



FINAL DECISION
Australian Gas Networks
Access Arrangement
2016 to 2021

Attachment 13 – Demand

May 2016

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Note

This attachment forms part of the AER's final decision on the access arrangement for Australian Gas Networks' South Australian distribution network for 2016–21. It should be read with all other parts of the final decision.

The final 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 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

Attachment 9 - Efficiency carryover mechanism

Attachment 10 - Reference tariff setting

Attachment 11 - Reference tariff variation mechanism

Attachment 12 - Non-tariff components

Attachment 13 - Demand

Attachment 14 - Other incentive schemes

Contents

Note	13-2
Contents	13-3
Shortened forms	13-4
13 Demand	13-6
13.1 Final decision	13-6
13.2 AGN's revised proposal	13-6
13.3 AER's assessment approach	13-6
13.3.1 Interrelationships.....	13-6
13.3.2 Minimum, maximum and average demand.....	13-7
13.3.3 Forecast pipeline capacity and utilisation	13-7
13.4 Reasons for final decision	13-7

Shortened forms

Shortened form	Extended form
AA	Access Arrangement
AAI	Access Arrangement Information
AER	Australian Energy Regulator
AGN	Australian Gas Networks
ATO	Australian Tax Office
capex	capital expenditure
CAPM	capital asset pricing model
CCP	Consumer Challenge Panel
CESS	Capital Expenditure Sharing Scheme
CPI	consumer price index
CSIS	Customer Service Incentive Scheme
DRP	debt risk premium
EBSS	Efficiency Benefit Sharing Scheme
ECM	Efficiency Carryover Mechanism
ERP	equity risk premium
Expenditure Guideline	Expenditure Forecast Assessment Guideline
gamma	value of imputation credits
GSL	Guaranteed Service Level
MRP	market risk premium
NECF	National Energy Customer Framework
NERL	National Energy Retail Law
NERR	National Energy Retail Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NIS	Network Incentive Scheme
NPV	net present value
opex	operating expenditure
PFP	partial factor productivity
PPI	partial performance indicators

Shortened form	Extended form
PTRM	post-tax revenue model
RBA	Reserve Bank of Australia
RFM	roll forward model
RIN	regulatory information notice
RoLR	retailer of last resort
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	Service Target Performance Incentive Scheme
TAB	tax asset base
UAFG	unaccounted for gas
WACC	weighted average cost of capital
WPI	Wage Price Index

13 Demand

This attachment sets out our assessment of the demand forecasts for AGN for the 2016–21 access arrangement period. Demand is an important input into the derivation of AGN's reference tariffs. It also affects operating expenditure (opex) and capital expenditure (capex) linked to network growth (new connections).¹

13.1 Final decision

We are satisfied that AGN's proposed demand forecasts comply with rule 74(2) of the National Gas Rules (NGR).

13.2 AGN's revised proposal

AGN's revised proposal incorporated the revisions to its demand forecasts required by our draft decision.²

In our draft decision, we accepted AGN's forecast connection numbers for Tariff V residential and commercial customers and for Tariff D customers. We also accepted AGN's forecast for Tariff D MDQ. We did not accept AGN's forecast consumption per connection for Tariff V residential and commercial customers.³

13.3 AER's assessment approach

Our assessment approach is the same as the draft decision.⁴

13.3.1 Interrelationships

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

Several interrelationships exist. This includes the effect of forecast demand on the efficient amount of capex and opex and tariffs in the 2016–21 access arrangement period. In particular, the demand forecasts impact:

- approved Tariff V connections capex, given the number of new connections affects the amount of approved connections capex

¹ Our final decisions on AGN's capex and opex are set out in attachments 6 and 7 of this decision.

² AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, January 2016 - Attachment 14.5 Demand*, p. 1.

³ AER, *Draft decision Australian Gas Networks access arrangement - Attachment 13 - Demand*, November 2015, pp. 13-12 to 13-16.

⁴ AER, *Draft decision Australian Gas Networks access arrangement - Attachment 13 - Demand*, November 2015, pp. 13-8 to 13-10.

- approved opex, given the forecast total connections numbers and total consumption (output growth) are used in deriving the additional opex required to service the larger network
- tariff prices, given they depend on forecast consumption (demand) per connection. Changes in these forecasts will change tariff prices. In simple terms, tariff prices are determined by cost divided by quantity (where quantity is measured by demand per connection). This means that an increase in forecast quantity has the effect of reducing the tariff price.

13.3.2 Minimum, maximum and average demand

Under the NGR, AGN's access arrangement information must include minimum, maximum and average demand for the earlier access arrangement period.⁵

We consider that AGN's access arrangement information satisfies the requirement of rule 72(1)(a)(iii) of the NGR.⁶

13.3.3 Forecast pipeline capacity and utilisation

The NGR require that to the extent practicable, the access arrangement information should include forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period.⁷ AGN did not provide information and submitted that:⁸

Rule 72 of the National Gas Rules (NGR) requires AGN, to the extent it is practicable, to provide a forecast of pipeline capacity and utilisation over the next (2016/17 to 2020/21) AA period. As previously indicated to the Australian Energy Regulator (AER), such parameters are not relevant or have no meaning in the context of a natural gas distribution network. This reflects that the Network consists of a variety of inter-linked pipe materials, each with a different capacity (unlike natural gas transmission pipelines).

We recognise there are practical considerations which mean that calculating capacity is not straightforward.

13.4 Reasons for final decision

In our draft decision, having regard to advice from our consultant ACIL Allen,⁹ we accepted AGN's forecast Tariff V connection numbers for residential and commercial customers, as well as AGN's forecast Tariff D MDQ. We are satisfied that these demand forecasts are consistent with rule 74(2) of the NGR.

⁵ NGR, r. 72(1)(a)(iii)(A).

⁶ AGN, *Access Arrangement Information for AGN's South Australian Natural Gas Distribution Network*, July 2015, p. 79–81.

⁷ NGR, r. 72(1)(d).

⁸ AGN, *Access Arrangement Information for AGN's South Australian Natural Gas Distribution Network*, July 2015, p. 31.

⁹ ACIL Allen, *Review of Demand Forecasts for the AGN South Australian Gas Networks*, 11 November 2015.

However, we did not accept AGN's forecasts for Tariff V residential and commercial consumption per connection. We agreed with our consultants, ACIL Allen, that an error existed with the method Core Energy (AGN's consultant) used to forecast Tariff V residential and commercial consumption per connection. We therefore considered that AGN's forecasts for Tariff V residential and business consumption per connection had not been arrived at on a reasonable basis and did not represent the best estimates in the circumstances.

AGN's revised proposal incorporated the revisions to its demand forecasts required by our draft decision.¹⁰

On the basis that we have not identified any new information which impacts upon our reasoning as set out in the draft decision, we are satisfied that the demand forecasts in AGN's revised proposal, including its forecasts for capacity utilisation, are arrived at on a reasonable basis and represent the best estimate possible in the circumstances.¹¹ This conclusion must be read in conjunction with our draft decision, which details our analysis of AGN's demand forecasts.¹²

¹⁰ AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, January 2016 - Attachment 14.5 Demand*, p. 1.

¹¹ NGR, r. 74(2).

¹² AER, *Draft decision Australian Gas Networks access arrangement - Attachment 13 - Demand*, November 2015.