



# Review of the Australian Market Supply Condition

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# Executive Summary

The Australian Market Supply Condition (the Supply Condition) is a condition imposed on certain petroleum and gas tenures in Queensland that requires the holder of the tenure to supply gas produced under the tenure to the Australian market. The first tenure granted with the Supply Condition occurred in March 2018. Since then there have been seven tenures granted across Queensland with the Supply Condition. Of which, only one of the tenures is a Petroleum Lease that has commenced production. The remaining tenures are an Authority to Prospect.

Aurecon were engaged by the Department of Natural Resources, Mines and Energy to review the Supply Condition and identify the extent to which the Supply Condition is meeting its policy objectives, and any modifications or alternative policy options that might deliver a better result. As there is only one tenure with the Supply Condition that is producing gas at the time of this review, this review focused on assessing the effectiveness of the Supply Condition through considering how the condition is applied and its impact on ensuring gas supply for industrial gas users across the East coast gas market.

Our approach for the review involved an in-depth research and analysis of current gas supply and market issues, and interviews of industry stakeholders including over 14 gas explorers and producers, 5 industrial gas users, and industry groups APPEA and QRC<sup>1</sup>.

## Key points raised by the gas industry were:

- The Supply Condition does not currently impact on investment decisions while gas prices for the Australian market and LNG net back are similar
- The process for land releases and the decision-making process to applying the Supply Condition lacks transparency
- The Supply Condition has:
  - for small/medium sized explorers/producers, improved their competitiveness for land release tenders
  - for major gas producers, generally decreased competitiveness for land release tenders
- There are a number of benefits to supplying gas to the liquefied natural gas (LNG) market over the East coast gas market
- The legislative framework that applies the Supply Condition is too rigid

## Key points raised by industrial gas users were:

- There are currently no alternative resources to gas viable for industrial gas users
- Industrial gas users can negotiate better gas supply agreements by negotiating directly with gas producers
- Industrial gas users are noticing improvements in the gas supply market and consider the Supply Condition is working as intended
- Gas demand forecasts are stable for the short to medium term, but industrial gas users have mixed preferences for short versus long term gas supply agreements

Overall, the review found that the Supply Condition has not hindered investment in the gas industry while gas prices for the Australian market and LNG net back are similar and is generally accepted by the gas industry and industrial gas users. However, the following emerging matters of concern are identified:

### Limited number of buyers in the East coast gas market

Around 7% of the total gas consumption in Queensland is consumed by large industrial gas users. This equates to only 98 petajoules (PJ) per annum, of which 95% is consumed by only four entities. While gas produced in Queensland can be supplied to other states across the East coast market, increased costs for transport and pipeline accessibility are challenges or constraints to expanding the gas buyers' market for producers in Queensland.

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<sup>1</sup> Australian Petroleum Production and Exploration Association (APPEA) and Queensland Resources Council (QRC)

## Gas demand and supply misalignment

In order for the Supply Condition to meet its objectives, it must be able to require gas to be supplied to the East coast gas market at certain periods of time to prevent a supply shortage. However, as the Supply Condition is applied at the start of a land release process, it does not guarantee gas will be available to the East coast gas market at a time when a shortfall is forecast.

## Gas price disparity

The East coast gas market is complex, with sub-markets and a number of factors which can influence gas supply outcomes. One such factor is the price of gas, which can differ between the various sub-markets. With respect to the Supply Condition, the difference between gas prices in the East coast gas market, and prices in the international LNG market, is an important consideration. All else being equal, gas producers are likely to prefer to supply gas to whichever of the two markets offers a higher price.

At the time of this review the LNG netback price had receded from the highs of recent years to sit at ~\$6.38/GJ. By contrast, spot prices in the Brisbane Short Term Trading Market (STTM), one of several indicators of domestic prices, were sitting at ~\$8.77/GJ. In recent years, the LNG netback price and domestic spot market prices have been relatively similar, leading gas producers to be comfortable (from a price perspective) with supplying gas to either market. As such, producers would not have been discouraged from investing in tenures with the Supply Condition.

However, if East coast gas prices were significantly below those in the international LNG market, gas producers may be less willing to invest in, or bid for, new land releases with the Supply Condition attached. They would instead likely prefer to deploy their capital on projects which could export gas to the international LNG market, which would be more profitable under these conditions. Therefore, the Supply Condition is likely to become a less effective tool for ensuring supply to the East coast gas market if a sustained and large gas price disparity emerges.

## Recommendations

A total of 11 recommendations are proposed that aim to ensure:

- The Supply Condition is monitored against the dynamic gas market to ensure that its objectives continue to be met
- Efficiency and transparency in the administration of the Supply Condition is improved
- Market participants are informed

Consideration was given to the modification of the existing Supply Condition policy, as well as the possibility of developing alternative policies, in order to deliver better gas supply outcomes in the domestic part of the East coast market.

### Adaptable framework for a dynamic market

Development and supply of gas is a dynamic market with many risk factors across the supply chain. The Supply Condition must be adaptable to ensure investment continues in the gas industry and the market operates efficiently for the benefit of both the East coast gas market and the LNG market.

### Recommendation 1:

The supply of gas is not conditioned to a specific sector (e.g. manufacturing only), but rather more generally conditioned to supply the Australian gas market

### Recommendation 2:

Enable gas swaps to meet East coast gas market demands

### Recommendation 3:

The Operational Policy (MIN/2019/2131) is:

- a. Consulted on further with stakeholders and the policy on 'ramp-up' gas is extended to a more suitable period of time

- b. Implemented in legislation or as a regulation to support industry confidence in the long term

**Recommendation 4:**

Streamline legislative exemption process

**Recommendation 5**

Review the Supply Condition framework on a regular basis, or when there are material changes to the market

**Increase efficiency and transparency in the administration of the Supply Condition**

The Supply Condition is an important tool for providing comfort to buyers of gas in the East coast market that supply will continue to be available. However, how the Supply Condition is applied is fundamental to realising its benefits while simultaneously avoiding negative impacts on gas industry development.

**Recommendation 6**

Review the gas demand and supply market and communicate the Department's assessment from this review in the Queensland Exploration Program

**Recommendation 7**

Publish principles for deciding when the Supply Condition may be applied to a land release on the Department's website

**Recommendation 8**

Identify the schedule of land releases with/without the Supply Condition in the Queensland Exploration Program

**Recommendation 9**

Release the weighting criteria for the tender evaluation of land releases.

**Informed market participants**

Informed market participants can improve negotiations as both sides of the negotiating parties better understand all aspects to contracting gas supply arrangements.

**Recommendation 10**

Develop information about the Supply Condition framework, including clearly documenting the objectives of the Supply Condition, and publish the information on the Department's website.

**Recommendation 11**

Publish links on the Department's website to guide stakeholders (such as the gas users) on where to go for up to date information on the gas market.

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# 1 Introduction

Aurecon has been engaged by the Queensland Government Department of Natural Resources, Mines and Energy (DNRME) to review the Australian Market Supply Condition (Supply Condition) and identify:

- The extent to which the Supply Condition is meeting its policy objectives
- Any modifications or alternative policy options that might deliver a better result

The Terms of Reference for the review is provided in Appendix A.

## 1.1 Scope of the review

The review focused on assessing the effectiveness of the Supply Condition in meeting the Government's policy objectives by undertaking an in-depth analysis of the impact of the Supply Condition on industrial gas users based in Queensland. The review does not include an analysis of the impact the Supply Condition has had on other gas users in the East coast gas market.

For the purposes of this review, industrial gas users are those entities that negotiate large gas supply agreements and includes entities across a range of different sectors, including:

- Fibre packaging
- Glass bottle manufacturing
- Fertiliser and ammonium nitrate manufacturing
- Mining and metal refining

## 2 Methodology

The approach of this review was to combine desktop research with information gathered through consultation with stakeholders in order to assess the effectiveness of the Supply Condition, to assess the extent to which the Supply Condition is meeting its policy objectives, and identify any recommendations for improvement.

The desktop research was broken down into two components. The first component involved an in-depth review of the Supply Condition, including its content and objectives. The second was a literature review, intended to assess the gas supply market and identify the gas market context in which the Supply Condition is applied. This included a review of the gas market demand and supply features, key market participants, and gas supply issues. Both research components relied on publicly available documentation, such as industry reports, and internal government information provided by the DNRME.

Information gaps identified during the research phase were then used to design questions for use during consultation with stakeholders. The consultation took the form of qualitative interviews with stakeholders and explored the gas supply market in more detail to target the information gaps.

The scope of the review focused on supply to large industrial gas users who are based in Queensland and typically have a demand for gas greater than 0.5 PJ per annum. It did not include gas-fired power generation or retailers. Stakeholders were selected from this group of large industrial gas users. Stakeholders consulted also included gas explorers and producers in Queensland, and two gas industry bodies, the Australian Petroleum Production and Exploration Association and the Queensland Resources Council.

The stakeholder interviews were conducted through semi-structured interviews; a format that provided structure and flexibility to gain deeper insight into the gas market and identify the effect of the Supply Condition on those stakeholders impacted by its use.

Throughout the literature review and stakeholder interviews, the following focus areas were explored:

- What is the intent and objectives of the Supply Condition?
- What is the gas market context in which the Supply Condition is applied?
- Who are the key Queensland industrial user groups of natural gas?
- What are the key supply issues (and their drivers) experienced by these user groups that are relevant to the Supply Condition?
- How are other States and Territories managing domestic natural gas reservations and how are these policies applicable to the intent of the Supply Condition?
- What potential impacts could the Supply Condition have on gas supply for industrial gas users in Queensland?
- To date, what is the current evidence that the Supply Condition has alleviated supply issues to large industrial users in Queensland and what are indicators that can be used in the future?

The data and information collected was analysed, with a focus on identifying:

- The extent to which the Supply Condition has had an impact on gas supply for industrial gas users based in Queensland
- Any modifications or alternative policy options that might deliver better results

## 3 Australian Market Supply Condition

The Queensland Government's Supply Condition is a condition imposed on certain petroleum and gas tenures that requires the holder of the tenure to supply gas produced under the tenure to the Australian market. This section explains the Supply Condition framework and how it is applied.

### 3.1 Australian Market Supply Condition policy objectives

The Supply Condition was introduced under the *Gas Security Amendment Act 2011* (GSA Act) as the Prospective Gas Production Land Reserve Policy (PGPLR). The Explanatory Notes state that the policy objective for the PGPLR is:

*'Queensland is seeing the emergence of a significant new liquefied natural gas export industry. The Queensland Government recognises the need to ensure that a booming export liquefied natural gas industry does not lead to a shortage of gas supply for large industrial uses (e.g. fertiliser producers and mineral processors) and electricity generators in the domestic market. To provide security to domestic markets it is proposed to implement a Prospective Gas Production Land Reserve Policy. The policy proposes to impose conditions on a call for tender for an authority to prospect (exploration tenure) which would provide that gas produced from any subsequent production tenure can only be supplied to the Australian market'.*

For the purposes of this review, the objective of the Supply Condition is to ensure that there is not a shortage of gas supply for large industrial users and electricity generators in the Australian East coast gas market.

### 3.2 The Australian Market Supply Condition framework

The Supply Condition is administered under the *Petroleum and Gas (Production and Safety) Act 2004* (P&G) Act whereby DNRME may impose conditions on the tenure, such as the Supply Condition<sup>2</sup>.

The Supply Condition requires that the gas produced from the land not be supplied other than to the Australian market<sup>3</sup>. The Supply Condition also extends to any other downstream contracts or arrangements of the original buyer in the Australian market. If the original user finds the gas from the conditioned tender is surplus to their requirements, the user must not supply the gas to anywhere other than to the Australian market.

#### Gas supply records

Under the Supply Condition framework, the holder of a petroleum tenure subject to the Supply Condition, and an entity that supplies gas that is subject to the Supply Condition, must keep a record of the gas supply<sup>4</sup>.

The record of gas supply must include the following information:

- Details of the tenure
- The entity to whom the gas was supplied to

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<sup>2</sup> Section 42(3A) (for ATP) and section 123 (for PL) of the *Petroleum and Gas (Production and Safety) Act 2004* (P&G Act)

<sup>3</sup> Section 175C of the P&G Act

<sup>4</sup> Section 175H of the P&G Act

- The volume of gas supplied<sup>5</sup>

Records must be kept for at least seven years after the day the record was made, and the Minister for Natural Resources, Mines and Energy (the Minister) may, upon giving a notice, require a copy of the record.

### **Exemptions and suspensions**

An exemption or suspension from having to meet the obligations under the Supply Condition may be applied for to the Minister.

Both an exemption or a suspension from the Supply Condition may be granted for a stated period in the situation when, for the stated period, sufficient gas may be produced from tenures in Queensland to supply both the Australian market and export demand; or the entity or tenure holder has taken all reasonable steps to supply the gas produced to the Australian market but it is not commercially viable to do so.

Essentially, both an exemption or suspension relieves the relevant entity from having to comply with the obligations under the Supply Condition. The difference between the two is that a suspension from the Supply Condition is an option available to a holder of tenure with the Supply Condition. An exemption is an option available to an entity that has been supplied gas subject to the Supply Condition.

## **3.3 Petroleum and gas land releases**

In Queensland, there are two types of petroleum and gas tenures: an Authority to Prospect (ATP) or a Petroleum Lease (PL). Obtaining a tenure is administered by the DNRME through a tender process established under the P&G Act.

The tender process begins with the publication of a gazette notice detailing the tender specifications and the evaluation criteria. Based on previously released tenders, the evaluation criteria can include consideration of the:

- Appropriateness of the tenderer's proposed exploration work program
- Applicant's capacity (technical and financial) to deliver the proposed work program
- Applicant's previous record of compliance with frameworks, including compliance with previously held tenders, environmental, cultural heritage and native title and safety requirements
- Applicant's approach to consulting with the community

The tender process concludes with an applicant being identified as the 'preferred tenderer' which provides the applicant exclusive rights to apply for a tenure over the area.

When a tender for petroleum and gas land is released, the tender document will specify whether the land released includes the Supply Condition or not. The Supply Condition does not retrospectively apply to existing tenures.

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<sup>5</sup> Section 46 of the Petroleum and Gas (General Provisions) Regulation 2017 (P&G Regulation)

## 3.4 Summary of other domestic gas policies

### 3.4.1 State and Territory gas policies

#### Western Australia

The Western Australian Government has a domestic gas reservation policy that has formally been in place since 2006. However, prior to that, State Agreements and contracts with the producers were used to secure domestic gas supply, as a precondition for allowing on-shore processing facilities on state land. These instruments were first used for the North West Shelf Liquefied Natural Gas (LNG) project in 1979 (Western Australia Legislative Assembly, 2011).

The Western Australian Government's domestic gas reservation policy requires LNG exporters to make available the equivalent volume of 15 per cent of LNG exports to the domestic gas market.

#### South Australian

South Australia does not have any gas reservation, or similar policies.

However, it was a condition of the South Australian Government's Plan for Accelerating Exploration (PACE) Gas grants such that in accepting the grant, producers must ensure 'that gas users (firstly electricity generators, followed by industry and then retail consumers in South Australia) will be provided with a first right to agree commercial terms to contract gas resulting from successful grant-supported projects' (Department of Energy and Mining, n.d). After two rounds in 2016-17, the PACE program was closed.

#### Northern Territory

The Northern Territory has ambitions to grow the Territory's economy through developing and diversifying a gas industry with a vision to 'by 2030, to be a world class hub for gas production, manufacturing and services'.

The Northern Territory Government does not have any policies that influence the supply of gas in the domestic market; rather, the Northern Territory Government has undertaken a range of regulatory reforms that aim to support onshore gas exploration and production.

The Northern Territory has a unique gas specification which allows for higher inerts. The main NT Amadeus Gas Pipeline operated by APA allows total inerts up to 12%, whereas the East Coast gas specification (AS 4564) only allows up to 7% total inerts. The main difference is due to the higher nitrogen content in gas produced in the Northern Territory. In order to export gas to the East coast gas market, gas produced in the Northern Territory has to be conditioned to meet the East coast gas market specification. This adds a nitrogen removal processing cost of \$0.77 per gigajoule (/GJ) for gas exported from the Northern Territory – an added cost to exporting gas from the Northern Territory.

#### New South Wales

The New South Wales (NSW) Government does not explicitly have a domestic gas policy. In 2012, the NSW Government responded to the Legislative Council's recommendation to implement a domestic gas reservation policy, stating that a reservation policy in NSW was not necessary as the coal seam gas (CSG) fields in the State were not tied to the LNG export facilities.

However, NSW has other policies that indirectly impact the supply of gas in the East coast gas market. This includes implementing exploration exclusion zones which prevent gas exploration from being undertaken in certain areas.

#### Victoria

Currently there are no domestic gas reservation, or similar policies, in Victoria. There is a moratorium on onshore gas exploration in the State which has been in place since 2017. Restrictions on gas exploration can subsequently impact on gas production and consequently reduce gas supply in the East coast gas market.

### 3.4.2 National gas policies

Effective from July 2017, the Australian Government introduced the Australian Domestic Gas Security Mechanism (ADGSM). The objective of the ADGSM is to ensure that there is a sufficient supply of natural gas for users in Australia. Under the ADGSM, the relevant Federal Minister decides whether Australian gas users will have sufficient gas supply in the forthcoming year. If a shortfall is determined, the ADGSM limits the export of LNG. To date, the Australian Government has not used the powers under the ADGSM.

In late 2019 the Australian Government reviewed the ADGSM, releasing its findings in the report *'Review of the Australian Domestic Gas Security Mechanism'*. The review recommends that the ADGSM continues until its scheduled end in 2023. The review of the ADGSM notes that since 2017, pressures in the East coast gas market have moderated. One of the key findings in this report is that the price of gas continues to be a concern for many gas users, particularly for manufacturers and gas feedstock users. The review further acknowledges that the formation of the price of gas is complex and underpinned by various market factors, recommending that a direct price trigger not be introduced as part of the ADGSM.

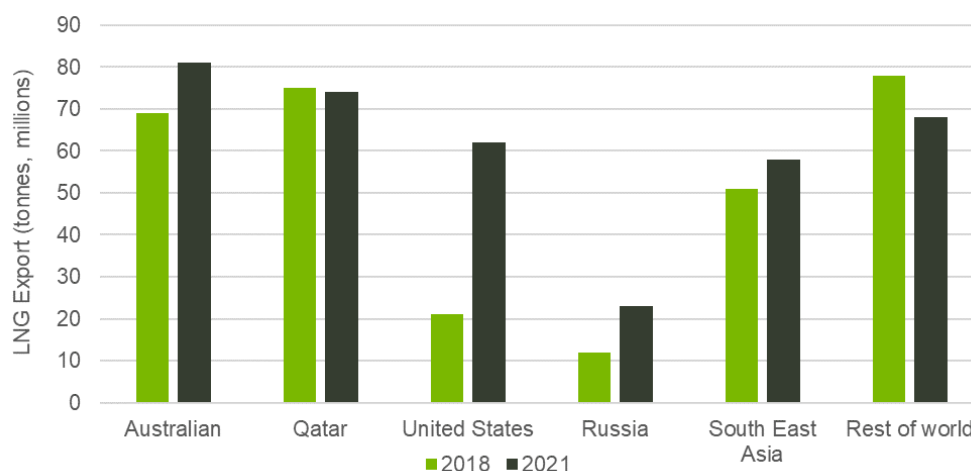
The Australian Government has also executed a Heads of Agreement with three East coast LNG exporters. The Heads of Agreement was executed in September 2018, with the commitment by the LNG exporters to *'maintain a secure and affordable supply of gas to the domestic market in 2018 and 2019'*. Generally, under the Heads of Agreement, the LNG exporters have agreed to the following during 2019 and 2020:

- Ensure uncontracted gas is offered to the domestic market in the event there is a gas supply shortfall
- Ensure that uncontracted gas supply is not offered to the international market, unless equivalent volumes of gas are first offered to the domestic market

The Australian Government has further stated that it is considering the establishment of a National Gas Reservation Scheme but to date, no further statements on this matter have been released by the Australian Government.

### 3.4.3 International gas policies

In 2018, Australia and Qatar were the two largest exporters of LNG, followed by the United States of America (Department of Industry, Innovation and Science, 2019). See Figure 3-1.



Source: Department of Industry, Innovation and Science, 2019. *Resources and Energy Quarterly: December 2019*

Figure 3-1 Global LNG exports by source country

Below is a brief summary of whether any of the major international natural gas exporters have a domestic gas reservation policy (or similar).

### **Qatar**

Qatar does not have any domestic gas reservation policies. Gas production in Qatar is largely undertaken by a state-owned company Qatar Petroleum.

### **Canada and USA**

Canada is a major gas producer in the global market and Canada does not have a gas reservation policy, or other policies intervening in domestic gas supply.

Likewise, the USA does not have any policies directly intervening in the supply of gas for the domestic market. However, both Canada and the USA have powers in place that control the export of gas. This is achieved by implementing legislation that requires gas producers to seek an approval to export gas.

### **Russia**

There is no domestic gas reservation policy in Russia. Gas export from Russia is authorised solely by one organisation, Gazprom. Gazprom is a majority state-owned natural gas producer that has exclusive export rights and sole control over all gas pipelines out of Central Asia (Petroleum Economist, 2006. Russia: Gazprom's export monopoly becomes law).



## 4 Literature review

The purpose of the literature review was to establish the context in which the Supply Condition (outlined in Section 3) is applied and operates in the East coast gas market. The information gaps identified through the literature review were used to develop the interview questions for consultation with stakeholders (see Section 6).

### 4.1 Australian gas market context

This section reviews the supply issues in the gas market that the Supply Condition could potentially address. In addition, it provides information on the development and operation of the East coast gas market to give context on how the Supply Condition might influence the supply of gas. The following topics are addressed:

- The key gas supply issues in the East coast gas market (see Section 4.1.1), including recent spot price trends (see Section 4.1.2)
- The key features of the market in terms of supply, demand, and delivery of gas to users (see Section 4.1.3), including:
  - The location and size of gas reserves within the East coast gas market
  - Demand trends for gas within the East coast gas market
  - The transmission and storage network that facilitates gas delivery to end users
  - Demand from industrial gas users in Queensland

#### 4.1.1 Gas supply issues in the East coast gas market

Gas supply issues have been a feature of the market for several years which have created challenges for gas users in the East coast gas market.

Prior to the significant ramp-up of the LNG industry on the East coast of Australia, potential gas supply exceeded domestic demand. As a result, large industrial gas users within the East coast gas market had been able to secure stable, long-term, high-volume gas supply contracts.

The development of LNG export facilities gave producers access to global markets, with larger demand and higher prices than the previously isolated domestic East coast gas market. This development fundamentally changed the way gas buyers in the East coast gas market procured their gas supplies.

The Australian Competition and Consumer Commission's (ACCC) *Inquiry into the East coast gas market* (September 2017) found that from 2012 onwards, gas buyers in the East coast gas market had difficulty securing gas supply for 2016 and beyond; reporting that some users did not receive any offers to their tender for gas supply (ACCC, 2017).

The ACCC reported the change in the market was unprecedented and the development of the LNG market created 'winners and losers' (ACCC, 2017). One of the key issues the ACCC identified, which highlighted what it considered a market failure, was that gas producers were either unwilling or unable to agree to firm gas supply agreements for users across the East coast gas market during 2016 and later. Around this period, supply was either fully contracted, or subject to finalisation of negotiations for supply arrangements with LNG buyers.

The ACCC noted, where users received gas supply offers, those offers, relative to offers received prior to 2011 were:

- Substantially higher in price
- Consisted of limited volume of gas
- Offering gas supply over shorter periods
- Consisted of contractual arrangements involving more restrictive arrangements

During this period, the rapidly changing nature of the market significantly increased costs and uncertainty for gas users in the East coast gas market, raising concerns about the long-term sustainability of their operations. Examples of some of the gas users that publicly reported difficulty with gas supply in the East coast gas market are summarised in Table 4-1.

**Table 4-1 Experience of industrial gas users in other east coast states**

Firm	Location	Supply Issue(s)	Commentary
	Queensland (QLD)	Difficulty securing supply agreements	Incitec Pivot had difficulty securing gas supply for its Gibson Island fertiliser facility near Brisbane, and only narrowly managed to source new supplies before its contract expired in 2018. <sup>6</sup> The firm has also recently chosen to direct investment to the USA rather than Australia, to take advantage of cheaper gas supplies. <sup>7</sup>
	Victoria (VIC)	High prices	In 2018, Dow decided to shut its manufacturing plant in Altona, Victoria. The decision was driven in part by the increase in gas prices, although the plant was also competing with newer, more efficient plants within its own firm for access to raw materials <sup>8</sup> .
	NSW	High prices	In 2019, it was reported that RemaPak had entered voluntary administration, in response to a '400 percent increase in gas costs' <sup>9</sup> .
	NSW, VIC	Limited volume	Qenos reported that it was unable to secure desired volume for production targets and have had to rely on trading in the Short Term Trading Market in both NSW and VIC to secure volumes at some times. It has considered job cuts in response to higher energy and input costs <sup>10</sup> .

<sup>6</sup> See <https://www.afr.com/companies/energy/incitec-pivot-says-gibson-island-may-survive-september-gas-deadline-20180509-h0ztk2>

<sup>7</sup> See <https://www.reuters.com/article/us-australia-energy/australias-gas-paradox-supply-crunch-looms-despite-rich-reserves-idUSKCN10Q0K6>

<sup>8</sup> See <https://www.smh.com.au/business/companies/altona-site-to-shut-union-sounds-jobs-alarm-on-gas-crisis-20190528-p51s2s.html>

<sup>9</sup> See <https://www.afr.com/companies/energy/east-coast-gas-crisis-claims-victim-as-remapak-goes-under-20190119-h1a8s4>

<sup>10</sup> See <https://www.afr.com/politics/qenos-looks-at-job-cuts-to-ease-gas-price-shock-20170915-gyicup>

## 4.1.2 Recent gas price trends and forecasts

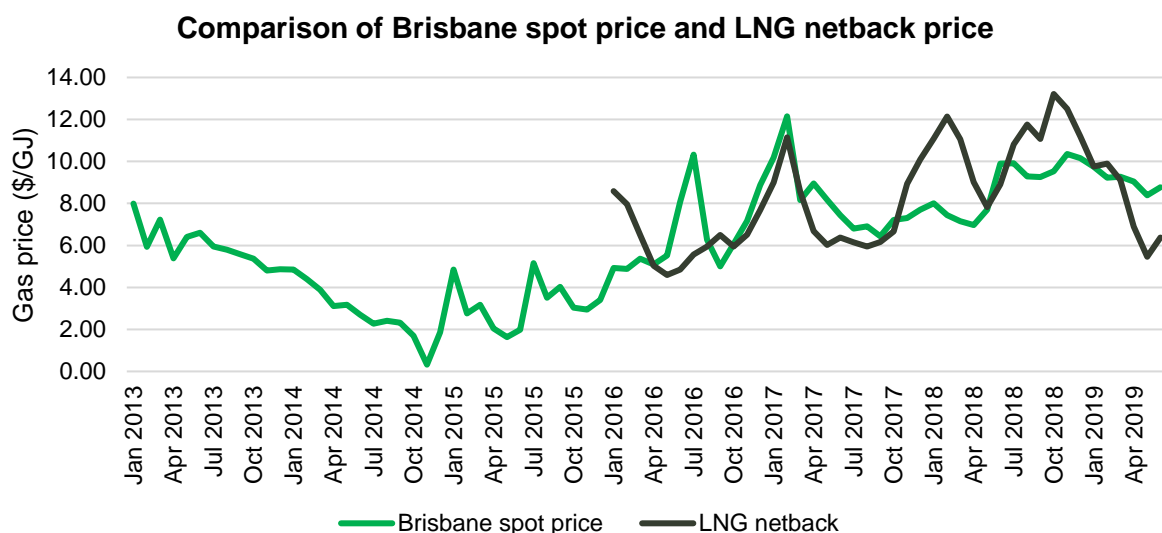
The price of gas in the East coast gas market can be used as a proxy for supply conditions, as all else being equal, an increase in supply of gas relative to demand for gas should lead to lower prices. Tight supply conditions are likely to coincide with price increases. There are three different gas spot market prices<sup>11</sup> available across the East coast of Australia. These are:

- Gas supply hubs in Wallumbilla, Queensland and Moomba, South Australia
- Short term trading markets (STTM) available in Brisbane, Sydney and Adelaide
- Declared wholesale gas market in Victoria

The ACCC reports the LNG netback prices<sup>12</sup>, which can be used as a measure to assess which of the markets (East coast gas market or LNG export markets) is expected to be more profitable to supply gas to (AER, 2018). When the LNG netback prices exceed prices in the East coast gas markets, it suggests that it may be more profitable to supply gas to the LNG export market.

When LNG exports first commenced in December 2014, the East coast gas market experienced steep gas price increases and the East coast gas market participants were competing for gas supply (AER, 2018). Prices peaked in 2016, at around \$10/GJ, and in 2017, at around \$12/GJ, when competition for available gas supply intensified as increased demand from LNG export coincided with strong demand in the domestic market (AER, 2018).

More recently, gas prices have receded from the peaks observed in 2016 and 2017. In June 2019, the spot gas price in the Brisbane STTM was around \$8.77/GJ, whereas the LNG netback price was around \$6.38/GJ (AER, 2019). Recent price trends are summarised in Figure 4-1. The implication is that in June 2019, supplying gas to the East coast gas market via the Brisbane STTM was around \$2.39/GJ more profitable than supplying gas to the LNG market. The spread between the two prices is volatile, and is partly caused by the different timeframes for the two price calculations; domestic spot gas prices are a daily figure, compared to LNG spot prices which are at least a month to trade.



Source: AER, 2019

Figure 4-1 Comparison of Brisbane spot price and LNG netback price

<sup>11</sup> Spot prices are monthly weighted average prices

<sup>12</sup> LNG netback price is the ACCC's calculation based on domestic spot market prices and the expected netback prices for LNG cargoes in Asia

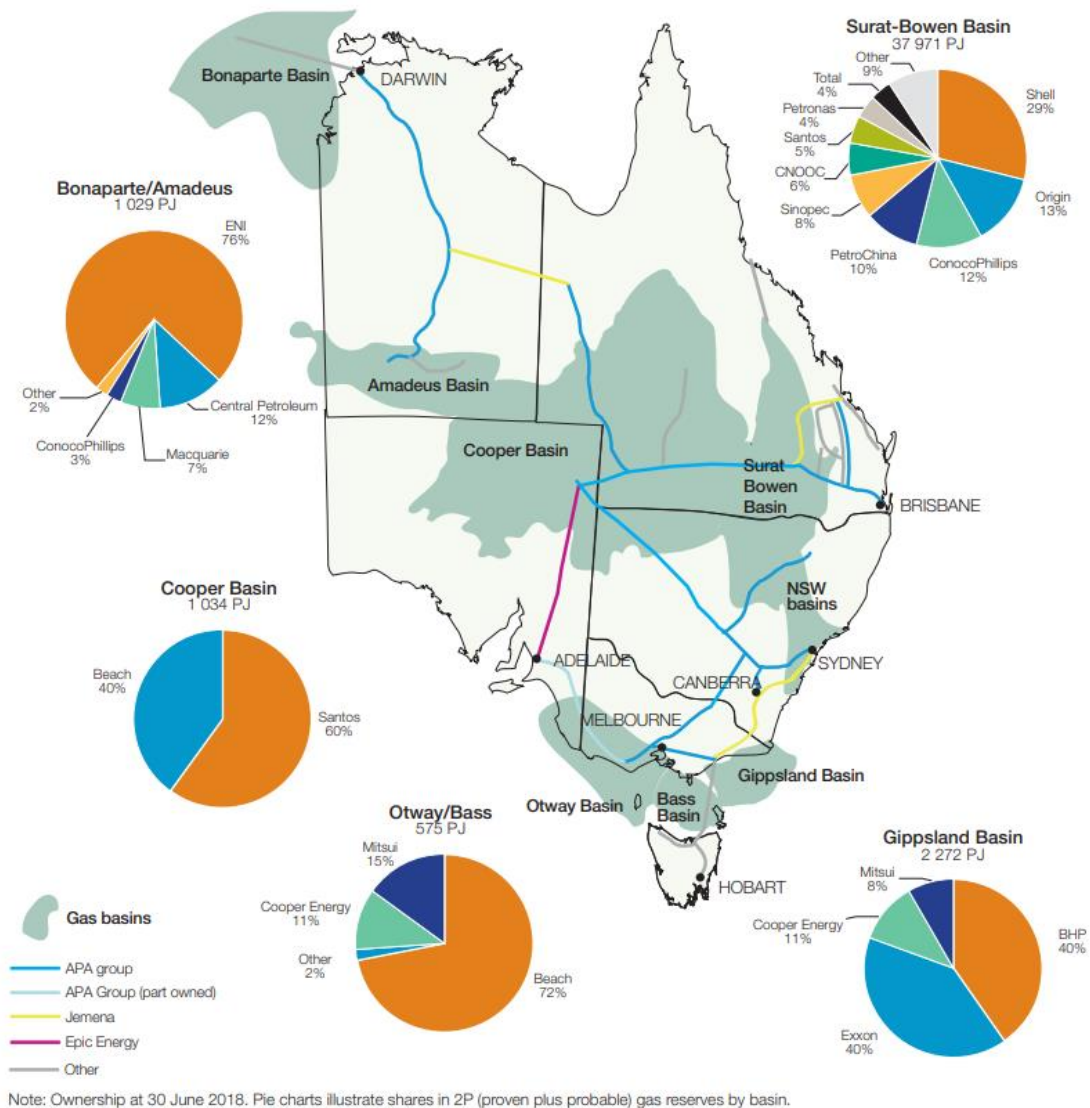
### 4.1.3 Key features and components of the East coast gas market

In assessing the likely impact of the Supply Condition on the supply issues identified in Section 4.1.1, it is important to consider the key features and components of the East coast gas market. These include the location of gas supplies, gas demand trends and the availability of transmission and storage infrastructure. To alleviate supply issues, the Supply Condition needs to be used to link sufficient gas reserves, via transmission infrastructure, to users across the East coast market that are capable of making use of the gas supply.

To this end, it is also necessary to consider demand from industrial gas users in Queensland. Transport costs and pipeline access for interstate gas transmission mean that these industrial users are likely to be the most suitable candidates for gas released under the Supply Condition.

#### Location of gas supplies in the East coast gas market

The East coast gas market connects gas supplies between all of Australia's states and territories, excluding Western Australia, via transmission pipelines. The Surat-Bowen Basin, located in Queensland, contains most of Australian's conventional and unconventional gas reserves, estimated to be around 37,971 PJ (see Figure 4-2).

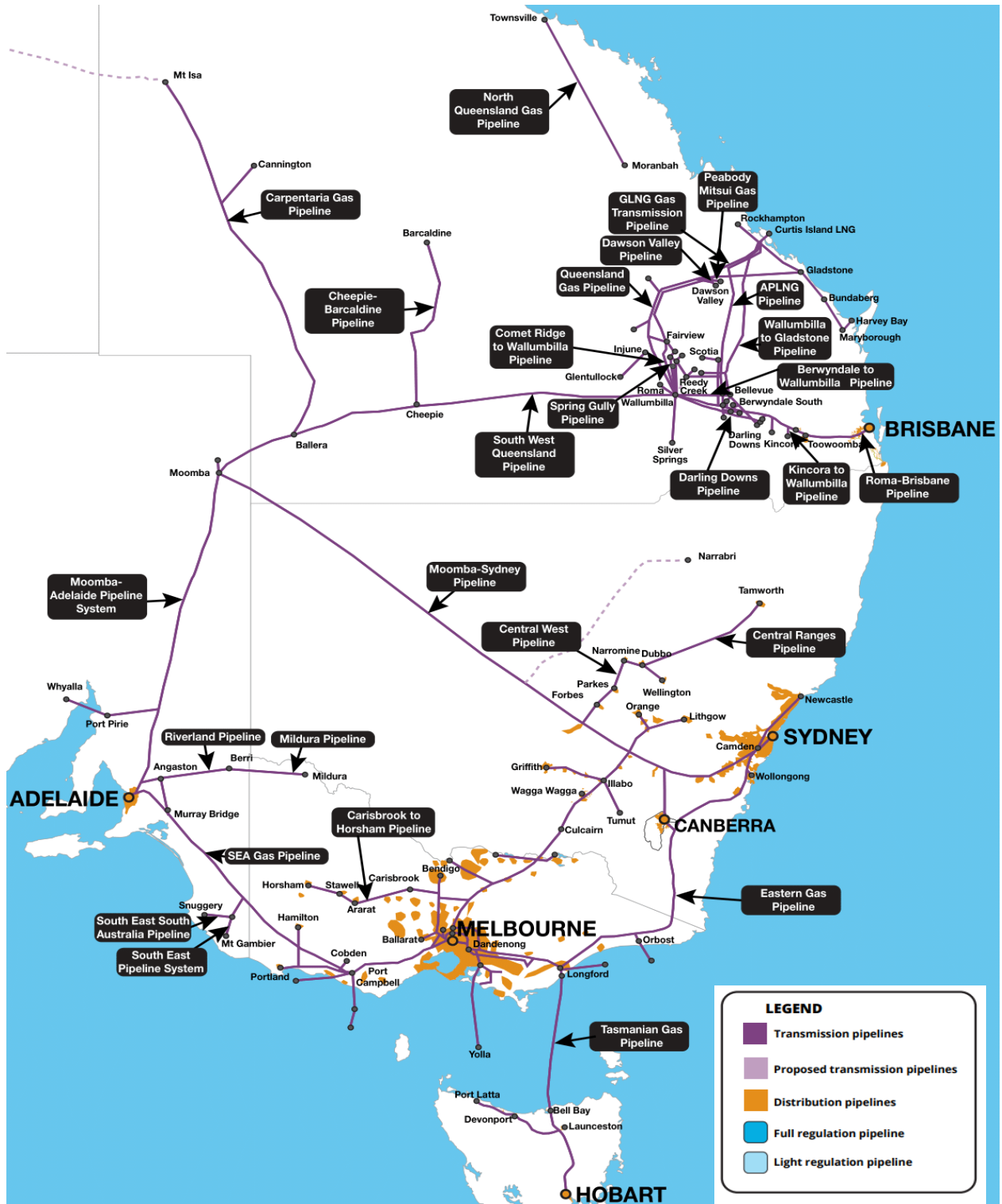


Source: AER, 2018

Figure 4-2 Location and size of 2P gas reserves in the East coast gas market

## Gas transmission network and storage facilities in the East coast market

The key piece of infrastructure required for gas delivery is the high-pressure transmission pipeline network. The network facilitates the delivery of gas from producers and is the operational backbone of the market. The transmission pipeline network is depicted in **Figure 4-3**.



Note: the Mt Isa to Northern Territory pipeline has since been completed

Source: Australian Energy Market Commission, 2018

**Figure 4-3** East coast gas transmission pipeline network



Gas supply across the East coast gas market is limited by the pipeline networks and the capacity of the pipelines to transport the gas. Table 4-2 summarises the registered pipelines depicted in Figure 4-5 which can facilitate the transfer of gas south from Queensland to major population centres and industrial loads in southern states.

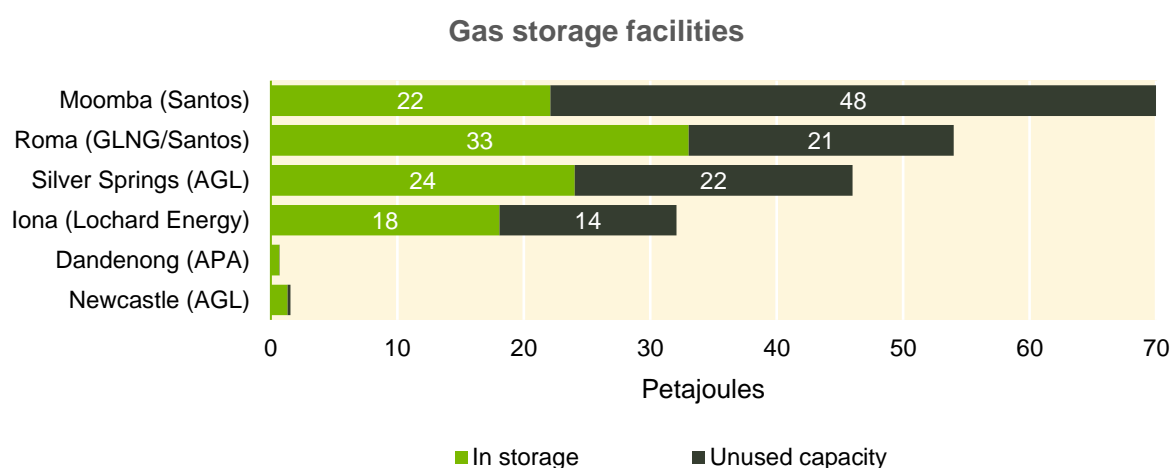
**Table 4-2 List of registered gas transmission pipelines in the East Coast gas market**

Pipeline	State	Length (km)	Capacity (TJ/day)
<b>South West Queensland Pipeline</b>	QLD	755	404 (340 reverse)
<b>Moomba to Sydney Pipeline</b>	SA–NSW	2,029	489 (120 reverse)
<b>Moomba to Adelaide Pipeline</b>	SA	1,184	241 (85 reverse)
<b>VIC-NSW Interconnect</b>	VIC–NSW		223 (150 reverse)
<b>Tasmanian Gas Pipeline</b>	VIC-TAS	734	129 (120 reverse)

Source: Gas Bulletin Board, 2019

The South West Queensland Pipeline can deliver 340 TJ/day of gas to southern states, which is approximately 124 PJ per annum. This would be enough to meet NSW’s current demand of 116 PJ per annum, even before allowing for existing gas production in southern states. Therefore there is sufficient pipeline capacity for gas produced in Queensland to be a material supply to some of the demand in the southern states, but factors such as timing of access to the pipelines and additional transport costs makes this arrangement slightly more complex for gas supply arrangements.

The transmission network is also supported by storage facilities, which are used to firm up supply at key points of the network and to manage pipeline constraints (e.g. by allowing gas to be shifted through pipeline bottlenecks at times of lower congestion for use at peak times). An indicative snapshot of the six gas storage facilities in the East coast gas market is provided in Figure 4-4. Gas is injected and withdrawn from these facilities as needed to meet short-term demand.



Source: AER, 2018

**Figure 4-4 Summary of gas storage facilities as at 30 June 2019**

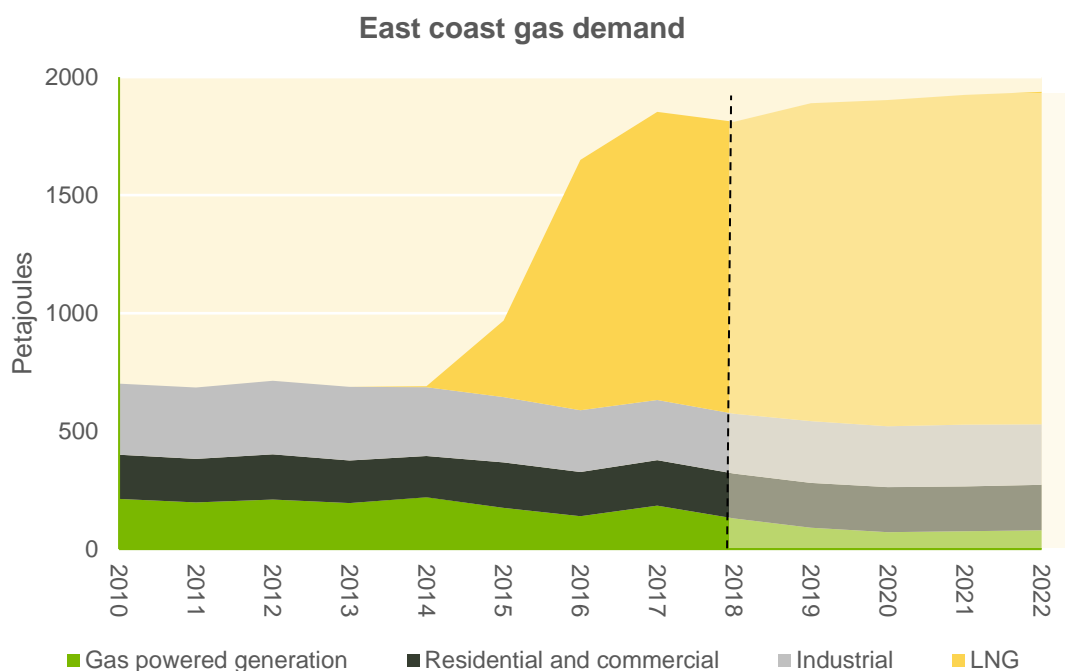
When selecting tenures for the Supply Condition, consideration should be made towards the available pipeline and storage infrastructure near the land. Tenures closer to such infrastructure are likely to deliver gas supplies to the East coast gas market in a timely manner and provide faster relief from supply issues.

It should also be noted that there are costs associated with using this infrastructure to transport gas. For example, current pipeline tariffs for moving gas from Wallumbilla to Sydney, via Moomba, range from \$2.00/GJ - \$2.47/GJ (APA, 2020), and would increase for transmission to locations further along the network. It is therefore more likely for gas released under the Supply Condition to be supplied to Queensland based users, as all else being equal they will have a greater capacity to pay than southern users.

### Gas demand in the East coast gas market

The linkage of the East coast gas market to international markets is a recent development, with the first exports from Queensland commencing in late December 2014. Prior to this linkage, potential gas supply exceeded demand from domestic East coast gas users, and large industrial gas users were important customers that could underpin development of new supplies by entering into long-term, high-volume contracts.

The LNG export facilities significantly increased demand for natural gas in the East coast gas market. As shown in Figure 4-5, in just three years demand increased from 690PJ in 2014 to 1,852PJ in 2017. The increase in demand has coincided with the conventional gas reserves in South Australia and Victoria approaching their end of life, and production from these reserves beginning a steady decline. This decline in production was exacerbated by shortfalls in production from CSG reserves, which had been intended to cover new LNG exports, with exporters having to purchase gas from southern states to fulfil their contracts with foreign buyers. Ultimately, the confluence of these factors created the tight supply conditions which led to some market participants reporting they did not receive any responses to their tender for gas supply (i.e. the market failure discussed in Section 4.1.1).



Source: AER, 2018

Figure 4-5 East coast gas demand

Looking forward, gas demand in the East coast market for industrial users and residential/commercial customers is expected to remain relatively steady through to 2022, while demand from gas-powered generation (GPG) is expected to decline as more renewable generation comes online within the National Electricity Market (NEM) network.

The application of the Supply Condition should be carried out with consideration of these expected demand trends. It is possible that releasing too much gas with the Supply Condition attached to it



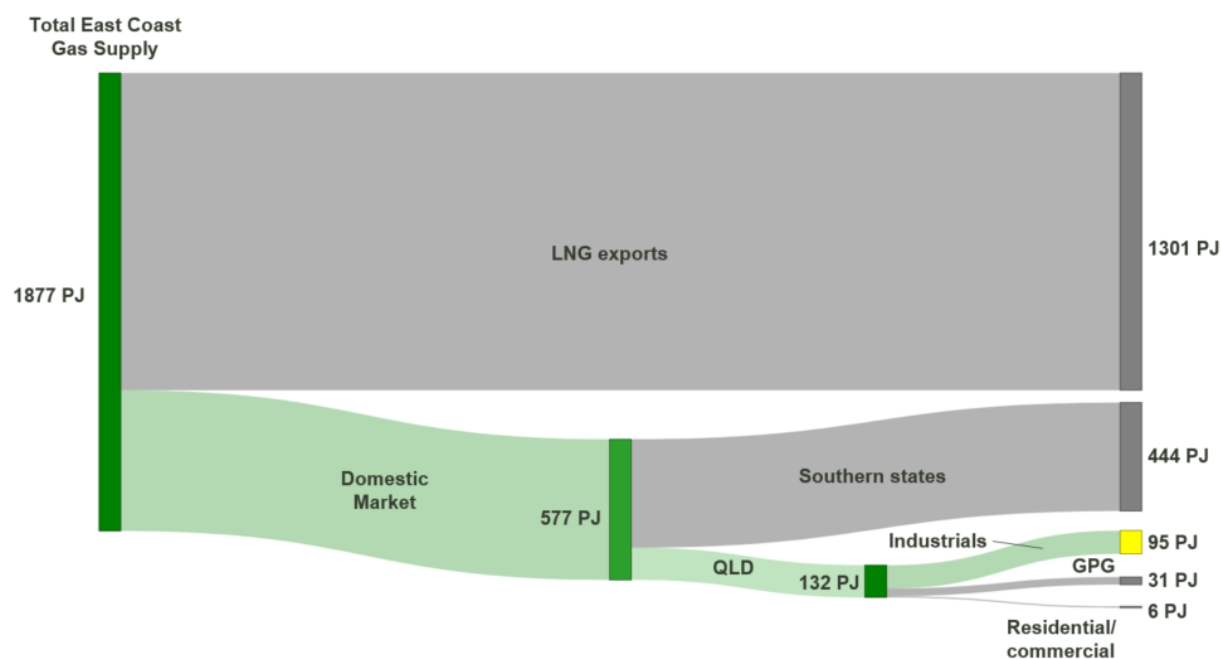
could saturate the domestic component of the East coast gas market should demand decline in line with forecasts.

The exact outcome would depend on the full set of market conditions, but it is possible that saturating the domestic component of the East coast market would artificially depress gas prices (a negative outcome for producers) or lead to productive gas reserves being left undeveloped if producers cannot find domestic users willing to make use of the gas and are unable to direct the gas to the export market.

As discussed above, due to the additional costs associated with transporting gas from Queensland to southern users, Queensland-based gas users are the most likely recipients of gas released under the Supply Condition. Given there are risks associated with saturating the domestic component of the East coast market with conditioned gas, it is worth considering the potential domestic gas users within Queensland that could benefit from the application of the Supply Condition.

Excluding LNG exports, gas use in Queensland was 132 PJ for the 12 months from September 2018 to September 2019 (see Figure 4-6). Industrial gas users accounted for 72% (95 PJ) of the consumption in Queensland, with the balance consumed by GPG, 23%, and residential customers, 5% (Australian Energy Market Commission, 2018).

### East coast gas market consumption



Source: Data sourced from EnergyQuest, September 2018-19

Figure 4-6 Flow of east coast gas supply among users

Industrial gas usage in Queensland, estimated to be around 95PJ<sup>13</sup>, is relatively concentrated. It is largely driven by the eight firms listed in Table 4-3, which means that the need for gas released under the Supply Condition may have a relatively low ceiling.

In exercising the Supply Condition over new land releases, it will be important for the Queensland Government to consider that there is a relatively limited number of large gas users within Queensland, and what, if any, are the gas supply issues for them that might justify the exercise of the Supply Condition. Otherwise, the Supply Condition restriction on Queensland gas producers, may create a gas surplus which benefits interstate gas users.

<sup>13</sup> Indicative figure based on data from EnergyQuest 2019

Table 4-3 Major and minor industrial gas users in Queensland

Firm	Site	Industry
<b>Major gas users (&gt;5 PJ p.a.)</b>		
	Gibson Island	Fertiliser
	Phosphate Hill	Fertiliser
	Moranbah	Ammonium Nitrate
	Moura	Ammonium Nitrate
	Yarwun	Alumina refinery
	Boyne Island	Smelter
	Gladstone	Alumina refinery
	Mt Isa	Mining/Concentrator
	Townsville	Copper refinery
<b>Minor gas users (&lt;5 PJ, but &gt;0.5 PJ p.a.)</b>		
	Yarwun	Ammonium Nitrate
	Century Mine	Mining/Concentrator
	South Brisbane	Glass Bottles
	Rocklea	Paper/packaging
	Southeast QLD (three sites)	Building supplies
	Rocklea	Paper/packaging

## 4.2 Gaps identified from the literature review

The review found that the establishment of LNG export facilities, and the associated increase in demand, fundamentally changed the way gas buyers in the East coast gas market procured gas supplies. While the gas supply issues outlined in Section 4.1.1 are well reported during this period, further exploration with key stakeholders was required to assess whether the Supply Condition had an impact on the East coast gas market and achieved its policy objectives. This included exploring with stakeholders:

- If the Supply Condition impacted on investment in the gas industry (as a negative impact could adversely affect supply in the East coast gas market)
- If the Supply Condition influences the gas industry's decision to bid for land releases
- Whether gas development and the timing of production prevents shortages for the East coast gas market
- If the Supply Condition has influenced the gas industry's focus to supply gas to the East coast gas market
- The key factors to negotiating a gas supply agreement, including factors affecting agreements from being settled with industrial gas users
- The market conditions that help get gas to the East coast gas market faster

## 5 Market response to the Supply Condition

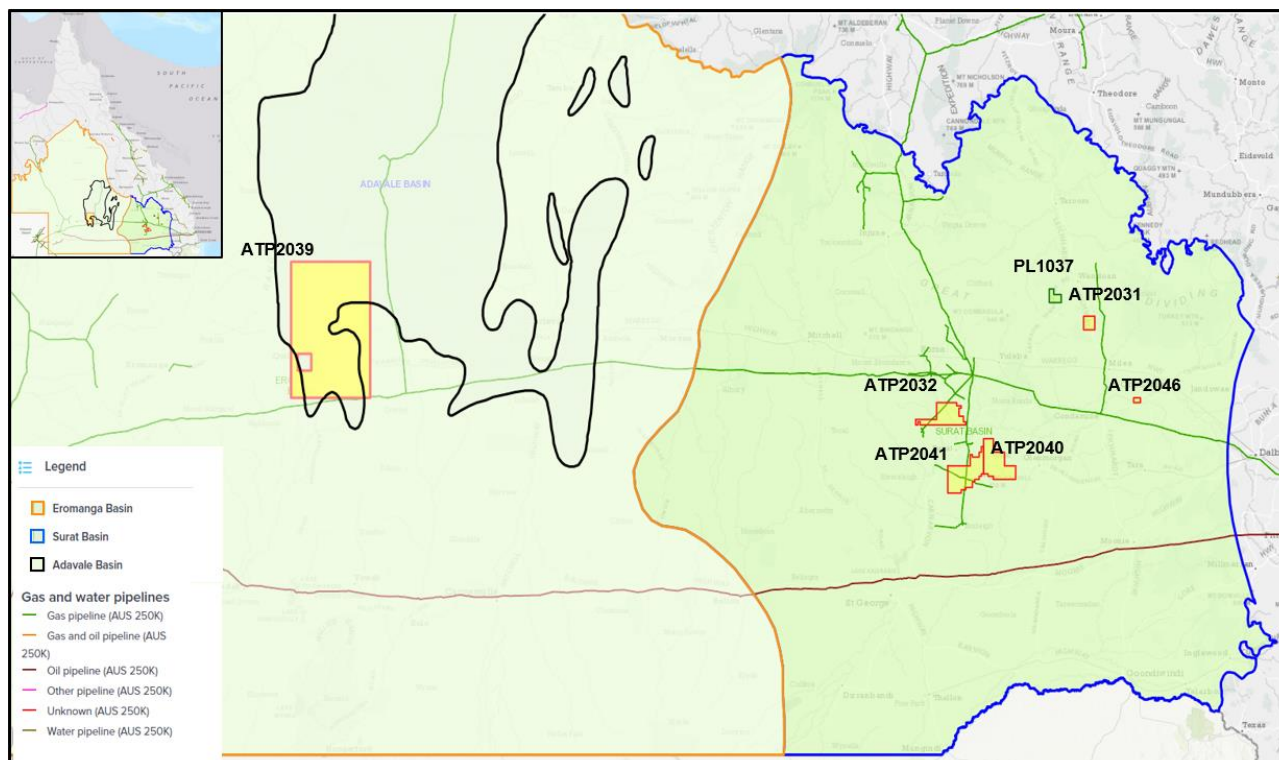
As detailed in Section 3.1, the objective of the Supply Condition is to ensure that there is not a shortage of gas supply for large industrial users and electricity generators in the Australian market. The review set out to assess whether the Supply Condition is effective in meeting its objectives by exploring what the market's response has been to the land releases with the Supply Condition.

### 5.1 Land releases with the Supply Condition

While the Supply Condition was enacted in 2011, the first land release in Queensland with the Supply Condition did not occur until February 2017. Since then, there have been 15 land releases with the Supply Condition in total. Of these:

- Seven tenures have been granted (six ATPs and one PL)
- Three preferred tenderers are awarded and are pending application for a tenure or pending decision on the application for tenure
- One land release did not receive any bids
- Four land releases within PLR PLR2019-2 closed on 13 February 2020 and is subject to a tender evaluation process.

As shown in Figure 5-1, with the exception of one, all tenures granted with a Supply Condition are an ATP. Most of these tenures are located in the Surat Basin, with one tenure granted in the Adavale and Eromanga Basins. The one PL granted with the Supply Condition only just commenced production in December 2019.



Source: Queensland Government GeoResGlobe. Accessed 24 February 2020

Figure 5-1 Tenures granted with the Supply Condition

Of the three land releases where a preferred tenderer is awarded, two applications for an ATP have been made and are located in the Bowen Basin (see Figure 5-2). The remaining land release where a preferred tenderer is awarded has not yet received an application for a tenure, however if an application is made, it will be for an ATP located in the Bowen and Surat Basins.

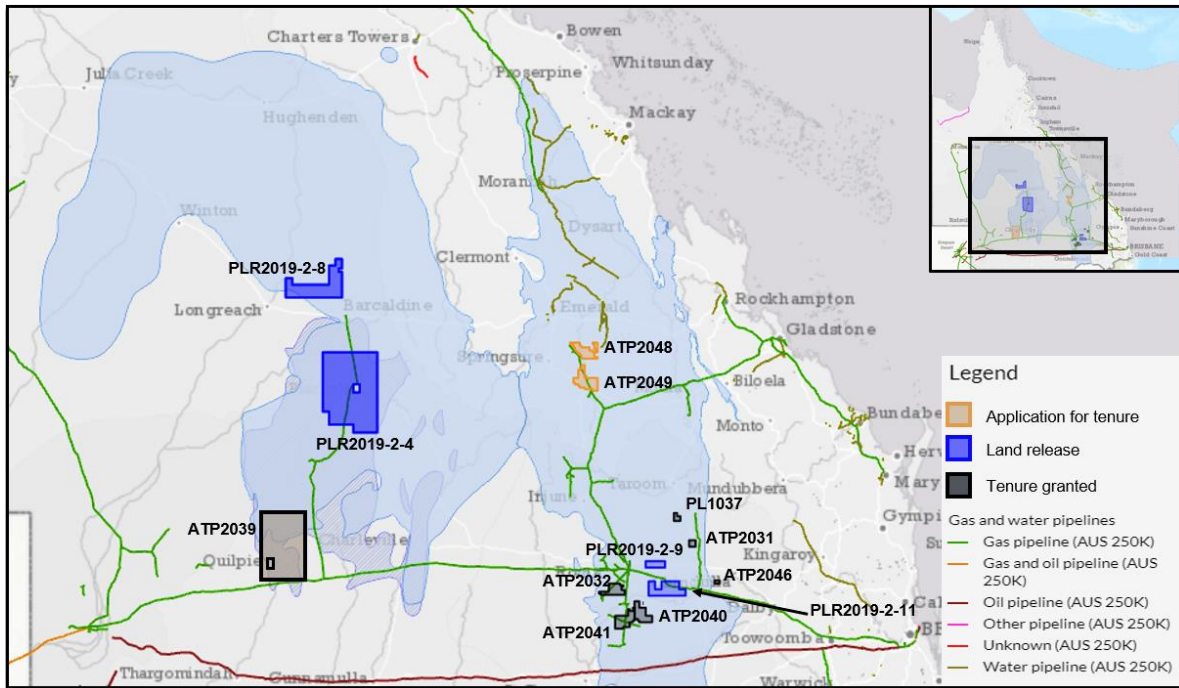


Source: Queensland Government GeoResGlobe. Accessed 24 February 2020

**Figure 5-2 Applications for a tenure with the Supply Condition**

To date, most land releases with the Supply Condition are in close proximity to pipelines and most are located in the Surat and Bowen basins, with some located in the Adavale and Galilee basins. As shown in Figure 5-3, the tenders for land releases that closed on 13 February 2020 include one land release in the Galilee Basin, which is some distance from existing pipeline infrastructure.





Source: Queensland Government GeoResGlobe. Accessed 24 February 2020

Figure 5-3 All land releases (including application for and granted tenure) with the Supply Condition

## 5.2 Number of market participants

Closed land release tenders with the Supply Condition have attracted between 0 and 8 applications, with more than half of the land releases receiving three or more applications. Applicants to the land releases with the Supply Condition include both major gas producers and small to medium sized gas producers and/or explorers.

Note, as the applications submitted for the land releases are confidential, the applications and the subsequent evaluation considerations that informed the preferred tenderer status were not considered as part of this review.

In total, there have been 10 land releases with the Supply Condition where a preferred tenderer has been awarded. As shown in Figure 5-4, most preferred tenders have been awarded to small-to-medium sized gas explorer/producers. The remaining two land releases were awarded to a major gas producer, and to a joint venture arrangement between a large and small/medium sized gas producer.

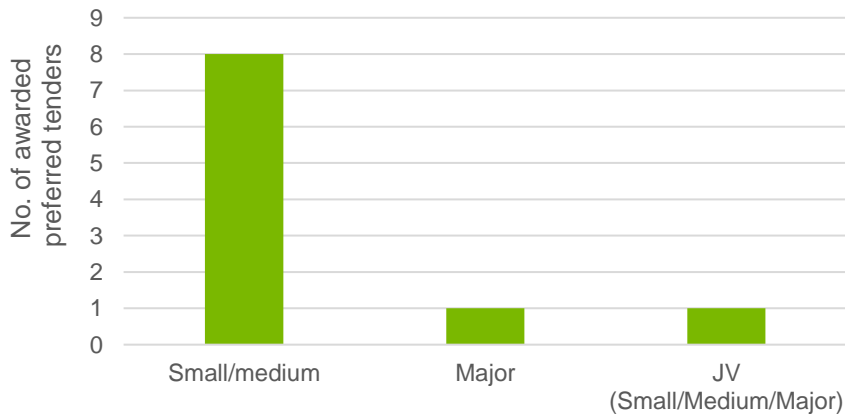


Figure 5-4 Summary of awarded preferred tenders

## 6 Stakeholder consultation

### 6.1 Consultation methodology

As detailed in Section 4.2, the literature review identified the following gaps that required further exploration with stakeholders:

- If the Supply Condition has impacted on investment in the gas industry (as a negative impact could adversely affect supply in the East coast gas market)
- If the Supply Condition influences the gas industry's decision to bid for land releases
- What are the gas development timelines for those tenures with the Supply Condition and what is the demand outlook for industrial gas users (in order to identify if supply will enter the East coast gas market when it is needed)?
- If the Supply Condition has influenced the gas industry's focus to supply gas to the East coast gas market
- What are the key factors to negotiating a gas supply agreement, including factors affecting agreements from being settled with industrial gas users?
- What market conditions helps get gas to the East coast gas market faster?

A list of interview questions was developed to target the identified gaps (listed above) and were provided to stakeholders prior to the interview to ensure interviews were informative and detailed. A copy of the interview questions is provided in Appendix C.

The stakeholders consulted were those who had direct experience in negotiating gas supply arrangements, had applied for a land release with the Supply Condition, or have knowledge of the industry and how the Supply Condition works in practice. This included:

- Representatives of the gas industry including major gas producers, small and medium-sized explorers and/or producers, as well as gas industry associations
- Representatives of major industrial gas users with a large gas demand in Queensland, as well as small industrial gas users with plants across the East coast gas market
- The Department of Natural Resources, Mines and Energy

A total of 22 stakeholders were consulted, and a list of the stakeholders consulted is detailed in Appendix B. Interviews were conducted either face-to-face or via teleconference.

### 6.2 Feedback from the gas industry

Feedback from the gas industry covered a range of topics, including:

- The Supply Condition does not currently impact investment decisions (see Section 6.2.1)
- Perception that the current process to releasing land, including the decision-making process of applying the Supply Condition, lacks transparency (see Section 6.2.2)
- The Supply Condition has had a positive/negative impact on the market (see Section 6.2.3)
- There are a number of benefits in supplying gas to the LNG market over the East coast gas market (see Section 6.2.4)
- The legislative framework is too rigid (see Section 6.2.5)



The gas industry also raised several recommendations and alternative policy options to generally improve gas supply (see Section 6.2.6).

Feedback received from each gas industry representative has been de-identified, and any feedback associated with specific commercial arrangements have been omitted from this report to maintain confidentiality.

### 6.2.1 Supply Condition does not currently impact on investment decisions

The review set out to understand whether the Supply Condition has had, or is likely to have, any impact on investment in the gas industry to assess whether the Supply Condition has or is likely to have adverse consequences that affects gas supply to the market.

As shown in Table 6-1, the main consensus amongst gas industry stakeholders is that the Supply Condition is not a material factor in deciding whether to bid for a land release. The decision to bid for a land release is mainly dependent on subsurface geological characteristics, as well as access to infrastructure with capacity to transport gas. It was noted that at the time when current land releases with the Supply Condition were released, there was not a material difference in gas prices between the East coast gas markets and LNG net back price.

However, two gas industry representatives raised concerns about the potential risks to the industry by constraining supply to a limited number of buyers in the East coast gas market. Generally, the risks referred to were in relation to there being only a limited number of buyers across the East Coast gas market. Further information on this is detailed in Section 7.1.

**Table 6-1 Gas industry feedback across industry stakeholder groups - Supply Condition does not impact on investment decisions**

	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association			
The Supply Condition is not a material factor in deciding whether to bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	-	-

Legend:

✓ Agreed with statement

✗ Disagreed with statement

- Not applicable or did not make any comments on this matter

### 6.2.2 Land release process and the decision-making process to applying the Supply Condition lacks transparency

The most common topic of feedback from the gas industry was on the process of tendering land releases. Specifically, the consistent theme raised was the perceived lack of transparency in both the process for tendering land releases, and the decision-making process for determining whether a land release is conditioned with the Supply Condition.

The gas industry stated more information is required to assist in providing relevant submissions that aligns with the Government’s objectives. Some of the common feedback around the lack of transparency includes:

- Lack of information to understand how applications will be assessed, such as no information about the weightings for the evaluation criteria
- No information is provided about what areas are submitted through the expression of interest (EOI) process, therefore gas industry participants do not know if an area has already been submitted. Additionally, there is no feedback provided about why some areas are not released and so the gas industry is left having to continually submit applications for those areas through the EOI process
- Minimal, or lack of constructive feedback, is given to unsuccessful applicants to land releases

Several stakeholders stated they consider the process for releasing land and applying for tenure has improved. Feedback noted there has been an increase in the number of land releases in recent years. Additionally, other feedback noted that DNRME has been more proactive in driving tenure applications through the process. However, almost all gas industry stakeholders acknowledged that the process from releasing land, to when a preferred tenderer is awarded and tenure is granted is too long. Some suggestions raised by the gas industry to improve the existing process were:

- Allow industry to decide whether a land release should be an ATP or PL. Under this option, the government would release an area for tender, and applicants to the tender decide whether they apply for an ATP or PL. The intention is that this option can, in some situations, allow the gas industry to go straight to a PL, and therefore produce gas sooner.
- When a tender for a land release closes and no applications for the land release is received, the area should become open to direct tenure application (i.e. not re-release the area through a tender process). In this situation, it is argued that the area of land has already been tendered and therefore market competition has already been tested. Re-releasing the area through a second tender process is suggested to be ineffective and significantly extends the possibility of when gas may be supplied to the market.
- Allow industry to determine which markets they will supply gas to in their applications for land releases. Under this option, the Supply Condition will not exist, but the evaluation criteria will indicate whether gas supply to the East coast gas market is more heavily weighted or not. The suggestion is that industry is best placed to assess which supply arrangement best achieves value for money by stating in its application a percentage of production that will be supplied to which market (e.g. 60% supplied to the East coast gas market ). Under this option, the Queensland Government will still retain the option to assess if applicants have the potential to achieve the greatest return the state.
- Evaluation of land releases should be weighted more towards the applicants' past performance to assess how efficient they are at effectively running gas operations and turn-over of land
- Remove the land release process and allow the gas industry to make direct applications for tenures, thus significantly reducing the current timeframe for getting access to land

**Table 6-2 Gas industry feedback across industry stakeholder groups - lack of transparency in current processes**

	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association		
The tender process for releasing land, and applying the Supply Condition, lacks transparency	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

The tender process for land releases, and subsequent tenure application process is too long	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓
The Supply Condition should not be applied to frontier land releases	—	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	—	—	—

Legend:

✓ Agreed with statement

— Not applicable or did not make any comments on this matter

### 6.2.3 The Supply Condition’s impact on the gas supply market

Throughout consultation common themes were raised by the gas industry about how the Supply Condition has, or has not, impacted on the gas market. Common themes were that:

- Gas users are starting to become slightly more adaptable in the negotiation process for gas supply agreements
- The Supply Condition has improved/worsened competition in the market (conflicting views)
- The large industrial gas user market is limited, raising concerns about the potential adverse effect the Supply Condition could have on investment in the gas industry
- Gas producers had always supplied gas to the East coast gas market and the Supply Condition has not changed this

#### Gas users are starting to become slightly more adaptable

Overall, the gas industry acknowledged that the Supply Condition is meeting its purpose with most having experienced a positive change in the market. Some stakeholders from the gas industry acknowledged that industrial gas users are starting to become slightly more adaptable at negotiating gas supply agreements. While industrial gas users still generally require a consistent volume of gas supply (i.e. flat load), some stakeholders noted they are experiencing instances where users are becoming more flexible with the supply arrangements, with some starting to accept more risk. For example, some noted that gas users are accepting more risks associated with the potential capacity restrictions on transporting gas.

Some gas industry stakeholders also noted that the Supply Condition supports a growing trend of more industrial gas users approaching producers directly for their gas supply arrangements.

#### The Supply Condition has improved/decreased competition in the market

There was mixed feedback between major gas producers and small to medium sized gas explores/producers about whether they perceived improved (or worsened) competition for land releases as a result of the Supply Condition.

Some small to medium sized gas explorers/producers stated they believe the Supply Condition improves their chances of being awarded as the preferred tenderer. For example, some stakeholders saw the Supply Condition as an opportunity to partner with major gas users, which was thought to be beneficial for small to medium sized explorers/producers as it offered an alternative source of funding.

Conversely, some major gas producers raised concerns that the Supply Condition is having a negative impact on their ability to be awarded as preferred tenderer, as it was perceived that Government's desire to award these areas to small to medium sized explorers/producers.

Overall, the gas industry acknowledged there has been an increase in small to medium sized explorers/producers being awarded as preferred tenderers to land releases in recent years.

While the gas industry acknowledged the increase in tenure ownership by small to medium sized gas explorers/producers, there was further mixed feedback about whether this will have a positive or negative impact on the East Coast gas market. Some commentary included that small to medium sized gas explorers/producers are more determined to supply gas to the East coast gas market as they do not have prior commitments to the LNG market.

Other commentary focused on potential risks, such as concerns whether small sized explorers awarded an ATP with the Supply Condition have the capability and/or intention to bring gas to the market. These stakeholders advised that there is significant capital and other factors required to successfully proceed from an ATP to PL and bring gas to market. Such resources can be difficult for small sized gas explorers to obtain, and the concern is therefore whether this may affect the ability of small sized gas explorers supplying gas to the East coast gas market in a timely manner.

### The industrial gas user market is limited, raising concerns about the potential adverse effect the Supply Condition could have on investment

At present, the gas industry did not report any difficulty in securing financing for tenures conditioned with the Supply Condition. At the time of the bids gas spot prices in the East coast gas markets and the LNG net back prices were similar. This may be an issue in the future if there is a material difference between the two markets.

A small number of gas industry representatives raised concerns about there being a limited number of buyers in the East coast gas market, and that these buyers are not expected to increase their gas supply requirements in the short to medium term. It was noted that this highlights the risk of potentially saturating the East coast gas market if more land is released with the Supply Condition. If such a situation was to occur, it could have adverse impact on investment in Queensland's gas industry.

### Gas producers had always supplied gas to the East coast gas market and the Supply Condition has not changed this

Almost all stakeholders from the gas industry stated they had always, or have no issues with, supplying gas to the East coast gas market. Most gas industry stakeholders did not think the Supply Condition had made them more or less committed to supplying gas to the East coast gas market .

Table 6-3 Gas industry feedback across industry stakeholder groups - Supply Condition's impact on the market

	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association			
Gas users are starting to become slightly more adaptable	-	✓	✓	✓	-	-	✗	-	✓	-	✓	✓	✓	-	-	-
The Supply Condition has improved competition	✗	✗	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗

The industrial gas user market is limited, raising the potential risk of the Supply Condition negatively impacting on the market	-	×	×	×	-	-	-	-	-	✓	-	-	✓	-	-	-
No issue with supplying gas to the East Coast gas market and have always been committed to supplying gas to the domestic market	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-

Legend:

✓ Agreed with statement

× Disagreed with statement

- Not applicable or did not make any comments on this matter

## 6.2.4 There are a number of benefits in supplying gas to the LNG market over the East coast gas market

All gas industry representatives noted there are a number of benefits in supplying gas to LNG buyers. They noted that LNG buyers and large gas retailers have more liquidity and offer preferred contractual terms and conditions that reduces the risk in gas development projects. For most small and medium sized gas producers, reducing the risk in gas development projects is fundamental and can sometimes be the difference between getting projects off the ground or projects not proceeding.

The gas industry representatives noted that supplying gas to the East coast gas market is very different to the LNG market. Industrial gas buyers require short-term, flat load gas supply contracts. Many of the industrial gas buyers also require the gas to be transported to them but do not take on any risks associated with the transport.

Because of this difference, a common theme raised was that supplying gas to the LNG market is often preferred.

Table 6-4 Gas industry feedback across industry stakeholder groups - differences between the domestic and LNG markets

	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association			
LNG market has more liquidity and offers preferred contractual terms and conditions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Industrial gas market prefers short-term, flat load gas supply contracts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-

Legend:

✓ Agreed with statement

- Not applicable or did not make any comments on this matter

## 6.2.5 The legislative framework is too rigid

Most gas industry and industry groups consulted raised concerns that the legislative framework is too rigid and not applicable to how the industry works in practice. Feedback mostly noted the legislative framework being too prescriptive, specifically concerning the requirements to monitor and trace the specified gas to the end user.

The gas industry noted that gas producers have a few options when supplying gas to the East coast gas market. They can sell the gas directly to a major gas user, such as industrial and manufacturing entities, or they can sell the gas to retailers, where the gas is on-sold. The gas industry stated that retailers predominately sell gas to the East coast gas market, but some retailers can also supply gas to LNG customers. The sale of gas is also likely to be transported through gas storage/hubs such as the Short-Term Trading Market, Wholesale Gas Market and the Gas Supply Hubs such as the Wallumbilla Hub. If the gas is not supplied directly to a gas user, stakeholders stated that it is difficult, or unachievable, to trace the specific gas once it is transported to a retailer.

Some gas industry representatives detailed real examples of where retailers had reservations about accepting gas subject to the Supply Condition, as they were concerned they could not comply with the requirements under the Act. It was stated that as a result, this can disadvantage producers with gas conditioned under the Supply Condition as it reduces the number of potential buyers.

After consulting with industry, DNRME released a draft Operational Policy – Complying with the Australian Market Supply Condition (Operational Policy). The Operational Policy aims to clarify how a holder of a tenure with the Supply Condition, or entity that the Supply Condition applied to, can comply with the obligations under the framework. Some gas industry representatives noted the Operational Policy was a positive step in addressing some of the issues (noted above) in complying with the Supply Condition. However, stakeholders considered that the methods by which their reporting obligations can be met must be implemented in legislation. The concern is that an operational policy can be amended too easily, and without consultation, raising uncertainty in planning for gas development projects.

Those stakeholders that did not provide any feedback around the framework, or disagreed that the framework is too rigid, were primarily gas industry representatives in the early stages of exploration, or had not been awarded a tenure with the Supply Condition and therefore not had to negotiate any gas supply agreements.

**Table 6-5 Gas industry feedback across industry stakeholder groups - legislative framework too rigid**

	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association		
The legislative framework is too rigid	✓	✓	–	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	–	✓
Operational policy offers improvements, but further work is required	–	–	–	✓	✓	–	✓	✓	–	✓	✓	–	–	✓	–

Legend:

✓ Agreed with statement

– Not applicable or did not make any comments on this matter

## 6.2.6 Recommendations and alternative policy options

The gas industry raised a number of recommendations they consider will offer improvements for industry development. Many of the recommendations raised were options to increase gas supply

generally, not specifically increase supply to the East coast gas market . These recommendations are listed in Table 6-6.

When asked if there are any preferences for any alternative policy options aimed at ensuring a gas supply shortage is not encountered in the East coast gas market, most gas industry stakeholders accepted the current policy, though some noted a preference for no regulation at all.

Support for the existing policy came with some conditions. While supportive of the current policy, stakeholders are concerned about the framework applying retrospectively to existing tenures. The gas industry and industry representatives also raised concerns with how the Supply Condition will be applied into the future, noting that there is no framework that details the Queensland Government’s process to deciding if and how the Supply Condition is applied to land releases.

Additionally, stakeholders noted that if the Supply Condition was applied retrospectively, it would have significant adverse consequences to the industry.

Most stakeholders noted that they would not support the Supply Condition if the Australian Government utilised the ADGSM.

**Table 6-6 Gas industry feedback across industry stakeholder groups - recommendations and alternative policy options**

RECOMMENDATION / OPTION	Major gas producer/upstream gas provider						Small to medium sized gas explorer/producer						Peak industry association	
Allow a percentage of gas (e.g. 30% of the field’s development) to be authorised for supply to alternative markets such as LNG.							✓		✓	✓			✓	
Release land for a PL (rather than ATP)	✓						✓							
Provide regulatory certainty – both at a State and Federal level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Streamline the land release process so that land can be released quicker	✓		✓			✓	✓				✓	✓	✓	✓
Release land with access to infrastructure already negotiated/set up					✓						✓			
Streamline tenure application assessment process	✓		✓			✓	✓		✓			✓	✓	✓
Government should focus on increasing gas supply generally, which will improve supply to the domestic market		✓		✓	✓		✓				✓	✓	✓	✓



Government should offer funding for research and development (e.g. exploration in unexplored areas)		✓							✓					
Amend the existing framework so that applicants to land releases nominate how much gas (a percentage of estimated production) that must be supplied to the Australian market.			✓								✓			
More planning is required. Make up to 5 years forward notice of upcoming land releases (including those that will have the Supply condition).								✓					✓	
Government should create a body that is responsible for collaborating resources for small companies. For example, facilitate funding from small producers fund a pipeline														✓
Amend policies, such as the declaration of Strategic Environmental Area in the Channel Country, that restricts gas exploration and production from occurring in certain areas. For example, lift restrictions imposed on gas exploration and production in the Galilee Basin.			✓					✓					✓	
Permit steel casings			✓					✓					✓	

Legend:

✓ Agreed with statement

## 6.3 Feedback from industrial gas users

Feedback from the industrial gas users provided insight into gas supply needs and confirmed:

- There are currently no alternative fuel sources to gas viable for use by the industrial gas industry (see Section 6.3.1)

- Industrial gas users can negotiate better gas supply agreements by negotiating directly with gas producers (see Section 6.3.2)
- Industrial gas users are noticing improvements in the gas supply market and consider the Supply Condition is working as intended (see Section 6.3.3)
- Most industrial gas users prefer short-term gas supply agreements (see Section 6.3.4)

The industrial gas users also raised a number of recommendations and alternative policy options, as detailed in Section 6.3.5.

### 6.3.1 Alternative resources are not a feasible option if gas supply or price becomes unsustainable

The review set out to understand the potential consequences if the Supply Condition failed to achieve its policy objective, by assessing whether the industrial gas users have considered alternative fuel sources.

For the most part, users do not believe that alternative fuel sources are not viable options for replacing their gas requirements. All of the industrial gas users indicated that they either have or are currently investigating alternative resources such as hydrogen. However, the results indicated that currently there is no suitable option that could replace industrial gas users' total gas demand at a comparable or better price. Industrial gas users that require gas as a feedstock for their operations also noted that testing of alternative resources to date contaminates their product.

All gas users indicated that an inability to secure enough supply of gas at an affordable price, would most likely result in them either closing down their operations permanently, or relocating to an alternative location.

**Table 6-7 Industrial gas users' feedback - alternative resources are not a feasible option**

Theme	Gas user				
	A	B	C	D	E
Alternative fuel sources are not currently a feasible option to replace gas	✓	✓	✓	✓	✓
Risk of plant closures in the industrial sector if gas supply or price becomes unsustainable	✓	✓	✓	✓	✓

Legend:

- ✓ Agreed with statement

### 6.3.2 Going direct to producers for supply of gas has delivered price benefits

The industrial gas users all highlighted a growing preference to negotiating gas supply agreements directly with gas producers. Traditionally, the industrial gas users sourced gas supply via a retailer. Industrial gas users stated there are fewer costs and therefore price benefits when gas is supplied directly from the producers. However, the contracts can be a little more complex, particularly regarding negotiations on the arrangements for transporting the gas.

Feedback also highlighted there are other variables that need to be considered when negotiating gas supply agreements directly with gas producers. The main factor to consider is the location of the plant in relation to the location of gas production. Industrial gas users require the gas to be supplied to their plant.

**Table 6-8 Industrial gas users' feedback - going direct to producers saves costs**

Theme	Gas user				
	A	B	C	D	E
Going direct to producers has delivered price benefits	–	✓	–	✓	✓

Legend:

✓ Agreed with statement

– Not applicable or did not make any comments on this matter

### 6.3.3 The Supply Condition is working as intended and negotiating gas supply agreements have improved

With one exception, industrial gas users believe the Supply Condition is working as intended. Industrial gas users have experienced a positive change in the market, stating that gas supply negotiations are more constructive because gas producers are more driven to negotiate suitable gas supply agreements.

One industrial gas user does not believe the Supply Condition has made any material improvements, and recommends that more action is needed. Commentary on this matter noted that the price of gas in the East coast gas market is still far too high and that the Supply Condition has not improved this.

The industrial gas users stated they have observed more gas producers approaching them directly with supply offers, and have found producers to be more receptive to negotiating gas supply agreements.

**Table 6-9 Industrial gas users' feedback - Supply Condition is working as intended**

Theme	Gas user				
	A	B	C	D	E
Supply Condition is working as intended	✓	✗	✓	✓	✓
Negotiating gas supply agreements has improved as a result of the Supply Condition	✗	✗	✓	✓	✓

Legend:

✓ Agreed with statement

✗ Disagreed with statement

### 6.3.4 Gas demand forecast is stable for the short to medium term, but industrial gas users have mixed preference for short or long term gas supply agreements

The industrial gas users generally provided mixed feedback on their preference for short or long-term gas supply agreements, with the majority of smaller gas users acknowledging a preference for short-term agreements.

The preference towards short-term agreements was due to the variability of the price of gas, with most small gas users hesitating to secure long-term agreements in case the gas price decreases. Conversely, large gas users were looking for long-term gas supply agreements and greater certainty in supply, particularly those users who also used gas as feedstock in their plants.

Feedback on this matter also provided commentary regarding gas users' forward projections for their continual operations. Generally, all gas users consulted acknowledge confidence that their operations will continue to remain stable, and as such, so too will their demand for gas supply.

**Table 6-10 Industrial gas users' feedback – gas demand from industrial gas users**

Theme	Gas user				
	A	B	C	D	E
Short-term supply contracts are preferable	✓	✗	✓	✓	✗
Long-term supply contracts are preferable	✗	✓	✗	✗	✓
Gas demand forecasts are confident that demand will remain stable in the short to medium term	✓	✓	✓	✓	✓

Legend:

- ✓ Agreed with statement
- ✗ Disagreed with statement

### 6.3.5 Recommendations and alternative policy options

While most industrial gas users stated they believe the Supply Condition is meeting its purpose, recommendations for improvements were also raised.

One large industrial gas user flagged an interest in being more involved in the development of gas as they believe this arrangement would provide them more control over gas exploration/production and will keep gas costs down. This industrial gas user recommended that industrial gas users should be allowed to be a tenure holder for gas exploration and/or production. Feedback on this option noted that the current legislative framework prevents industrial gas users from being able to be the holder of a petroleum and gas tenure due to the requirement to be an authorised tenure holder under the P&G Act.

A number of industrial gas users recognise that the gas market has become more complex and that they need to adapt to this changing market. Industrial gas users recommend more information/guidance material should be made available to help gas users understand the Supply Condition and provide direction to information about the gas supply market.

Consultation also revealed that industrial gas users prefer greater flexibility with regards to the physical delivery of gas and contractual agreements. Many of the industrial gas users stated that gas supply hubs such as the Short-Term Trading Market and the Wallumbilla Hub allow industrial gas users to manage their gas supply needs by providing them with the option to on-sell gas back to the hubs during low production periods, or buy additional supply during peak operating periods.

**Table 6-11 Industrial gas users' feedback - recommendations and alternative policy options**

Theme	Gas user				
	A	B	C	D	E
Allow major gas uses to holder exploration and/or production tenures	✓				
More information and guidance are required for gas users to be better informed and negotiate adequate gas supply agreements	✓	✓	✓		
Flexibility (both in terms of physical delivery and contractual agreements) are desirable			✓		✓

Legend:

- ✓ Agreed with statement

## 6.4 Feedback from the Department of Natural Resources, Mines and Energy

DNRME was interviewed to clarify points raised during stakeholder interviews and provide an understanding of the decision-making process for determining whether to attach the Supply Condition to a land release. The review also set out to understand how DNRME consider the Supply Condition as being a success.

Consultation with DNRME confirmed:

- It's too soon to know whether the Supply Condition has been successful in supplying gas to the East coast gas market, however DNRME is tracking it (see Section 6.4.1)
- There is no explicit framework for deciding when to apply the Supply Condition (see Section 6.4.2)
- DNRME has had a focus on driving market diversity through land releases (see Section 6.4.3)
- DNRME has noticed a change in the way the gas industry is approaching its applications to tendered land releases (see Section 6.4.4)
- DNRME is acutely aware of the risks that regulatory uncertainty create for the gas industry (see Section 6.4.5)
- DNRME understands there is some ambiguity within the legislative framework (see Section 6.4.6)

### 6.4.1 It's too soon to know whether the Supply Condition has been successful

Consultation with DNRME confirmed that the department's focus is to ensure gas produced from a tenure with the Supply Condition is supplied to the East coast gas market. However, DNRME also noted there are some complexities in ensuring compliance with the Supply Condition, as it is difficult for the gas industry or recipients of the gas to trace the specific gas to the end user.

DNRME also acknowledged that to date, most tenures with the Supply Condition are ATPs and therefore there is a high degree of uncertainty around whether gas will be discovered and if these tenures will progress to a PL and supply gas to the domestic market. DNRME will monitor this to ensure compliance under the Supply Condition framework.

During this preliminary phase of applying the Supply Condition, DNRME considers the first measure of success under the Supply Condition is an ATPs progression to a PL and supply gas to the domestic market. None have done this so far.

### 6.4.2 There is no explicit framework to deciding when to apply the Supply Condition

DNRME clarified it's role is to advise and recommend to the Minister for Natural Resources, Mines and Energy areas suitable for the Supply Condition, and the Minister approves land releases with the Supply Condition.

DNRME advised there is no hard and fast approach to deciding whether to attach a Supply Condition to a land release. However, DNRME advised that some of the key factors in deciding to attach the Supply Condition are consideration towards the proximity of the land release to infrastructure and the geological prospectivity of the land. DNRME also considers competing land uses and location in relation to other tenements/gas projects.

DNRME stated that its focus is on ensuring sufficient gas supply for both the LNG market and the East coast gas market. DNRME monitors current and future gas demand and supply potential for both markets, including making assessments around potential gas reserves based on both individual tenures and major gas producers' project portfolios.

### **6.4.3 Focus towards driving market diversity through land releases**

DNRME noted that in recent years, the focus has been on market diversity through land releases.

DNRME has observed a change in behaviour by the gas industry in recent years and considers some of this can be attributed to the Supply Condition (as well as other changes the department has made with land releases). For example, gas producers are increasingly focused on developing gas fields in shorter periods. DNRME has also noticed that some land release applicants have negotiated gas supply agreements with major industrial gas users and used these agreements as evidence to demonstrate their commitment to supply gas to the East coast gas market. DNRME considers this change attributable in part to the Supply Condition, and other changes made with land releases.

### **6.4.4 Change in the way the gas industry is approaching its applications to land releases**

DNRME has noticed the greatest change in the way applicants are applying for land releases with the Supply Condition is that some applicants are taking a more proactive approach by securing gas supply agreements at the early stages of applying for an ATP.

DNRME reiterated that the tender document does not require applicants to secure gas supply agreements in order to meet this criterion. The level of evidence required is dependent on a number of factors, such as proximity to infrastructure, understanding of subsurface geological conditions, and level of prospectivity. The higher the certainty of commerciality of the resource, the higher the expectation of the level of evidence provided to meet the criterion. The tender document requires applicants to demonstrate how they will meet the Supply Condition and includes a guideline on the level of evidence/information required to meet the criterion (for example, a proposed or existing contract, memorandum of understanding or other written agreement with entities where the supplied gas is or is intended to be consumed within Australia).

### **6.4.5 The department is acutely aware of the risks regulatory uncertainty creates for the gas industry**

DNRME highlighted that regulatory restrictions placed in other states, such as the federal ADGSM and moratoriums on gas exploration, are having an impact on supply across of the East coast gas market. DNRME also acknowledged that regulatory uncertainty is one of the key risks to any gas project.

DNRME highlighted that one of the benefits to the Supply Condition is that industry is made aware of which land releases will contain the condition prior to submitting a tender for the land and undertaking any activity.

### **6.4.6 There is some ambiguity under the legislative framework**

DNRME is aware that there are three main issues with the legislation for the Supply Condition:

- The Supply Condition does not account for when a buyer in the East coast gas market is not able to use all the gas supplied and/or agree to take all the gas produced from a production field. When this occurs, it is standard for the gas producer or buyer to on-sell the supply to gas trading hubs.

As such, it is difficult to prove any gas that is supplied to the hub is then supplied to the East coast gas market .

- The volume and flow rates of gas supply varies, and it can be difficult to find a gas buyer in the East coast gas market that can take the entire supply, if and when it is available. There is an exemption provision under the framework, though the exemption process takes too long given variability of gas supply can occur within days.
- It is difficult for gas retailers to prove specific gas supplied to them from land subject to the Supply Condition is then supplied to the East coast gas market. DNRME understands that gas retailers supply most of their gas to the East coast gas market but cannot trace the exact gas to confirm compliance with the legislation. DNRME confirmed that if gas retailers can prove that the volume of gas subject to the Supply Condition is supplied to the East coast gas market, they are compliant with the legislation.



## 7 Review findings and analysis

The review is cognisant that the tenures with the Supply Condition are mostly in the early stages of exploration, with only one tenure producing gas from late 2019. Therefore, gas production has not been considered as a measure of the effectiveness of the Supply Condition in this report.

The review has confirmed that stakeholders generally accept the Supply Condition, with both the gas industry and the industrial gas users noting improvements in the market. The gas industry highlighted:

- The Supply Condition does not currently impact investment decisions while gas prices for the Australian market and LNG net back are similar
- The process for land releases and the decision-making process for applying the Supply Condition lacks transparency
- The Supply Condition has generally:
  - For small to medium sized explorer/producer, improved competitiveness for land release tenders
  - For major gas producers, decreased competitiveness for land release tenders
- There are a number of benefits to supplying gas to the LNG market over the East coast gas market
- The legislative framework under which the Supply Condition is applied is too rigid

Additionally, consultation with the industrial gas users helped to better understand their gas supply needs, confirming:

- There are currently no alternative fuel sources to gas viable for industrial gas users
- Industrial gas users can negotiate better gas supply agreements by negotiating directly with gas producers
- Industrial gas users are noticing improvements in the gas supply market and consider the Supply Condition is working as intended

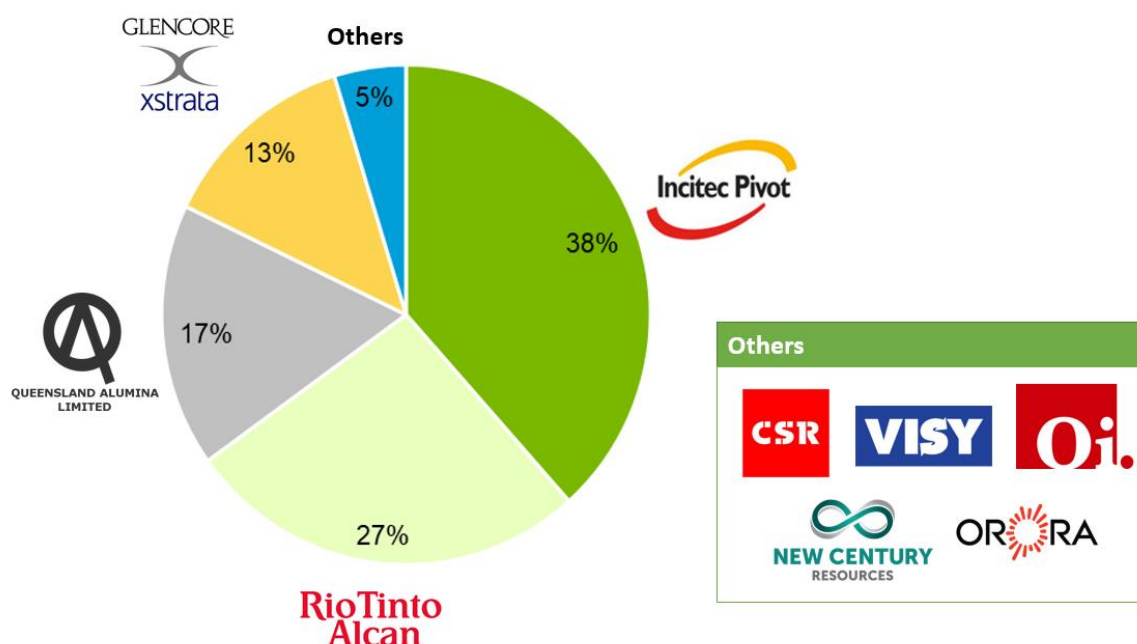
While stakeholders generally accept the Supply Condition, the review has identified several emerging matters that could adversely impact the market if not correctly administered. These matters, explained in detail below, are that:

- There are a limited number of industrial gas users in the East coast gas market, and Queensland in particular
- There is a misalignment between the potential supply of gas from tenures subject to the Supply Condition and demand for gas in the East coast gas market
- A gas price disparity between the East coast and the international LNG markets has the potential to influence supply to the different markets

### 7.1 Limited number of industrial buyers

There are a limited number of industrial gas users across the East coast gas market, and even fewer in Queensland. The demand for gas from large industrial gas users in Queensland is estimated to be around 95 PJ per annum. This equates to only 7 per cent of the total gas consumption in Queensland.

As illustrated in Figure 7-1, around 95 per cent of the gas consumed by the large industrial gas users is consumed by only four entities: Incitec Pivot Limited, RioTinto Alcan Inc, Queensland Alumina Limited and Glencore Xstrata Plc.



Source: Indicative figure based on data from EnergyQuest 2019

Figure 7-1 Breakdown of major industrial gas users in Queensland

Through stakeholder consultation and market research, it is understood that each of the four major industrial gas users in Queensland have secured a reasonable supply of gas in the short to medium term.

While gas produced in Queensland can be supplied to other States across the East coast gas market, the added costs for transport and restricted pipeline capacity issues prevent this from being a feasible option for many gas supply arrangements, to adequately increase the number of potential gas buyers for producers in Queensland.

## 7.2 Gas demand and supply misalignment

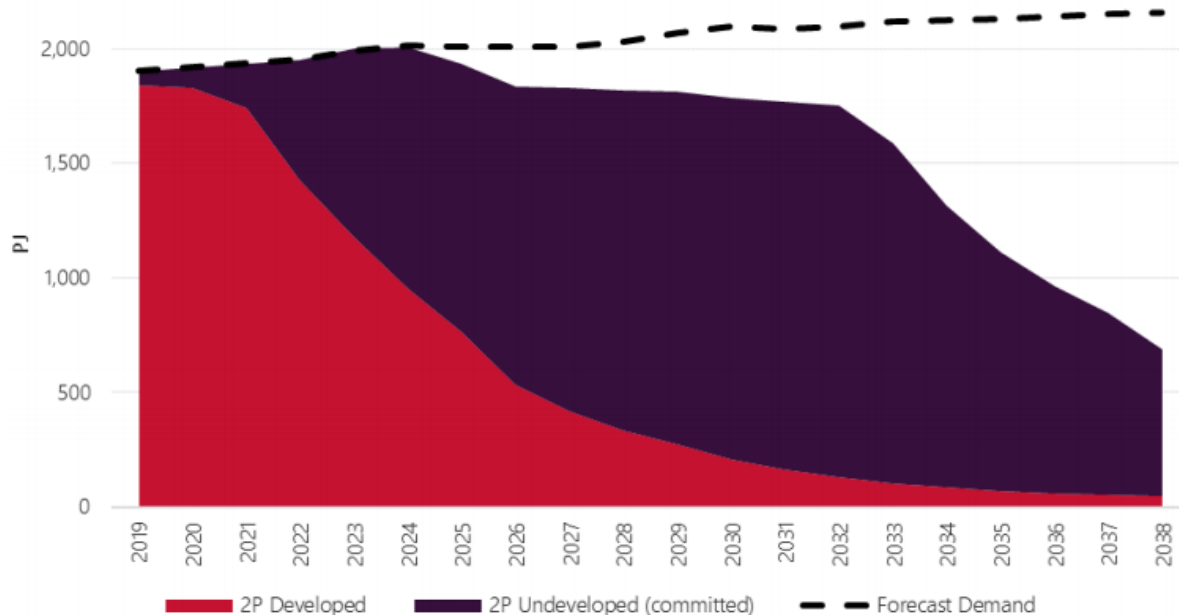
Consultation confirmed that gas is fundamental for the continued operations of large industrial gas users, as there is currently no feasible alternative fuel to substitute gas as an energy source or feedstock. Gas supply in the East coast gas market is therefore a critical resource for the continued operations of these businesses and the Supply Condition can ensure supply to this market.

However, it is fundamental that the timing and volume of gas supplied to the East coast gas market occurs as and when it is needed. The risk in not getting this right can cause either an oversupply or under supply of gas in the East coast gas market which can be detrimental to stakeholders.

There is a misalignment between when gas subject to the Supply Condition can be supplied to the market, and when demand for gas is required. Under the current framework, the Supply Condition is first applied when a block of land is released for tender. This arrangement received positive feedback from stakeholders, with many of the gas industry representatives stating a preference for knowing about the Supply Condition prior to applying for the tender, and a strong preference for the policy to not be applied retrospectively to existing tenures.

However, with the exception of one, all land release with the Supply Condition has been for an ATP and as such there is no certainty around the timing and volume of gas supply from these tenures to the East coast gas market. Latest forecasts by the AEMO suggest there is a risk of a gas supply shortage in the East coast gas market by around 2025 (see Figure 7-2).

It is important to note that AEMO state this shortage is forecast to be experienced in states south from Queensland and capacity constraints for infrastructure will mean gas from Queensland will be restricted, and in some cases, may not be able to be transported (Australian Energy Market Operator, 2019).



Source: Australian Energy Market Operator, 2019. Gas Statement of Opportunities

Figure 7-2 AEMO's projected gas demand and reserve supply in the East Coast gas market

AEMO further state that supply limitations are also expected to drive shortfalls in Queensland's LNG exports, as around 8PJ of CSG is forecast as having to be diverted from LNG to the East coast gas market to ensure domestic demand is met in 2029, and 25PJ in 2030 (Australian Energy Market Operator, 2019).

As noted earlier, with the exception of one, all tenures and land releases with the Supply Condition are, or will be, ATPs and so gas supply from these areas is uncertain. The timeframe to explore and produce gas is unique to each land release and is subject to a number of variables such as the geology and flow rates, location to infrastructure, operator capability and market conditions. There is some evidence indicating that Central Petroleum's ATP 2031 may proceed to a PL and commence producing gas by 2022<sup>14</sup>. There is also evidence suggesting Armour Energy's ATP 2046 may proceed to a PL and commence producing gas in mid-2021<sup>15</sup>. However there is no certainty around when the production timeframe will be realised, or if and when the remaining ATPs will proceed to production stage.

<sup>14</sup> See <http://centralpetroleum.com.au/our-business/our-licence-areas/surat-basin/project-range/>

<sup>15</sup> See [https://static1.squarespace.com/static/5907bd625016e17b11b79b3b/t/5da919f9be6c4514ed032c1c4/1571363365785/2019\\_10.18\\_AR\\_Pages.pdf](https://static1.squarespace.com/static/5907bd625016e17b11b79b3b/t/5da919f9be6c4514ed032c1c4/1571363365785/2019_10.18_AR_Pages.pdf)

Figure 7-3 provides a hypothetical example of a possible timeframe of when gas could be supplied to the East coast gas market under each land release with the Supply Condition. This figure is not based on the tenures' work programs or any evidence documented by DNRME. Rather, it is based on assuming a 'best case scenario' that is formed by the below assumptions, or based on public statements made by the tenure holder:

- Exploration activities are undertaken over a four year period, from grant of an ATP
- Commercial gas discovery is made under each land release and an application for a PL is made two years from the completion of exploration
- An application for a PL takes up to two years to be granted and development and production activities occur subsequently for up to 20 years

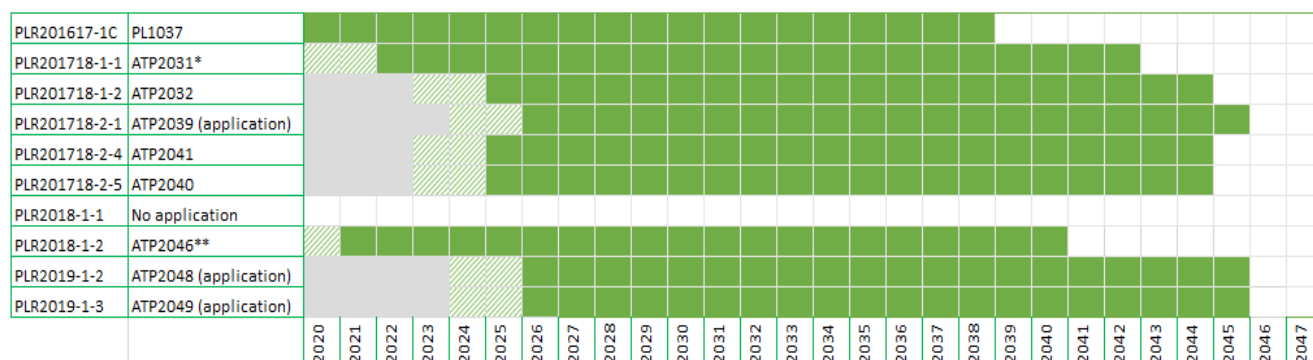


Figure 7-3 Possible timeframe for gas supply from land releases with the Supply Condition

\* Central Petroleum has indicated that it may commence production under its Range Gas Project (ATP2031) in 2022<sup>14</sup>

\*\* Armour Energy has indicated that it may commence production from the area of the ATP 2046 in mid-2021<sup>15</sup>

Using this production profile, gas may start to be supplied to the East coast gas market from the areas under ATP 2031 and ATP 2046 prior to the supply shortage forecast in 2024. The remaining tenures with the Supply Condition are not likely to supply gas to the East coast gas market until around 2025 to 2027.

This suggest that a little over half (6 out of 9 granted tenures with the Supply Condition) may supply gas to the East coast gas market, when a gas supply shortage is forecast by 2025. However the timing and volume of gas supply is not certain and there is a chance for gas production to commence later, as the tenures are still at the ATP stage. Additionally, as majority of the tenures with the Supply Condition are at the early stage of exploration, the review is not able to quantify the potential volume of gas that may result from these tenures, or assess whether it will be sufficient volume to address, or at least mitigate, the forecast gas supply shortage.

### 7.3 Gas price disparity

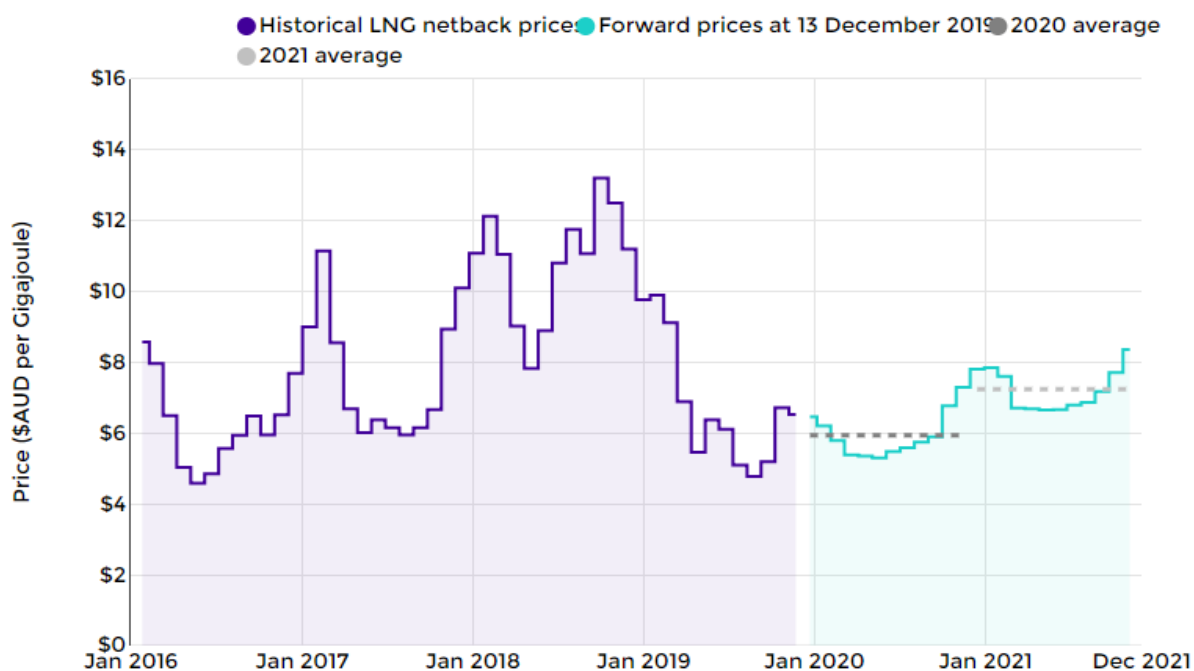
Another emerging theme identified from this review is the potential for a gas price disparity to emerge between the Australian East coast gas market and international LNG markets. This has the potential to impact supply conditions, as higher prices in one market is likely to influence where gas is supplied.

As detailed in Section 4.1.2, the gas price across the different markets is volatile. The latest output from the ACCC has forecast the LNG netback price to slightly increase throughout 2020 and 2021, and is expected to settle around \$8/GJ - see Figure 7-4 (ACCC, 2019).

While the price of LNG exports remains low or on par with the East coast gas prices, the competition for gas supply across the markets will remain relatively even. Under these conditions the Supply Condition is likely to remain an effective tool for securing gas for East coast gas users.

However, should the gas price in these markets shift to a scenario where the international LNG price is well above East coast gas prices, producers will be less attracted to supplying gas to the East coast market through the Supply Condition. The Supply Condition may still positively contribute to securing supply for East coast gas users, but its effectiveness will be reduced if the relative economic returns for supplying gas to the East coast market are significantly lower than supplying it to the international LNG market.

### ACCC's LNG Netback price



Source: ACCC, 2019.

Figure 7-4 ACCC LNG Netback Price Chart

## 7.4 Importance of gas to Australia's industrial gas users

Consultation confirmed that gas is essential for the continued operations of industrial gas users. The industrial gas users consulted confirmed that they do not believe there is an alternative fuel source that is a viable alternative to gas. While they have considered and investigated alternative resources it has been determined that alternatives to gas are either not available at a sustainable price in suitable volumes to meet requirements, or would lead to product contamination where gas is used as a direct process feedstock for their operations.

Consultation confirmed industrial gas users are vulnerable to significant increase in the costs for gas with all gas users indicating that, if they were unable to secure enough supply of gas at an affordable price, it would like result in them having to close their operations or re-locate to an alternative location overseas.

Gas supply in the East coast gas market is therefore a critical resource for the continued operations of these businesses and the Supply Condition can ensure adequate gas supply to this market is maintained. However, getting the timing and volume of gas supplied to East coast gas market is critical.

## 8 Recommendations

The review has identified that stakeholders broadly accept the Supply Condition and are experiencing improvements in gas supply to the East coast gas market. Stakeholders have however raised a number of recommendations to improve the existing framework.

Additionally, as detailed in Chapter 7, the review has identified several emerging matters concerning the Supply Condition that could adversely impact the market if not correctly administered.

The review has however identified options under the existing policy that could improve the operation of the Supply Condition. In total, the review has identified 11 recommendations that the Government should action to ensure:

- The Supply Condition is **adaptable for a dynamic market**
- **Efficiency and transparency** in the administration of the Supply Condition is improved
- Market **participants are informed**

It should also be noted that, as summarised in Section 6.2, the gas industry raised a number of recommendations to increase gas supply. While the recommendations may target increasing gas supply generally, the recommendations do not definitively ensure supply to the East Coast gas market. The review considers that the supply of gas to specific markets is mostly responsive to market conditions. Gas supply is most likely to flow to whichever market offers acceptable terms and conditions, and whichever market offers the greatest return on investment. Accordingly, a number of the recommendations that did not focus on ensuring supply to the East Coast gas market were considered but have not formed part of the recommendations for this review.

### 8.1 Adaptable framework for a dynamic market

Development and supply of gas is a dynamic market with many risk factors across the supply chain. The Supply Condition must be adaptable to ensure investment continues in the gas industry and the market operates efficiently for the benefit of both the Australian and export markets.

#### **Recommendation 1**

The supply of gas is not conditioned to a specific sector (e.g. manufacturing only), but rather more generally conditioned to supply the Australian gas market

The gas industry noted, on one occasion, a land release was conditioned that required gas to be supplied specifically to the manufacturing industry (rather than the Australian market as a whole). This had been the only instance when gas supply was conditioned to be supplied to a specific sector and is not technically a feature of the Supply Condition framework. It is however a condition the Minister can place on any tenure under the P&G Act and was considered related to the Supply Condition framework by the gas industry.

Some industrial gas users noted this action improved negotiations for them, stating that they considered that it put more of a need for gas producers to negotiate a gas supply agreement.

However, there is only a limited number of industrial gas buyers in Queensland and there are limitations for the gas industry to negotiate gas supply agreements with some buyers in other states.

**It is recommended that the Supply Condition does not limit supply to a specific sector, but rather ensures gas is supplied to the Australian market.**



### Recommendation 2

Enable gas swaps to meet East coast gas market demands

The production and supply of gas to a buyer is multifaceted and the ability to bring gas to the market is subject to a number of variables.

Except for one, all tenures with the Supply Condition are an ATP and there is a high degree of uncertainty around if and when gas will be produced. As a result, it is difficult for the Supply Condition to ensure there is no gas shortage for large industrial gas users.

To allow industry to be more responsive to market demand under the Supply Condition, in particular, to be able to respond to potential gas shortages in the East coast gas market, **it is recommended that the framework allows gas swaps.**

Gas swaps refers to allowing tenure holders with the Supply Condition to supply gas from their other tenures to meet the obligations under the Supply Condition.

It is important the appropriate safe guards are put in place when applying gas swaps. The objective of allowing gas swaps is to permit industry to supply gas to the East coast gas market at a time when supply is needed, and at the same time, satisfy its obligations under the Supply Condition.

For example, gas swaps would allow a holder of an ATP with the Supply Condition to supply gas to the East Coast gas market from a PL it also holds. The gas swap would have to be authorised from the appropriate government authority prior to the arrangement taking place, and should occur during a period when there is a shortage of gas supply in the East coast gas market. Assuming the gas supplied from the PL satisfies the relevant Supply Condition on the ATP, the holder of the ATP is then free to supply gas from the area of the ATP (if it progresses to a PL) to any market.

### Recommendation 3

The Operational Policy (MIN/2019/5131) is:

- a. consulted on further with stakeholders and the policy on 'ramp-up' gas contained within is extended to a more suitable period of time
- b. implemented in legislation, or as a regulation to support industry confidence in the long term

There are marked differences in supplying gas to the LNG market and East coast gas market, and the conditions offered by the LNG market are often more favourable for gas producers.

The gas industry noted that due to LNG buyers having more liquidity and offering favourable terms and conditions, supplying gas to the LNG market can reduce the risk in gas development projects.

For most small and medium sized gas producers, reducing the risk in gas development projects is crucial and can sometimes be the difference between getting projects off the ground and projects not proceeding.

The recent release of the Operational Policy (MIN/2019/5131) was a positive improvement to the Supply Condition framework as it allows tenure holders with the Supply Condition to supply 100 per cent of gas produced during the commissioning phase (commonly referred to as ramp-up gas) or capped at 3 months from the first sale to an LNG buyer. The gas industry stated however that this period is too short.

	<p>It is <b>recommended that the period for ramp-up gas is consulted further with industry and extended to a more suitable period of time.</b></p> <p>It is also <b>recommended that the Operational Policy is, after consultation with stakeholders, implemented in legislation or as a regulation.</b></p> <p>By implementing the conditions of the Operational Policy in legislation, it will offer the gas industry greater certainty and therefore assist them in negotiating gas supply agreements.</p>
<p><b>Recommendation 4</b> Streamline the legislative exemption process</p>	<p>There was minimal feedback received directly on the process of applying for an exemption under the Supply Condition.</p> <p>However, the feedback received highlighted that the process of applying for an exemption is thought to be too long as the gas industry needs to be more reactive to fluctuating gas supply volumes.</p> <p>If amendments to the legislative framework are supported by the Government, it is <b>recommended that consultation with stakeholders is undertaken on the exemption process at the same time to make this process more aligned to how to the operational needs of the gas industry.</b></p>
<p><b>Recommendation 5</b> Review the Supply Condition on a regular basis, or when there are material changes to the market.</p>	<p>While this review has identified a number of recommended improvements to the Supply Condition, at the time of this review only one of the tenures with the Supply Condition were in production and had only just commenced production in late 2019. As a result, the direct effect of the Supply Condition could not be properly assessed.</p> <p>Additionally, the review had identified emerging matters concerning the Supply Condition that could adversely impact the market if not correctly administered (as detailed in chapter 7). In particular is the emerging concern there being a limited number of buyers, whereby there is the risk of oversupplying the gas market. Chapter 7 further details the potential influence the gas price disparity across the different markets can have on supply. These conditions continue to vary with almost no predictability but can have unfavourable impacts on the market if not carefully considered when applying the Supply Condition to new land releases.</p> <p><b>It is recommended that a review of the framework for the Supply Condition is undertaken on a regular basis, or when there are material changes to the market.</b></p> <p>For example, a review on the Supply Condition framework could be undertaken in four years. This will allow a review to assess the effectiveness of the Supply Condition around the time when AEMO has forecast a gas shortage. It will also be timely to review whether any of the existing ATPs subject to the Supply Condition have or are likely to progress to a PL.</p>

## 8.2 Increase efficiency and transparency in the administration of the Supply Condition

The Supply Condition is an important tool in providing comfort to Australian gas buyers that supply will continue. However, how the Supply Condition is applied is fundamental to ensuring the benefits are realised and the Supply Condition does not negatively affect development in the gas industry. Efficiency and transparency in the administration of the Supply Condition is the key to achieving this, as outlined in the following two recommendations.

### Recommendation 6

Review the gas demand and supply market and communicate the Department's assessment from this review in the Queensland Exploration Program

It is understood that DNRME reviews and assesses the gas demand and supply across the East coast gas market, including the LNG market, when deciding whether to condition a land release with the Supply Condition.

While it is difficult to accurately forecast the potential future demand and supply in the gas market, it is **recommended that DNRME release its assessment of the market when it releases the Queensland Exploration Program.**

This recommendation is aimed at improving transparency in the decision making process of releasing land with the Supply Condition.

The recommendation also intends to assist land release applicants by improving their understanding of the Government's objective for specific land releases, in turn assisting them in submitting more relevant and informed applications.

### Recommendation 7

Publish principles for deciding when the Supply Condition may be applied to a land release on the Department's website

The gas industry is aware what land is available for release and use this knowledge to plan which areas they consider ideal for their business portfolio. However, there is no information informing the likelihood of the available land to be subject to the Supply Condition.

The gas industry are first made aware of whether an area is subject to the Supply Condition when a tender for the land is released. Consultation with the gas industry confirmed that industry prefer knowing of the application of the Supply Condition prior to making the bid. However, consultation also confirm that industry require more notice about the application of the Supply Condition for investment and operation planning requirements.

**It is recommended that principles for deciding when the Supply Condition may be applied to a land release is published on the Department's website.**

Releasing principles on when land releases might be subject to the Supply Condition can assist the gas industry in making better-informed assessments on the potential future land release applications.

Examples of principles that may be considered include:

- Land releases will be considered for the Supply Condition if the land has access to existing pipeline infrastructure

	<ul style="list-style-type: none"> <li>■ Land releases will be considered for the Supply Condition if reports on the gas market forecast a potential gas shortage in the East coast gas market within a 5-year period</li> <li>■ Land releases will not be considered for the Supply Condition if located in frontier basins.</li> </ul>
<p><b>Recommendation 8</b></p> <p>Identify the schedule of land release with/without the Supply Condition in the Queensland Exploration Program</p>	<p>Some gas industry stakeholders recommended more notice be given for releasing the program of land releases. The preference was for a schedule of land releases covering a five-year period, arguing this provides greater certainty to industry and will assist investment decisions.</p> <p>This review considers the timing of gas supply aligning with demand in the East coast gas market essential, however it is difficult to forecast the need for supply to the market with certainty.</p> <p>Currently, when the Queensland Exploration Program is released, industry is informed of the upcoming land releases, but not whether the Supply Condition will be included. It is therefore <b>recommended that when releasing the Queensland Exploration Program, the program details which land releases include the Supply Condition (or not).</b></p> <p>By documenting the department's market analysis (Recommendation 6) at the same time as outlining whether land releases will include the Supply Condition allows the gas industry to understand the department's decision-making process for land releases, and improves transparency.</p>
<p><b>Recommendation 9</b></p> <p>Release the weighting criteria for the tender evaluation of land releases</p>	<p>Gas industry feedback consistently noted concerns about lack of transparency, particularly regarding not disclosing the weighting criteria for evaluating land releases.</p> <p>The gas industry stated if the weighting criteria is released, applicants would better understand what the Government is seeking and tailor its response accordingly.</p> <p>The review assessed what is currently released with the tender documents based on the recent land release for PLR 201902. The tender document details the evaluation criteria but does not confirm the weighting for each criterion.</p> <p>It is <b>recommended that DNRME update its policy for releasing land by making the evaluation criteria (including their weighting) for future land releases available.</b></p>

## 8.3 Informed market participants

Informed market participants can improve negotiations if both parties better understand all aspects to contracting gas supply arrangements.

### Recommendation 10

Develop information about the Supply Condition framework, including clearly documenting the objectives of the Supply Condition, and publish the information on the department's website.

Consultation highlighted that all stakeholders are aware of the Supply Condition but stated the objectives of the framework were unclear.

Some stakeholders questioned whether the objective of the framework is to increase supply to the Australian market, or whether it is to maintain existing volumes to the market to ensure a gas shortage is not experienced. Commentary was also provided, questioning whether the Supply Condition was to prevent a gas shortage in Queensland or in the East coast gas market.

**The review recommends DNRME clarify the Supply Condition's policy objectives and clearly communicate this information on its website.**

### Recommendation 11

Publish links on the department's website to guide stakeholders (such as major gas users) on where to go for up to date information on the gas market.

The Australian gas market has evolved in recent years. Prior to LNG, major gas users had traditionally experienced minimal difficulty in securing gas supply agreements, and these were often negotiated with major gas retailers. However, the LNG export market created greater competition for gas supply.

A recent trend in the East coast gas market was observed whereby a small group of major gas buyers succeeded in establishing gas supply certainty by being more proactive in managing their gas supply portfolio. This included using a variety of gas supply arrangements such as directly from gas producers, short-term trading hubs and retailers. Some buyers took this proactive approach a step further and have their own gas storage facilities to lessen their exposure to gas price variability.

Some gas buyers are also becoming more proactive by staying up to date on gas supply market changes to understand if and when potential gas shortages may occur, and securing supply prior to such an event.

This is a relatively new approach for gas buyers; however, not all gas buyers employed such proactive methods. Consultation with stakeholders confirmed that more information and education is required to assist buyers in managing their gas supply portfolio.

**It is recommended that DNRME develop and document information about the Supply Condition on its website** that informs both the gas industry and gas users. This should include information about the framework and how stakeholders can comply with the framework.

Market information is also required for gas buyers. There is a range of available market reports and data that can help to

understand current trends in the gas market, and forecast gas supply and demand changes.

The review **recommends that the information on DNRME's website should also include links to additional gas market information.** For example, AEMO's annual Gas Statement of Opportunities, and the ACCC website which is regularly updated with data and information on the gas market.

Access to independent market sources can help gas buyers improve their understanding of the market and assist in negotiating gas supply agreements that best suit their business.



# References

- Australian Competition and Consumer Commission. (2017). *Inquiry into the East coast gas market*
- Australian Competition and Consumer Commission. (2017). *Gas inquiry 2017-2025*
- Australian Energy Market Commission. (2018). *Transmission Pipeline Network*
- Australian Energy Regulator. (2018). *State of the Energy Market 2018*
- Australian Energy Regulator. (2019). *State of the Energy Market – Data update November 2019*
- Department of Industry, Innovation and Science. (2019). *Resources and Energy Quarterly: December 2019*.
- Gas Bulletin Board. (2019). GDD data portal. Accessed December 2019 at <https://aemo.com.au/energy-systems/gas/gas-bulletin-board-gbb/data-portal>
- Getting the Deal Through. (2019). *Gas Regulation – Norway*. Accessed January 2020 at <https://gettingthedealthrough.com/area/15/jurisdiction/53/gas-regulation-norway/>
- Department of Energy and Mining. (n.d.). PACE Gas. Accessed February 2020 at [http://www.energymining.sa.gov.au/petroleum/latest\\_updates/pace\\_gas](http://www.energymining.sa.gov.au/petroleum/latest_updates/pace_gas)
- Norwegian Petroleum. (2019). *Exports of Oil and Gas*. Accessed January 2020 at <https://www.petroleum-economist.com/articles/politics-economics/europe-urasia/2006/russia-gazproms-export-monopoly-becomes-law>
- Petroleum Economist. (2006). *Russia: Gazprom's export monopoly becomes law*. Accessed January 2020 from <https://www.petroleum-economist.com/articles/politics-economics/europe-urasia/2006/russia-gazproms-export-monopoly-becomes-law>
- Western Australia Legislative Assembly, Economics and Industry Standing Committee. (2011). *Inquiry into Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament*. Accessed December 2019 at: [https://www.parliament.wa.gov.au/publications/tailedpapers.nsf/displaypaper/3813232af0e096cabecf9c8e4825785e0004c326/\\$file/3232.pdf](https://www.parliament.wa.gov.au/publications/tailedpapers.nsf/displaypaper/3813232af0e096cabecf9c8e4825785e0004c326/$file/3232.pdf)

<b>ACCC</b>	Australian Competition and Consumer Commission
<b>AEMO</b>	Australian Energy Market Operator
<b>AER</b>	Australian Energy Regulator
<b>ATP</b>	Authority to Prospect
<b>CSG</b>	Coal Seam Gas
<b>DNRME</b>	Department of Natural Resources, Mines and Energy
<b>GJ</b>	Gigajoule (a billion (10 <sup>9</sup> )joules)
<b>GPG</b>	Gas powered generation/generator
<b>GSA</b>	Gas supply agreement
<b>Joule</b>	A unit of energy in the international System of Units
<b>JV</b>	Joint venture
<b>LNG</b>	Liquefied Natural Gas
<b>MMBTU</b>	Million British Thermal Units
<b>NEM</b>	National Electricity Market
<b>NSW</b>	New South Wales
<b>P&amp;G Act</b>	<i>Petroleum and Gas (Production and Safety) Act 2004</i>
<b>PJ</b>	Petajoule (a quadrillion (10 <sup>15</sup> )joules)
<b>PL</b>	Petroleum Lease
<b>QLD</b>	Queensland
<b>SA</b>	South Australia
<b>STTM</b>	Short term trading market
<b>Tas</b>	Tasmania
<b>TJ</b>	Terajoule (a trillion (10 <sup>12</sup> ) joules)
<b>Vic</b>	Victoria

<b>2P</b>	Refers to proved and probable reserves. Commercially recoverable reserves with at least a 50% probability that the quantities recovered will equal or exceed the estimate amount
<b>Australian market</b>	Refers to the domestic gas market in Australia. Combination of the East coast gas market, as well as the standalone Western Australia market.
<b>Australian Market Supply Condition</b>	See Section 4
<b>East coast gas market</b>	Refers to the gas market across Queensland, Northern Territory, New South Wales, Australian Capital Territory, South Australia, Victoria, and Tasmania
<b>Liquefied natural gas (LNG)</b>	Natural gas that has been converted to liquid form for storage or transport
<b>LNG market</b>	Refers to the gas flow to/from three LNG export facilities based in Queensland – APLNG, QCLNG and Gladstone LNG export facilities
<b>LNG netback price</b>	Defined by the ACCC, LNG netback price is a concept based on an effective price to the producer or seller at a specific location or defined point, calculated by taking the delivered price paid for gas and subtracting or 'netting back' costs incurred between the specific location and the delivery point of the gas.
<b>Prospective resources</b>	Defined by the ACCC as prospective resources that are estimated quantities associated with undiscovered natural gas. It represent quantities of gas which are estimated, as of a given date, to be potentially recoverable from gas deposits identified on the basis of indirect evidence but which have not yet been drilled.
<b>Ramp up gas</b>	Coal seam gas produced during the early stages of an LNG export project
<b>Reserves</b>	Quantities of natural gas expected to be commercially recoverable from a given date under defined conditions
<b>Supply Condition</b>	Refers to the Australian Market Supply Condition.
<b>Supply Condition Framework</b>	Refers to the legislative framework for the Australian Market Supply Condition contained in the <i>Petroleum and Gas (Production and Safety) Act 2004</i>



# Appendices

# Appendix A

## Terms of Reference

### Australian gas market supply condition pilot program evaluation

#### Terms of Reference

The Department of Natural Resources, Mines and Energy requires an evaluation of the Australian market supply pilot program for gas resources, to investigate and report on:

- The extent to which the domestic supply condition is meeting the government's objectives, and
- Any modifications or alternative policy options that might deliver a better result.

#### Background:

- Queensland released land for gas development with an Australian market supply condition for the first time in February 2017, as market analysts were projecting an undersupply of gas from 2019-21. Under the condition, the gas produced must be supplied and used in Australia.
- The legislative framework for the Australian Market Supply Condition is set out largely in Chapter 2, Part 2A of the *Petroleum and Gas (Production and Safety) Act 2004*.
- Since 2017, the Queensland Government has released 11 areas with an Australian market supply condition, totalling over 8,500 square kilometres (km<sup>2</sup>) of land.
- Recently, the Queensland Government enhanced its Australian market supply condition program by including a requirement that any gas produced must be supplied to an Australian manufacturer that will use the gas within Australia in a recent call for tenders.

#### Scope:

The report must provide:

1. commentary on the extent to which land releases to date with Queensland's Australian market supply condition have or are predicted to ameliorate domestic gas supply issues;
2. any specific impediments to the optimal operation of the legislation;
3. recommendations on possible adjustments to the Australian market supply condition legislation or its implementation to improve its effectiveness and/or efficiency, including:
  - how/whether gas can be sold into the spot market (either at a hub or the Short Term Trading Market (STTM))
  - consider barriers to achieving the objective(s) which could be addressed easily, e.g. whether domestic gas can be delivered by a swap arrangement which may include swapping with an LNG supplier
4. recommendations for consideration on alternative or additional policies that would address domestic gas supply issues.

#### Out of Scope:

Queensland royalty arrangements for petroleum and gas tenure.

#### Evaluation methodology:

##### Interviews:

The evaluation must include interviews with companies, namely:

- Two bidders from each land release
- Major gas producers
- Gas users/manufacturers
- APPEA
- QRC.

##### Desktop scans:

Investigation of other jurisdictions' approach to domestic gas supply, and the status of the East coast gas market as outlined in such reports as AEMO's Gas Statement of Opportunities (GSOO)

report, Australian Competition and Consumer Commission's (ACCC) Gas inquiry (2017-2020 Interim report) etc.

Interviews/sourcing material from DNRME staff:

The Department will provide the following materials:

1. a contextual description of the East coast gas market including forecast supply and demand, the major suppliers and users, and a discussion of gas processing and transmission infrastructure;
2. a statement of pilot program facts: Areas, tender winners, status of tenure exploration or production, estimate where feasible of volume of gas available;
3. a summary of gas supply initiatives underway in Queensland and those being implemented through national programs, for example through the COAG Energy Council.

**Timing:**

A draft report is required in December 2019 and a final report in February 2020.



# Appendix B

## List of stakeholders consulted

<b>Gas industry and industry associations</b>	
Stakeholder	Interview approach
Australia Pacific LNG (APLNG)	Face-to-face interview
Australian Petroleum Production and Exploration Association (APPEA)	Face-to-face interview
Arrow Energy	Face-to-face interview
Central Petroleum	Face-to-face interview
Chi Oil and Gas Pty Ltd	Telephone interview
Comet Ridge	Face-to-face interview
ConocoPhillips	Face-to-face interview
Galilee Energy	Face-to-face interview
Origin Energy	Face-to-face interview
Queensland Resources Council	Face-to-face interview
Santos	Face-to-face interview
Senex Energy	Face-to-face interview
Shell QGC	Written submission
State Gas	Face-to-face interview
Tri-Star Petroleum	Face-to-face interview
Westside	Face-to-face interview
Stakeholders invited to participate but was not interviewed	
Armour Energy	
<b>Major industrial gas user</b>	
Stakeholder	Interview approach
CSR	Telephone interview
Glencore	Telephone interview
Incitec Pivot	Face-to-face interview
Visy	Telephone interview
Orora	Telephone interview
Stakeholders invited to participate but was not interviewed	
O-I Australia	
Rio Tinto Alcan/QAL	
Orica	
<b>Government</b>	
Stakeholder	Interview approach
Queensland Government Department of Natural Resources, Mines and Energy	Face-to-face interview

# Appendix C

## Stakeholder interview questions

Stakeholder Group	Interview questions
<b>Gas explorers/producers</b>	<p><b>Technical focus</b></p> <ol style="list-style-type: none"><li>1. The Queensland Government has awarded 11 competitive tender releases for either an ATP/PL with an Australian Market Supply Condition. What are the key factors to deciding to bid or to not bid? (Is social licence also a factor that influences decision to bid?)</li><li>2. Does the fact that a tender is conditioned with the Australian Market Supply Condition influence your company's decision to submit an offer to the tender?</li><li>3. If you have been awarded a tender with an Australian Market Supply Condition, what is the potential development timelines (i.e. for ATP holder, what is the estimated timeframe applying for a PL; for a PL holder, what is the estimated plan for production?)</li></ol> <p><b>Gas market focus</b></p> <ol style="list-style-type: none"><li>4. Has your company's focus on domestic gas sales increased recently? If yes, why?</li><li>5. What have been the overall trends over the past five years for supplying gas to non-LNG exports? What have been the trends to directly sell to Queensland based industrial users?</li><li>6. Is there a difference in supplying to an LNG exporter, buyer or retailer versus a domestic buyer? (e.g. prices, flexibility or certainty)?</li><li>7. What market conditions (or alternative policies) could potentially help increase gas to the domestic market? i.e. are there any specific market factors that influences your decision to supply gas to the domestic market or do you consider any alternative policies would address domestic gas supply issues more effectively?</li></ol> <p><b>General</b></p> <ol style="list-style-type: none"><li>8. Is the legislative framework for the Australian Market Supply Condition meeting its purpose? Is the framework fit-for-purpose? What issues, if any, exist with the framework and how would you address these issues?</li><li>9. Are there any alternatives or suggested improvements to the framework that would work better?</li><li>10. Does the Australian Market Supply Condition have consequences for investment decisions or ability to secure financing for capital expenditure for gas projects? Other impacts?</li><li>11. Following from previous question, how could the Australian Market Supply Condition improve to provide a positive impact for both QLD gas producers and QLD industrial users? Are there any recommendations to support supply for QLD industrial users?</li></ol>

Stakeholder Group	Interview questions
<b>Queensland's industrial gas users</b>	<p><b>Gas Demand</b></p> <ol style="list-style-type: none"> <li>1. Is the legislative framework for the Australian Market Supply Condition meeting its purpose? Is the framework fit-for-purpose? What issues, if any, exist with the framework and how would you address these issues?</li> <li>2. Are there any alternatives or suggested improvements to the framework that would work better?</li> <li>3. At a high level, what is your company's gas demand outlook for the next ten years and what are the key influences on demand? (e.g. when is the next major investment decision such as plant turnaround scheduled? How often do they occur?)</li> <li>4. What is your company's contracted position across short-term (less than 3years) and mid to long term? <ul style="list-style-type: none"> <li>o (Follow-up/prompt questions) - Is it shorter or longer than usual? What is the catalyst to change the position? Do you use the Short Term Trading Market (STTM)</li> </ul> </li> <li>5. Explain how gas supply is purchased, that is, from a retailer or direct? If direct, what is your experience in dealing with gas producers? <ul style="list-style-type: none"> <li>o (Follow-up/ prompt questions) Large/LNG, vs mid-size Senex/Westside or a small explorer/producer? Is LNG net back gas a real option for you? Did the Australian Domestic Gas Security Mechanism change anything? If yes. how?</li> </ul> </li> <li>6. If gas prices become unsustainable, what are alternative fuel sources to gas or mitigation plans?</li> <li>7. What likely action would your company take in the scenario of an East Coast gas shortage?</li> <li>8. How could the Australian Market Supply Condition improve to provide a positive impact for both QLD gas producers and Queensland industrial users?</li> </ol>

Stakeholder Group	Interview questions	
<b>Government</b>	<p><b>Process focus</b></p> <ol style="list-style-type: none"> <li>1. What is the Queensland Government's expectation of gas flows to the domestic market? Does/how has the Government track the effectiveness of the policy?</li> <li>2. What is the decision process and influencing factors for selecting how the Australian Market Supply Condition is applied to tenders? E.g. which tenures is it applied to and whether it applies to the whole tenure or a proportion of the tenure?</li> <li>3. Has there been any impact from the Federal Australian Domestic Gas Security Mechanism (ADGSM), or other State's legislation, on the application and effectiveness of Queensland's Australian Market Supply Condition.</li> </ol> <p><b>Application focus</b></p> <ol style="list-style-type: none"> <li>4. Has the Queensland Government experienced any difficulty administrating the framework? Are there any suggestions for improvement?</li> <li>5. Have you noticed any difference in the tender applications received from tenderers that submitted applications to petroleum tenders with the Australian Market Supply Condition, as opposed to those petroleum tenders without the Australian Market Supply Condition?</li> </ol>	

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to life*

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