



**DRAFT DECISION**  
**Roma to Brisbane Gas Pipeline**  
**Access Arrangement**  
**2017 to 2022**

**Attachment 13 – Demand**

July 2017

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## Note

This attachment forms part of the AER's draft decision on the access arrangement for the Roma to Brisbane Gas Pipeline for 2017–22. 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 - 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

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## Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ATO	Australian Tax Office
capex	capital expenditure
CAPM	capital asset pricing model
CPI	consumer price index
DRP	debt risk premium
ECM	(Opex) Efficiency Carryover Mechanism
ERP	equity risk premium
Expenditure Guideline	Expenditure Forecast Assessment Guideline
gamma	Value of Imputation Credits
MRP	market risk premium
NGL	National Gas Law
NGO	national gas objective
NGR	National Gas Rules
NPV	net present value
opex	operating expenditure
PTRM	post-tax revenue model
RBA	Reserve Bank of Australia
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STTM	Short Term Trading Market
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 the RBP access arrangement proposal from APTPPL for the 2017–22 access arrangement period. Demand is an important input into the derivation of APTPPL’s reference tariffs.

## 13.1 Draft decision

We are satisfied that APTPPL proposed demand forecasts comply with rule 74(2) of the National Gas Rules (NGR), taking into account the revenue and pricing principles (RPP).

APTPPL has proposed two separate demand forecasts for its eastbound and westbound services over the 2017-22 access arrangement period. It proposes to offer these services on a long term and short term firm basis. For both eastbound and westbound services, it forecasts an average 200 TJMDQ<sup>1</sup>/day long term firm equivalent demand over the 2017-22 access arrangement period.<sup>2</sup> APTPPL engaged ACIL Allen to assist it to come to its position on demand forecasts.

APTPPL forecasts that the eastbound service will be sought by retail and industrial users on a long term firm basis, and that gas powered generation (GPG) users will acquire the eastbound service on a short term firm basis. APTPPL forecasts that its westbound services will be sought only on a short term firm basis by a range of different users; including CSG LNG producers, and spot market traders.

Based on all the information before us, our conclusion is that APTPPL's forecast of an average of 200 TJMDQ/day long term firm equivalent demand is the best estimate in the circumstances.

## 13.2 APTPPL’s proposal

APTPPL proposed a number of changes to its current access arrangement (2012-2017 access arrangement period) that affect its demand forecasts. In particular, APTPPL proposes to offer during the 2017–22 access arrangement period:<sup>3</sup>

- both eastbound and westbound services, to allow midstream gas to be shipped either towards Brisbane (eastbound) or towards the Wallumbilla Hub (westbound); and
- both long term and short term firm services.

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<sup>1</sup> Tera Joule Maximum Daily Quantity

<sup>2</sup> To calculate the long term firm service tariff, APTPPL has translated the forecast amount of short term firm service to a revenue-equivalent level of long firm demand. For an explanation of long term equivalent demand, see: APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, pp. 46-52.

<sup>3</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 3.

The long term firm service is a capacity reservation service which is charged with a capacity-only tariff over the term of a long term contract. The short term service is only charged for the term of the capacity reserved (as little as one day).<sup>4</sup>

APTPPL has therefore submitted separate demand forecasts for its eastbound and westbound services, as well as whether demand for these services will be for the long term or short term firm service.

Demand for APTPPL's westbound service has been forecast separately. APTPPL submit that this is because it is a new service (on offer since October 2015) and the characteristics of shippers demanding this service differ from those demanding the eastbound service.<sup>5</sup> It forecasts that users of this service will only seek the short term firm service.

To forecast demand for its eastbound service, APTPPL's approach to forecasting differs between customer classes:<sup>6</sup>

- For retail and industrial users, the forecast load is based on historical flows, adjusted for organic growth in the retail sector and known changes in the industrial sector. APTPPL forecasts these users to demand the long term firm service over the access arrangement period; and
- For gas power generation (GPG) users, APTPPL submits that forecasting is more complex with demand for gas depending largely on the relationship between gas prices, electricity prices and generation station operating costs. APTPPL forecasts these eastbound users to demand the short term firm service over the access arrangement period.

### 13.3 AER's assessment approach

The NGR require access arrangement information for a full access arrangement proposal for a transmission pipeline to include:

- usage of the pipeline over the earlier access arrangement period showing minimum, maximum and average demand for each receipt and delivery point; and user numbers for each receipt or delivery point<sup>7</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>8</sup>

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<sup>4</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 3.

<sup>5</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 55.

<sup>6</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 32.

<sup>7</sup> NGR, r. 72(1)(a)(iii).

<sup>8</sup> NGR, r. 72(1)(d).

The NGL requires us to take into account the RPP and the NGR also require that forecasts and estimates:<sup>9</sup>

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

We consider that there are two important considerations in assessing whether demand forecasts are arrived at on a reasonable basis and whether they represent the best forecasts possible in the circumstances.<sup>10</sup> These are:

- 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 taken into account in developing demand forecasts.

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

- information provided by APTPPL;
- other analysis from demand experts;
- the data inputs used to implement the forecasting methodology.

In making our draft decision, we had regard to:

- the NGR and NGL;
- information provided by APTPPL as part of its proposed access arrangement;
- additional information provided by APTPPL in response to our information requests;
- information from other demand experts;
- other information such as current and expected market conditions.

## Interrelationships

Tariff prices depend on estimates on forecast total demand (GJ/day). To set transmission tariffs, the demand forecast is expressed in terms of the capacity reserved by the user (maximum daily quantity). Changes in these forecasts will translate into changed tariff prices. In simple terms, tariff prices are determined by cost divided by total demand (GJ/day), such that an increase in forecast demand has the effect of reducing the tariff price and vice versa.

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<sup>9</sup> NGL, s 28(2)(a); NGR, r. 74(2). The RPP of particular relevance to our assessment of demand are those specified at NGL, ss. 24(2), 24(3), 24(6) and 24(7).

<sup>10</sup> NGR, r. 74(2).



For this access arrangement, APTPPL combines both its forecasts for long term firm and short term firm demand (eastbound and westbound) into one overall forecast - a long term firm equivalent demand of 200 TJMDQ/day.<sup>11</sup> To do this, it converts the amount of short term firm throughput to a revenue-equivalent level of long term firm demand. This is done by multiplying the forecast amount of short term firm throughput by the short term firm multiplier of 1.66 (and then dividing by 365 days to derive a daily amount).<sup>12</sup>

Generally, demand forecasts also affect augmentation capital expenditure to increase network capacity, network extensions to serve new customers, and associated operating expenditure. However, this interrelationship is not relevant because APTPPL has not proposed to increase the capacity of the RBP during the access arrangement period.

### 13.3.1 Minimum, maximum and average demand

APTPPL has included data on its minimum, maximum and average demand for each receipt or delivery point for the earlier access arrangement. It has also provided information on user numbers. We have reviewed this information and are satisfied that it is a fair representation of usage of the pipeline in the previous access arrangement.<sup>13</sup>

### 13.3.2 Forecast pipeline capacity and utilisation

APTPPL's access arrangement information includes information on forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period. We assess that this information satisfies the requirements of the NGR.<sup>14</sup> We have formed this view on the basis that the capacity forecast has taken into account aggregated contracted demand on the pipeline and any additional capacity that can be delivered within the physical and contractual constraints of the pipeline.<sup>15</sup>

## 13.4 Reasons for draft decision

Based on the information before us, we are satisfied that APTPPL's forecast of an average of 200TJMDQ/day long term equivalent demand on the RBP for the 2017-22 access arrangement period is the best estimate in the circumstances. We are also of the view that APTPPL's forecast is at a level that provides it with a reasonable opportunity to recover at least its efficient costs, incentives to promote efficient investment, and avoid under or over investment and utilisation of the pipeline.<sup>16</sup>

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<sup>11</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, pp. 46-52.

<sup>12</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, pp. 48.

<sup>13</sup> NGR, r. 72(1)(a)(iii)(A)(B).

<sup>14</sup> NGR, r. 72(1)(d).

<sup>15</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement information*, September 2016, p. 18.

<sup>16</sup> NGL, ss. 24(2), 24(3), 24(6) and 24(7).

We note that APTPPL's demand forecast includes the load for both the long term and short term firm service. As set out in attachment 1, we did not accept APTPPL's proposal to make the short term firm service a reference service. For forecasting demand, we consider it appropriate to include the short term firm service load in the demand forecast. This is because demand for this service, especially westbound, is expected to increase as projected by APTPPL and its consultant, ACIL Allen. Forecasts costs should therefore be allocated across to this service.

Below we discuss particular issues we had regard to in APTPPL's proposal. An overarching consideration has been the current uncertainties in the energy market. In this environment there are a range of potential scenarios which might impact the demand for gas transport services going forward. While there are a range of views on which scenarios are most likely, overall, we are satisfied with the approach taken by APTPPL in preparing its demand forecast.

## Eastbound demand

We are satisfied that APTPPL's forecast for eastbound long term demand (retail and industrial user demand) and short term demand (GPG users) is the best estimate in the circumstances.

We observe the following:

- Retail gas demand is forecast by extrapolation of the historical demand for each tariff class.<sup>17</sup> We are satisfied that the methodology is reasonable and the resulting forecasts are the best estimate in the circumstances.
- APTPPL has also included a forecast for industrial users. We have reviewed this forecast and are satisfied. Further detail is in confidential appendix A in this Attachment and Attachment 10.
- For eastbound short term demand, one of the key issues we considered was recent information from Stanwell (owner of GPG user - Swanbank E)'.<sup>18</sup> Swanbank E is a combined cycle gas turbine power station which was put into 'cold storage' in December 2014 for up to three years.<sup>19</sup> When we factored in Swanbank's return to service in an alternative demand forecast, we found the difference between our alternative forecast and APTPPL's was less than 10 per cent. Given the uncertainties in the energy market and therefore variability around demand for RBP services, we consider that APTPPL's forecast of 200TJMDQ/day is the best estimate in the circumstances.

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<sup>17</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 32; and ACIL Allen Consulting, *Roma to Brisbane pipeline – Assessment of demand for services*, August 2016, p. 29.

<sup>18</sup> See 27 February 2017 Queensland publication, 'Change Log' tab, at the following webpage: <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Generation-information>; accessed 28 February 2017. AEMO collects generation information reported from generation industry participants, which is then reported publicly on its 'Generation Information' webpage.

<sup>19</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 37.

## Westbound demand

While there is agreement that demand for the westbound service will increase over the access arrangement period, the extent of the uptake is unclear. This uncertainty is reflected in APTPPL's proposal to adopt higher westbound demand forecasts than ACIL Allen, as it considers there is some scope in the marketplace to out-perform relative to the ACIL Allen forecast.<sup>20</sup> Further, our assessment suggests that APTPPL's forecast of westbound demand for the first two years of the access arrangement period (2017-18 and 2018-19) could be marginally understated, given recent actual data of westbound throughput (February 2016 to January 2017) showing increasing activity.<sup>21</sup>

In light of the uncertainty around the uptake of westbound demand over the access arrangement period, we accept APTPPL's forecast demand for the westbound service. We are satisfied that it is the best estimate in the circumstances.

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<sup>20</sup> APA Group, *Roma to Brisbane pipeline: Access Arrangement submission*, September 2016, p. 63.

<sup>21</sup> AER analysis of data provided by APA in response to information request #007 and #029.