# Allgas Energy

## Application for Light Regulation Determination

Allgas Network

January 2015
Public

## Applicant's name and contact details


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# Contents

# 1 Introduction and Summary

Allgas Energy Pty Ltd (Allgas Energy) owns the Allgas Network, which is used to distribute gas supplied via the Roma to Brisbane Pipeline (RBP) to customers located in the following regions in Queensland:[1,2]

- the Brisbane region, which encompasses the area south of the Brisbane River down to the Albert River;
- the South Coast Region, which encompasses the Gold Coast, Tweed Heads and Banora Point in north east NSW; and
- the Western region, which encompasses the Toowoomba and Oakey townships.

Allgas Energy is owned by GDI (EII) Pty Ltd (GDI (EII)), which is, in turn owned by Marubeni Corporation[3] (40%), SAS Trustee Corporation[4] (40%) and APA[5] (20%).

The Allgas Network is operated by APA, on behalf of Allgas Energy, under an outsourcing agreement.

Pursuant to section 112 of the National Gas Law (NGL), Allgas Energy is applying to the National Competition Council (NCC) for a determination that the services provided by means of the covered portion[6] of the Allgas Network be classified as *light regulation services*. In keeping with section 112(2) of the NGL, this application is made in accordance with the National Gas Rules (NGR) and contains the information required by rule 34 of the NGR.

A brief overview of the key elements of this application is provided below.

## *1.1 Light regulation*

The regulatory framework established by the NGL and NGR provides for two alternative forms of regulation:

- full regulation, which requires the Australian Energy Regulator (AER) to approve the price and non-price terms and conditions that will apply to the reference service(s) provided by the pipeline over the regulatory period; and
- light regulation, which is based on the negotiate/arbitrate model and places greater emphasis on commercial negotiation and information disclosure,[7] while also providing the parties with some degree of protection through:

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1 A description of the Allgas Network can be inspected at: http://apa.com.au/our-business/economic-regulation/gas-distribution.aspx

2 The network is also used to supply customers in Moura but this does not form part of the covered pipeline.

3 Energy Investment Two P/L.

4 Managed by Rreef, on behalf of SAS Trustee Corporation.

5 APT Pipeline Pty Ltd.

6 The pipeline servicing the Moura region does not form part of the covered pipeline. See map in Appendix B.

7 The information disclosure obligations in the NGR require service providers of light regulation services to:

- publish the price and non-price terms and conditions of access on their website;
- report to the AER, at least annually, on access negotiations; and
- comply with the facilitation of, and request for, access provisions in the NGR.

- a dispute resolution mechanism (administered by the AER), which can be triggered if an agreement on the price and/or non-price terms and conditions of access cannot be reached;[8] and
- a number of other safeguards that are designed to prevent the service provider from engaging in activities that could adversely affect third party access or competition in other markets.[9]

The light regulation option was implemented by policy makers in 2008 in response to recommendations made by both the Productivity Commission and the Expert Panel on Energy Access Pricing. In short, these two bodies were of the view that: [10]

- the degree of regulatory intervention should be commensurate with the degree of market power possessed by the service provider; and
- a less intrusive form of regulation should be applied when a service provider is unable to exercise a substantial degree of market power, because the gap between the price the service provider charges and the 'efficient price' is likely to be small and, as a consequence, the costs of full regulation are likely to outweigh the benefits.

## *1.2 Principles governing a light regulation determination*

The principles that the NCC must have regard to when deciding whether or not to make a light regulation determination are set out in section 122 of the NGL. In short, this section of the NGL requires the NCC to consider:

(a) the likely effectiveness of full and light regulation in promoting access to the services provided by the pipeline that is the subject of the application; and

(b) the effect of full and light regulation on the costs that may be incurred by an efficient service provider, efficient users and prospective users, and end-users.

In considering these matters, the NCC is required by sections 122(2)(a)-(c) of the NGL to have regard to:

(a) the National Gas Objective (NGO), which is reproduced below:[11]

> The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

(b) the form of regulation factors,[12] which in simple terms requires consideration to be given to the extent to which:

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8 The dispute resolution mechanism is set out in Chapter 6 of the NGL and Part 12 of the NGR.

9 These provisions are set out in sections 133, 136 and 137-148 of the NGL and prevent a service provider from engaging in:
- conduct that would prevent or hinder access to the pipeline services;
- price discrimination, unless it is conducive to efficient service provision; and
- behaviour that could adversely affect competition in a related market by carrying on a related business, or conferring an advantage on an associate.

10 See for example, Productivity Commission, Review of the Gas Access Regime, 11 June 2004, p. 228, Expert Panel on Energy Access Pricing, Report to the Ministerial Council on Energy, April 2006, p. 51.

11 Section 23 of the NGL.

12 Section 16 of the NGL.

- the service provider is likely to possess market power, either as a result of barriers to entry or network externalities;[13]
- any market power possessed by the service provider may be constrained by:
  - any countervailing power held by users or prospective users;[14] or
  - the ability of users or prospective users to switch to an alternative provider of pipeline services or energy source;[15] and
- the extent to which users or prospective users will have access to adequate information to negotiate on an informed basis.[16]

(c) any other matters the NCC considers relevant.

## 1.3 Application of section 122 to the Allgas Network

As part of this application, Allgas Energy has assessed whether:

- light regulation will be as effective in promoting access to the services provided by the Allgas Network as full regulation, having regard to the form of regulation factors and the effectiveness of other safeguards available under light regulation;
- the costs associated with light regulation are likely to be lower than the costs that would be incurred if the Allgas Network remains subject to full regulation; and
- a light regulation determination is likely to be consistent with the NGO.

The results of this assessment are set out in summary form below.

### 1.3.1 Effectiveness of light versus full regulation

Having regard to the form of regulation factors and the other safeguards that would be available under light regulation, Allgas Energy is of the view that light regulation of the services provided by the Allgas Network will be no less effective than full regulation in terms of promoting access. The reasons for this are four-fold.

First, Allgas Energy does not possess a significant degree of market power. That is, while the Allgas Network exhibits the standard natural monopoly characteristics, the proximity of the RBP to large parts of the network means that the barriers to supplying certain parts of the network are low. The absence of any network externalities further reinforces the fact that Allgas Energy's market power is limited.

Second, any market power that Allgas Energy may be said to possess, by virtue of the fact that the network is a natural monopoly, will be more than offset by the commercial imperative it has to encourage greater utilisation of the network given both the 12% reduction in demand that has occurred over the last five years and the following market characteristics:

- gas is a fuel of choice for small customers in Queensland, as evidenced by the low penetration rates and the low and declining average rates of consumption;

[13] Sections 16(a)-(c) of the NGL.

[14] Section 16(d) of the NGL.

[15] Sections 16(e)-(f) of the NGL.

[16] Section 16(g) of the NGL.

- gas does not have a clear competitive advantage over other fuels in Queensland and its competitive position is expected to further deteriorate in the future, given the projected increase in wholesale gas prices brought about by the LNG developments and government policies that favour other energy forms; and
- the structural changes underway in the broader market (e.g. the internationalisation of the wholesale gas market, the ongoing de-industrialisation of the economy and continuous improvements in energy efficiency), which are expected to prompt further reductions in the demand for gas.

It will also be constrained by the following factors:

(i) The ability of large customers located in the Brisbane and Western regions to bypass the Allgas Network by connecting directly to the RBP.[17] The risk posed by this bypass option is substantial and imposes a real constraint on the prices Allgas Energy can charge large customers located in close proximity to the RBP.

(ii) The substitution threat posed by other energy sources, such as electricity and LPG (particularly for smaller customers and commercial customers), which is significant in Queensland because they are readily available and gas does not have a clear competitive advantage over these energy sources.

(iii) The countervailing power possessed by:

- the retailers operating in the Allgas Network (AGL, Origin Energy and Alinta Energy), which are all sophisticated players that have extensive experience in negotiating access to gas pipelines and are in a strong position to:
  - threaten to bypass parts of the network, on behalf of their larger customers that could connect directly to the RBP; and
  - encourage smaller gas customers to transition to electricity (or LPG).
- large industrial and commercial customers (Demand customers) in the Brisbane and Western regions that can credibly threaten to bypass the Allgas Network by connecting directly to the RBP, or using an alternative energy source; and
- small customers, particularly when their appliances are reaching the end of their lives.

Importantly, these constraints will apply irrespective of the form of regulation letand can be expected to impose greater discipline on Allgas Energy when negotiating the price and non-price terms and conditions of access than full regulation. Further support for this view, can be found in the fact that existing tariffs (both reference and negotiated tariffs) already reflect the opportunity that customers have to bypass the Allgas Network by either connecting to the RBP or to an alternative energy source. For example, in 2013-14:

- [XXX]% of the capacity reserved by Demand customers was subject to reference tariffs that reflected the opportunity this group has to connect to the RBP; and
- a further [XXX]% of the capacity reserved by Demand customers was subject to a negotiated rate and/or prudent discount, which reflected the opportunity the

[17] A large user could connect to the RBP by either relocating their operations so they are closer to the RBP, or building a connecting pipeline between their site and the RBP. The latter of these options could be funded by an individual customer, or a group of customers located in a similar area. Alternatively, it could be funded by a competing pipeline operator.

customers had to either switch to another provider of pipeline services and/or an alternative energy source.

Third, the information required by users to enable them to negotiate effectively with Allgas Energy will be available under light regulation. Further cost information can be derived from public information[18] and industry sources. Retailers can also be expected to draw on their experience in developing and/or operating distribution networks and knowledge of the prices and conditions applying in other networks.

Fourth, the dispute resolution mechanism and other safeguards set out in the NGL[19] will impose further discipline on Allgas Energy and provide users and prospective users with an appropriate level of protection if negotiations break down. Users and prospective users will also derive some protection from section 118 of the NGL, which allows any other person to apply to the NCC to have a light regulation determination revoked.

### 1.3.2 Likely costs of light versus full regulation

Allgas Energy has estimated that over a five year period, the direct costs associated with the alternative forms of regulation are likely to be:

- $4.6 million for full regulation (Allgas Energy: $2.75 million, AER: $1.75 million and users and other stakeholders: $0.1 million); and
- $0.4 million-$0.8 million for light regulation (Allgas Energy: $0.2-$0.3 million, AER: $0-$0.2 million and users and prospective users: $0.2-$0.3 million).[20]

The difference between the expected cost of full and light regulation is therefore $3.8 million-$4.2 million over a five year period.

Given that light regulation will be as effective as full regulation in promoting access to the Allgas Network, this cost differential can be viewed as an unnecessary impost, the effects of which will ultimately be borne by end-users.

### 1.3.3 Consistency with the NGO

A light regulation determination will, in this case, result in a greater level of productive,[21] allocative[22] and dynamic efficiency[23] than would otherwise be available under full regulation. Over time these efficiency benefits can be expected flow through to consumers of natural gas in the form of lower delivered gas prices and higher quality services. When coupled with the fact that light regulation will be as

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[18] Including the three Access Arrangements (AA) that have been developed over the last 15 years and the annual reports that GDI (EII) has to provide the AER as part of the annual compliance program.

[19] See footnote 9.

[20] The upper bound of this range assumes that the dispute resolution mechanism is triggered and a limited AA is prepared, while the lower bound just reflects the negotiation costs.

[21] Productive efficiency will be higher under light regulation because Allgas Energy's regulatory costs will be lower, which means it can supply the services at a lower cost.

[22] Allocative efficiency will be higher under light regulation because Allgas Energy has no incentive to exercise market power and its ability to do so will be constrained. When coupled with the fact that its regulatory costs will be lower, the prices charged under light regulation can be expected to lower than what would prevail under full regulation.

[23] Dynamic efficiency will be higher under light regulation because the productive and allocative efficiencies outlined above will persist over the longer run. Light regulation will also provide Allgas Energy with a greater ability to respond more rapidly to changing circumstances and customer preferences because it won't be constrained by the length of the regulatory cycle.

effective as full regulation in promoting access and can be achieved at a lower cost, it is clear that light regulation is more consistent with the NGO than the continued application of full regulation.

## 1.4 Structure of this application

Further detail on why Allgas Energy believes the services provided by the Allgas Network should be subject to light regulation is provided in the remainder of this application, which is structured as follows:

- Section 2 contains some background information on the technical characteristics, the services provided and the parties that have an interest in the ownership and operation of the Allgas Network.
- Section 3 provides an overview of the utilisation of the Allgas Network, the shippers currently using the network, the nature of the end-use demand for services provided by the network and the alternative energy forms that may be available to end-users in the regions serviced by the network.
- Section 4 provides a brief overview of light and full regulation and the safeguards that will be available to users and prospective users of the network if the NCC decides the services provided by network should be subject to light regulation.
- Section 5 contains Allgas Energy's assessment of the effectiveness of light regulation in promoting access to the services provided by the network.
- Section 6 sets out Allgas Energy's estimates of the costs that are likely to be associated with full and light regulation.
- Section 7 outlines Allgas Energy's view on the consistency of a light regulation determination with the NGO.
- Appendix A sets out where the information required by rule 34 of the NGR can be found in this application.
- Appendix B contains a map of the regions serviced by the Allgas Network.

# 2 Network Information

The Allgas Network was originally developed to enable town gas to be distributed to customers located in South Brisbane and Toowoomba. Following the construction of the RBP in 1969, the network ceased supplying town gas and started to supply natural gas. Over the last 45 years the network has gradually been renewed and expanded to upgrade capacity and to allow gas to be supplied to a number of new areas in South East Queensland and northern NSW.

In 1997 the Allgas Network was included in Schedule A of the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Gas Code) and was therefore deemed to be a covered pipeline from the commencement of the Gas Code. This coverage status was retained when the NGL and NGR came into effect in 2008. For the last 17 years the Allgas network has been subject to full regulation. In that period, the network has been subject to three access arrangements (AA).

The remainder of this section of the application provides further detail on the following matters:

- the areas supplied by the Allgas Network and the points at which gas is injected into the network;
- the services provided by means of the Allgas Network; and
- the identity of parties that have an interest in the ownership and operation of the Allgas Network and the extent to which there are any horizontal and/or vertical relationships that may be relevant to the assessment.

## *2.1 Areas served by the network and injection points*

The Allgas Network consists of a number of discreet distribution systems, which are supplied directly by the RBP through gate stations located at Toowoomba,[24] Oakey, Ellengrove, Willawong, Wishart and Tingalpa. The distribution systems are used to supply gas to customers located in the following regions of South East Queensland and northern NSW:

- *Brisbane region:* this region consists of over 1,800 km of distribution mains and is used to supply customers located south of the Brisbane River between:
  - Dinmore and Springfield in the west and Cleveland in the east; and
  - Marsden and Loganlea in the south and Lytton in the north.
- *South Coast Region*: this region consists of over 700 km of distribution mains and is used to supply customers located between Albert River in the north and Banora Point in northern NSW, including customers located in the Gold Coast and Tweed Heads.
- *Western region:* this region consists of over 570 km of distribution mains and is used to supply customers located in Toowoomba and Oakey.

The Allgas Network is also used to distribute gas to customers in Moura, but this distribution network does not form part of the covered pipeline and so is not referred to in the remainder of this application.

[24] The Toowoomba gate station is owned by APA.

The location of each of these regions and gate stations is illustrated in Figure 2.1. A more detailed map of the Allgas Network can be found in Appendix B.

*Figure 2.1:* Allgas Network Distribution Area

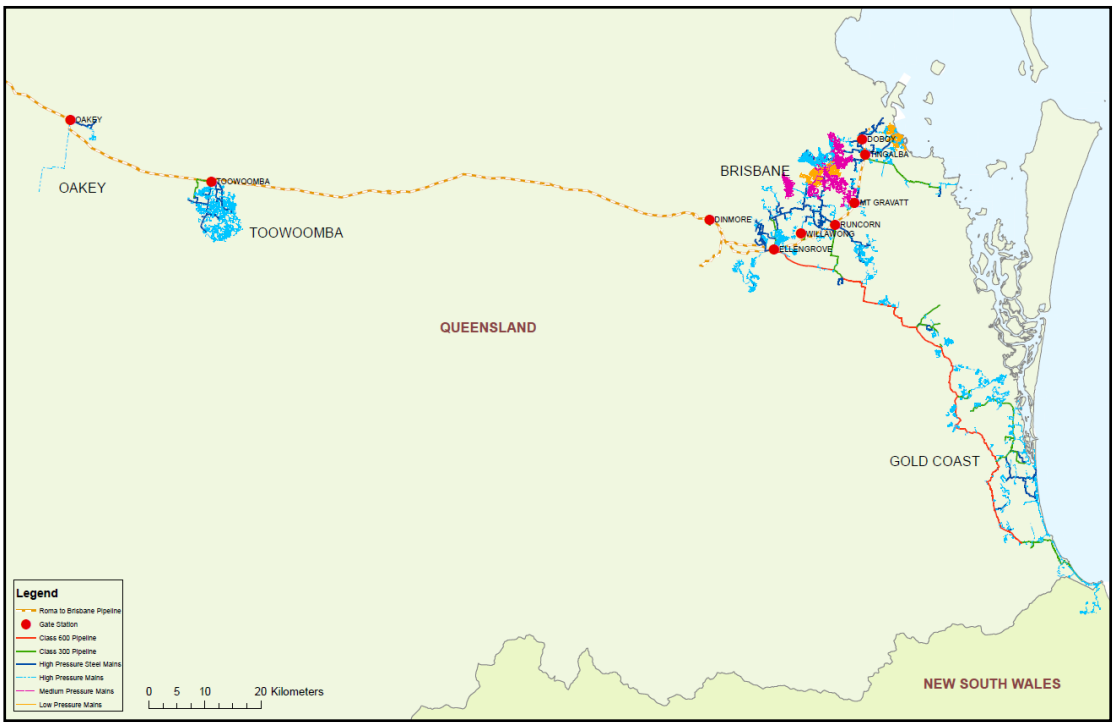



Table 2.1: provides further information on the length of the network by pressure tier and geographic location. As this table indicates, the Allgas Network comprises over 3,135 km of distribution, with the Brisbane Region accounting for close to 58% network, the South Coast Region 23% and the Western Region 19%.

*Table 2.1: Network Main Lengths (km)** (as at 1/7/2014)

| | Transmission Pressure | High Pressure | Medium Pressure | Low Pressure | Total |
|---|---|---|---|---|---|
| | >1050 kPa | 300-1050 kPa | 7-200 kPa | <7 kPa | |
| Brisbane | 73 | 1,101 | 429 | 224 | 1,827 |
| South Coast | 123 | 574 | - | - | 697 |
| Northern NSW | - | 31 | - | - | 31 |
| Toowoomba | 6 | 537 | - | - | 543 |
| Oakey | - | 36 | - | - | 36 |
| **Total** | **203** | **2,280** | **429** | **224** | **3,135** |

*The pipelines that comprise the network are predominantly made of polyethylene and steel, with the remainder made up of cast iron and a small amount of PVC.

## 2.2 Services provided by means of the Allgas Network

The services currently provided by the Allgas Network include:

- The following haulage reference services, which provide for the receipt of gas at a receipt point, the transportation of gas on a forward haul basis from the receipt point to the delivery point, the odorisation of gas and the provision of data on metered volumes at scheduled intervals:
  - the Volume Customer Service, which is available to end users that withdraw less than 10 TJ p.a. (e.g. domestic and small commercial customers); and
  - the Demand Customer Service, which is available to end users that withdraw more than 10 TJ p.a. (e.g. industrial and large commercial customers).
- The following ancillary reference services: special meter reading[25] service; an inlet disconnection service; and an inlet reconnection service.[26]
- Negotiated services, which includes services that are requested by a user that cannot be classified as either a haulage reference service or an ancillary reference service.

## 2.3 Ownership and operation of the Allgas Network

Allgas Energy is the Allgas Network service provider and owns the network assets in the Brisbane and South Coast regions and also has a 100% interest in:

- Allgas Toowoomba Pty Ltd, which owns the network assets in Toowoomba and Oakey; and
- Allgas Pipelines Operations, which owns the pipeline easements in Queensland

Allgas Energy is owned by GDI (EII) Pty Ltd, which is an unlisted investment vehicle that is owned by:

- Energy Investment Two P/L (Marubeni Corporation), which has a 40% equity interest in GDI (EII);
- SAS Trustee Corporation (managed by Rreef), which has a 40% equity interest in GDI (EII); and
- APT Pipelines Pty Ltd (APA), which has a 20% equity interest in GDI (EII).

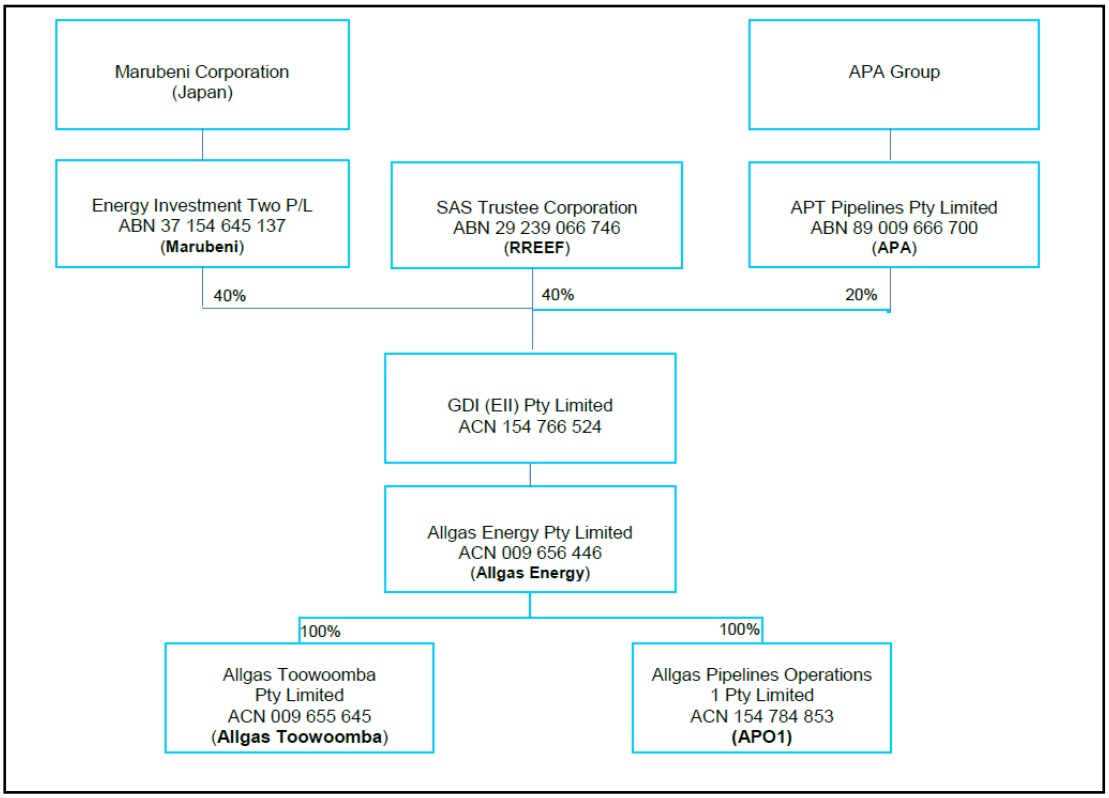
In addition to having a 20% interest in GDI (EII), APA also provides operational, asset management and corporate support services to Allgas Energy under an outsourcing agreement.

Figure 2.2 provides an overview of the Allgas Energy group structure and the equity interests that Marubeni, SAS Trustee Corporation and APA have in GDI (EII).

*Figure 2.2: Allgas Energy group structure and ownership interests*

[25] This special meter reading service provides for a meter read in addition to the scheduled meter read.

[26] The disconnection service provides for the physical disconnection of pipe-work joining a delivery point to the network while a reconnection service provide for the physical reconnection of a delivery point.




In keeping with rule 34(2)(g), Table 2.2 describes the nature of the relationships between the owner, operator and controller of the Allgas Network and other parties and pipeline owners in the areas served by the network.

*Table 2.2: Nature of relationships*

| Rule 34 Information Requirement | | Response |
|---|---|---|
| Relationship between the owner, operator and controller of the pipeline (or any two of them) | | Owner and controller of the pipeline: Allgas Energy owns and controls the pipeline. The ultimate owner of the Allgas Network is GDI (EII), which is owned by Marubeni Corporation (40%), SAS Trustee Corporation (40%) and APA (20%).<br>Service provider: Allgas Energy is the service provider but has entered into a contract with APA for the provision of operational, asset management and corporate support services. |
| Relationship between the owner, operator or controller of the pipeline and: | A pipeline user, supplier or consumer of gas in the locations or geographic area served by the pipeline | Neither Allgas Energy nor GDI (EII) has a relationship with a pipeline user, supplier or consumer of gas in the geographic area served by the Allgas Network. |
| | Any other pipeline serving any one or more of the same locations or the same geographic area | Neither Allgas Energy nor its two largest shareholders, Marubeni Corporation and SAS Trustee Corporation, has a relationship with any other pipelines serving the same locations or geographic area as the Allgas Network. |
| | | APA, which has a 20% interest in GDI (EII) does, however, have a 100% interest in the RBP, which is used to supply gas into the Allgas Network.<br>Until recently APA also had a 33% interest in Envestra (now Australian Gas Networks), which owns the Queensland Gas Distribution Network (QGDN) serving those areas of Brisbane north of the Brisbane River, but this interest was sold to CK Consortium in August 2014. While APA still provides asset management services to AGN and the QGDN, it does **not** have any influence over the operational, pricing or contracting decisions of this network. |

# 3 Network Utilisation and Alternative Energy Sources

In 2013-14 the Allgas Network was used to distribute approximately 9.4 PJ of gas to 92,805 end-users on behalf of three shippers. The remainder of this section provides further detail on:

- the shippers that currently utilise the Allgas Network;
- the end-use demand for the services provide by the Allgas Network;
- the current utilisation of the capacity of the Allgas Network; and
- the alternative energy sources and pipeline services that may be available to end-users in the Brisbane, South Coast and Western regions and the constraint these have placed on the prices that can be charged by Allgas Energy.

## *3.1 Shippers currently utilising the Allgas Network*

The only shippers (users) that are currently using the Allgas Network and have entered into gas transportation contracts with Allgas Energy are:[27]

- AGL, who retails gas to residential, commercial and industrial customers in all three regions;
- Origin Energy, who retails gas to residential, commercial and industrial customers in the Brisbane, South Coast and Western regions;
- Alinta Energy, who retails gas to large industrial customers in the Brisbane and South Coast regions.

[information redacted]

The proportion of customers and volumes supplied by AGL, Origin Energy and Alinta Energy in 2013-14 are set out in Table 3.1. As this table indicates, AGL currently accounts for the largest proportion of customers and volumes supplied on the Allgas Network, followed in declining order by Origin Energy and Alinta Energy.

*Table 3.1: Retailer market share* (2013-14)

| Retailer | Customers (%) | | | Volume Delivered (PJ pa) | | |
|---|---|---|---|---|---|---|
| | Demand Customers | Volume Customers | Total | Demand Customers | Volume Customers | Total |
| AGL | [information redacted] | | | | | |
| Origin Energy | | | | | | |
| Alinta Energy | | | | | | |

[27] Australia Power & Gas (AP&G) is the only other retailer that has previously entered into a transportation contract with Allgas Energy but in late 2013 it was acquired by AGL.

The limited number of retailers currently retailers operating in the Allgas Network reflects a number of factors, such as:[28]

- the small size of the Queensland retail market, which is estimated to be about 1.7% of the size of the Victorian market when measured on the basis of residential gas consumption;[29]
- the fixed costs associated with gas supply and transportation, which when coupled with the relatively small size of the market, can place a cap on the numbers of retailers that can effectively compete in the market;[30] and
- the development of LNG facilities in Queensland, which has made it more difficult for new retailers and other buyers to secure competitively priced long-term gas supply contracts in Queensland.[31]

While these characteristics of the market may deter new entry by retailers, it is worth noting that Allgas Energy has a strong incentive to encourage this entry given the potential for it to result in greater utilisation of the network. It is also worth noting that Allgas Energy does not have any interests in the retail supply of gas, so it has no incentive to discriminate between retailers.

## 3.2 End-use demand for services provided by the Allgas Network

The Allgas Network is currently used to distribute gas to residential customers, small commercial and industrial customers and a number of large commercial and industrial customers. Table 3.2 provides a breakdown of the number of customers supplied by the network and the volume of gas delivered to each customer segment in 2013-14.

[28] It is worth noting that in a recent survey that was conducted as part of the AEMC's 2014 retail competition review, retailers were asked whether they were considering entering the Queensland retail gas market to supply small customers. Only one retailer responded in the affirmative, although it noted that it had no firm plans to do so.

K Lowe Consulting and Farrier Swier Consulting, AEMC 2014 Retail Competition Review: Retailer Interviews, June 2014, p. 22.

[29] Bureau of Resources and Energy Economics, 2014 Energy Consumption by Industry and Fuel Type, Table F (2012-13) and information on gas supplied by QGDN and the Allgas Network in 2013-14.

[30] AEMC, 2014 Retail Competition Review, 22 August 2014, p. 62.

[31] Department of Energy and Water Supply, Gas Market Review Queensland, 2012, p.38, The Australian, Clash looms as supply contracts unsecured, 19 January 2013 and K Lowe Consulting and Farrier Swier Consulting, AEMC 2014 Retail Competition Review: Retailer Interviews, June 2014, p. 22.

*Table 3.2: Demand for distribution services* (2013-14)

| Customer Type | | Number of End-Use Customers | Volume Delivered (PJ) |
|---|---|---|---|
| Residential customers[32] | | 88,400 | 1.09 |
| Small commercial and industrial customers (<10 TJ) | | 4,299 | 1.98 |
| Large commercial and industrial customers ('Demand Customers') (>10 TJ) | Reference tariff (regulated) | 101 | 4.80 |
| | Negotiated tariff | 5 | 1.56 |
| **Total** | | **92,805** | **9.44** |

In 2013-14, residential customers accounted for 95% of end-use customers, but just 12% of the gas delivered, while small commercial and industrial customers accounted for approximately 5% of connections and 21% of gas delivered. Large commercial and industrial customers ('Demand customers'), on the other hand, accounted for less than 0.1% of customers but 67% of the gas delivered.

On a revenue basis, residential customers accounted for approximately 45% of the revenue earned by Allgas Energy in 2013-14, while Demand customers accounted for approximately 29% and small commercial and industrial customers accounted for 26%.

Although not shown in this table, the total volume of gas delivered by the Allgas in 2013-14 was 6% lower than was expected when the last AA process was conducted (9.4 PJ vs 10.1 PJ), while customer numbers were just 1% lower than expected.[33] A similar outcome was observed in 2012-13, with the total volume of gas delivered in that year being 7% lower than was forecast in the AA process (9.3 PJ vs 10.2 PJ) while customer numbers were broadly in line with expectation.[34] These outcomes highlight a more fundamental trend that has emerged in the Allgas Network, which is that customers are consuming less gas, on average, than they have in the past. Over the last five years this trend has contributed to a 12% reduction in the volume of gas delivered by the Allgas Network (10.6 PJ in 2009-10 to 9.4 PJ in 2013-14).

The scale of this reduction is of significant source concern to Allgas Energy, particularly given the expectation that demand will continue to fall in response to some of the structural changes underway in the broader market. It has therefore a strong incentive to try and encourage greater utilisation of the Allgas Network through its price and non-price offerings.

Further detail on the source of the decline in gas consumption across the residential, small commercial and industrial and Demand customer segments is provided below.

[32] It should be noted that "Residential" customers includes both single dwelling customers and large multi-story residential buildings, with each multi-unit residential building served by a single meter and counted as a single customer. This impacts the calculation of average consumption per 'Residential' customer.

[33] AER, Final decision: APT Allgas Access arrangement proposal for the Qld gas network, June 2011, p. 67.

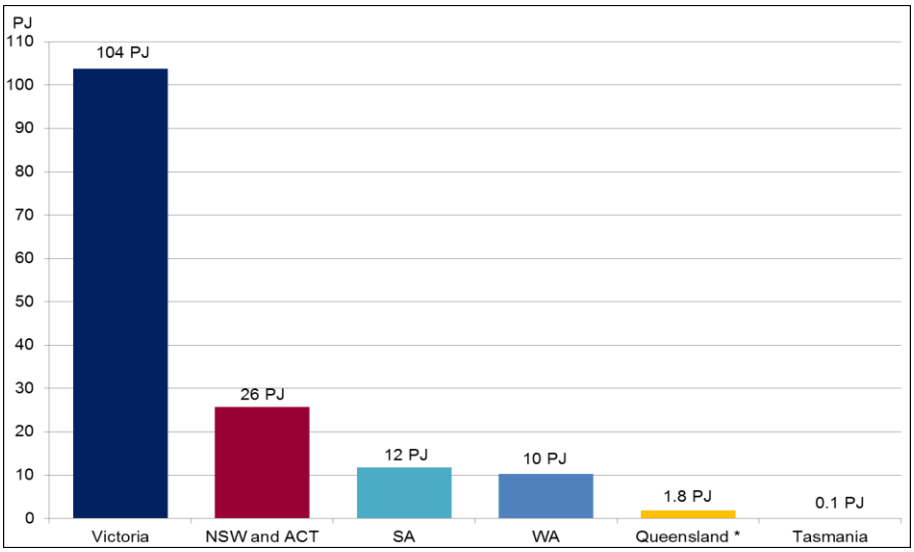
[34] ibid.

### 3.2.1 Residential customers

In 2013-14, residential customers in Queensland consumed approximately 1.8 PJ of natural gas, with 1.09 PJ (61%) supplied by the Allgas Network and the remaining 0.7 PJ (39%)[35] supplied by the Queensland Gas Distribution Network (QGDN).

To put the volume of gas consumed by residential customers in Queensland into context, it is worth noting that 1.8 PJ is equivalent to 1.7% of the volume of gas consumed by residential customers in Victoria in 2012-13 and 7-18% of the volume of gas consumed in New South Wales, South Australia and Western Australia (see Figure 3.1.

*Figure 3.1: Residential consumption across Australia*




Source: Bureau of Resources and Energy Economics, 2014 Energy Consumption by Industry and Fuel Type, Table F (2012-13). * Queensland based on 2013-14 volumes supplied by QGDN and Allgas Network.

The relatively small volume of gas consumed by residential customers in Queensland can be attributed to a range of factors, including:

- *Low penetration rates* - Estimates developed by the Australian Bureau of Statistics in 2011 suggest that only 19% of households in Brisbane are connected to gas,[36] while the penetration rate is around 90% in Melbourne, 85% in Perth, 75% in both the ACT and Adelaide and 50% in Sydney.
- *Low average household consumption* – New residential customers connecting to the Allgas Network consume around 9 GJ p.a., while their counterparts consume approximately 50 GJ p.a. in Victoria, 45 GJ p.a. in the ACT, 20 GJ p.a. in South Australia and New South Wales and 15 GJ p.a. in Western Australia. The lower consumption levels observed in Queensland is not surprising given:
  - winters are much milder in Queensland than they are in other jurisdictions, which means there is little need for space heating; and
  - the majority of households in Brisbane that are connected to gas only have a single gas appliance (i.e. hot water (30%) *or* cook top (28%)), whereas in

[35] See Envestra, Application for Light Regulation of Envestra's Queensland Gas Distribution Network, 15 August 2014, p. 18.

[36] ABS, 4602.0.55.001 Environmental Issues: Energy Use and Conservation, March 2011, Table 6.

Victoria the majority of households have multiple gas appliances (i.e. heating, cooktops *and* hot water).[37]

As these two points highlight, gas really is a fuel of choice in Queensland.

Table 3.3 sets out the number of residential customers supplied by the Allgas Network in the last five years and the volumes of gas delivered to these customers.

*Table 3.3: Residential customers: consumption and customer numbers*

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---|---|---|---|---|
| Customer numbers[38] | 77,981 | 80,764 | 83,426 | 86,033 | 88,400 |
| Volume of gas delivered (PJ) | 0.92 | 1.04 | 1.12 | 1.14 | 1.09 |

As this table highlights, the volume of gas delivered to residential customers has fallen slightly in the last year. The growth in the residential customer numbers has also fallen in the last three years from 2,783 in 2010-11 to 2,367 in 2013-14.

While Allgas Energy has taken steps to try and address the declining trend (e.g. through marketing and promotional programs), there have been a number of policy and structural changes over the last five years that have made it more difficult to arrest the decline. These changes include:

- the development of more energy efficient appliances;
- changes to State and Federal government policies, which have resulted in a shift away from supporting the use of natural gas;
- the increasing penetration of solar panels in Queensland, which in 2013 had reportedly reached 22%;[39] and
- the development of the LNG export industry in Queensland, which has resulted in a significant increase in the price payable for wholesale gas under medium to long-term contracts from its historic levels of $3-$4 per GJ to around $8-$9 per GJ in 2013-14 in Brisbane.[40]

AGN's application for light regulation of the QGDN provided a good summary of these changes (see Box 3.1) and the effect they are having on both:

- the relative competitiveness of gas and electricity for residential customers in Queensland; and
- the incentive that prospective residential customers have to connect to gas and for existing customers to install more than one gas appliances.

[37] Grattan Institute, Gas at the crossroads, October 2014, p. 16.

[38] "Residential customers" includes multi-unit residential buildings, with each multi-unit residential building served by a single meter and counted as a single customer.

[39] http://reneweconomy.com.au/2013/people-power-rooftop-solar-pv-reaches-3gw-in-australia-99543

[40] EnergyQuest, EnergyQuarterly, February 2014, p. 19.

*Box 3.1: AGN's observations: Factors affecting residential consumption in Queensland*

This trend decline is attributed to a range of factors, including continuous improvements in energy efficiency (primarily appliance efficiency), customer appliance preferences (electric reverse cycle air conditioning instead of gas space heating) and the significant installation of solar equipment in recent years.

The decline in average consumption also reflects the effect of government policies. For example, Federal Government greenhouse gas abatement policies have generally been geared towards solar electric, or other low use electric solutions (e.g. heat pump hot water systems). Government support generally comes in the form of a rebate or Small-scale Renewable Energy Scheme (SRES) certificates.

These forms of government policy support reduce the upfront capital cost of installing electric appliances to be equal to or less than the capital costs associated with a gas appliance. As an example, the Energy Networks Association (ENA) calculates that the cost of a hot water electric heat pump drops by $1,100 with the assistance of the SRES. This drops the capital cost of the heat pump hot water system to be the same as a gas instantaneous unit.

There has also been a more overt policy shift away from supporting natural gas in Queensland, with the State Government in February 2013 removing a requirement to replace failed electric storage hot water units with low greenhouse gas intensity hot water units. Under the previous policy, which policy had existed for seven years from March 2006, many customers elected to connect a gas hot water unit as it provided the cheapest and fastest form of policy compliance.

The Federal Government's continued support of electric appliances and the Queensland Government's removal of the electric storage hot water ban have combined to provide a further disincentive for prospective customers to connect to the network and/or for existing customers to install an additional natural gas appliance. This negatively affects throughput which, in turn, raises the unit cost of transporting gas (thereby providing a further disincentive to use natural gas).

The competitive position of natural gas will be further challenged by the expected increase to east coast domestic wholesale gas prices from approximately $3-$4 per GJ to $12-$14 per GJ by 2020. This more than three-fold increase in wholesale gas prices will lead to increases in retail gas prices, which in-turn will lead to further reductions to gas demand (and precipitate a further shift to electricity). These effects are expected to be felt more acutely in Queensland given:

- the close proximity of Queensland's domestic gas market to the LNG export terminals; and
- electricity generation in Queensland is dominated by coal, so electricity prices are relatively impervious to shifts in the price of wholesale gas.

There are a range of other current and emerging pressures on the average consumption of residential customers, including:

- further substantial increases in renewable generation – a high penetration of 'green' electricity reduces the environmental driver for customers to adopt natural gas;
- emergence of new technologies – including continual technological improvements in distributed generation, battery storage and electric vehicles (which might reduce the unit price of electricity by resulting in a step change in volumes); and
- further increases in the penetration rates of reverse-cycle air-conditioners – which reduces the up-front cost of switching from gas to electricity.

Source: Australia Gas Networks, Application for Light Regulation of the Queensland Gas Distribution Network, 15 August 2014, pp. 20-21.

Some insight into the effect that the changes outlined above and, in particular improvements in energy efficiency are having on residential consumption in Queensland can be found in the frequency distribution set out in Figure 3.2, which shows the distribution of volumes consumed by residential customers/[41]

Before looking at this figure, it is worth noting that the data has not been 'cleansed' in any way. For example, no adjustments have been made:

- to exclude customers that connected to the Allgas Network post 2010 from the count of customers in earlier years, which is why there are a large number of

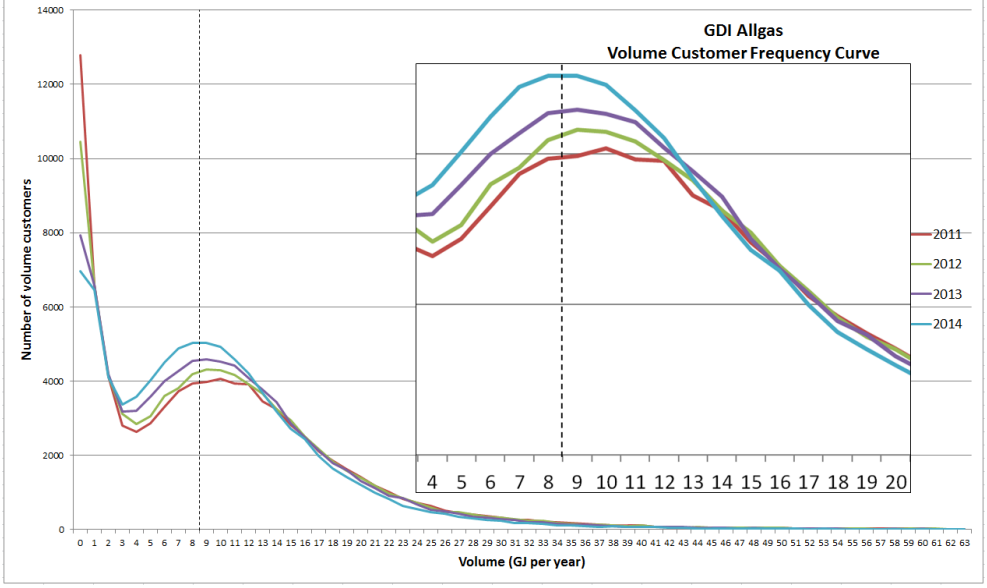
[41] Including multi-unit residential buildings.

customers reportedly consuming 0 GJ (e.g. if a customer connected in 2014, it would be counted as a customer that consumed 0 GJ in 2011, 2012 and 2013);

- to account for customers that connect part way through the year, which is why there are a large number of customers reportedly consuming 1-4 GJ (e.g. if a customer connects nine months of the way through 2011 and consumes just 3 GJ in that year but 8 GJ in 2012 it will just be counted as 3 GJ in 2011); and
- to take into account the fact that the residential category consists of a large number of multi-unit residential buildings that are served by a single gas meter and so are counted as a single customer, which explains why there are a large number of customers reportedly consuming more than 15 GJ.

Setting these issues aside, the key point to note from this figure is that the mode of the distribution has been progressively shifting to the left and increasing in height over the last three years and is now around 8-9 GJ p.a.. This shift can largely be attributed to recent improvements in the energy efficiency of appliances, in particular for hot water systems where the shift from storage to instantaneous systems has resulted in a material increase in energy efficiency.

*Figure 3.2: Residential consumption – frequency distribution*




Notes: 2010 has not been included in this figure because water restrictions in this year lead to an abnormal reduction in the volume of gas used for hot water systems.

### 3.2.2 Small commercial and industrial customers (<10 TJ p.a.)

The small commercial and industrial customers currently supplied by the Allgas Network include small retail outlets, small businesses and light industrial facilities.

Table 3.4 sets out the number of small commercial and industrial customers supplied over the last five years by the Allgas Network and the volume of gas supplied to this group of customers.

*Table 3.4: Small commercial and industrial customers: consumption and customer numbers*

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---|---|---|---|---|
| Customer numbers | 3,877 | 3,922 | 3,986 | 4,076 | 4,299 |
| Volume of gas delivered (PJ) | 1.86 | 2.05 | 2.00 | 1.97 | 1.98 |

Over the last four years, the average volume of gas consumed by this customer segment has been steadily declining (522 GJ in 2010-11 to 462 GJ in 2013-14). In a similar manner to residential customers, the decline in consumption can be attributed to a range of factors including energy efficiency improvements, changes in government policies and rising wholesale gas prices.

### 3.2.3 Demand customers (>10 TJ p.a.)

In 2013-14 the Allgas Network supplied approximately 6.4 PJ of gas to 106 large commercial and industrial customers. These customers work across a range of industries including hospitals, theme parks, food manufacturers, transport industry, building and construction, manufacturers and laundry services.

The table below sets out both the number of Demand customers supplied by the Allgas Network over the last five years and the volume of gas delivered to this customer segment.

*Table 3.5: Demand customers: consumption and customer numbers*

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---|---|---|---|---|
| Demand customers (no.) | 105 | 114 | 103 | 103 | 106 |
| Volume of gas delivered (PJ) | 7.8 | 7.0 | 6.4 | 6.2 | 6.4 |

Given the small number of Demand customers it is difficult to compare average consumption levels over time. However, as Table 3.5 highlights, the total volume of gas transported to this customer segment has fallen over the last five years from 7.8 PJ to 6.4 PJ. This reduction can be attributed to a range of factors, including:

- The structural changes occurring in the upstream gas market, which have given rise to a significant increase in wholesale gas prices.
- Lower than expected growth of the Queensland economy in the last few years, which has affected a number of industries including the building and construction industries. The slowdown in these two industries has been quite acute and has

affected the production of building materials (e.g. [information redacted]) by many of Allgas Energy's large customers.

- Greater emphasis being placed on energy efficiency by large customers, which has resulted in less gas being required for the same amount of production. For example, brick works are installing more efficient kilns to make bricks.
- A range of other commercial reasons. For example:
  - End-use customers, such as [information redacted] are currently located on prime CBD land but are likely to move out of these prime locations as a cost saving measure. Their future sites for production are unknown and the ability for Allgas Energy to secure these customers in the future is uncertain.
  - Some large industrial customers are consolidating several production sites into one site. For example:
    - [information redacted]has been shutting down some manufacturing units and concentrating their production on one site.
    - A number of brick works have also been consolidating because efficiencies in transport mean that a single brick works can produce bricks at a lower delivered cost, than the previous business model of having a number of brick works sites close to the construction areas.

    This consolidation tends to result in lower gas usage because there are efficiencies associated with operating from one site rather than multiple sites.
  - As a drive to reduce costs, some commercial and industrial customers are moving parts of their [information redacted].

Looking forward, the volume of gas supplied to this customer segment could fall further in response to rising wholesale gas prices, because the wholesale gas component accounts for a larger proportion of this customer segment's bill.

## 3.3 Capacity utilisation

Table 3.6 sets out the current and forecast capacity of the network and the utilisation of the network in 2013-14.

*Table 3.6: Current capacity, forecast capacity and capacity utilisation in 2013-14*

| Network | Capacity (Sm3/h) | Utilisation (Sm3/h) | Utilisation (%) |
|---|---|---|---|
| Oakey High Pressure Steel | 1,931 | 1,033 | 53 |
| Aubigny High Pressure PE | 1,155 | 1,155 | 100 |
| Oakey High Pressure PE | 232 | 112 | 48 |
| Toowoomba High Pressure Steel | 3,646 | 2,737 | 75 |
| Toowoomba High Pressure PE | 394 | 300 | 76 |
| Riverview Transmission Pressure | 9,454 | 1,200 | 13 |
| Richlands Transmission Pressure | 19,467 | 10,172 | 52 |
| Wacol High Pressure Steel | 4,555 | 3,420 | 75 |
| Springfield High Pressure PE | 1,078 | 860 | 80 |
| Forest Lake High Pressure PE | 574 | 477 | 83 |
| Sherwood Medium Pressure | 228 | 228 | 100 |
| Gold Coast Pipeline | 24,571 | 20,346 | 83 |
| Surfers Paradise High Pressure Steel | 4,030 | 2,777 | 69 |
| Coomera High Pressure PE | 1,765 | 1,444 | 82 |
| Willawong Transmission Pressure | 41,239 | 2,541 | 6 |
| Sunnybank High Pressure Steel | 15,295 | 6,517 | 43 |
| Salisbury High Pressure Steel | 5,334 | 3,785 | 71 |
| Meadowbrook High Pressure PE | 862 | 699 | 81 |
| Sunnybank Medium Pressure PE | 521 | 424 | 81 |
| Ekibin Medium Pressure | 441 | 392 | 89 |
| Yeronga Low Pressure | 164 | 164 | 100 |
| Garden City Pipeline | 8,943 | 2,672 | 30 |
| Mt Gravatt High Pressure Steel | 3,321 | 1,273 | 38 |
| Mt Gravatt High Pressure PE | 671 | 181 | 27 |
| Mt Gravatt Medium Pressure | 184 | 164 | 89 |
| West End High Pressure Steel | 13,708 | 10,099 | 74 |
| Wynnum High Pressure Steel | 908 | 764 | 84 |
| Woolloongabba High Pressure PE | 671 | 381 | 57 |
| Morningside Medium Pressure | 230 | 218 | 95 |
| Coorparoo Low Pressure | 164 | 164 | 100 |
| Lytton High Pressure Steel | 2,911 | 2,507 | 86 |
| Morningside High Pressure PE | 1,478 | 1,077 | 73 |

While there is currently sufficient capacity in each of the networks to meet current customer peak demands, there is a plan to upgrade the following networks to be able to meet future customer demands and increase security of supply to existing customers:

- The Aubigny high pressure polyethylene main is used to supply a single large industrial customer and does not have any spare capacity. For any additional customer demand this section of main would have to be duplicated.
- The old low and medium pressure networks in Sherwood, Yeronga, Coorparoo, Morningside, Mt Gravatt and Ekibin have no spare capacity to meet future customer demands and are planned for replacement and pressure upgrades.
- The high pressure polyethylene networks in Springfield, Forest Lake and Coomera have very limited spare capacity and will require augmentation to meet potential future customer demands.
- The Gold Coast Pipeline, which supplies a large number of customers in the Brisbane and Gold Coast regions, has limited spare capacity, so there is a plan to duplicate 10km long section in Logan Reserve in the next period.

## 3.4 Alternative sources of energy and gas supplies

The alternative sources of energy available to end-users of the Allgas Network differ depending on the nature of their end-use requirements. For residential and commercial customers, gas primarily competes with electricity and liquefied petroleum gas (LPG). For industrial customers, the ability to switch to an alternative energy source will depend on their production processes, but some of the options that may be open to this customer segment include electricity, LPG, diesel and/or coal.

For Demand customers located in the Brisbane and Western regions another option that may be available is to bypass the Allgas Network and obtain their gas supplies directly from the RBP.

Further detail on electricity, LPG and the RBP bypass option is provided below.

### 3.4.1 Electricity

For residential and small commercial customers, electricity is the most obvious alternative fuel source to gas supplied via the Allgas Network because it has a 100% penetration rate and can be used for the same purposes as gas (e.g. cooking, hot water and space heating). Even in areas like Toowoomba, which have historically used gas for space heating in the winter months, electricity is becoming the preferred fuel, with many gas customers switching to reverse cycle air conditioning and leaving the network.

The other factor that works in favour of electricity in Queensland is that, unlike some other jurisdictions, gas does *not* have a competitive advantage over electricity. This reflects a range of factors, one of the more significant of which is that gas transportation and distribution costs tend to be quite high, because the penetration rate and average consumption levels are so low in Queensland. Rising wholesale gas prices has also contributed to the recent deterioration in the competitive position of gas *vis-à-vis* electricity and is expected to continue to do so in the short to medium term.

Forecasts developed by EnergyQuest earlier this year suggest that wholesale gas prices in Brisbane could reach close to $12/GJ in 2015 and remain at that level until

2017 before falling to around $9/GJ in 2019.[42] To put these forecasts into perspective, it is worth noting that historically gas prices have been around $3-$4/GJ. An increase to $12/GJ therefore represents a 200-300% increase from this historic level.

With wholesale gas prices accounting for around 30% of retail prices,[43] the increase will obviously not prompt a one for one increase in retail prices. However, the increase is still expected to have a material effect on retail gas prices, with BREE estimating that a doubling of wholesale gas prices would result in a 33% increase in retail prices.[44][45] For larger commercial and industrial customers, the effect will be even greater because the wholesale cost of gas accounts for a much larger proportion of their total bill.

### 3.4.2 LPG

LPG is another fuel source that residential, commercial and some industrial customers can use as an alternative to gas supplied via the Allgas Network and is quite prevalent in South East Queensland, with four major suppliers operating in the area.[46]

Like electricity, the relative competitiveness of gas *vis-à-vis* LPG is expected to deteriorate in the future given the projected increases in wholesale gas prices and linkage to international oil prices. In contrast to the gas market, the domestic market for LPG is already exposed to the international market, so local LPG prices already capture the effect of global prices.

The other point to bear in mind with LPG is that while the cost of the fuel on a $ per GJ basis may be higher than gas, once the fixed charges associated with the transportation of gas are taken into account it can be more expensive than LPG, particularly for customers that only require gas on a seasonal basis. For these customers, it may be cheaper to pay a higher fuel charge for LPG for part of the year than to pay the fixed gas transportation costs all year round.

This has been a particular issue in the Allgas Network for both small and large customers with seasonal demand and has placed a constraint on the prices that Allgas Energy can charge some customers. For example, the Allgas Network currently supplies [information redacted] which require the large majority of their gas during the winter months.

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42 EnergyQuest, EnergyQuarterly, February 2014, p. 19.

43 IPART, Final Report: Review of regulated retail prices and charges for gas, June 2013, p.4.

44 BREE, Gas Market Report, July 2012, p.55.

45 In IPART's recent review of retail gas prices for small customers in NSW, price increases of 15-18% were approved through to 2016. The majority of this increase was attributed to rising wholesale gas prices. See IPART, Changes in regulated retail gas prices from 1 July 2014, pp. 2 and 5.

46 Before LPG can be used, natural gas appliances must either be converted to LPG, or new appliances purchased. The cost of conversion has been estimated to cost approximately $300 per appliance. See Envestra, Application for Light Regulation of Envestra's Queensland Gas Distribution Network, 15 August 2014, p. 25.

### 3.4.3 Alternative gas supply options

For Demand customers located in the Brisbane and Western regions, one alternative to being supplied with gas via the Allgas Network is to connect directly to the RBP. Connecting to the RBP could occur by either:

- relocating their operations so they are closer to the RBP; or
- building a connecting pipeline between their site and the RBP.

The latter of these options could be funded by either an individual customer or a group of customers located in a similar area. Alternatively, it could be funded by a competing pipeline owner/operator or a retailer.

Figure 3.3 provides some insight into the viability of the RBP supply option for large customers that are located in close proximity to the RBP. As this map highlights, the RBP bisects the Allgas Network's territory in Brisbane and is also close to the Toowoomba and Oakey townships.

The bypass risk posed by this option is significant in some parts of the Allgas Network, which is why Allgas Energy has taken steps to mitigate the risk by structuring its Demand Services tariff as follows:

- Each region has been divided into zones, with the bounds of the zones reflecting the distance from the RBP.[47] For example, the Brisbane region consists of three zones, with Zone 1 being the closest distance to the RBP, Zone 3 being the furthest distance and Zone 2 sitting in between.
- The prices within each zone[48] are then calculated using the group bypass stand alone cost methodology, which entails:
  - Estimating the costs of developing and operating an efficient stand-alone pipeline that would connect end-users in the zone directly to the RBP.
  - To ensure the stand-alone cost estimate reflects the most efficient supply option, end-users located in close proximity to each other are grouped.

The prices arising as a result of the application of this methodology can be seen in Table 3.7, which sets out the charges payable by Demand customers in Brisbane. As this table highlights, the charges payable in Zone 1 are far lower than those in Zone 2, while the charges in Zone 2 are lower than those in Zone 3.

In addition to using the group bypass stand-alone cost methodology, Allgas Energy has also applied a negotiated discount to those large customers where the risk of bypass is greatest.

[47] Brisbane has three zones, Toowoomba has two zones, Oakey has two zones and the South Coast region has three zones.

[48] Note that the group bypass stand alone cost methodology is not applied to all customers in zone 3 because their capability of bypassing the network is far lower than customers in zones 1 and 2.

*Figure 3.3: Location of the RBP vs the Allgas Network*

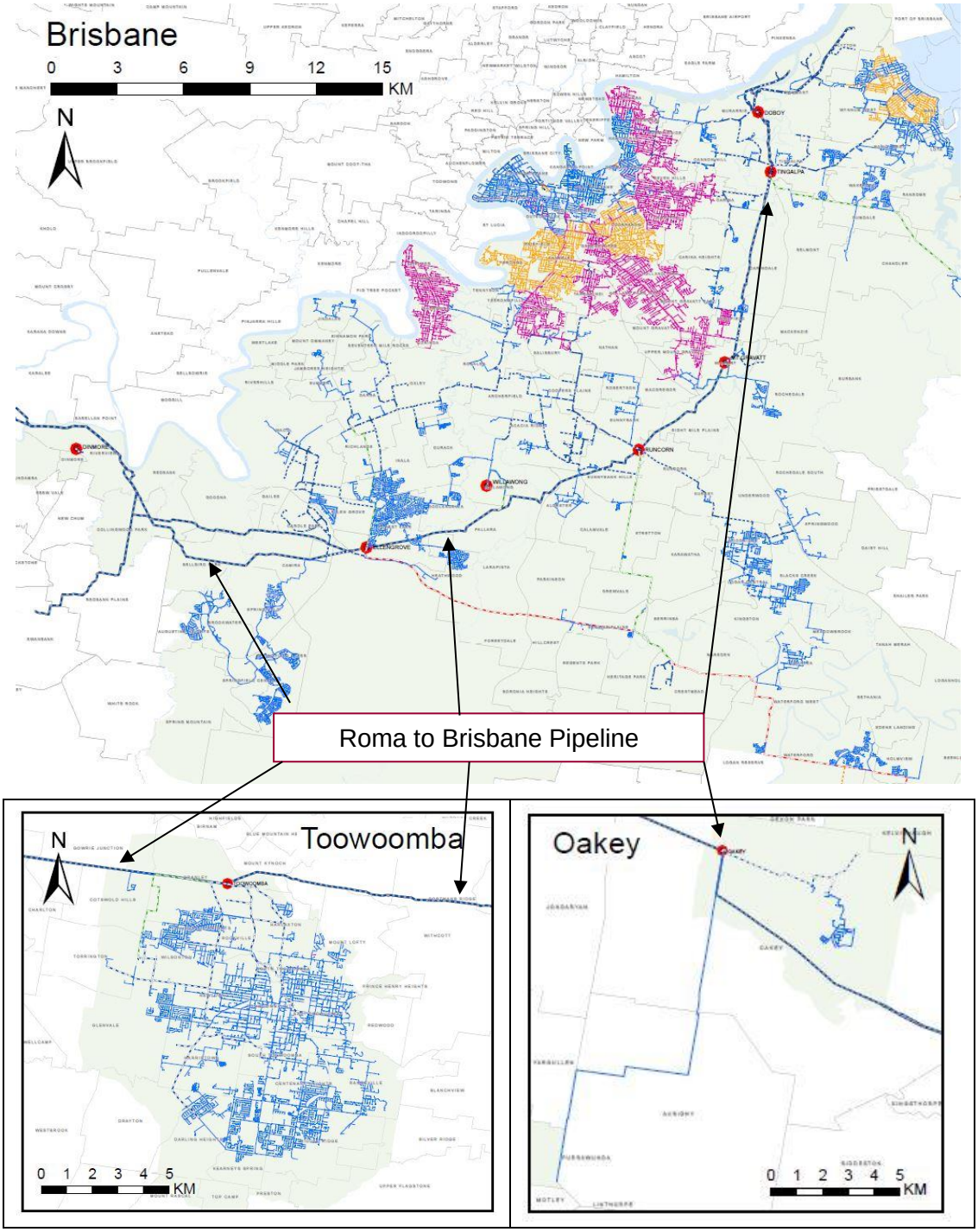

*Table 3.7: Demand Service charges in Brisbane by zone* (2014-15)

| Charge | | Zone 1 | Zone 2 | Zone 3 |
|---|---|---|---|---|
| Base Charge ($/GJ of MHQ/day) | | $3.5486 | $4.7174 | $4.0682 |
| MDQ ($/day) | 50 GJ<MDQ | $101.565 | $147.015 | $165.9550 |
| | 50GJ<MDQ≤125GJ | $101.565+ $1.1265/GJ of MDQ > 50 | $147.015+ $2.0939/GJ of MDQ > 50 | $165.9550+ $3.3648/GJ of MDQ > 50 |
| | 125GJ<MDQ≤275GJ | $186.0525+ $0.7943/GJ of MDQ > 125 | $304.0575+ $1.7329/GJ of MDQ > 125 | $418.315+ $2.4984/GJ of MDQ > 125 |
| | 275GJ<MDQ≤525GJ | $305.1975+ $0.3465/GJ of MDQ > 275 | $563.9925+ $0.0.8086/GJ of MDQ > 275 | $793.0750+ $1.3719/GJ of MDQ > 275 |
| | 525GJ<MDQ | $391.8225+ $0.3033/GJ of MDQ > 525 | $766.1425+ $0.3173/GJ of MDQ > 525 | $1136.05+ $0.3755/GJ of MDQ > 525 |

[information redacted]

# 4 Alternative Forms of Regulation

The NGL and NGR provide for two alternative forms of regulation for the services provided by covered pipelines: full and light regulation. The remainder of this section provides an overview of:

- the differences between the obligations arising under full and light regulation;
- the safeguards that will be available to users and prospective users if the Allgas Network is subject to light regulation; and
- the circumstances in which policy makers envisaged light regulation will apply.

## *4.1 Differences between full and light regulation*

The owner or service provider of a pipeline that is subject to full regulation is required by the NGR to submit a 'full' access arrangement (AA) to the Australian Energy Regulator (AER) on a periodic basis (typically every five years) and obtain its approval for:

- the proposed price and non-price terms and conditions of access to the pipeline's reference service(s); and
- the pipeline's queuing policy, capacity trading policy, extensions and expansions policy and the terms on which the shipper can change receipt/delivery points.

When assessing a service provider's proposed AA, the AER is required to have regard to the price and revenue regulation related provisions set out in Part 9 of the NGR, the NGO and the revenue and pricing principles in section 24 of the NGL. This assessment process can take up to 13 months.[49]

Unlike the direct form of regulatory control imposed under full regulation, the light regulation option better reflects the negotiate/arbitrate model. That is, greater emphasis is placed on commercial negotiation and information disclosure, with the parties provided with some degree of protection through the dispute resolution mechanism.

Under this form of regulation, the AER's role is to monitor the progress of access negotiations and arbitrate any access disputes that may arise.

For pipeline services that are subject to light regulation, the NGR requires the service provider to:

- publish the price and non-price terms and conditions of access to light regulation services on its website (rule 36); and
- report to the AER on access negotiations (at least annually) and, in doing so, set out the results of the negotiations and provide any other information required by the AER (rule 37).

The service provider of a pipeline that is subject to light regulation also has the option under section 116 of the NGL of developing a 'limited' AA for approval by the AER. The key difference between a full and limited AA is that a limited AA does not need to incorporate reference tariffs.

[49] Rule 13 of the NGR.

## 4.2 Safeguards available under light regulation

While the light regulation option places greater emphasis on commercial negotiation, it also includes a number of safeguards, which are designed to:

- ensure that users and prospective users have access to information and that service providers respond to access requests within a certain time period;
- provide users and prospective users with some degree of protection if negotiations with the service provider fail by allowing them to have recourse to a dispute resolution mechanism; and
- prevent the service provider from engaging in activities that could adversely affect third party access and/or competition in upstream or downstream markets (e.g. preventing or hindering access, engaging in (inefficient) price discrimination and/or conferring an unfair advantage on related businesses).

Further information on these safeguards is provided below.

### 4.2.1 Access to information and facilitation of access

Two important safeguards that are available under the light regulation option, which are designed to ensure users and prospective users have access to sufficient information can be found in:

- Rule 36 of the NGR, which requires the service provider to publish the price and non-price terms and conditions of access on its website.
- Part 11 of the NGR, which requires the service provider to comply with the facilitation of, and request for, access rules. Amongst other things, these provisions require service providers to:[50]
  - make available information that a prospective user reasonably requires to decide whether to seek access to a pipeline service; and
  - respond to any access request made by a prospective user within a defined period and provide information on the tariff that would apply, if it is commercially and technically feasible to provide the service.

### 4.2.2 Dispute resolution mechanism

Another important safeguard is the dispute resolution mechanism set out in the NGL (Chapter 6) and the NGR (Part 12), which a user or prospective user can trigger if a dispute about access, or the terms and conditions of access, arises.

If such a dispute arises, the user (or prospective user) or service provider may notify the dispute resolution body in writing. The dispute resolution body may then require the parties to mediate, conciliate or engage in other alternative dispute resolution processes to resolve the dispute. The dispute resolution body in this case is the AER.

From a user's or prospective user's perspective, the dispute resolution mechanism can be considered an effective alternative to full regulation because the AER can be

[50] These provisions also require the *users* of full and light regulation pipelines to respond to any request for information about whether any of their unutilised contracted capacity is, or is likely to, become available and, if so, the terms and conditions upon which it would be prepared to transfer the unutilised capacity.

expected to employ the same approach and principles in an access determination that it does under full regulation. There should therefore be no difference between the price and/or non-price terms and conditions that would arise under an access determination and a regulatory determination. The AER's detailed understanding of the costs of operating a gas distribution network also means that it is well-placed to make an informed access determination.

From a service provider's perspective, the threat of the AER determining the price and non-price terms and conditions of access can be expected to provide it with sufficient impetus to reach an agreement that satisfies users' and prospective users' requirements. The fact that the dispute resolution mechanism has not been triggered on any of the pipelines that are currently subject to light regulation is testament to this fact.

The other threat that the dispute resolution process poses for service providers is that a series of access disputes could be seen by the NCC as an indication that light regulation is not effective and leaves it vulnerable to full regulation being reinstated if an application is made to have the light regulation determination revoked. In Allgas Energy's view the threat of full regulation being reinstated provides a service provider with a strong incentive to reach an agreement with users and prospective users to avoid this mechanism being triggered.

### 4.2.3 Prohibition on activities that could affect third party access or competition

Some other important safeguards that have been incorporated into the NGL, which are designed to prevent the owner or service provider of a light regulation pipeline from engaging in activities that could adversely affect third party access and/or competition in upstream or downstream markets, include:

- Section 133, which states that a service provider must not engage in conduct that prevents or hinders a person's access to the services provided by the pipeline.
- Section 136, which prohibits a service provider from engaging in price discrimination, unless it is conducive to efficient service provision.
- Sections 137-148, which set out the ring-fencing requirements that a service provider must comply with and are designed to prevent a service provider from:
  - carrying on a related business (i.e. the production, purchase or sale of natural gas); and
  - conferring an unfair advantage on an associate that takes part in a related business.

The ease with which light regulation can be revoked and full regulation reinstated by the NCC in response to an application by a user or prospective user, is another important constraint that can be expected to deter a service provider from exerting any other types of market power when negotiating access.

## *4.3 Circumstances in which light regulation should apply*

The light regulation option was included in the NGL and NGR in response to the recommendations contained in both:

- the Productivity Commission's review of the Gas Access Regime in 2004; and
- the Expert Panel on Energy Access Pricing's report to the Ministerial Council on Energy (MCE) in 2006.

The Productivity Commission recommended the inclusion of a lighter-handed form of regulation in the gas access regime as an alternative to full regulation where the costs of full regulation are likely to exceed the benefits. Elaborating further on this recommendation, the Productivity Commission noted the following:

> 'Regulation with access arrangements with reference tariffs should be applied only where the net benefits of access arrangements with reference tariffs are markedly greater than the net benefits of the monitoring option. Where the difference in net benefits are marginal or the net benefits of the monitoring option are greater than the net benefits of access arrangements with reference tariffs, then the monitoring option [light regulation] should be applied.'[51] [insertions added]

The Productivity Commission went on to add that:

> '..the marginal benefit of intervening [through full regulation] decreases as the gap between the 'efficient price' and the 'monopoly price' narrows. Thus, for pipelines that are not exerting substantial market power (that is, where the price gap is narrow), the marginal benefit of intervening is lower.'[52]

The Productivity Commission's recommendation to allow a lighter handed form of regulation to be applied when the market power of a pipeline is constrained was echoed by the Expert Panel in its 2006 report to the MCE:[53]

> 'The Panel's overall conclusion is that direct price or revenue controls should be applied principally to services supplied under conditions of natural monopoly and substantial market power. These conditions can be identified by having regard to the presence of economies of scale and scope, network externalities and other market characteristics which give rise to the presence of high barriers to entry by potential rivals. Less intrusive forms of regulation or no regulation at all are warranted where there is evidence of potential or actual competition sufficient to discipline the conduct of incumbent service providers and the barriers to entry are modest or low.'

Policy makers responded to the Productivity Commission and Expert Panel's recommendations by introducing the light regulation option into the NGL and NGR. The circumstances in which policy makers expected light regulation to be applied can be found in the following extract taken from the Second Reading Speech:[54]

> 'Determining how covered pipeline services are to be regulated requires an assessment of the potential for market power to be exploited by a service provider. … Accordingly, where light regulation can reduce the costs of regulation while still providing an effective check on a pipeline's market power, the light regulation option should be available…'

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[51] Productivity Commission, Review of the Gas Access Regime, 11 June 2004, p. 228.

[52] ibid, p. 332.

[53] Expert Panel on Energy Access Pricing, Report to the Ministerial Council on Energy, April 2006, p. 51.

[54] South Australian Hansard 2008, *'National Gas (South Australia) Bill 2008'*, Legislative Assembly, p. 2701, 9 April 2008.

Further insight into the circumstances in which light regulation may be relevant can be found in the following extract taken from the NCC's Light Regulation Guide:[55]

> 'The intention in introducing this lighter form of regulation is that, through its use in appropriate circumstances, the administrative costs to the pipeline services provider and the regulator will be lower. This less intrusive form of regulation is considered to be appropriate where the market power exercised by the provider is less substantial and there is the potential for contestability for the services to emerge. It may also be appropriate where the number of access seekers is relatively small and these parties can themselves exercise some countervailing market power in the course of commercial negotiations. Further, light regulation may be an appropriate option for regulation where particular assets are in a transition towards effective competition.'

[55] NCC, Light regulation of covered pipeline services – A guide to the function and powers of the NCC under the NGL Part C, July 2011, p. 14.

# 5 Effectiveness of Light and Full Regulation in Promoting Access

In keeping with section 122(1)(a) of the NGL, the first matter that the NCC must consider when making a decision on the form of regulation is the likely effectiveness of full and light regulation in promoting access to the services provided by the pipeline.

Whether or not light regulation will be as effective as full regulation in promoting access, will depend on whether users and prospective users are able to negotiate effectively with the service provider under light regulation. This will, in turn, depend on the extent to which:

- the service provider is likely to possess market power, either as a result of barriers to entry or network externalities (sections16(a)-(c));
- any market power possessed by the service provider may be constrained by:
  - any countervailing power that may be held by users or prospective users (section 16(d)); or
  - the ability of users or prospective users to switch to an alternative provider of pipeline services or energy source (sections 16(e)-(f)).
- users or prospective users will have access to adequate information to negotiate on an informed basis with the service provider (section 16(g)).

The effectiveness of light regulation in promoting access will also depend on how effective the safeguards available under light regulation are likely to be (see section 4.2).

These issues are explored in further detail in the remainder of this section, which commences with an assessment of the form of regulation factors set out in section 16 of the NGL.

Before moving on, it is worth noting that any incentive Allgas Energy may otherwise be said to have to exercise market power under light regulation will be constrained by the commercial imperative it has to encourage greater utilisation of the Allgas Network, given both the 12% reduction in demand that has occurred over the last five years and the following characteristics of the market:

- gas is a fuel of choice for small customers in Queensland, as evidenced by the low penetration rates, the low and declining average rates of consumption;
- gas does not have a clear competitive advantage over other fuels in Queensland and the competitive position of gas is expected to deteriorate even further in the future, given both the projected increase in wholesale gas prices[56] and government policies that favour other energy forms over gas;
- the bypass options available to a number of large customers (i.e. connecting to the RBP or using an alternative energy source) constitute a real and ongoing threat to the utilisation of parts of the Allgas Network; and

[56] EnergyQuest, EnergyQuarterly, February 2014, p. 19.

- the structural changes underway in the broader market (e.g. the internationalisation of the wholesale gas market, the ongoing de-industrialisation of the economy and continuous improvements in energy efficiency), which are expected to prompt further reductions in the demand for gas.

## 5.1 Factor (a): Presence and extent of barriers to entry

Form of regulation factor (a) requires consideration to be given to whether barriers to entry may act as potential source of market power for Allgas Energy. An important point to bear in mind with this form of regulation factor is that a pipeline would not be covered if there were no barriers to entry. The choice between the alternative forms of regulation will therefore depend on the height of the barriers to entry, rather than their existence.

Because of its close proximity to the RBP, the barriers to entry to the market for the provision of pipeline services will differ depending on whether a prospective entrant is seeking to:

- transport gas to *all* of the geographic areas served by the Allgas Network; or
- transport gas to specific locations in the Allgas Network.

Further detail on the barriers to entry that a prospective entrant is likely to face under these two alternative forms of entry is provided below.

**Barriers to entry to supplying <u>all</u> geographic areas served by the network**

For a prospective entrant that wants to compete directly with the Allgas Network for the provision of transportation services to *all* the geographic areas served by the network, the following are likely to be viewed as relatively high barriers to entry:

- the high capital costs associated with constructing a distribution network, most of which are sunk; and
- the relatively low penetration of gas and average demand in the regions serviced by the Allgas Network (see section 3.2), which mean that it would be difficult for a new entrant to realise the economies of scale required to profitably enter the market.

While these natural monopoly characteristics mean that the threat of this type of entry is unlikely, there are a number of other factors that will constrain any market power that these barriers to entry could be said to confer on Allgas Energy, including:

- the countervailing power of users and prospective users;
- competition from alternative energy sources (e.g. electricity and LPG); and
- the threat of competition for the provision of pipeline services to certain parts of the network.

Further detail on the first two of these factors is provided in sections 5.4-5.6, while the latter of these factors is discussed in further detail below.

**Barriers to entry to supplying certain parts of the network**

While the barriers to entry outlined above may mean that a prospective entrant would not consider replicating the whole network, it may still be able to compete to provide transportation services to parts of the network.

For example, a prospective entrant could develop a pipeline connecting the RBP to Demand customers located in the Brisbane or Western regions of the Allgas Network. Alternatively a group of Demand customers could fund the development of such a pipeline. The barriers to entry in this case would be far lower because:[57]

- the cost of building a dedicated pipeline and delivery point on the RBP to serve a group of customers in a particular part of the network is much lower than the cost of replicating the whole network; and
- the new pipeline would be used to supply customers that consume greater volumes of gas, which would enable the prospective entrant to achieve economies of scale.

The fact that a significant proportion of the Demand customers supplied by the Allgas Network are already paying prices that reflect the risk of this type of entry/bypass (see section 3.4.3) highlights just how low the barriers to this form of entry are and the contestable nature of these pipeline services.

## 5.2 Factor (b): Externalities between gas services provided by the service provider

Form of regulation factor (b) requires consideration to be given to whether there are any network externalities (interdependencies) between the natural gas services provided by Allgas Energy, which may act as an additional source of market power.

While gas distribution pipelines are usually said to exhibit network externalities,[58] the market power typically associated with these interdependencies may, as both the NCC and Expert Panel have previously acknowledged, be negated where rates of connection and/or average usage is low because:[59]

> '…the unit cost for the provision of natural gas may be sufficiently high that competition from alternative energy sources provides an effective constraint on market power'.

As the following observations highlight, the circumstances described by the NCC and Expert Panel in this context are consistent with those faced by Allgas Energy:

- *Penetration rate and average consumption*: The penetration rate in Queensland is currently around 19%[60] while average residential consumption in the Allgas

[57] While it may be contended that APA's interest in both the Allgas Network (20%) and the RBP (100%) means that the risk of this form of bypass is low, it is worth noting that the RBP is subject to regulation and that any attempt by APA to prevent or hinder a connection to the RBP would contravene section 133 of the NGL. APA's interest in these two pipelines should not therefore be viewed as a barrier to this form of bypass.

[58] Because of the any to any supply characteristics of a network.

[59] NCC, Light regulation of covered pipeline services, July 2011, p. 44 and Expert Panel on Energy Access Pricing, Report to the Ministerial Council on Energy, April 2006, p. 14.

[60] ABS, 4602.0.55.001 Environmental Issues: Energy Use and Conservation, March 2011, Table 6.

Network is around 12.4 GJ[61] p.a. (or 8-9 GJ p.a. for new residential customers). When compared with the penetration rates and average consumption levels in other jurisdictions in eastern Australia, which range from 50-90% and 15-50 GJ p.a. (see section 3.2.1), it is clear that these utilisation metrics are quite low. The low values of these metrics in the Allgas Network are, as noted in section 3.2.1, primarily a function of the milder climatic conditions in Queensland and this is not expected to change in the future.

- *Competitiveness of alternative energy sources:* Because the penetration rate and average consumption levels are low, the unit cost of supplying natural gas via the Allgas Network is relatively high. Natural gas does not therefore enjoy the same cost advantage over electricity and LPG in Queensland that it does in some other jurisdictions. Competition from these alternative energy sources therefore acts as an important constraint on Allgas Energy's behaviour (see section 3.4).

It follows from these observations that the network externalities associated with operating a distribution network do *not* confer any market power on Allgas Energy.

The only other interdependencies that Allgas Energy is aware could *potentially* be viewed as conferring market power on it, is APA's 100% interest in the RBP. There are, however, two factors that must be borne in mind when considering the effect that this interest will have on Allgas Energy's market power:

- First, APA only has a minority interest in Allgas Energy (i.e. 20%), which means that it has *no* incentive to behave in a manner that will put the volumes transported on the RBP at risk (e.g. by making access or the price of access to the RBP conditional on a deal being reached on the Allgas Network).
- Second, the RBP is subject to regulation, which means that even if APA had an incentive to use its interest in the RBP to confer market power on the Allgas Network (which it doesn't), it will be prevented from doing so by sections 133[62] and 136[63] of the NGL.

APA's interest in the RBP should not therefore be considered an additional source of market power for Allgas Energy.

## 5.3 Factor (c): Externalities between natural gas services and other services provided by service provider

Form of regulation factor (c) requires consideration to be given to whether there are any network externalities (interdependencies) between a natural gas service provided by Allgas Energy and any other services it provides in any other market, which may accord it with an additional source of market power.

This form of regulation factor has previously been described by the NCC as requiring an assessment of whether the service provider has involvement in

[61] Note that this average includes multi-unit residential buildings, which are counted as a single customer.

[62] This section prohibits a service provider from engaging in conduct for the purpose of preventing or hindering the access of a person to the pipeline services.

[63] This section prohibits a service provider from engaging in price discrimination, unless it is conducive to efficient service provision.

upstream or downstream markets in the areas served by the pipeline for which light regulation is sought.[64]

Table 5.1 provides a summary of the other interests that Allgas Energy, GDI (EII), and GDI (EII)'s shareholders have in Queensland. The key points to note from this table are that:

- Neither Allgas Energy nor its owner, GDI (EII), has any upstream or downstream interests (i.e. they do not produce, retail or consume any of the gas transported via the Allgas Network).
- While Marubeni and APA have interests in a number of other assets in Queensland, the services provided by these assets do not constitute a network externality because they are either:
  - geographically remote (e.g. the Diamantina and X41 power stations); or
  - operationally separate from the Allgas Network (e.g. the Directlink interconnector, Daandine power station and coal seam processing plants).

There are therefore *no* network externalities between the services provided by the Allgas Network and other services provided by Allgas Energy or its owners.

[64] NCC, Gas Guide, October 2013, p. 92.

*Table 5.1: Other interests in Queensland*

| Entity | | Other interests |
|---|---|---|
| Service Provider | Allgas Energy Pty Ltd | Allgas Energy's sole business is the ownership and operation of the Allgas Network. It does *not* therefore produce, purchase or sell natural gas. |
| Owner of Allgas Energy | GDI (EII) Pty Ltd | The only asset that GDI (EII) Pty Ltd owns is the Allgas Network, which as noted above does not have any upstream or downstream interests. |
| Shareholders in GDI | SAS Trustee Corporation (40%) | The only relevant asset that SAS Trustee Corporation owns in Queensland is the Allgas Network, which as noted above does not have any upstream or downstream interests. |
| | Marubeni (40%) | Marubeni's interests in Queensland include:<br>▪ the Directlink interconnector (49.9%)<br>▪ the Daandine (west of Brisbane – operated under tolling arrangement with Arrow Energy) and X41 (Mt Isa) gas fired power stations (49.9%)<br>▪ coal seam gas processing plants in Tipton West and Kogan North (operated under tolling arrangements with Arrow Energy) (49.9%). |
| | APA (20%) | APA's interests in Queensland include:<br>▪ the Directlink interconnector (19.9%)<br>▪ the Daandine (west of Brisbane – operated under tolling arrangement with Arrow Energy) and X41 (Mt Isa) gas fired power stations (19.9%)<br>▪ coal seam gas processing plants in Tipton West and Kogan North (operated under tolling arrangements with Arrow Energy) (19.9%)<br>▪ the Diamantina power station in Mt Isa (50%)<br>▪ APT Facility Management Pty Ltd, which provides co-generation services to two hospitals in Toowoomba.<br>APA also provides operating, maintenance and asset management services to the QGDN under an outsourcing contract, but does not have any involvement in the running of the distribution network and since August 2014 has not had an equity interest in its owner. |

## 5.4 Factor (d): Countervailing power of users

Form of regulation factor (d) requires consideration to be given to the extent to which any market power possessed by Allgas Energy is, or is likely to be, mitigated by any countervailing power possessed by existing or prospective users of the Allgas Network.

The term countervailing power refers to the ability of users and/or prospective users to counter any market power a service provider may possess when negotiating the price and non-price terms and conditions of access. Whether or not a user will possess such power will depend on the following types of factors:

- the user's ability to credibly threaten to bypass the service provider, either by accessing a competing source of pipeline services, or by switching to an alternative energy source; or
- where the cost and demand circumstances are such that the service provider will be adversely affected by the failure of users, or a group of users, to take supply.

Before setting out Allgas Energy's view on the countervailing power possessed by its users, it is worth noting that not all users have to possess countervailing power. To the contrary, one user with countervailing power may be sufficient to constrain

the behaviour of the service provider, particularly given the operation of the non-discrimination provisions set out in section 136 of the NGL. In effect, this provision means that if the services provided by the Allgas Network are subject to light regulation, Allgas Energy will be obliged to offer all users any price advantage obtained by the user that has countervailing power.

### 5.4.1 Retailers

There are currently three retailers supplying gas in the Allgas Network: AGL, which accounts for XXX% of the gas delivered, Origin Energy, which accounts for XXX% and Alinta Energy, which accounts for the remaining XXX%.

For the reasons set out below, Allgas Energy is of the view that each of these retailers has sufficient countervailing power to effectively constrain any attempt by Allgas Energy to exercise market power (e.g. by raising prices or reducing service quality):

- AGL, Origin Energy and Alinta Energy are all sophisticated players in the energy market, operating across various facets of the energy supply chain in both electricity and gas. For example, AGL and Origin are both involved in gas exploration and production, electricity generation, energy retailing and, in Origin's case, LNG export facilities and associated pipelines. Alinta Energy, on the other hand, is involved in electricity generation, energy retailing and has an interest in a gas transmission pipeline.[65]
- Each of these retailers has extensive experience in negotiating access to gas distribution and transmission pipelines. They have all also owned and/or operated gas distribution networks and transmission pipelines,[66] so they have a detailed understanding of the costs of operating a pipeline. They can therefore be viewed as well informed buyers.
- All three retailers are in a strong position to threaten to bypass parts of the Allgas Network by developing or funding a pipeline that connects the RBP and their Demand customers in the Brisbane and Western regions, given their financial position and experience in pipeline development.
- All three retailers are able to offer their customers an alternative energy source, because they retail both gas and electricity and, in Origin Energy's case, LPG. Origin Energy and AGL are also in a position to help customers transition from gas to electricity because they have an appliance installation business and direct communication channels with their customers.

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[65] The pipeline that Alinta Energy has an interest in is the Goldfields Gas Pipeline in WA.

[66] For example:

- AGL used to own the gas distribution network in Sydney and was involved in the development of the Berwyndale to Wallumbilla Pipeline.
- Origin Energy used to operate the Australian Gas Networks distribution systems in Brisbane, Adelaide, Melbourne and other areas in Australia and was involved in the development of a number of transmission pipelines, such as the SESA pipeline, the SEA Gas Pipeline, the Port Campbell to Mortlake Pipeline and the Wallumbilla to Darling Downs Pipeline.
- Alinta Energy used to operate the gas distribution network in Perth and also has an interest in the Goldfields Gas Pipeline in WA.

The latter two of these points are of particular importance and highlight both the extent of the retailers' countervailing power and the symbiotic nature of the relationship between Allgas Energy and the retailers.

In relation to other prospective retailers, it is worth noting that even if they don't possess the same degree of countervailing power as AGL, Origin Energy or Alinta Energy, they will, by virtue of the operation of section 136 of the NGL, still be able to access equivalent services at the same price as these retailers.

### 5.4.2 Demand customers

Demand customers that are able to credibly threaten to bypass the Allgas Network by connecting directly to the RBP or using an alternative energy source, can also be expected to have countervailing power when negotiating (either directly or indirectly via a retailer) access.

The extent of this countervailing power can be seen in both:

- The 'group bypass' methodology, which has been used to determine the reference tariffs payable by large customers that could bypass the Allgas Network by connecting to the RBP (see section 3.4.3). In 2013-14, the group bypass rate was being accessed by XXX Demand customers (~XXX% of Demand customers), who jointly accounted for XXX% of the capacity reserved by all Demand customers across the Allgas Network.
- The special negotiated rates and/or prudent discounts that are applied to other customers that can viably bypass the Allgas Network (e.g. by switching to an alternate fuel source or another provider of pipeline services). In 2013-14 there were XXX such customers and they jointly accounted for XXX% of the capacity reserved by all Demand customers across the Allgas Network.

### 5.4.3 Small customers

Residential and other small customers also have a reasonable degree of countervailing power, particularly when their appliances are nearing the end of their lives because gas appliances (e.g. hot water or cooktops) are perfectly substitutable by electricity or LPG appliances. This countervailing power is further strengthened by the fact that:

- gas does not have a clear competitive advantage over electricity or LPG; and
- a large proportion of residential customers have only one gas appliance, which makes it easier and cheaper to completely disconnect when the appliance comes to the end of its life.

The fact that both the penetration rate and average consumption levels for new residential customers are so low in the Allgas Network is a clear indicator of the bypass and fuel substation options available to small customers and the strength of their countervailing power.

### 5.4.4 Summary

Based on the observation set out above, it is clear that retailers and a number of Demand customers already possess a significant degree of countervailing power

and are prepared to draw upon this when negotiating (either directly or indirectly) with Allgas Energy. Small customers also exhibit a significant degree of countervailing power, particularly when their appliances are nearing the end of their lives.

## 5.5 Factor (e): Substitutes in the market for the pipeline service

Form of regulation factor (e) requires consideration to be given to whether the presence and extent of any substitutes for the services provided by the pipeline may act as a constraint on the market power that Allgas Energy may otherwise possess.

One obvious option that is available to Demand customers located in the Brisbane and Western regions of the Allgas Network is to connect directly to the RBP, either individually or with a group of other customers in its local area.[67] Further detail on this option is provided in section 3.4.3.

As the discussion in section 3.4.3 highlights, the prices that Allgas Energy charges large customers located in close proximity to the RBP already reflects the risk posed by this bypass option. Competition from this source can therefore be viewed as a credible threat to Allgas Energy and an important constraint on its behaviour. Some insight into the significance of this threat can be found in the fact that in 2013-14:

- XXX% of the capacity reserved by Demand customers was subject to the group bypass rate; and
- another XXX% of the capacity reserved by Demand customers was subject to a prudent discount, because the customers can viably bypass the Allgas Network by either switching to another provider of pipeline services or an alternative energy source.

While on this topic, it is worth noting that although APA has a 100% interest in the RBP it would be prevented from trying to prevent this bypass occurring by section 133 of the NGL, which prohibits a covered pipeline service provider from engaging in conduct for the purpose of preventing or hindering access. Prospective users could also have recourse to the dispute resolution mechanism if APA tried to discourage entry by setting the connection cost at a prohibitive level. APA's interest in both the RBP (100%) and Allgas Network (20%) should not therefore be viewed as an impediment to this form of bypass.

## 5.6 Factor (f): Substitutes in the market for electricity or gas

Form of regulation factor (f) requires consideration to be given to whether there are any other substitutes in a market for electricity or gas, as the case may be, that may act as a constraint on the market power Allgas Energy may otherwise possess.

Before looking at the alternative fuel sources available to end-users in the Allgas Network, it is worth considering the following observations on the substitutability of natural gas, which were made by the Expert Panel in its 2006 report to the MCE:

[67] Note that while there would be costs involved in developing a connecting pipeline, the costs would be lower over the life of the asset than what would be payable if Allgas Energy stopped using the group stand-alone cost methodology to determine the prices for these customers.

> 'Gas and electricity markets also display different characteristics in terms of the price elasticity of demand and the ability of consumers to seek substitutes. Energy services, and in particular electricity services, are generally considered to have relatively inelastic demand. This inelasticity reflects the essential nature of electricity to commercial and industrial activity and to modern domestic life. This is less so for gas which is considered to be a 'fuel of choice'; meaning that it is subject to more competition from substitutes.
>
> While the cost of network services is only part of the final energy price seen by energy consumers, the energy price responsiveness of users can impose some constraints on the exercise of market power in some circumstances.
>
> For gas, it could be said that there is a stronger substitution effect, particularly for locations that do not require space heating in any great extent. Electricity, in general, provides a better substitute for gas than gas does for electricity. Consumers are better able to exercise a choice on the source of their energy supply where there are competing sources of supply to a common area.'

Two of the observations that the Expert Panel made in this extract, which are of particular relevance to the Allgas Network are that:

- gas is a 'fuel of choice', meaning it is subject to more competition from substitutes; and
- the substitutability of electricity for gas is likely to be particularly strong in 'locations that do not require space heating in any great extent'.

The influence of these two factors on the Allgas Network can clearly be seen in the low penetration rates and relatively low average and declining consumption levels.

Another important factor that directly affects the substitutability of gas in Queensland is that, unlike other jurisdictions, it does *not* have a clear competitive advantage over other fuels. The lack of a competitive advantage reflects a range of factors, including the wholesale price of gas and the impact of low penetration rates and low average consumption on the unit cost of transporting gas to end-users.

The latter of these points was touched on by the NCC in its October 2013 Gas Guide:[68]

> '…even in large gas markets, where rates of connection and/or average usage is low, then the unit cost for the provision of natural gas may be sufficiently high that competition from alternative energy sources provides an effective constraint on market power.'

Turning now to the alternative forms of energy available to end-users of the Allgas Network.

As noted in section 3.4, residential customers (which account for the largest proportion of the Allgas Network customer base), predominantly use gas for hot water and/or cooking. Both of these appliances are perfectly substitutable for electricity or LPG appliances. The prices of electricity and LPG can therefore be expected to act as a constraint on Allgas Energy's pricing decisions, particularly when appliances come to the end of their lives and customers are deciding whether to continue to use gas or to switch to an alternative energy source.

[68] NCC, Gas Guide, October 2013, p. 86.

Another important point to bear in mind with the ability of small customers to substitute to an alternative energy source is that about one third of the residential customers in Queensland only have a single appliance.[69] Their switching costs are therefore lower than what might be observed in other jurisdictions because they only need to replace one asset.

For commercial customers, the alternative energy sources primarily include electricity and LPG. The substitutability of gas and LPG is particularly strong for commercial customers that exhibit a seasonal demand for gas; while the fuel cost of LPG may be higher, once the fixed charges associated with the transportation of natural gas are taken into account, it can be more expensive than LPG if the fuel is only required for part of the year. The price of LPG therefore acts as an important constraint on the prices that can be charged to these customers, which is borne out in the negotiated discounts that Allgas Energy currently applies to [information redacted].

For Demand customers the options will depend on their production processes, but could include electricity, LPG or biomass, diesel or coal to generate heat. While the competitive constraint imposed by these alternative fuels may not be as great as it is for the other customer segments, these customers do have the option of connecting directly to the RBP and continuing to use gas. It is this more direct form of competition that constrains Allgas Energy's pricing behaviour for this customer segment.

## 5.7 Factor (g): Access to information

Form of regulation factor (g) requires consideration to be given to whether there would be adequate information available to users and prospective users to enable them to negotiate in an informed manner with Allgas Energy under light regulation.

If the services provided by the Allgas Network are subject to light regulation then Allgas Energy will be required to:

- Publish the price and non-price terms and conditions of access to its services on its website (rule 36). In keeping with section 136 of the NGL and the current Allgas Network tariff structure, Allgas Energy intends to apply the same price to customers seeking equivalent services (e.g. the Volume Customer Service, Demand Customer Service and ancillary services) unless it is efficient to deviate from this (e.g. to reduce the risk of bypass).
- Comply with the facilitation of, and request for, access provisions in Part 11 of the NGR, which, amongst other things, will require Allgas Energy to:
  - comply with any notices the AER issues to provide (at the request of a prospective user) information that the prospective user reasonably requires to decide whether to seek access to a pipeline service (rule 107); and
  - respond as soon as practicable to any request by a prospective user for the tariff that will apply to the service it is seeking (rule 108).
- Report on the outcome of access negotiations to the AER (rule 37).

[69] Grattan Institute, Gas at the crossroads, October 2014, p. 16.

- Continue to submit an annual compliance report to the AER[70] and comply with any RIN issued by the AER under section 42 of the NGL.

Other publicly available sources of information that can be expected to assist users with and prospective users when negotiating access include:

- the historic AA and AAI for the Allgas Network, which contain a significant amount of information on how prices have been calculated to date, the efficient costs of operating the network and non-price terms and conditions of access;
- GDI (EII)'s annual financial report, which is submitted to the AER on an annual basis as part of the compliance reporting process and contains information on the value of the Allgas Network, operating costs, capital expenditure, depreciation, financing costs and the revenue earned by the network; and
- regulatory determinations for other gas distribution networks, which will contain information on an appropriate rate of return and expenditure benchmarks.

In addition to these public sources of information, a prospective user could obtain advice from an industry consultant on prices and other terms and conditions. AGL, Origin Energy and Alinta Energy will also be able to draw on the extensive experience they have had in developing, owning and operating pipelines (including distribution networks), when negotiating prices.

In Allgas Energy's view, the information disclosure requirements set out in the NGL and the NGR, coupled with the other publicly available information, will provide users and prospective users with sufficient information to enable them to negotiate effectively if the services provided by the Allgas Network are subject to light regulation.

## *5.8 Effectiveness of other safeguards*

Two other matters that Allgas Energy has considered when assessing the effectiveness of light regulation in promoting access to the Allgas Network are:

- the extent to which the dispute resolution mechanism is likely to be effective in resolving any access dispute that may arise; and
- how effective the other safeguards available under light regulation are likely to be (see section 4.2).

### 5.8.1 Effectiveness of the access dispute mechanism

In Allgas Energy's view, the possibility of an access dispute arising on the Allgas Network if it's subject to light regulation and proceeding to mediation or arbitration is remote in this case, given:

- the incentive it has to encourage greater utilisation of the Allgas Network and the constraints on its ability to exercise market power;
- the strong incentive it has to reach a negotiated outcome given:

[70] Amongst other things, this reporting requirement requires the service provider of a light regulation pipeline to provide information on access negotiations, ring-fencing arrangements, associates and to report on compliance with a number of provisions in the NGL (see section 4.2.3).

- the costs that may be incurred if an agreement cannot be reached and proceeds to mediation or arbitration;
- the informed nature of the dispute resolution body: the AER; and
- the potential for an access dispute to be viewed by the NCC as an indication that full regulation should be reinstated if a party makes an application to have the light regulation determination revoked.

- the success other service providers have had to date in negotiating contracts with retailers and other users on light regulation and uncovered networks, as evidenced by the fact that there have been no access disputes to date.

Setting this aside, if a dispute about the terms and conditions of access was to arise, then the user or prospective user could have recourse to the dispute resolution mechanism in the NGL and NGR.

In Allgas Energy's view, this mechanism will afford users and prospective users a considerable degree of protection, because the AER has:

- a detailed understanding of the costs of operating a gas distribution network through its role as the economic regulator of full regulation pipelines; and
- a well-established methodology for determining prices and is likely to deploy the same methodology when determining an access dispute.

Initiators of the access dispute can therefore be confident in the AER's ability, as the dispute resolution body, to make an informed determination and to reach the same decision as it would have if the network was subject to full regulation.

While it may be contended that an access dispute is more likely to occur under light rather than full regulation and may occur with greater frequency, it is worth noting that there have been no access disputes to date on either full or light regulation pipelines. The lack of any such disputes simply highlights the fact that the parties have the right incentive to negotiate and reach a commercial agreement that is at least as good as (if not better) than would be obtained were the AER to determine the price using the approach applied under full regulation.

It is also worth noting that if the access dispute provisions were triggered then the likelihood of there being more than one arbitration in a contracting cycle can expected to be low given:

- the AER's ability to join access dispute proceedings if it would otherwise be conducting two or more dispute hearings at a particular time and if one or more matters are common across the proceedings; and
- the operation of section 136 of the NGL, which will confer on all access seekers the right to access the price established through the arbitration proceedings for an equivalent service.

For the reasons set out above, Allgas Energy is of the view that if, in the unlikely event a dispute arises, then the dispute resolution mechanism will provide an effective mechanism for resolving the dispute.

### 5.8.2 Effectiveness of other safeguards

If the Allgas Network is subject to light regulation, Allgas Energy expects the safeguards set out below to operate as they are intended to under the NGL and NGR. That is, they will ensure that it does not engage in any activities that could adversely affect third party access and/or competition in upstream or downstream markets. Specifically, Allgas Energy will be prevented from engaging in:

- conduct that prevents or hinders a person's access to the pipeline services;[71]
- price discrimination, unless it is conducive to efficient service provision;[72]
- behaviour that could adversely affect competition in a related market by carrying on a related business, or conferring an advantage on an associate.[73]

In addition to these safeguards, users and prospective users will be able to apply to have the light regulation determination revoked if they have any concerns about Allgas Energy exercising market power.

## *5.9 Conclusion on the effectiveness of light vs full regulation*

For the reasons set out above, Allgas Energy is of the view that light regulation will be no less effective than full regulation in terms of promoting access to the Allgas Network and will result in prices and non-price terms and conditions of access that are the same as, if not better than, what would prevail under full regulation. The reasons for this are four-fold.

First, Allgas Energy does not possess a significant degree of market power. That is, while the Allgas Network exhibits the standard natural monopoly characteristics, the proximity of the RBP to the network means that the barriers to supplying certain parts of the network are low. The absence of any network externalities further reinforces the limited nature of Allgas Energy's market power.

Second, any market power that Allgas Energy may be said to possess, by virtue of the fact that the network is a natural monopoly, will be more than offset by the commercial imperative it has to encourage greater utilisation of the network given declining consumption and the structural changes underway in the broader market. It will also be constrained by:

- the ease with which large customers in the Brisbane and Western regions can bypass the Allgas Network by connecting directly to the RBP;
- the substitution threat posed by alternative energy sources, such as electricity and LPG (particularly for smaller customers and commercial customers), which is significant in Queensland because they are readily available and gas does not have a clear competitive advantage over these energy sources; and
- the countervailing power possessed by retailers, a number of large customers and small customers when their appliances are reaching the end of their lives.

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71 Section 133 of the NGL.

72 Section 136 of the NGL.

73 Sections 137-148 of the NGL.

Importantly, these constraints will apply irrespective of the form of regulation will apply and can be expected to impose greater discipline on Allgas Energy when negotiating the price and non-price terms and conditions of access than full regulation. Further support for this view, can be found in the fact that existing tariffs (both reference and negotiated tariffs) already reflect the opportunity that customers have to bypass the Allgas Network.

Third, the information required by users to enable them to negotiate effectively with Allgas Energy will be available under light regulation. Further cost information can be derived from public information and industry sources. The current group of retailers can also be expected to draw on the experience they have had in developing and/or operating gas distribution networks and their knowledge of the prices and non-price terms and conditions applying on other networks.

Fourth, the dispute resolution mechanism and other safeguards set out in the NGL and NGR will impose further discipline on Allgas Energy and provide users and prospective users with an appropriate level of protection if negotiations break down.

# 6 Comparative Costs of Light and Full Regulation

The second matter the NCC is required to consider under section 122(1)(b) of the NGL is the effect of full and light regulation on the likely costs that may be incurred by an efficient service provider, efficient users and prospective users, and end users.

The remainder of this section sets out Allgas Energy's assessment of the likely costs of these two alternative forms of regulation.

## *6.1 Likely costs of full regulation*

The costs associated with full regulation are primarily incurred in the following processes:[74]

- The AA review process, which typically occurs every five years and involves:
  - the preparation and submission of a full AA, Access Arrangement Information (AAI) and other supporting information by the service provider and the preparation of responses to the AER's draft decision;
  - the submission of comments on the proposed AA and the AER's draft decision by users, industry groups and/or consumer groups; and
  - a detailed review of the proposed AA and AAI by the AER and its consultants and the publication of a draft and final decision.

  This process can take up to two years to complete, once the time the service provider requires to prepare the AA and AAI is taken into account.
- The merits review process, which may or may not be triggered at the end of an AA review process. If this process is triggered then the service provider, the AER and any other parties that are granted leave to appeal must prepare a statement of facts, issues and contentions and appear before the Australian Competition Tribunal (ACT).
- The AA and NGL compliance process, which involves, amongst other things:[75]
  - compliance with annual Regulatory Information Notices (RIN) issued by the AER, which must be independently audited;
  - the preparation of annual tariff variations in line with the AA; and
  - ensuring ongoing compliance with other aspects of the AA.

While the latter of these processes give rise to some ongoing costs, most of the costs associated with full regulation are incurred in the AA review process and any merits review process that may follow. The costs incurred in these processes are primarily borne by the service provider and the AER, although users, industry

[74] Service providers of full regulation pipelines will also incur costs making submissions to reviews and rule changes that affect pipelines that are subject to full regulation. These costs have not, however, been included in the estimate.

[75] As part of the AA and NGL compliance process service providers are also required to submit an annual report to the AER, which demonstrates their compliance with the provisions set out in section 4.2.3 and other NGL provisions. This requirement applies equally to both full and light regulation pipelines and has not therefore been included in the cost estimates.

groups and/or consumer groups that choose to participate in these processes may also incur some costs.

Allgas Energy's estimates of the costs that are likely to be incurred by each party under full regulation are outlined below.

### 6.1.1 Costs likely to be incurred by Allgas Energy

The main costs that Allgas Energy will incur if the network continues to be subject to full regulation are:

- the costs of preparing the full AA, AAI and supporting information and participating in the review process;
- where relevant, the costs of participating in a merits review process; and
- the ongoing costs of complying with the AA and NGL provisions and responding to rule changes that affect distribution networks.

The next AA for the Allgas Network is due to be submitted to the AER in July 2015 and take effect from 1 July 2016.

A good starting point for estimating the costs that Allgas Energy would incur in the AA process if it remains subject to full regulation, is the costs that it incurred in the last AA review, which was conducted in 2010-11 and progressed through to a merits review.[76] In this case, Allgas Energy spent $0.9 million on the AA and merits review process.

These costs were incurred four to five years ago and are therefore somewhat outdated. Another more recent AA review process that Allgas Energy thinks is a useful indicator of the costs that an efficient service provider would incur is the APA GasNet review, which was carried out in 2013. In this case, APA spent approximately $2.2 million on both the AA and merits review process.

In the period following the APA GasNet review, a number of changes have been made to the regulatory process and framework, which can be expected to give rise to even higher costs if the Allgas Network remains subject to full regulation. These changes include:

- The requirement that service providers undertake a robust customer consultation process[77] prior to submitting the AA and AAI to the AER, which Allgas Energy estimates would cost around $0.25 million over a five year period.[78]
- Revisions to the rate of return provisions in the NGR and the publication of the AER's rate of return guideline, which Allgas Energy expects will add at least $0.2 million to the cost of an AA review because the guideline departs from the

[76] The merits review in this case involved a single issue: the calculation of the debt risk premium.

[77] The types of activities that would have to be carried out as part of the consumer engagement process include: informing consumers about the regulatory process and key issues facing the network; getting feedback from consumers about their preferences and willingness to pay for changes to service standards.

[78] Jemena Gas Networks (JGN) is the first gas distribution network that has had to comply with this requirement and based on its experience to date, it has forecast that it will spend approximately $0.5 million on customer engagement over the next five years. While Allgas Energy is unlikely to incur the same level of costs as JGN given the smaller size of the network, it would still expect to spend around $0.25 million on complying with this requirement if it remains subject to full regulation.

Jemena Gas Networks, 2015-20 AAI, 30 June 2014, p. 76.

approach employed in prior decisions, including prior decisions by the ACT. The likelihood of a merits review has also increased following this change.

Given the nature of these changes and the amount spent by APA in the recent APA GasNet review, Allgas Energy would expect to spend approximately $2.65 million on an AA and merits review process if it remained subject to full regulation.

In addition to the costs associated with the AA review and merits review processes, Allgas Energy will incur ongoing AA compliance costs. Based on Allgas Energy's experience, it would expect these costs to be around $0.1 million over a five year period (or $20,000 p.a.), once the costs of obtaining independent auditor sign off for the RINs are taken into account.[79]

The total cost that Allgas Energy is likely to incur if it remains subject to full regulation is therefore around **$2.75 million** over a five year period**.**

### 6.1.2 Costs likely to be incurred by the regulator

The costs that the AER is likely to incur under full regulation include the costs associated with:

- reviewing and approving the AA;
- participating in a merits review process, where relevant; and
- monitoring a service provider's compliance with the NGL, NGR and AA.

To put these matters into context, it is worth noting that the last Allgas Network AA review process took the AER nine months to complete and as part of this process it obtained 10 expert reports. It was also a party to the merits review process that followed the last AA, which would have given rise to additional costs.

Information on the costs incurred by the AER on specific AA and merits review processes is not publicly available. Allgas Energy is aware though that the AEMC has previously estimated that the direct costs of a revenue or price assessment process range from $0.5 million to $3 million.[80] While the costs incurred by the AER are likely to have increased in the five years since this estimate was published, it still provides a useful guide to the costs that the AER is likely to incur when assessing an AA for a pipeline of the size of the Allgas Network.

Based on what transpired in the last AA and merits review process and the additional sources of costs set out below, Allgas Energy would expect the AER's costs to fall towards the middle of the AEMC's range (i.e. $**1.75 million)**:[81]

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[79] Note that this estimate does not included the compliance costs that Allgas Energy would also face under light regulation.

[80] AEMC, Perspectives on the building block approach, 30 July 2009, p. 10.

[81] The AER's latest annual report indicates that it spent approximately $21.5 million in 2013-14 on employee costs ($18 million), external consultants and legal costs ($2 million), travel ($0.4 million) and other direct costs ($1.1 million). Of the $21.5 million, 53% was reportedly spent on the Energy Networks Group and a further 12% was spent on the Technical Advisors Group and Executive, which according to the AER was drawn on 'heavily' by the network regulation area. 65% of $21.5 million equates to around $14 million for energy network regulation. In its discussion on the costs incurred on external consultants in 2013-14, the AER noted that expenditure on consultancies is 'likely to remain significant in the short term, given the large number of network pricing decisions due in the next three years'.

See AER, Annual Report 2013-14, pp. 101-103.

- the costs of constituting a Consumer Challenge Panel for the AA review;
- the costs of the Better Regulation program, which are assumed to be spread across all assets subject to full regulation; and
- the costs of monitoring compliance with the NGL, NGR and AA.

If the costs incurred by the ACT in a merits review process were also taken into account, this number would obviously be higher.

### 6.1.3 Costs likely to be incurred by users

For users that decide to participate in the AA review process, costs may be incurred in:

- preparing responses to the proposed AA and AER draft decision and participating in customer consultation processes or stakeholder workshops; and
- participating in a merits review if they are granted leave to appeal.

While it is difficult to estimate with any degree of precision how much stakeholders would incur in this process, Allgas Energy would expect the costs to be relatively low when compared with the costs incurred by the AER and the service provider. Allgas Energy has therefore adopted a relatively conservative estimate of $0.1 million for the total cost that **all** stakeholders would incur during the AA review process.

### 6.1.4 Costs likely to be incurred by end-users

For retail customers, the costs of full regulation will depend on the extent to which the retailer passes these costs on. In principle though, the costs should include:

- any costs the retailer incurs if it participates in the AA review process; and
- the share of Allgas Energy's costs that are included in the reference tariff.

For those users of the Allgas Network that are also end-users, the costs of full regulation would include:

- any direct costs they incur if they participate in the AA review process; and
- a share of the regulatory costs incurred by Allgas Energy that the AER allows to be recovered through the reference tariff.

Based on the estimates set out above, the total cost that end-users are likely to face if the Allgas Network remains subject to full regulation is $2.85 million (i.e. Allgas Energy's costs plus users costs).

### 6.1.5 Total costs of full regulation

In total, Allgas Energy estimates that full regulation would cost approximately **$4.6 million** over a five year period if the network remains subject to full regulation (Allgas Energy: $2.75 million, AER: $1.75 million and users and other stakeholders: $0.1 million).

## *6.2 Likely costs of light regulation*

Under light regulation, the costs that the various parties could incur include the costs associated with:

1. publishing the price and non-price terms and conditions of access on the service provider's website and making other information available to users;
2. complying with the NGL and NGR reporting obligations;
3. negotiating access to the services provided by the pipeline;
4. participating in an access dispute if, notwithstanding the strong incentive a service provider has to reach an agreement, negotiations fail and the dispute resolution mechanism is triggered; and
5. developing a limited AA, if the service provider elects to do so.

The first two of these costs would be incurred under both full and light regulation, so have not been considered any further in this analysis. In relation to the other costs, it is worth noting that the development of a limited access arrangement is not mandatory and that the access dispute related costs can also be avoided.

The remainder of this section sets out Allgas Energy's estimates of the costs that could be incurred by each party under items 3-5. Before moving on though, it is worth noting that unlike full regulation where the costs are primarily borne by the service provider and the AER, most of the costs under light regulation are borne by the service provider, users and prospective users.

### 6.2.1 Costs likely to be incurred by Allgas Energy

***Negotiating costs***

The main cost that Allgas Energy will incur under light regulation is the cost of negotiating the price and non-price terms and conditions of access to the network. While Allgas Energy already incurs costs when negotiating the commercial agreements that govern access to the Allgas Network, these agreements tend to mirror the terms of the approved AA. So Allgas Energy would expect to incur some additional costs when negotiating access under light regulation.

To determine what these additional costs are likely to be, Allgas Energy has had regard to the following factors:

- There are currently just three shippers using the Allgas Network. While the number of shippers may increase slightly in the future, there are unlikely to be a large number of end-users wanting to contract directly with Allgas Energy because they would need to be of a particular scale to contract directly with upstream producers. The fixed cost nature of gas supply and transportation is also likely to act as a deterrent to all but the largest users.
- The gas transportation contracts typically have a term of five years.
- Information provided by APA indicates that the negotiation costs for light regulation and unregulated pipelines can range from:
  - as little as $1,000 for shippers that accept the standard price and non-price terms and conditions; *to*
  - over $50,000 for complex contracts where shippers require material deviations from the standard non-price terms and conditions.

APA has also informed Allgas Energy that a contract it recently negotiated with a retailer on one of its unregulated pipelines cost it approximately $29,000 to negotiate.

Based on the transportation contracts that are currently in place on the Allgas Network, Allgas Energy would not expect to be negotiating complex amendments to the standard terms and conditions. It is therefore of the view that the $29,000 APA recently spent negotiating access with a retailer is a better indicator of the upper bound of the range on costs that it would incur negotiating with shippers in its network.

- The prohibition in section 136 of the NGL on inefficient price discrimination, which when coupled with the requirement in rule 36 for the conditions of access to be published on a website, means the same price and non-price terms and conditions of access to a particular service will apply to all parties for equivalent services, unless it is efficient to deviate from this.[82]

Together these factors suggest that over a five year period, the cost to Allgas Energy of negotiating access is likely to be around $0.2 million.

***Access dispute costs***

For the reasons set out in section 5.8, the possibility of a dispute arising and proceeding to an access determination is remote in this case. Nonetheless Allgas Energy has given some thought to the costs that it could incur if the dispute resolution mechanism in the NGL was triggered. While it is difficult to be definitive about what these costs are likely to be,[83] Allgas Energy would expect that if a dispute arose and could not be resolved amongst the parties then:

- the scope of the dispute is likely to be quite narrow (e.g. it may just be about the rate of return used to calculate price, or delivery points or other specific terms and conditions of access) when compared to the standard AA review; and
- the dispute is likely to be resolved quickly given the AER's existing experience in this area and the fact that the network has already been subject to three AAs.

The costs to Allgas Energy of participating in the arbitration process are therefore likely to be quite low. Estimates developed by Envestra suggest that the costs could be around $0.1 million (assuming 15 days of expert legal advice and 20 days of internal labour, or similar).[84] Allgas Energy thinks these assumptions are reasonable and has therefore adopted the same estimate.

Because any determination the AER makes about prices or other general terms and conditions is likely to flow directly through to other users and prospective users (i.e. by virtue of section 136 of the NGL), the likelihood of another arbitration occurring in

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[82] For example, to reduce the risk of bypass via the RBP or by switching to an alternative fuel.

[83] It is difficult to be definitive because:

- the scale of the costs will depend on how significant the disputed matter is and whether the dispute proceeds all the way to an access determination or is resolved through mediation; and
- there have been no access disputes to date that have proceeded to arbitration

[84] Envestra, Application for Light Regulation of Envestra's Queensland Gas Distribution Network, 15 August 2014, p. 45.

the five year contracting cycle is remote.[85] Allgas Energy would not therefore expect its costs to exceed $0.1 million in this period.

***Limited AA***

Section 116 of the NGL allows a service provider to develop a limited AA (setting out the non-price terms and conditions of access) and have this approved by the AER. Because this is not a mandatory requirement, a service provider is only likely to go down this path if it is expected to reduce the costs of negotiating the non-price terms and conditions with multiple access seekers.

Because the negotiation cost estimate set out above already includes an implicit allowance for negotiating the non-price terms and conditions of access, it is not necessary to make any additional provision for this option in the estimate of the costs that Allgas Energy is likely to incur under light regulation. The costs the AER is likely to incur though if a limited AA is submitted are considered below.

### 6.2.2 Costs likely to be incurred by users and prospective users

In a similar manner to Allgas Energy, the main cost that users and prospective users will incur under light regulation is the cost of negotiating access to the network. Given the amount of information that is already in the public domain about the costs of operating the Allgas Network and the operation of non-discrimination provisions in section 136 of the NGL, Allgas Energy would not expect users or prospective users' negotiating cost to be any different to the costs it would incur (i.e. $0.2 million over a five year period).

Allgas Energy has similarly assumed that if, on the off chance, an access dispute arises and proceeds to arbitration, the user or prospective user that is a party to the arbitration would incur roughly the same costs it does (i.e. $0.1 million).

### 6.2.3 Costs likely to be incurred by the AER

Under the light regulation option, the AER would only incur costs if the dispute resolution mechanism is triggered, or if Allgas Energy decides to submit a limited AA.

As noted in section 6.2.1 it is difficult to know precisely how much the AER would incur if the dispute resolution mechanism is triggered and the dispute proceeds to arbitration. However, given the AER's existing knowledge in this area and the likely narrowness of the scope of the dispute, Allgas Energy would expect the AER's costs to be around the same level as its own (i.e. $0.1 million).

In addition to these costs, the AER could incur some costs in reviewing and approving a limited AA if this option was taken up by Allgas Energy. Because the limited AA only relates to non-price terms and conditions and the AER is only required to publish its final decision,[86] the costs of reviewing the AA are likely to be low. Estimates developed by Envestra suggest the AER's costs could be as low as $0.1 million, if it is assumed the AER obtains five days of expert advice and 40 days

[85] It is worth noting that Chapter 6, Part 7 of the NGL also allows the AER to conduct a joint access dispute hearing if there are common matters to be decided. This ability further reduces the likelihood of another arbitration occurring.

[86] Unlike a full AA, the AER does not have to publish both a draft and final decision.

of internal labour, or similar.[87] Allgas Energy thinks these assumptions are reasonable and so has adopted the same estimate.

### 6.2.4 Costs likely to be incurred by end-users

For end-users of the Allgas Network, the costs of light regulation will just include the costs to the user or retailer of negotiating access, a share of Allgas Energy's negotiating costs (which will be reflected in the network charges) and, where relevant, the costs of resolving any access dispute.

Based on the estimates set out above, the total cost that end-users are likely to face under light regulation is:

- $0.4 if the dispute resolution provisions are not triggered; and
- $0.6 million if the dispute resolution provisions are triggered.

### 6.2.5 Total costs of light regulation

Based on the assumptions set out above, Allgas Energy has estimated that if the Allgas Network is subject to light regulation then the total cost of negotiating access over a five year period is likely to be around $0.4 million. If a decision is made to submit a limited AA to the AER then the cost of light regulation could increase by $0.1 million, while if a dispute about access arises then the cost could increase by a further $0.3 million. The costs of light regulation can therefore be expected to fall within a range of **$0.4 - $0.8 million** over a five year period (Allgas Energy: $0.2-$0.3 million, AER: $0-$0.2 million and users and prospective users: $0.2-$0.3 million).

## *6.3 Comparison between costs of full and light regulation*

The difference between Allgas Energy's estimates of the costs associated with full and light regulation over a five year period is set out in the table below.

*Table 6.1: Estimates of the costs of full vs light regulation ($ million over five years)*

| | Full regulation | Light regulation | Difference (Full- Light) |
|---|---|---|---|
| Allgas Energy | $2.75 | $0.20 – $0.30 | $2.45 – $2.55 |
| Users and prospective users | $0.10 | $0.20 – $0.30 | -$0.20 – -$0.10 |
| AER | $1.75 | $0 – $0.20 | $1.55 – $1.75 |
| **Total Cost** | **$4.60** | **$0.40 – $0.80** | **$3.80 – $4.20** |
| **Likely cost to end-users** | **$2.85** | **$0.40 – $0.60** | **$2.25 – $2.45** |

As this table reveals, the total cost of full regulation is expected to be $3.8-$4.2 million *higher* than the cost of light regulation over a five year period. Given the conclusion reached in section 5.9 that light regulation will be just as effective as full

[87] Envestra, Application for Light Regulation of Envestra's Queensland Gas Distribution Network, 15 August 2014, p. 44.

regulation in promoting access to the Allgas Network, this cost differential can be viewed as an unnecessary impost, the effects of which will ultimately be borne by end-users.

Another important point to note from this table is that the parties that bear most of the costs differs under both forms of regulation, with Allgas Energy and the AER bearing about 98% of the costs under full regulation, while under light regulation Allgas Energy, users and prospective users bear around 75-100% of the costs. While the distribution of costs differs, what really matters under the NGO is the total cost to end-users. As the final row of the table highlights, the total cost to end-users is approximately $2.25-$2.45 million higher under full regulation than it would be under light regulation over a five year period.

# 7 Consistency with the NGO

In considering whether or not to make a light regulation determination, the NCC is required by section 122(2)(a) of the NGL to have regard to the NGO, which states the following:

> The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

To be consistent with this objective, light regulation should:

- be as effective in promoting access as full regulation; and
- promote a greater degree of efficiency in the provision of natural gas services than would otherwise occur under full regulation.

As the analysis in section 5 demonstrated, light regulation will be as effective as full regulation in this case, while section 6 demonstrated that the costs of light regulation would be lower than the costs of full regulation. The remainder of this section therefore focuses on whether light regulation will promote a greater degree of productive, allocative and/or dynamic efficiency than full regulation.

## *7.1 Productive efficiency*

Productive efficiency is said to occur when services are supplied at the lowest sustainable cost (taking into account safety and service level obligations), using the least-cost combination of inputs.[88]

As the comparative analysis in section 6 highlighted, Allgas Energy's costs would be approximately $2.35-$2.45 million *lower* under light regulation than they would be under full regulation over a five year period.

A decision to subject the services provided by the Allgas Network to light regulation can therefore be expected to result in a material improvement in productive efficiency, the benefits of which will be passed through to users in the form of lower network charges.

## *7.2 Allocative efficiency*

Allocative efficiency is said to occur when prices reflect the efficient cost of service delivery and service levels what customers are willing to pay for.[89]

As the analysis in section 5 demonstrated, Allgas Energy does not have a significant degree of market power and any market power it can be said to possess will be constrained by a range of factors, including its own commercial incentive to encourage greater utilisation of the network.

The price and non-price terms and conditions of access to the Allgas Network arising under light regulation can therefore be expected to be the same, if not better than what would prevail under full regulation, once the costs of full regulation are taken into account.

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[88] This form of efficiency is consistent with the 'efficient operation of natural gas services' element of the NGO.

[89] This form of efficiency is consistent with the 'efficient utilisation of natural gas services' element of the NGO.

A decision to subject the services provided by the Allgas Network to light regulation can therefore be expected to give rise to a greater degree of allocative efficiency than full regulation.

## 7.3 Dynamic efficiency

Dynamic efficiency is said to occur when allocative and productive efficiency are achieved jointly over time. This term is also used to refer to a service provider's ability to adapt over time to changes in consumer preferences and/or technology by implementing measures that result in cost reductions, service quality improvements and/or the development of new services.[90]

The productive and allocative efficiencies outlined in the preceding two sections can be expected to persist over the longer run, which will translate into a higher degree of dynamic efficiency under light regulation than under full regulation.

Another important source of dynamic efficiency that is available under light regulation but not full regulation, stems from the fact that prices and other terms and conditions of access do not have to be locked in for the duration of the AA (five years). A decision to subject the Allgas Network to light regulation would therefore enable Allgas Energy to respond more rapidly to changes in market conditions and user requirements than it would be under full regulation, which will give rise to an even higher degree of dynamic efficiency.

## 7.4 Conclusion

Based on the preceding discussion, it is clear that light regulation of the services provided by the Allgas Network will give rise to a greater degree of productive, allocative and dynamic efficiency in the provision of natural gas services than will occur if it continues to be subject to full regulation. Over time these efficiencies can be expected to flow through to end-users in the form of lower network charges and higher quality services.

When coupled with the fact that light regulation will be as effective as full regulation in promoting access (see section 5.9), light regulation can be considered more consistent with the NGO than the continued application of full regulation.

[90] This form of efficiency is consistent with the *long run* 'efficient investment in, and efficient operation and use of, natural gas services' elements of the NGO.

# A Compliance with Rule 34 of the NGR

The table below sets out where the information set out in rule 34 of the NGR can be found in this application.

| Clause | Information Requirement | Section in Application |
|---|---|---|
| 34(1)(b) | Identify the pipeline that provides, or is to provide, the services for which the determination is sought and include a reference to a website at which a description of the pipeline can be inspected | Section 1. |
| 34(1)(c) | Include a description of all pipeline services provided or to be provided by means of the pipeline | Section 2.2 |
| 34(1)(d) | Include the applicant's reasons for asserting that the pipeline services should be light regulation services | Section 5-7 |
| 34(1)(e) | Include information, and be accompanied by the documents, on which the applicant relies in support of the application | Whole application |
| 34(2)(a) | The capacity of the pipeline and the extent to which that capacity is currently utilised | Section 3.3 |
| 34(2)(b)(i)-(iii) | n.a. | n.a. |
| 34(2)(c)(i) | For a distribution pipeline, a description of the geographical area served by the pipeline | Section 2.1 |
| 34(2)(c)(ii) | For a distribution pipeline, a description of the points at which natural gas is, or is to be, injected into the pipeline | Section 2.1 |
| 34(2)(d) | A description of the pipeline services provided, or to be provided, by the pipeline | Section 2.2 |
| 34(2)(e) | An indication of any other sources of energy available to consumers of gas from the pipeline | Section 3.4 |
| 34(2)(f) | The identity of the parties with an interest in the pipeline and the nature and extent of each interest | Section 2.3 |
| 34(2)(g)(i) | A description of any relationship between the owner, operator and controller of the pipeline (or any 2 of them) | Section 2.3 |
| 34(2)(g)(ii) | A description of any relationship between the owner, operator or controller of the pipeline and a user of pipeline services or a supplier or consumer of gas in a location or geographical area served by the pipeline | Section 2.3 |
| 34(2)(g)(iii) | A description of any relationship between the owner, operator or controller of the pipeline and the owner, operator or controller of any other pipeline serving any one or more of the same locations or the same geographical area | Section 2.3 |
| 34(2)(h) | An estimate of the annual cost to the service provider of regulation | Section 5 |
| 34(2)(i) | Any other information the applicant considers relevant to the application of the NGO or the form of regulation factors in the circumstances of the present case | Sections 2-7 |

B

# Map of the Allgas Network

*Note the Moura region does not form part of the covered pipeline*