



Source: AEMO 2023 Gas Statement of opportunities.

### 12.4.1.2 AusNet’s response to the 2023 GSOO

On 28 March 2023, AusNet submitted an updated demand forecast in response to the 2023 GSOO. In particular, the updated forecast contained a new weather-normalised starting point to account for colder than typical conditions in 2022, and further post-model adjustments to

<sup>8</sup> 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.

<sup>9</sup> 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.

incorporate the latest fuel switching forecasts from the 2023 GSOO. This led to a reduction in total demand from AusNet’s revised proposal.

### 12.4.1.3 Our assessment

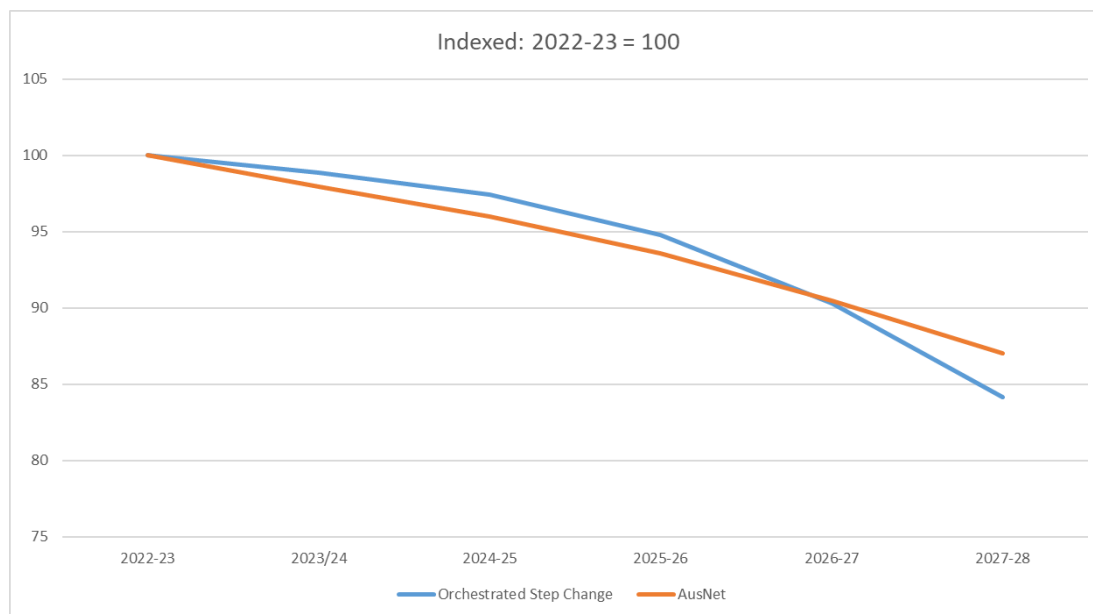
As noted above, we remain of the view that AusNet’s base forecasting approach is sound. That is, the process AusNet applied to modelling was reasonable, based on historical trends, the accepted process of weather normalisation, and growth in new connections.

The focus of our draft decision was on AusNet’s post-model adjustments to account for the impact of the Roadmap. As these adjustments were included in response to new policy, they needed to be based on assumptions rather than on observed historical trend.

At the draft decision, we accepted these adjustments were reasonable, but stated they should be updated for the GSOO. In the final decision, we have focussed on the new aspects of the forecast, namely the changes in response to the 2023 GSOO, and whether these are reasonable and represent the best available forecast.

As a starting point for our assessment, we considered whether AusNet’s adjusted demand forecast reflected the trends present in the 2023 GSOO. Figure 12.2 shows AusNet and AEMO’s demand trends for residential and commercial customers.

**Figure 12.2 – Comparison of AusNet and AEMO’s demand trends**



Source: AEMO 2023 Gas Statement of opportunities, AER analysis.

As illustrated by Figure 12.2, AEMO’s forecast trend is slightly higher than AusNet’s for the first three years of the access arrangement period, nearly equal in year four, and slightly lower in the final year. In aggregate, applying AEMO’s trend will result in slightly higher demand than the forecast put forward by AusNet. Other things being equal, this would result in slightly lower reference tariffs if the AEMO trend was adopted.

We raised this with AusNet as part of an information request. In response, AusNet noted that it was not concerned with the AER applying AEMO’s trend, provided the correct weather

normalised starting point was used. We consider AusNet’s weather normalised starting point was derived on a reasonable basis, using accepted forecasting methodology.

On balance, we consider a forecast based on AEMO’s 2023 GSOO trend and AusNet’s weather normalised 2022-23 actual gas consumption provides a better estimate of future demand than AusNet’s forecast. AEMO’s orchestrated step change scenario takes into account the latest information and analysis around the adoption of fuel switching and ongoing changes in gas usage over the access arrangement period and beyond. Importantly, it predicts a lag in the large scale adopting of alternative fuels when compared to the 2022 step change scenario, and incorporates this in its latest forecast of gas consumption. This results in similar total consumption across the period, but the upfront fall in the first three years is lower than AusNet’s forecast, leading to lower reference tariffs over the access arrangement period.

We also note that, in our substitute forecast of demand, we have updated the customer number forecast. This takes account of our decision on abolishments (customer disconnections) in Attachment 6 of this final decision. We consider that, if fewer customers disconnect from the network, total customer numbers will be higher. As our decision includes fewer abolishments than forecast by AusNet, we have adjusted total customer numbers upwards by a commensurate amount.

Finally, as noted in the draft decision, we are open to AusNet 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 also expect AusNet to engage with its customers if actual demand turns out to be materially higher or lower than our final decision by mid-period.

#### **12.4.2 Tariff D and M demand forecast**

We remain of the view from the draft decision that AusNet’s forecast for Tariff D and M demand represents the best forecast under the circumstances. Our reasons are outlined in Attachment 12 of the draft decision.

#### **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.<sup>10</sup> AusNet’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.<sup>11</sup>

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<sup>10</sup> NGR, r. 72(1)(a)(iii)(A).

<sup>11</sup> NGR, r. 72(1)(d).

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

# Glossary

Term	Definition
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGN	Australian Gas Networks (Victoria and Albury)
Capex	Capital expenditure
CIE	Centre for International Economics
GSOO	Gas Statement of Opportunities
MGN	Multinet Gas Networks
NGR	National Gas Rules
Opex	Operating expenditure
PTRM	Post tax revenue model
The Roadmap	Victorian Gas Substitution Roadmap
VGPR	Victorian Gas Planning Report