



Final Report

**Review of Small Customer Gas Pricing
and Competition in Queensland**

November 2008

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TABLE OF CONTENTS

	PAGE
GLOSSARY	III
EXECUTIVE SUMMARY	IV
1. INTRODUCTION	1
1.1 Purpose of the Review	1
1.2 Terms of Reference	1
1.3 Process for the Review	2
1.4 Structure of the Report	2
2. BACKGROUND	4
2.1 The Queensland Natural Gas Industry	4
2.2 Natural gas consumption in Queensland	9
2.3 Development of Full Retail Competition in the Queensland gas market	10
3. COMPETITION ASSESSMENT FRAMEWORK	13
3.1 What is meant by “competition”?	13
3.2 The AEMC’s Competition Assessment Framework	14
3.3 The Authority’s view on a competition assessment framework for the Queensland small customer gas market	16
3.4 A forward looking competition assessment framework	19
4. COMPETITIVE MARKET OUTCOMES FOR SMALL GAS CUSTOMERS IN QUEENSLAND	21
4.2 Changes in market shares and market concentration	23
4.3 Customer participation	25
4.4 The Emergence of Price and Product Differentiation	28
5. GAS PRICES FOR SMALL CUSTOMERS	31
5.1 Historical regulated retail prices	31
5.2 Cost components of the natural gas supply chain	32
5.3 Overall Costs	37
5.4 Current retail gas prices	38
5.5 Cost reflectivity for residential customers	39
5.6 Cost reflectivity for business customers	43
5.7 Conclusion on current cost reflectivity	46
6. SUBSTITUTES FOR NATURAL GAS	48
6.1 Liquid Petroleum Gas	48
6.2 Electricity	52
6.3 Conclusion on substitute fuels	55

7.	RETAIL CONTESTABILITY OUTCOMES IN OTHER JURISDICTIONS	57
7.1	Competition in other jurisdictions	57
7.2	Assessment of the level of retail competition in other jurisdictions	59
8.	FUTURE OF GAS RETAIL COMPETITION DEVELOPMENT IN QUEENSLAND	73
8.1	Barriers to entry, expansion and exit	73
8.2	Provision of information for small gas customers	75
8.3	Conclusion on Future Competition	77
	APPENDIX A – TERMS OF REFERENCE	79
	APPENDIX B – TERMS OF REFERENCE CHECKLIST	82
	APPENDIX C – LIST OF SUBMISSIONS RECEIVED	84

GLOSSARY

ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
APG	Australian Power and Gas
CGP	Carpentaria Gas Pipeline
CSM	Coal Seam Methane
ECC	Energy Competition Committee
FRC	Full Retail Contestability
GRMO	Gas Retail Market Operator
IPART	Independent Pricing and Regulatory Tribunal
KG	Kilogram
kPa	Kilopascals
KT	Kilotonnes
LPG	Liquid Petroleum Gas
MMA	Maclennan Magasanik Associates
NSW	New South Wales
PJ	Petajoule
PSI	Pounds per Square Inch
QGP	Queensland Gas Pipeline
RBP	Roma to Brisbane Pipeline
SA	South Australia
SWQP	South West Queensland Pipeline
TJ	Terajoule
VENCorp	Victorian Energy Networks Corporation
WA	Western Australia

EXECUTIVE SUMMARY

The Queensland gas market was fully deregulated as from 1 July 2007. Deregulation provided the opportunity for new retailers to enter the market and for consumers to choose their preferred supplier.

However, no new entrants are currently active in the market and prices charged to small gas customers have increased significantly. The Government has taken some action to ameliorate the price increases for eligible seniors and pensioners. In addition, the Minister for Mines and Energy has asked the Queensland Competition Authority (the Authority) to review the small customer gas pricing and competition in the Queensland retail gas market to enable the Government to determine whether any additional measures need to be taken to improve the outcomes for gas customers, incumbent retail market participants and new entrants.

The Authority's findings are summarised below.

Competition

While there are a number of retailers licensed to retail gas in Queensland, only two are currently active in the market. However, there is some evidence of customer switching between host retailers and to a third retailer that was active in the market for a short period.

The lack of activity by new retailers suggests that the current level of profitability is not sufficient to attract new entrants.

Prices and costs

In the past, maximum retail gas prices for residential and other small gas consumers were regulated by the Queensland Government. Prices set under those arrangements did not necessarily reflect the full cost of supplying gas for all consumers and the fixed cost of supply was often significantly higher than the access charge under the approved tariff structure.

At the same time as it opened the gas market to competition, the Government also deregulated retail prices. This was different to the approach taken with respect to electricity where the Government retained regulated tariffs for customers not choosing to enter into market contracts. The capacity to set a regulated price for non-market customers was also retained in Victoria (until very recently), New South Wales and South Australia when full retail competition (FRC) was introduced into those markets. Following the introduction of FRC and the accompanying decision to deregulate prices, retailers and distributors in Queensland have restructured tariffs with the effect that charges for small users have increased significantly (but often still remain below the cost of supply).

For residential customers with low levels of usage, tariffs are not reflective of the cost of supply. For customers consuming 2GJ (typically a customer with a cooker only), the shortfall is around 33% other than in the Wide Bay region where tariffs do not include a fixed and variable component. As customer usage levels increase, the cost reflective outcomes tend to improve, so that at 25GJ of consumption (typically a family with gas cooking and hot water), the shortfall is reduced to 2 to 7% below the cost of supply, although in the Wide Bay region, these customers are paying above the cost of supply.

Table E1: Residential cost reflective outcomes

Area	2GJ	25GJ
	Cost Reflectivity Shortfall	Cost Reflectivity Shortfall
Brisbane Metro	33%	2-7%
Queensland Regional	32-34%	4-6%
Wide Bay	77%	-14%

With the exception of Wide Bay, there did not appear to be a pronounced regional dimension to pricing outcomes.

A similar, but less extreme, picture emerged for small commercial customers where cost reflective outcomes were generally higher with higher consumption levels. Thus, a customer consuming 100GJ (typically a customer such as fish and chip shop) might have been paying 5% less than the cost of supply while customers consuming 500GJ (such as a bakery) were generally meeting their cost of supply (again there were some unusual results for the Wide Bay region).

Table E2: Commercial cost reflective outcomes.

Area	100GJ	500GJ
	Cost Reflectivity Shortfall	Cost Reflectivity Shortfall
Brisbane North	5%	0%
Brisbane South	-4%	-9%
North Queensland	5%	1%
Wide Bay	9%	13%
Toowoomba	-2%	-8%

Substitutes

The opportunities for substituting energy sources appear quite limited. While the LPG market is competitive and has advantages in terms of availability in areas not serviced by reticulated natural gas, it does not provide a competitive option for any but the smallest consumers when in competition with reticulated natural gas due to the higher cost of LPG compared to natural gas. Similarly, reticulated LPG appears to only be viable where reticulated natural gas is not available.

Only electricity provides a cost effective alternative for natural gas users consuming more than minimal amounts (such as those using gas for cooking and water heating) and is a viable option for small consumers who invariably will have electricity available already.

The costs of converting between energy sources (even between the alternate gas types) are a major hurdle to consumers switching between fuel sources.

Barriers to entry and future competition

Two current barriers to entry were identified in the Queensland natural gas market:

- (a) capacity constraints of the Roma to Brisbane Pipeline (RBP); and
- (b) less than cost reflective tariff levels, particularly for smaller users, leading to low profit margins.

Limited short term capacity is currently available on the Roma to Brisbane pipeline (RBP), but only to existing customers. Capacity on the RBP will be increased by 10% in future. In addition, a gas bulletin board has been established which may facilitate greater trading between operators in different Australian jurisdictions.

Low profit margins appear to be a major impediment to increased competition amongst retailers. Retailers are currently transitioning to cost reflective tariffs which will eventually improve profit margins. In addition, current Government policy should work to increase market penetration and usage levels of gas which should in turn reduce cost structures, improve cost reflective outcomes and provide stronger incentives for retailers to enter the market.

However, the Government's uniform tariff policy for electricity is working in the opposite direction by holding the price of electricity artificially low in regional areas and thereby reducing the scope for competition by gas which does not enjoy the benefits of these subsidies.

Retailers suggested that less than cost reflective regulated tariffs in the electricity market were also a key impediment to the development of competition in the small customer gas market as this limited their capacity to offer dual fuel contracts. This was particularly so in regional areas where the economies available through dual fuel contracts were essential if there was to be competition in the small gas market.

Future decisions regarding carbon or emissions trading may eventually have a significant impact on the market due to a likely differential impact on alternate energy sources and this may improve the competitive environment for natural gas, particularly in regional areas.

There do not appear to be significant impediments to consumers exercising informed choices. Multiple information sources are available to consumers, including the Authority's price comparator, and dispute resolution services are available from the Energy Ombudsman Queensland.

Overall, it appears the Queensland small customer gas market is still in its infancy but some competitive signs are emerging.

1. INTRODUCTION

The Minister for Mines and Energy (the Minister), under the relevant provisions of the *Gas Supply Act 2003* (the Act), has directed the Queensland Competition Authority (the Authority) to review small customer gas pricing and competition in the Queensland retail gas market.

The Minister has asked the Authority to undertake this review to assist the Queensland Government to determine whether any additional measures need to be combined with existing initiatives to improve competitive market outcomes for gas customers, incumbent retail market participants and new entrants.

1.1 Purpose of the Review

Full Retail Competition (FRC) in Queensland energy markets commenced on 1 July 2007, allowing all electricity and gas customers the option to choose their retailer. At the commencement of FRC, the regulated prices for small reticulated natural gas customers (those consuming less than 1 terajoule (TJ) per annum)¹ were revoked with licensed retailers given the responsibility for setting prices for all their customers.

Prior to the commencement of FRC, natural gas retail prices for small non-market customers were set by the Queensland Government and were, in general, escalated each year by the Consumer Price Index (CPI). These prices were often subsidised by larger commercial and industrial customers and were generally below the cost of supply.

Since the commencement of FRC and deregulation of gas tariffs, retailers active in the Queensland gas market have moved to restructure their gas prices to better reflect the costs of supplying reticulated natural gas to small customers in Queensland. As a result, some smaller residential customers have experienced significant price rises. In response, the Queensland Government has taken action to lessen the impact of price increases on eligible seniors and pensioners.

The Minister has directed the Authority to undertake this review to assist the Queensland Government to determine whether competition is effective in the small customer gas market and whether any additional measures need to be combined with existing initiatives to improve competitive market outcomes for gas customers, incumbent retail market participants and new entrants.

1.2 Terms of Reference

In undertaking the review, the Authority is required to consider and report on the following issues in relation to Queensland's small customer gas market:

- (a) the current level of competition in the markets for reticulated natural gas and substitute fuels such as reticulated and bottled Liquefied Petroleum Gas (LPG);
- (b) the impact on retail prices of costs in the upstream gas market and whether current small customer retail prices are reflective of actual costs incurred in the upstream gas supply chain; and
- (c) the extent of current small customer gas market activity, including consumer switching behaviour, impediments to small customers exercising informed choices regarding their retailer of choice and consumer perceptions of natural gas as a product of choice compared to other energy supply options.

¹ Most residential and small business consumers use less than 1TJ per annum.

The Authority is also required to:

- (a) consider how each of these issues affects different categories of small gas customers;
- (b) comment on differences in market competitiveness and cost reflectivity between regions within Queensland; and
- (c) provide an analysis of differences in market competitiveness and cost reflectivity between Queensland and other Australian States or Territories.

The full Terms of Reference are reproduced in **Appendix A**.

1.3 Process for the Review

In conducting this review, the Authority has taken into account the views and evidence presented in submissions and a report prepared by consultant McLennan Magasanik Associates (MMA), as well as its own research and analysis. In this regard, the Authority has:

- (a) advertised the notice of the review on 10 May 2008 in a state-wide newspaper;
- (b) released an Issues Paper on 23 May 2008 and invited all interested parties to provide submissions detailing their responses to the issues raised in the Issues Paper and any other matters relevant to the review. A list of stakeholders who made submissions addressing the Issues Paper is provided in **Appendix C**;
- (c) released a Draft Report on 10 October 2008 and invited all interested parties to provide submissions detailing their responses to the Draft Report and any other matters relevant to the review. A list of submissions received in response to the Draft Report is provided in **Appendix C**;
- (d) held meetings with some key stakeholders and been provided with quantitative and qualitative information from retailers; and
- (e) engaged MMA to assist the Authority in calculating the cost of supplying reticulated natural gas in Queensland and made MMA's draft and final reports available on the Authority's website.

1.4 Structure of the Report

This Final Report is structured as follows:

- (a) Chapter 2 provides background information on the retail gas market for small customers in Queensland including an overview of: the structure the Queensland gas industry; details of natural gas consumption in Queensland and the introduction of FRC to the Queensland retail gas market.
- (b) Chapter 3 describes the Authority's view on the concept of competition as it applies to the small customer gas market and summarises the analytical framework adopted in assessing competition within the retail gas market;
- (c) Chapter 4 presents the Authority's provisional assessment of the competitive market indicators it believes are relevant in determining whether competition is developing in the Queensland small gas customer market. It examines market evidence on the number of retailers participating since FRC, the market share of active retailers and their level of

market concentration, as well as the level of customer participation in the FRC environment;

- (d) Chapter 5 examines the cost of supplying reticulated natural gas in the Queensland retail market. It includes the Authority's assessment of whether current retail prices reflect efficient costs and the likely movement of retail prices in the future to achieve cost reflectivity;
- (e) Chapter 6 considers the level of competition in the substitute fuel market for reticulated natural gas. In particular, it presents the Authority's findings on the level of competition in the reticulated and bottled LPG markets and how this impacts on the small customer reticulated natural gas market;
- (f) Chapter 7 describes the level of retail competition in other Australian natural gas markets including the pricing outcomes for small gas customers as a comparison to the Queensland market; and
- (g) Chapter 8 outlines the Authority's findings on the future of gas retail competition, including the strength of any barriers to entry and exit that may be limiting the level of retail competition in the small customer market at present. It also identifies any impediments to customers exercising informed choices.

2. BACKGROUND

This chapter provides background information on the retail gas market for small customers in Queensland. In particular, it provides an overview of:

- (a) the structure and market characteristics of the Queensland gas industry;
- (b) natural gas consumption in Queensland; and
- (c) the introduction of FRC to the Queensland retail gas market.

2.1 The Queensland Natural Gas Industry

The Queensland natural gas industry is separated into four broad market segments – Production, Transmission, Distribution and Retail. As illustrated in Figure 2.1, each of these market segments contains a number of components and/or industry participants.

Most reticulated natural gas customers will only deal with the retail segment of the market, as retailers provide the interface between the other three segments (gas producers, transmission pipeline owners and distribution pipeline owners). Retailers are responsible for securing the supply of gas (from gas producers) and then entering into the transportation arrangements (with transmitters and distributors) required to deliver the gas to a customer's location.

Gas Production

There are numerous companies involved in natural gas production in Queensland. However, the major fields are generally owned jointly by a small number of companies that include Santos Ltd, Origin Energy (Origin), Queensland Gas Company and Arrow Energy.²

In Queensland, these natural gas producers extract gas either as:

- (a) conventional gas from fields covering the Cooper and Eromanga basins in the south and south-west of Queensland (which is produced in Ballera and Roma) or;
- (b) coal seam gas³ in the Bowen and Surat basins.

Queensland has over 5000PJ of proved and probable gas reserves with more than 60% of gas produced in Queensland coming from coal seam gas reserves in the Bowen and Surat basins in 2006-07⁴.

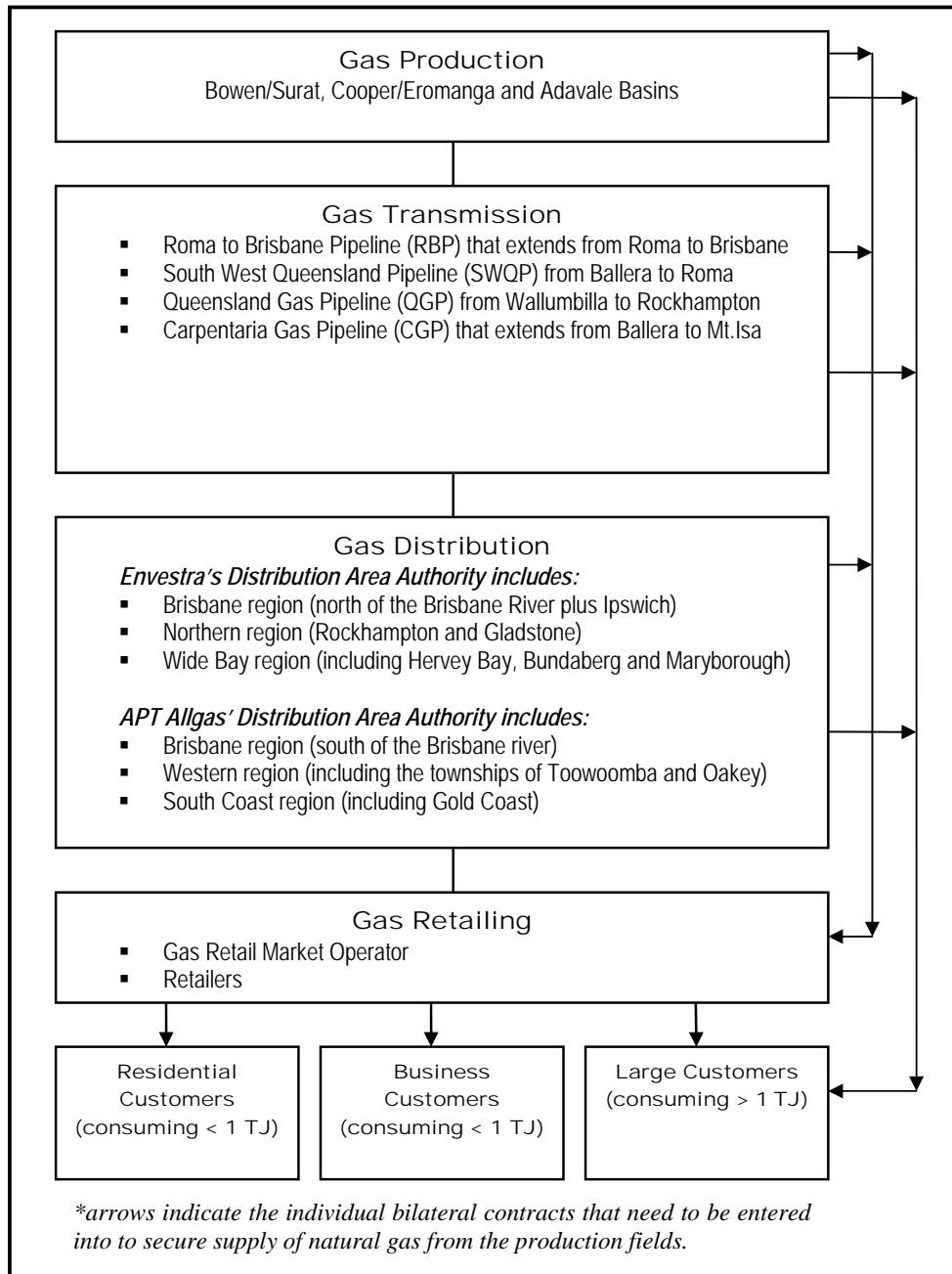
The structure of the transactions for purchasing natural gas from gas producers is determined by the participants themselves with almost all being long-term contracts that lock in prices and quantities for a number of years.

² NERA Economic Consulting, *The gas supply chain in eastern Australia – A report to the Australian Energy Market Commission*, March 2008 p 19

³ Coal seam gas is typically attached to the coal along its natural fractures and cleats and is released when pressure on the coal seam is reduced, usually by removing water from the seam.

⁴ Department of Mines and Energy, *Queensland's Coal Seam Gas 2006-2007 Update*, available at: http://www.dme.qld.gov.au/zone_files/coal_files_pdf/new_csg_cc.pdf

Figure 2.1: Structure of the Queensland Natural Gas Industry



Gas Transmission

Gas transmission entities construct and operate high pressure, large capacity pipelines that transport gas from receipt points (such as gas production plants) to delivery points into the distribution networks or large industrial customers.

In Queensland, the Roma to Brisbane Pipeline (RBP), which is owned by the APA Group, is the most significant transmitter of natural gas to small consumers. This is because it transports gas from gas production facilities in western Queensland to Brisbane, which has the largest number

of small customers in the State. The RBP therefore plays a very important role in supplying gas to the Queensland small customer gas market.

In its advice to the Authority, MMA reported that long term firm capacity in the RBP is currently fully contracted. MMA also advised the APA group “is currently offering short term firm contracts to new entrant retailers for up to three years supply into existing brownfield sites”⁵. This means that, while short term supply is available, gaining access to longer term supply, or supply to new or greenfield customers may be more difficult. APA advised of plans to expand the capacity of the RBP by 10%. MMA advised that the increased capacity is likely to come at a higher cost than current transmission, due to the increased capital outlay.

New pipelines and capacity are constructed in response to demand for transportation. Due to the significant capital costs of pipelines, duplication of transmission networks is generally not economic. This means that transmission pipeline owners often hold considerable power in the gas supply chain. Gas transmission pipelines may therefore be subject to third party access arrangements, the regulation of which has recently transferred under the National Gas Law and National Gas Rules initiative from the Australian Competition and Consumer Commission (ACCC) to the Australian Energy Regulator (AER).

The Authority notes that, until recently, the RBP and the South West Queensland Pipeline (SWQP) were unregulated and tariffs for the pipelines were established under derogation by the Queensland Government. The AER has recently reviewed and approved the RBP access arrangements including the tariffs through to 2011.⁶ The SWQP will continue to be unregulated under Queensland Government derogation until 30 June 2016.⁷

Gas Distribution

Gas distributors construct and operate the network of high to low pressure, large to small diameter, pipelines that convey gas from receipt points from transmission pipelines to customer meters. The distribution networks generally have a large diameter high pressure spine that delivers gas to very large end-users and also conveys gas to the small diameter pipes serving a large number of small to medium size end-users. The major gas distribution entities in Queensland are Envestra and APT Allgas.

The Queensland distribution network is effectively split into two areas: the northern region and southern region. The northern region encompasses:

- (a) Brisbane suburbs to the north of the Brisbane River and Ipswich; and
- (b) the northern region townships of Rockhampton and Gladstone.

The southern region encompasses:

- (a) Brisbane suburbs to the south of the Brisbane river;
- (b) the western region townships of Toowoomba and Oakey; and
- (c) the South Coast region of Gold Coast.

⁵ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 33

⁶ AER, *Revised access arrangement by APT Petroleum Pipelines Ltd for the Roma to Brisbane Pipeline*, March 2007

⁷ AER, *Revised access arrangement by Epic Energy Queensland Pty Ltd for the Ballera to Wallumbilla Natural Gas Pipeline (South West Queensland Pipeline)*, November 2006

Due to the nature of distribution network assets and the cost of duplication, the distribution networks are subject to third party access. The Queensland gas distribution networks owned by Envestra and APT Allgas were regulated by the Authority under the *Gas Pipelines Access (Queensland) Act 1998* and the *National Third Party Access Code for Natural Gas Pipeline Systems*. However, with the enactment of the National Gas Law effective from 1 July 2008, distribution access arrangements will now be regulated by the AER.

Host Retailers

Prior to the introduction of FRC, host gas retailers were granted an Area Retail Authority by the Queensland Government to sell gas to small customers. An Area Retail Authority allowed the nominated retailer to sell gas in their designated distribution network zones. In addition, the distribution networks were divided between two area retailers: Origin and AGL Energy (AGL). The licensed areas for the two host retailers are provided in the following Table 2.1.

Table 2.1: Licensed areas for natural gas host retailers

<i>Current Host Retailer</i>	<i>Licensed Area</i>
AGL	Brisbane (South Brisbane), South Coast (Gold Coast) and Western Area (Oakey and Toowoomba)
Origin	Brisbane (North Brisbane and Ipswich), Northern (Gladstone and Rockhampton) and Wide Bay Area (Bundaberg, Maryborough and Hervey Bay)

Source: Queensland Government Area Retail Authority No. RA-A-004 Issues to AGL (Queensland) Pty Ltd and No. RA-A-008 issued to Origin Energy Retail Ltd available at <http://www.dme.qld.gov.au>

Since FRC, new entrant retailers are able to obtain General Retail Authorities enabling them to sell gas to any customer in Queensland. While host retailers are still obligated under their Area Retail Authority to supply gas to any customer within their licensed area, they are also able to sell to any other gas customer in Queensland along with new entrants.

In 2007, the Queensland Government privatised Sun Gas Retail, the former natural gas retailing arm of Energex and Energex's Allgas Energy natural gas distribution network. Below is a brief description and history of the two current host licensed area retailers.

Origin Energy

Origin was established in February 2000 as a result of a de-merger of Boral Ltd's energy and construction businesses and has become an integrated energy company which is involved in a diverse range of energy markets. Its activities range from gas and oil exploration, power generation to the retail supply of electricity, liquefied petroleum gas (LPG) and natural gas to residential and small businesses in Australia and the Pacific.

In Queensland, Origin is an active retailer in both the electricity and gas markets and holds substantial interests in Queensland's gas production fields. Origin holds the Area Retail Authority for retailing gas in Envestra's distribution network area.

AGL Energy

AGL was established in October 2006 following the merger of AGL's infrastructure assets with Alinta Limited and then the subsequent separation of AGL. In February 2007, AGL purchased Sun Gas Retail Pty Ltd. AGL's retail interests extend beyond Queensland into South Australia

(SA), Australian Capital Territory (ACT), New South Wales (NSW) and Victoria through its subsidiaries which hold retail authorities in those jurisdictions.⁸

Gas Retailing in Queensland

Historically, gas retailers in Queensland were vertically integrated – with gas distributors – and operated as regulated monopoly providers in their respective license areas. Gas retailers are now stand-alone entities. They purchase gas directly from gas producers and arrange for transmission and distribution to customers.

Gas retailers come in variety of forms including:

- (a) companies that use gas to generate electricity;
- (b) large commercial and industrial users; and
- (c) entities that supply to residential and small business customers.

The requirements of the first two categories of gas retailers (electricity producers and commercial users) are catered for at the wholesale market level through bilateral commercial negotiations. However, the requirements of the third category are somewhat more complicated and a Gas Retail Market Operator (GRMO) has been established to facilitate effective competition in that market.

In Queensland, the Victorian Energy Networks Corporation (VENCorp) has been appointed the GRMO with its primary role being to oversee and administer:

- (a) the Queensland *Gas Market Market Rules* - the purpose of which is to facilitate the allocation of gas within the distribution networks between competing retailers to ensure that each retailer matches supply with its demand or pays a penalty for any imbalance between supply and demand; and
- (b) *Gas scheduling* - which is the means by which buyers nominate daily quantity requirements to producers, network owners (transmission pipeline owners and distributors) and the GRMO under the terms of their contracts. Network owners and the GRMO then co-ordinate actual gas flows and ensure that each participant's imbalances between injections and withdrawals are addressed by adjustments to subsequent nominations.

Contract arrangements in the Queensland gas industry

While the structure of the gas industry in Queensland is relatively linear, Figure 2.1 demonstrates that the contract arrangements between the different industry sectors are somewhat more complex. In order to supply gas to customers, retailers enter into bilateral contracts, typically of three to 20-year duration, with each of the upstream supply chain participants.

Development of a short term gas trading market

In Victoria, a market model was adopted with a price-based balancing regime operated by its independent system operator VENCorp since 1999. The regime operates via bids into a gas

⁸ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008 p 56

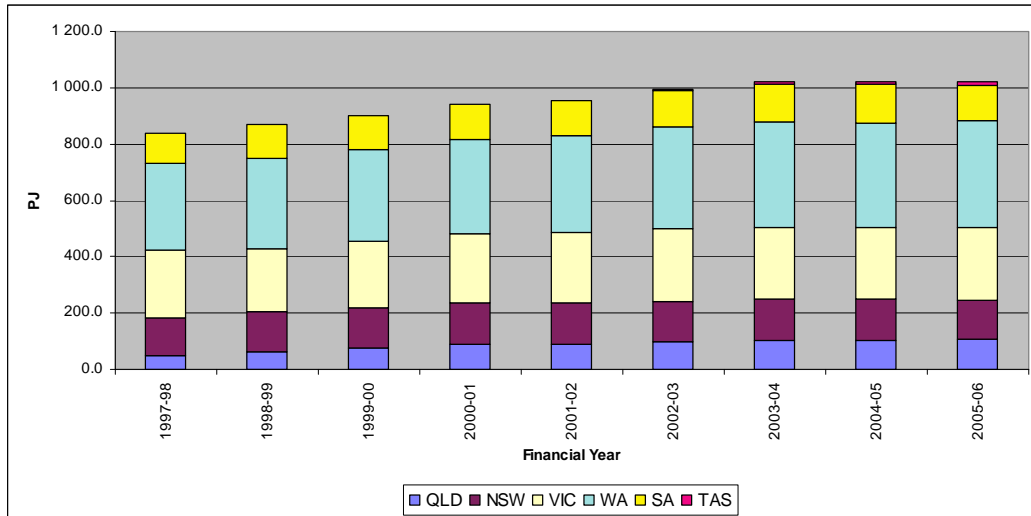
pool, similar to the electricity market. Outside Victoria, shorter term gas markets are relatively undeveloped although some bilateral secondary trading is known to occur.⁹

The Authority notes that there has been significant progress towards the development of a national short-term gas trading market. In particular, the launch of the National Gas Market Bulletin Board on July 1 2008 provides a website that collects and publishes information with regard to all major gas production fields, major demand centres and natural gas transmission pipeline systems, including the interconnected systems of South Australia, Victoria, Tasmania, New South Wales, the ACT and Queensland.¹⁰

2.2 Natural gas consumption in Queensland

Queenslanders on average consume a relatively small amount of natural gas in comparison to other States. For example, Figure 2.2 shows that between 1997-98 and 2005-06, Queensland was the second smallest overall consumer of natural gas in Australia, recording a cumulative consumption of 780.6PJ or 8.8% of total national consumption.

Figure 2.2: Gas Consumption by State¹¹



Source: ABARE, Energy Statistics Historical (Tables C, C1 and C2)
 Note: NSW statistics include the Australian Capital Territory

Table 2.2 provides a more detailed breakdown of the total number of small and large users in most States along with their relative consumption levels in 2006-2007.

⁹ McLennan Magasanik Associates , *Natural Gas in Australia. Report to the Joint Working Group on Natural Gas Supply*, July 2006, p 10

¹⁰ See www.gasbb.com.au

¹¹ The data consists of primary energy consumption for all types of gas customers (small and large), and is based on estimation and findings from the voluntary Fuel and Electricity Survey.

Table 2.2 Natural gas distribution connections and consumption as at 30 June 2007

	<i>NSW & ACT³</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA⁴</i>	<i>TOTAL²</i>
Number of connections						
Residential & small commercial and industrial ⁵	-	1,690,408	145,267	374,239	574,558	-
Large commercial and industrial ⁶	-	869	182	183	166	-
Total	1,124,096	1,691,277	145,449	374,422	574,724	3,909,968
Consumption (TJ)						
Residential & small commercial and industrial ⁵	-	100,484	4,968	10,417	12,300	-
Large commercial and industrial ⁶	-	80,549	21,394	25,837	16,800	-
Total	109,661	181,033	26,362	36,254	29,100	382,409

Source: *esaa Electricity Gas Australia 2008, Table 5.5*

Notes:

1. This table represents natural gas delivered via the distribution network only, and excludes gas delivered to direct transmission customers such as electricity generators.
2. A breakdown of connections and consumption by customer classification was not available in New South Wales.
3. Customer connections and consumption in Western Australia reflect the AlintaGas distribution network only.
4. Small commercial and industrial connections consume less than 10 TJ per annum.
5. Large commercial and industrial connections consume greater than 10 TJ per annum.

Table 2.2 illustrates that the number of gas customers on the Queensland distribution networks account for less than 4% of total customer distribution connections in mainland Australia. It also shows that Queensland has the smallest residential and small business customer natural gas consumption of the mainland states.

This consumption pattern is mainly attributable to Queensland's subtropical climate. Heating loads for all energy sources are far lower than those experienced in southern states. For example, the average consumption load of Brisbane residential gas customers is approximately 12GJ per annum compared to 60GJ for Victorian households.¹²

Table 2.2 also confirms statements by AGL¹³ and Origin's¹⁴ that Queensland has comparatively low customer numbers and low consumption levels.

2.3 Development of Full Retail Competition in the Queensland gas market

In Queensland, gas customers who are supplied directly from transmission pipelines (mainly larger industrial customers) have always been contestable. However, customers who were supplied via the gas distribution networks (usually smaller customers) were supplied by host retailers, having no choice as to who supplied their gas. Maximum price levels were set by the Queensland Government and, in general, were raised each year by the Consumer Price Index (CPI).

¹² Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008

¹³ AGL, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008

¹⁴ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008

Implementation of FRC

The Queensland Government implemented a three-stage approach to introducing FRC in the natural gas market. Customers using at least 100TJ of gas per year became contestable on 1 July 2003 with the threshold lowered to 1TJ per year as of 1 July 2005.

In November 2006, the Queensland Government legislated to deregulate all natural gas retail prices and contestability thresholds from 1 July 2007.

The introduction of FRC effectively meant that all gas consumers in Queensland – be they large industrial users or individual homes – were able to choose their gas retailer.

The FRC regulatory framework

As part of the FRC implementation framework, the Queensland Government also introduced a number of regulatory safeguards to protect customers while at the same time reducing barriers to entry and fostering competition in the gas retail market.

The regulatory safeguards provided for the development of a Gas Industry Code (the Code) that includes rules for the operation of the gas market and regulating the marketing behaviour of retailers. Under the Code, gas customers have the benefit of a 10 day cooling-off period on any contract entered into so that they have time to consider their choice. The Code also establishes minimum terms and conditions for standard retail contracts.

The Code incorporates marketing rules that regulate the marketing conduct of retailers. The legislation and Code also set standards in relation to the publication of information in bills, customer charters and public notices to ensure customers are fully informed in making their choice of retailer.

Under the legislation, the Minister for Mines and Energy has the reserve power to regulate the gas tariffs should competition be found not to be effective.

The Authority also has a number of responsibilities in relation to retail gas issues ranging from enforcing breaches of the Code to reviewing gas retailers procedures for handling customer complaints and disputes with respect to marketing and administering the Gas Retail Market Rules.

The Authority has also set up an online “price comparator” to assist residential customers in comparing the deals available from retailers who are offering negotiated contracts.

FRC in other Australian jurisdictions

While all jurisdictions have agreed to a uniform gas market which is open to competition, their progress toward this objective has not been uniform.

For example, on 1 January 2002, New South Wales (along with the ACT) became the first jurisdiction to introduce FRC. However, NSW’s Independent Pricing and Regulatory Tribunal (IPART) continues to regulate “default” retail prices for small gas customers (those consuming less than 1TJ per year) where they have not chosen to enter into a negotiated customer supply contract.

Similarly in Victoria, where FRC was introduced on 1 October 2002, the Government has reserved the power to regulate retail prices for natural gas customers consuming less than 1TJ per year, who have not taken up a market offer with an energy retailer under FRC. While “default” retail prices for such customers were initially set by Government and later by the

Essential Services Commission, Victoria recently (September 2008) replaced its price regulation provisions with price monitoring provisions following an assessment that there was effective retail competition in the energy market in that state.

In 2004, both the Western Australian (31 May) and South Australian (28 July) Governments introduced FRC. Both of these jurisdictions regulate gas prices for customers with annual demand of less than 1 J who have not switched to a market contract.

Prices in the Northern Territory remain fully regulated.

A more detailed consideration of the implementation of FRC and its outcomes in other jurisdictions is contained in chapter 7 of this report.

3. COMPETITION ASSESSMENT FRAMEWORK

One of the central tasks for the Authority in this review is to assess the *existing level of competition* since the introduction of FRC in the Queensland small customer segment of the gas market. The Authority is also required to gauge the potential for *future competition* and to identify any impediments to the expansion of retail competition.

The level of contestability (the degree of ease with which firms can enter and exit a market) and the level of competition are important determinants of market structure and the conduct of individual retailers within that market and will have implications for the price and level of service customers receive.

This chapter describes the Authority's view on the concept of competition as it applies to the Queensland small customer gas market and outlines the analytical framework adopted by the Authority in assessing competition within that market.

The Authority's assessment of the potential for future competition including current barriers to the expansion of competition in the small gas customer retail market is discussed in chapter 8.

3.1 What is meant by "competition"?

Competition has been defined as a process of rivalry among firms, where the price and output decisions of each market participant are constrained by the actions of others.¹⁵ Competition is not an absolute concept, as different types of competitive rivalry can exist depending on the nature of the market.

In economic theory, markets are generally considered to range from perfectly competitive to pure monopolies.

Perfectly competitive markets are characterised by a large number of buyers and sellers each producing a homogenous product, with perfect knowledge of the conditions of supply and demand. In such markets, the cost of entry is low and producers are free to enter and exit the market over time. Where these characteristics prevail, the degree of competition between suppliers is generally considered to be high. Producers are considered to be effectively price-takers as they have no real power to increase prices above marginal cost.¹⁶

In contrast, a natural monopoly is characterised by significant barriers to entry such as high up-front capital costs and economies of scale relative to demand. In these cases, there may be only one producer supplying the entire market giving customers little bargaining power. In these markets, it is possible for the monopolist to exert its market power by raising prices and limiting output so as to earn above normal profits. In some cases, economies of scale may dictate that it is not efficient to duplicate infrastructure to allow competition. Governments often regulate these types of monopolies in order to prevent them from exerting excessive market power.

Most markets fall somewhere in between the two theoretical extremes. For example, some markets may be characterised by high barriers to entry and only a few suppliers. Other markets may have relatively low barriers to entry and with a number of suppliers that produce differentiated products that are highly, but not perfectly, substitutable for one another. In each of these markets, firms can compete with one another in different ways. For example, in markets for the sale of a homogenous product, suppliers are likely to compete on the basis of

¹⁵ AEMC, *Review of the Effectiveness of Competition in the gas and electricity retail markets*, April 2007, p 5

¹⁶ Marginal cost refers to the cost of producing the last unit sold.

price. In a monopolistic market, suppliers may compete by consistently developing new products over time in an attempt to maintain a price premium over other products or market share.

It is also worth noting that firms in a competitive market may also exhibit a “transient market power” where the expected competitive response of actual and potential rivals will act to constrain the exercise of that market power. The response of consumers to rival offers is also critical for establishing competition. As long as there are enough customers in the market that are willing and able to switch to another supplier in response to a price increase or equivalent deterioration in quality or service, and the firm is unable to identify and discriminate against those customers that are not willing to switch, firms within the market will be constrained in their pricing, output, service and quality decisions. Therefore, over time, an effectively competitive market would be expected to become economically efficient.

While economic theory of competition provides a useful basis to understand real world markets, the Authority considers that any approach to assessing competition in real world markets should be a fact-based exercise which takes into account all relevant structural, behavioural and performance characteristics of the market.

3.2 The AEMC’s Competition Assessment Framework

In developing an appropriate framework, the Authority has considered the approach adopted by other regulators in reviewing retail competition in their respective energy markets.¹⁷

More recently at the national level, the Australian Energy Market Commission (AEMC) has been conducting its assessment on the effectiveness of energy retail competition in Australia on a jurisdiction-by-jurisdiction basis following a formal request from the Ministerial Council on Energy (MCE). The AEMC has completed its review of the Victorian energy market¹⁸ and recently released its first draft report on the South Australian market.¹⁹

In conducting its South Australian review, the AEMC adopted three key analytical strands in its assessment of competition. According to AEMC, a competitive energy retail market should encompass the following characteristics:

- (a) informed and active consumers willing and able to respond to offers for the supply of energy products, at prices and on other terms and conditions of supply which best meet their needs;
- (b) rivalrous conduct between retailers (and/or the threat of entry by new retailers) to offer the products, services, prices and other conditions of supply which are most attractive to consumers; and

¹⁷ Essential Services Commission of Victoria, *Review of Effectiveness of Retail Competition and Consumer Safety Net in Gas and Electricity*, June 2004

Essential Services Commission of South Australia, *Review of the Effectiveness of Energy Retail Market Competition in South Australia*, June 2007

Western Australian Office of Energy, *Gas Tariff Regulations Review Report, Report prepared by the Minister for Energy on the Review of the Energy Co-ordination (Gas Tariffs) Regulations 2000*, October 2007

¹⁸ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, December 2007

¹⁹ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008

- (c) freedom of movement for resources into and out of the market(s) in pursuit of profit opportunities, thereby eroding any excess profits over time and allocating resources to supply the goods and services most valued by consumers.²⁰

An assessment of each of these characteristics requires not only analysis of multiple factors within each, but also how they interact with the other characteristics. For example, freedom of movement for resources will only lead to the eroding of excess profits if there is rivalrous conduct between retailers.

In its Issues Paper, the Authority stated that it considered the analytical framework adopted by AEMC to represent a useful approach for considering the level of competition in the Queensland gas market. However, the Authority also noted that, since FRC was introduced in Queensland only relatively recently, competition can not be expected to be as mature in the small customer gas market in Queensland as may be the case in other jurisdictions.

Origin suggested that the AEMC criteria would provide a useful measure, while noting that the framework would not provide a definitive conclusion on whether a contestable natural gas market was developing in Queensland nor would it provide a snapshot of retail competition in the future.²¹

AGL indicated that using the same analytical framework as the AEMC will allow for greater consistency in inter-jurisdictional comparisons but noted that, due to the infancy of FRC in Queensland, it would be important to consider how the retail market has developed and take a forward-looking approach regarding where the market is heading rather than focusing on a set of indicators measuring competitive activity at a given point in time.

Both AGL and Origin also stated that, as competition has only been a feature of the Queensland residential gas market for a short time, the competitive situation is developing but is still immature.

Origin and AGL highlighted certain factors that make the Queensland gas market unique in comparison to other jurisdictions. These factors include:

- (a) low customer numbers/penetration in Queensland compared to other states;
- (b) low average residential gas consumption due to Queensland's warmer climate; and
- (c) regulated gas tariffs being kept below cost reflective levels prior to deregulation in July 2007.

The customer numbers and consumption data discussed in Table 2.2 in chapter 2 conforms with the views of AGL and Origin about Queensland being less attractive to retailers compared to other markets.

APG²² and Origin²³ expressed the view that retailing gas in Queensland at present is not financially viable for retailers. Both AGL and Origin claimed to have chosen not to move immediately to cost reflective pricing levels since deregulation in order to avoid a shock to their customer base, and plan to transition to cost reflective pricing over time. In this light, one

²⁰ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008, p 11

²¹ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 4

²² Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 1

²³ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 7

possible explanation for there being licensed but inactive natural gas retailers in Queensland is that they are waiting for pricing levels to become cost reflective before they start to compete for customers.

The Authority accepts that applying the AEMC framework to Queensland's retail gas market may not necessarily provide a balanced assessment without taking into consideration factors that make the Queensland small gas customer market different from retail gas markets found in other jurisdictions upon which the framework was developed.

3.3 The Authority's view on a competition assessment framework for the Queensland small customer gas market

Whilst the factors described above can impact on the development of competition in an immature market such as Queensland's, the Authority is of the view that the FRC environment in the Queensland should still provide some indication of the emergence of competition within small customer gas market. The Authority has taken into consideration the following market characteristics in assessing the extent to which competition is developing in the Queensland small customer gas market:

- (a) number of retailers competing in the market;
- (b) change in market share and market concentration since the introduction of FRC;
- (c) the level of customer participation in the market; and
- (d) emergence of differentiated products and services within the market.

As competition intensifies, retailers can be expected to pursue cost efficiencies and construct gas tariff and product offerings which are more tailored to the needs of their customer's, thereby passing efficiency savings through to customers in the form of more cost reflective tariffs in order to retain or obtain market share.

However, the Authority is also mindful that, before residential and small business customers can benefit from efficiency gains from a competitive retail market, retailers must have the ability to offer competitive tariffs which at a minimum recover retailers' actual costs in supplying the gas to the particular class of customer.

Below is a detailed examination of each of the market characteristics which the Authority has considered in its preliminary assessment of competition in the small customer gas market in Queensland.

Number of retailers competing in the small customer market

Generally, the greater the number of retailers participating in a given market, the greater the level of competition present. If numerous competing gas retailers had entered the market since FRC commenced, it would provide a very strong signal that the small customer retail market is competitive, although the distribution of market shares and the nature of costs faced by retailers would also be important. Conversely, if there were a small number of dominant retailers, it might be possible for them to exercise market power to the detriment of customers. However, if

economies of scale or scope exist²⁴, it may be possible for a relatively small number of efficient natural gas retailers to provide a more efficient, lower cost supply to small customers.

Economies of scale or scope enjoyed by host (incumbent) retailers with large customer bases may act as a potential barrier to entry for prospective new entrants or may inhibit market share growth of small retailers. This would mean the behaviour of incumbent retailers will not be disciplined by the threat of a new entry and the potential for future competition will be reduced. The threat of entry by new retailers may also be reduced if there is limited access to wholesale supply of energy, if information and customer transfer arrangements between retailers or the structure of government support acts to limit efficient transfer of customers between retailers, or if the costs of licensing and economic regulation are considered too high by prospective retailers.

If incumbent retailers were to develop a reputation for an aggressive response to entry (i.e. pricing below cost), then this could also deter some entrants without requiring the incumbent to incur costs to execute an aggressive response. However, the tendency of incumbent retailers to engage in such behaviour would be tempered somewhat by the ability of new entrants to exit the market relatively quickly. For example, new entrant retailers could offer monthly supply contracts, which would give them flexibility to exit the market relatively quickly in response to aggressive behaviour and then re-enter once the incumbent ceases such behaviour. To the extent that consumers are willing to take up such contracts, the entry, exit and re-entry strategy they permit may prevent an incumbent from recouping any losses if it sets its price below cost.

Contestable markets theory also indicates that, under certain conditions, the threat of potential new entry, as opposed to actual entry, can influence existing enterprises to change their behaviour.²⁵ The argument for the contestability of a market was based on potential entrants having access to the same technology as existing enterprises and there being no sunk costs, along with free entry and exit in markets.

Potential entrants can establish a credible threat of entry simply by obtaining a retailing license to operate in a particular jurisdiction, without incurring any other expenditure (i.e. other than licensing costs). Once a prospective entrant holds a retail license, it can enter at any time to take advantage of any profit opportunity if incumbents were to set price above cost. This makes it difficult for an incumbent to gauge the best time to launch an aggressive strategy.

Changes in market shares and market concentration

Market share and market concentration provide a useful measure for assessing whether any one or more of the retailers are capable of exercising any unilateral or collective market power. The concentration of market shares in a small number of retailers may provide an opportunity for explicit or tacit collusion or for coordination of market conduct that may reduce competitive rivalry, increase price and discourage entry.

The total number of small gas customers attributable to each active retailer would provide a reasonable indicator of market share. Since the small customer gas market in Queensland was split between the two host area retailers, Origin and AGL (formerly as Sun Gas Retail), the

²⁴ *Economies of scale* refers to reducing unit costs arising from an increase in operational size and *economies of scope* refers to reducing per unit cost through providing a range of related services rather than provision of individual services separately.

²⁵ Baumol, William J. “*Contestable markets: an uprising in the theory of industry structure*” *American Economic Review* 72(1) March 1982, p 1-15; and Baumol, William J. and Willig, Robert D., –“*Contestability: developments since the book,*” *Oxford Economic Papers* 38 *Supplement* November 1986, p 9-3.

Authority has considered whether there is any significant change in their respective market share to assess the level of retail competition currently existing in the market.

While market share and market concentration measures are one indicator for consideration in assessing the effectiveness of competition in a market, a critical consideration for the Authority has been the degree of rivalry between competing retailers. A relatively concentrated market may be the result of technical conditions of supply (such as economies of scale and scope) but relatively small numbers in a market can be consistent with achieving competitive market outcomes provided there is ongoing vigorous competition between competing suppliers.

Customer participation

A competitive retail market may encourage retailers to provide greater comparative information to enable consumers to understand better the differences between retailers' service offerings and so allow consumers to exercise more choice and to participate more actively in the retail market. This participation and exercising of choice may manifest itself in:

- (a) switching between alternative retailers; and
- (b) choosing between the different products and services being offered by a retailer.

Consumer behaviour can therefore play an important role in developing an effective competitive market which delivers benefits. This is because it encourages retailers to strive to retain customers and increase their share of the total number of customers. In this regard, the most useful indicator of the degree of competition existing in the market is the extent to which contestable customers are responding to competitive offers either by switching retailers or entering into market contracts with retailers. Switching or "customer churn" may be viewed as an outcome of the effectiveness of retailer actions in motivating customer responses.

The AEMC review of the effectiveness of retail competition in Victoria²⁶ and South Australia²⁷ found that consumer participation was strong and contributed to achieving effective competition.

Emergence of differentiated products and services within the market

Increased rivalry and competition amongst retailers resulting from FRC could lead to a more competitive and responsive retail market with greater emphasis on delivering the goods and services that consumers demand, at least cost, and increasing customer choice through increased product innovation and service differentiation.

Within the energy market, this may include price reductions and non-price benefits and service offerings for customers such as:

- (a) promotion of green energy benefits in order to promote greater environmental responsibility;
- (b) dual fuel offerings where the customer has one supplier and one bill for electricity and gas usage with the potential for associated discounts;

²⁶ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, December 2007

²⁷ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008

- (c) the provision of non-price incentives and offerings, such as free movie tickets or magazine subscriptions;
- (d) customer 'value add' services such as energy cost reduction information and energy efficiency audits; and
- (e) higher levels and quality of customer service from retailers.

The AEMC review of the effectiveness of retail competition in Victoria²⁸ and South Australia²⁹ found that a high degree of rivalry in those markets led retailers to offer a discount to the standing offer energy price. Retailers also offer non-price benefits in an effort to differentiate their offers from other retailers and to maintain and grow their market share.

3.4 A forward looking competition assessment framework

The Authority's terms of reference³⁰ require an examination of current, and the potential for future, competition necessitating a forward looking approach. Queensland Council of Social Services (QCOSS) questioned the base assumption of the terms of reference that an increase in the level of competition necessarily results in benefits to residential consumers, and that any benefits of competition are, in their view, yet to be demonstrated in the Queensland market³¹.

While there can be agreement that ineffectual competition may not produce ideal outcomes for all market participants, for any given market to deliver competitive market outcomes, market participants will need time to respond and adjust to competitive market incentives. The Authority therefore has placed more emphasis on whether there are signs of competitive outcomes and to what degree they are currently being experienced in the market.

As the AEMC observed, it is possible for different levels of competition to exist in a single market over time.³² The Authority notes that a forward looking approach also concurs with the approach taken by the AEMC in examining questions of competition. In reviewing the effectiveness of energy market competition in South Australia, the AEMC highlighted the importance of taking a forward-looking approach, stating that:

...regard must be had to evidence of what has actually been happening in a market but the most important question is: what is likely to happen going forward? The past is only relevant to the extent that it is a guide to the future.³³

The Authority is of the view that the market characteristics discussed above should provide signs of any real or perceived competition developing between retailers as well as whether or not customer participation in the market is increasing as customers switch between retailers and choose products and services that best meet their needs. This approach to assessing competition was supported by Origin³⁴.

²⁸ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, December 2007

²⁹ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008

³⁰ See Appendix A

³¹ Queensland Council of Social Services, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, July 2008 p 3

³² AEMC, *Review of the Effectiveness of Competition in the Gas and Electricity Retail Markets – Statement of Approach*, April 2007, p 5-6

³³ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008, p 9-11

³⁴ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 2

The Authority is of the view that the market characteristics discussed above should provide signs of any real or perceived competition developing between retailers as well as whether or not customer participation in the market is increasing as customers switch between retailers and choose products and services that best meet their needs.

4. COMPETITIVE MARKET OUTCOMES FOR SMALL GAS CUSTOMERS IN QUEENSLAND

The Queensland gas market has been fully contestable for just over 12 months. Accordingly, as discussed in the previous chapter, the Authority is of the view that competition can not be expected to have fully matured yet as may be the case in other jurisdictions.

The Authority has therefore adopted a set of indicators that should assess whether competitive outcomes are developing in the small gas customer market.

This chapter describes the outcomes of those indicators. Specifically, this chapter describes the Authority's findings in relation to:

- (a) the number of retailers participating in the small customer gas market since FRC;
- (b) the market share of active retailers and the level of their market concentration;
- (c) customer participation in response to retail offers; and
- (d) emergence of price and product diversity.

The Authority's preliminary view is that positive outcomes in these competitive indicators are beginning to emerge in the small gas customer market in Queensland. The Authority believes that, once the market has had time to adjust and respond to various competitive pressures, consistent competitive outcomes across the entire market are more likely to be found.

4.1 Number of gas retailers

As discussed in chapter 2, the introduction of FRC has enabled new entrant gas retailers to compete with the host area retailers to offer to sell gas to the final tranche of gas customers, being the smallest users of natural gas in Queensland.

In July 2007, when FRC for gas commenced in Queensland, five gas retail licenses were on issue to four retailers. Two licenses were held by Origin and one by AGL as host area retailers and with the remaining two held by new entrants³⁵.

As at 30 June 2008, there were seven licensed gas retailers in Queensland.³⁶ Of these, only two were currently actively selling gas to small customers. Of all licensed gas retailers in Queensland, only the host area retailers are currently active in the gas retail market. Both these retailers are incumbent gas retailers who hold Area Retail Authority licenses as part of the pre-FRC gas market arrangement. Table 4.1 below lists all the active and inactive gas retailers licensed to retail gas to residential and small business customers in Queensland since FRC.

Whilst there are seven retail licences, only three are new entrants: Australian Power and Gas (APG), Energy Australia and Dodo Power and Gas (DPG). The remaining two licenses are held by the host retailers' subsidiary entities. All these licensed gas retailers are also licensed to retail electricity in the Queensland energy market.

³⁵ Australian Power and Gas and Energy Australia

³⁶ Dalby and Roma Town Councils each hold a retail authority that permits them to retail natural gas to customers within their specific distribution network area. However, customers within these areas are currently excluded from retail competition.

Table 4.1: Licensed Gas Retailers in Queensland as at 30 June 2008

<i>Licensed Gas Retailers</i>	<i>Date of License Issue</i>	<i>Active as at 30 June 2008</i>	<i>Licensed in more than one jurisdiction?³⁷</i>	<i>Active in the Qld electricity market</i>
<i>Host Retailers (Area Retail Authorities)</i>				
AGL (formerly Sun Gas Retail)	September 2004	Yes	Yes	Yes
Origin	February 2005	Yes	Yes	Yes
<i>Other retailers (General Retail Authorities)</i>				
APG	January 2007	No	Yes	No
AGL	March 2008	No	Yes	Yes.
Origin	July 2004	No	Yes	Yes
Energy Australia	July 2007	No	Yes	Yes
Dodo Power and Gas	January 2008	No	Yes	No.

Source: Department of Mines and Energy website, last updated April 2008, and information available to the Authority through its online energy Price Comparator.

APG is the only new entrant to have commenced gas retail activity since entering the market. However, in early 2008, after a few months in the market, it decided to halt new market offers to Queensland customers.

New entrant gas retailers

A more detailed overview of each new retailer is set out below.

Australian Power and Gas

APG was established in July 2006 and has been entering other Australian jurisdictions to compete in the energy FRC environment. With the Queensland energy market's impending FRC, APG acquired its retail gas licence in January 2007.

In Queensland, APG was the only second tier gas retailer to have begun to compete for customers since FRC but recently withdrew its gas and electricity offers from the market³⁸. APG stated that it has ceased its gas retailing activities because it could no longer viably compete for gas customers.³⁹

³⁷ NERA Economic Consulting, *The Gas Supply Chain in Eastern Australia - A Report to the Australian Energy Market Commission*, March 2008, p 80-82

³⁸ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008, p 56

³⁹ Australian Power & Gas, *Australian Power & Gas Submission, Review of Small Customer Gas Pricing and Competition in Queensland*, June 2008

Energy Australia

Energy Australia was granted a retail gas licence in July 2007. It is currently owned by the New South Wales Government⁴⁰. Energy Australia is only active in the Queensland electricity market. To date, it has not commenced any retail activities in the gas market.

Dodo Power and Gas

Dodo Power & Gas (DPG) was formed in late 2006 and is a subsidiary of the privately owned company Dodo⁴¹. DPG obtained both retail electricity and gas licenses in Queensland in January 2008. In addition, DPG also holds retail licenses for electricity and gas in South Australia, New South Wales, the Australian Capital Territory and Victoria. DPG is yet to commence any gas or electricity retailing activities in Queensland.

The Authority's assessment

While FRC has resulted in an increase in the number of licensed gas retailers in Queensland, there is still a distinct lack of alternative retailers for small gas customers to choose from.

4.2 Changes in market shares and market concentration

Market share and market concentration are useful measures for assessing whether one or more retailers are capable of exercising any unilateral or collective market power. The concentration of market shares in the hands of a small number of retailers may allow for explicit or tacit collusion or for coordination of market conduct in ways which may reduce competitive rivalry, increase price and discourage entry. Furthermore, such conditions could also act as a potential barrier to entry for new competitors or for smaller scaled retailers who may otherwise have an incentive to expand within the market.

Prior to the introduction of gas FRC, small gas customers were only served by two host area retailers, Origin and AGL (previously Energex, then Sun Gas Retail). Since the introduction of FRC and deregulation of the natural gas market, customers have had the option to either stay with their host area retailer under standard contracts or sign up with another licensed gas retailer on a negotiated market contract. Customers have also had the option to enter into negotiated market contracts with their host area retailer.

Given these options, it can be expected that some customers are likely to switch from their host area retailer to whichever retailer offers them the best product package to suit their needs at the most competitive price. This behaviour is referred to as customer 'switching' or customer 'churn' (discussed in section 4.3 below).

If customers begin exercising their choice to switch retailers, for retailers to be able to retain their market share and/or increase their market share, they are potentially forced to compete with their rivals by improving and upgrading their product offerings in order to cater for changing customers' tastes and preferences. When retailers are conscious of customers' ability to exercise choice, then the market is said to have demonstrated some degree of competitive market outcome.

⁴⁰ AEMC, *Review of the Effectiveness of Competition in the Electricity and Gas Retail Markets in South Australia*, July 2008, p 62

⁴¹ AEMC, *Review of the Effectiveness of Competition in the Electricity and Gas Retail Markets in South Australia*, July 2008, p 61

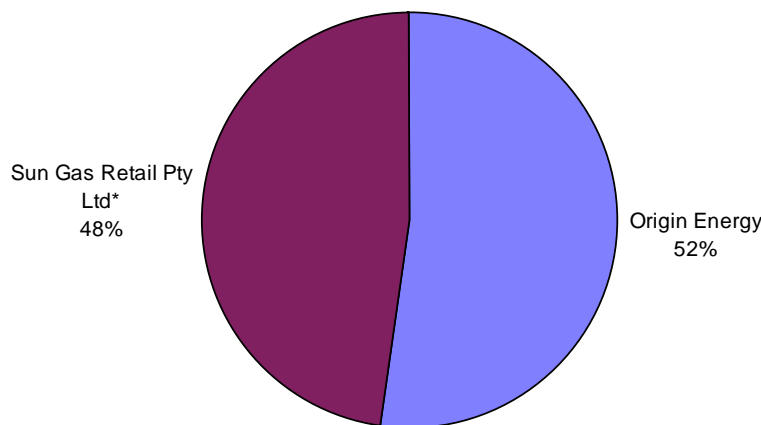
Change in host area retailers' market share since FRC

The Authority sought to obtain each retailers' approximate market share pre- and post-FRC to determine whether there was any evidence of change in their market share.

In approximating the market shares of retailers pre-FRC, the Authority relied on 'volume customer' data as provided by the respective distributors (Envestra and APT Allgas) in their 2006 Access Arrangements. Volume customers consist of customers consuming less than 10TJ of gas per annum. While the Authority acknowledges that these data may be approximate, it nevertheless reflects the number of customers connected to the respective distribution networks in different geographical areas within Queensland.

Since Origin was the sole host area retailer for Envestra's distribution network, customers connected to Envestra's distribution network have been considered Origin's customers. Based on the same principle, Sun Gas Retail Pty Ltd (purchased by AGL) was the sole host area retailer for customers connected to APT Allgas's distribution network. Hence, the Authority has classified customers who are connected to APT Allgas's distribution network as Sun Gas Retail Pty Ltd's customers. Figure 4.1 below provides an approximate proportion of 'volume customer' market share between the two host retailers in Queensland for the period ending 30 June 2006.

Figure: 4.1 Gas retail market share in Queensland as at 30 June 2006



Note: Figures are based on customers consuming less than 10TJ of gas p.a)

** Now referred to as AGL Sales (Queensland) Pty Ltd*

Source: Envestra and APT Allgas Energy Pty Ltds' Access Arrangement for the Queensland Network, June 2006.

From Figure 4.1 it can be seen that, prior to FRC, for the period ending 30 June 2006, the small customer gas market was split fairly evenly between the two retailers. Each retailer's licensed area is presented in Table 2.1.

As at 30 June 2008, the bulk of the small gas customer market is still dominated by the two host retailers, Origin and AGL. In particular, the market is still almost evenly split between the two host retailers, with APG capturing less than 1.0% of the total market share. However, APG's low market share also reflects the limited time that it was active and its subsequent decision to withdraw its retail offers.

Despite the low market share captured by APG, there is evidence of active customer switching behaviour. In particular, for the period ending 30 June 2008, VENCORP has reported 9,062 gross customer switches, where a customer has changed from their host retailer to an alternative retailer, in the Queensland gas market, out of a total 156,573 distribution supply points. This equates to gross customer switching rate of approximately 5.8% over that period (discussed in further detail under Section 4.3). This indicates that some degree of competitive market activity is present in the Queensland small customer gas market.

Market concentration

The areas where the host area retailers are offering negotiated retail contracts suggests that they predominantly target customers located within the metropolitan areas of Ipswich, North Brisbane, Gold Coast, Oakey, South Brisbane and Toowoomba.

Customers located in regional areas such as Gladstone, Rockhampton and the Wide Bay are currently unable to access negotiated retail contracts from a competing retailer. The only retailers which provides retail offers in these areas are the host retailers themselves who are required to supply gas to any customer in their area on the distribution network. For example, currently the only retailer available to small gas customers in Gladstone and Rockhampton is the host area retailer, Origin.

Retailers have suggested that supplying reticulated natural gas to customers in regional areas is not feasible at current tariffs because of the limited customer base available in these areas. They also suggested that this situation is exacerbated by regulated electricity tariffs which are (in their view) also not cost reflective, thereby limiting retailer competition in both markets and explaining, in part, the lack of new entrants in the retail gas market.

The Authority's assessment

Overall, the small gas retail market is highly concentrated between the two host area retailers at present. While the Authority's preliminary conclusion is that there are some signs of competitive retailer rivalry among existing retailers for customers within the larger metropolitan small customer gas market, the regional small customer gas market is as yet to be targeted by retailers. While competition in the electricity market will have some impact on the level of competition in the gas market, as discussed in the following chapter, the lack of cost reflective prices for small gas customers is more likely to be the immediate limiting factor.

4.3 Customer participation

The ability and willingness of customers to respond to price or quality differences by switching to products which better meet their needs is a useful indicator of the existing degree of competition in a market. Conversely, in markets where customers do not respond to differences in price and non-price products and service offerings, suppliers may have a degree of market power which enables them to maintain prices above the long-term cost of supply (or alternatively provide inferior service quality) for a significant proportion of their customer base without loss of custom.

Customer switching (customer churn)

An important measure of customer participation is the rate at which customers are actively switching between retailers or to negotiated contracts with their existing retailer. Where a sufficient number of gas customers are willing to switch to retailers with more attractive price or non-price terms, retailers are likely to be constrained in the extent to which they can retain or exercise market power in respect of any particular customer group. Customer switching or

“churn rate” may be viewed as an outcome of the effectiveness of retailer actions in motivating customer responses.

The rate of customer switching is likely to be affected by:

- (a) the extent to which retailers are actively promoting their offers in the market; and
- (b) customers’ awareness of the choices available to them, which will vary depending upon their receptiveness to the sales channels utilised by retailers.

There are two types of customer switching:

- (a) gross switching which refers to customers that switch from one retailer to another; and
- (b) internal switching which refers to customers that switch from a standard retail contract to a negotiated retail contract.

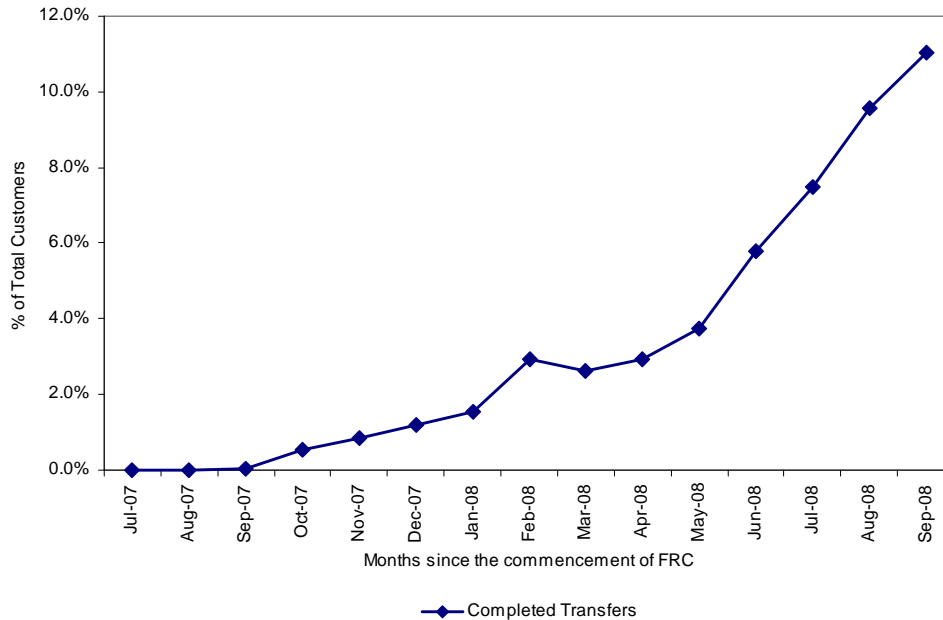
While gross switching is a useful indicator of market competitiveness, it should be interpreted with caution as low gross switching rates does not necessarily indicate a lack of competition.

Customer switching rates for Queensland are reported by the GRMO, VENCORP. The switching rates collected by VENCORP only reflect the gross switching rates for gas customers consuming less than 10TJ per year on the distribution network. VENCORP’s reported churn rates do not identify internal switching rates.

While data provided by VENCORP’s does not identify every aspect of customer participation in the small gas customer retail market, it nevertheless provides a good indication of customers’ responsiveness to competitive pressures within the market.

Figure 4.2 illustrates the monthly gross switching rates for gas customers in the 12 months to 30 June 2008.

Figure 4.2: Cumulative monthly gross switching rates in the Queensland gas retail market for the period ending 30 June 2008.



Source: Data provided by VENCORP, September 2008

Note:

1. Statistics include Greenfield sites and churns related to both basic and interval meters for customer consuming up to 10 TJ per year connected to the distribution network.
2. Statistics only include gross transfers or churns and not internal transfers.

The gross switching rate in the gas retail market was not significant in the first few months of FRC (July 2007 to September 2007). However, the rates have begun to rise more rapidly as customers are becoming more aware of their options in the FRC environment.

For the first 12 months following the commencement of gas FRC, the Queensland gas market recorded a 5.8% gross switching rate. Since then, the gross switching rate has continued to rise, reaching 11.0% for the first 15 months of FRC ending 30 September 2008. This indicates a significant increase in customer market activity since the commencement of FRC in Queensland. However, as noted above, switching in the small customer market has been limited to the larger metropolitan areas. Small customers in regional areas are generally unable to exercise market choice due to lack of retailer rivalry. Nevertheless, the Queensland gas retail market has demonstrated some degree of competition to date.

Factors that impact on customer participation and customer switching

Consumers responding to differences in price and service levels offered by retailers are essential for effective competition as this provides an incentive for retailers to respond to these signals to avoid losing market share.

The AEMC noted that:

...although energy supply is an essential service, electricity and gas are homogeneous products which are viewed by a large proportion of energy customers as low involvement

*commodities. Accordingly, many energy consumers may have a low level of interest in exercising choice between retailers and their alternative price/service offerings.*⁴²

The extent of customer participation by actively making decisions about their gas supply arrangements will to some extent depend on the presence or magnitude of search and switching costs relative to the benefits available from changing retailer. Switching costs are costs that a customer would in real or perceived terms incur in order to switch supplier that would not be incurred by remaining with their current supplier. Switching costs would therefore not always be quantifiable in monetary terms. For example, customers may be discouraged from switching if they consider the time and effort required to search for information to be relatively high when compared with the actual or perceived benefits to be gained from switching.

Origin stated that the switching patterns observed to date reflect to some extent the level of direct marketing activities undertaken by retailers.⁴³ By providing information directly to customers, retailers can differentiate their product service offerings from those of their rivals, while at the same time economising on the search and transaction costs of customers which may otherwise discourage many of them from exercising choice (the availability of information for customers to make informed choices is discussed in more detail in chapter 8).

Retailers can also minimise customer switching by:

- (a) creating barriers to discourage customers from changing their suppliers, such as binding fixed term contracts and exit or early termination fees;
- (b) bundling goods and services together (e.g. dual fuel offers);
- (c) using retention activities such as loyalty programs; and
- (d) providing good quality service.⁴⁴

Customer switching can also be affected by other variables such as the number of competitors in the market, demographics, demand, customers' perceptions of competition and the cost of the service.

4.4 The Emergence of Price and Product Differentiation

As noted in chapter 3, a competitive market is likely to exhibit some diversity in price and product offerings as sellers try to win market share.

Price Diversity

Price diversity is evident in the Queensland small customer gas market. The prices charged by a gas retailer typically consists of two price components – a fixed supply charge and a variable consumption tariff, which varies according to the size of the customer (a more detailed discussion on gas prices can be found in chapter 5).

Specifically, gas supply products offered are priced by steps or blocks based on the customers' individual demand or consumption profiles, with gas prices or tariffs being negatively related to the amount of gas demanded or consumed. For example, customers with greater consumption levels (such as those using gas not only for cooking purposes but also for bulk hot water or space heating purposes) have the benefit of purchasing gas products with lower tariffs as

⁴² AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, July 2008, p 87

⁴³ Origin Energy, *Review of Small Customer Gas Pricing and Competition in Queensland*, June 2008, p 13

⁴⁴ AER, *State of the Energy Market 2007*, July 2007, p 295

opposed to customers with lower consumption levels. In other words, retailers have structured their gas supply arrangements with different tariff levels to provide greater price benefits to small residential and commercial customers with higher consumption levels as opposed to customers with lower consumption levels.

Where competition is effective, customers have the benefit of negotiating market contracts with different retailers to obtain a gas supply arrangement which best suits their needs or preferences.

However, it should be noted that price differentiation between competing retailers has only been demonstrated in the metropolitan areas of Queensland, not in regional areas to date. Small residential customers in regional areas such as Gladstone, Rockhampton and Wide Bay are still unable to exercise market choice due to lack of retail offers.

Non-Price Product Differentiation

Beyond the provision of services to consumers at least cost, retailers may include non-price benefits and service offerings for customers to differentiate their products from competitors. These strategies involve delivering services that customers demand through product innovation and differentiation of service. Examples of these product differentiation strategies include:

- (a) promotion of green energy benefits in order to promote greater environmental responsibility;
- (b) dual fuel offerings where the customer has one supplier and one bill for electricity and gas usage with the potential for associated discounts;
- (c) the provision of non-price incentives and offerings, such as free movie tickets or magazine subscriptions;
- (d) customer 'value add' services such as energy cost reduction information and energy efficiency audits; and
- (e) higher levels and quality of customer service from retailers.

One widespread form of non-price product differentiation in the Queensland gas market is dual fuel market offers. These consist of bundling both electricity and gas in one contract. Retailers are able to earn an additional margin for each customer who signs up to purchase gas as well as electricity for a marginal increase in the acquisition cost, brought about by economies of scope. This is consistent with Origin's submission which noted that it targets electricity and dual fuel customers to minimise the cost of customer acquisition⁴⁵.

Furthermore, under these types of contracts, retailers often tie gas and electricity products with other inducements/benefits such as free magazine subscriptions, free electricity and free products.

These offers are currently available to customers located in the metropolitan areas of Ipswich, North Brisbane, Gold Coast, South Brisbane, Toowoomba and the Oakey distribution zones. However, it appears that these product packages are not being offered to customers residing in the regional areas of Gladstone, Rockhampton and Wide Bay zones, reinforcing the lack of choice for regional customers.

⁴⁵ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 8

Industry estimates are that at least 34,000 small customers were on a dual fuel contract in Queensland as at 30 June 2008, with the majority of these customers located within the metropolitan areas⁴⁶.

However, AGL, Origin and APG also suggested that a lack of cost reflectivity in regulated electricity tariffs limited the ability of retailers to offer dual fuel contracts, particularly in regional areas.

Another form of non-price product differentiation involves the labelling of gas as a form of 'green energy' or 'environmentally friendlier energy' compared to electricity. Natural gas consumption typically produces virtually no solid waste and lower levels of greenhouse gasses than using electricity or oil for the same purpose. A review of retailers' websites revealed that there is limited publicly available information marketing the benefits associated with natural gas as opposed to electricity. One possible reason for this is that retailers placed greater emphasis on promoting "green energy" rather than gas as an 'environmentally friendlier' alternative to electricity. This could also be the result of current cost reflective outcomes as discussed in chapter 5.

The price and product diversity evidence presented above demonstrates the presence of some degree of competitive market activity which is mainly focussed on bundling of gas with electricity as a dual fuel product and tying of this type of product with in-kind incentives or inducements.

⁴⁶ Origin Energy, Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper, June 2008

5. GAS PRICES FOR SMALL CUSTOMERS

Historically, maximum retail gas prices paid by Queensland's residential and other small natural gas consumers were regulated by the Queensland Government. The level set did not necessarily reflect the full cost of gas supply for all natural gas consumers. The introduction of FRC in the Queensland gas market was accompanied by the deregulation of gas prices to allow competition and provide incentives for new market participants.

Unlike Queensland's retail electricity market and retail gas markets in a number of Australian jurisdictions, there are no longer any regulated or Government-controlled prices for small gas customers in Queensland who do choose not to enter into market contracts. However, under the *Gas Supply Act*, the Government has retained the reserve power to regulate tariffs in the event that competition is found to be not effective.

The historically low retail prices have risen markedly in last 12 months since deregulation, particularly the retail prices being offered to some small customers.⁴⁷ Possible explanations include that price structures are now moving towards cost reflectivity after being kept artificially low by the Government prior to deregulation and/or that the market is experiencing increases in the cost of supplying customers. Alternatively, price increases could reflect a lack of competition and the resulting capacity of retailers to increase prices.

As part of this review, the Authority is required to ascertain whether current retail gas prices faced by small customers are cost reflective. The cost components that must be taken into account in determining the total cost of supply include:

- (a) wholesale gas prices;
- (b) transmission costs;
- (c) distribution costs; and
- (d) retail costs.

In order to consider and report on the impact on retail prices of movements in prices and costs in the upstream gas market, the Authority MMA to assist. MMA's report is available on the Authority's website.

In its advice to the Authority, MMA found that the largest costs, faced by retailers serving gas customers, are distribution charges. Retail costs were next in order of magnitude, with transmission costs and wholesale gas costs making up only a small proportion of the cost to retailers for small gas customers.

This chapter examines the financial situation faced by a second tier retailer wishing to enter the Queensland gas market, in order to assess whether current tariff levels provide an incentive or a barrier to market entry. To achieve this, the cost components that make up the total cost of supplying a reticulated natural gas customer for a second tier retailer are examined and estimated. These costs are then compared to prevailing tariffs to determine the degree of cost reflectivity.

5.1 Historical regulated retail prices

Prior to the introduction of FRC, residential customers were separated into areas called franchise areas. Government owned organisations were granted franchise areas to supply. The

⁴⁷ See the Terms of Reference, Appendix A, for this review.

maximum tariff that an organisation could charge was set by the Queensland Minister responsible for energy matters. Tariffs consisted of a fixed access charge and charges based on consumption levels.

Retailers supply customers via a distribution network. As distribution networks are natural monopolies, each distributor is required to gain approval for the terms under which retailers access their distribution network. Responsibility for approving access arrangements fell under the purview of the Authority under the *Gas Pipelines Access (Queensland) Act 1998* and the National Third Party Access Code for Natural Gas Pipeline Systems (the Code).

In preparation for the introduction of FRC, many public sector assets were sold including the retail franchise areas which were sold to Origin and AGL. Prior to this, it was identified that the current maximum tariff level set by the Minister was below the level that was fully reflective of the costs of supplying small gas customers. In order to bring tariffs closer to cost reflectivity two tariff increases of 10% were approved for March and October 2005.

While equal increases to the access and usage charges did assist with overall retail margins, it did not address the structure of tariffs. While retailers set tariffs to recover fixed and variable costs, the total fixed cost components were significantly higher than reflected in the access charge under the approved tariff structure. The retailers made up the shortfall by placing higher margins on the variable cost component to maximise overall profitability. Due to the higher margins on usage, larger gas users were subsidising smaller users, whose contribution was often less than the actual fixed costs of supplying a gas connection.

5.2 Cost components of the natural gas supply chain

The Queensland reticulated natural gas supply chain is set out in section 2.1. Each section of the supply chain has its own associated markets and costs, the combination of these making up the final cost to the natural gas consumer. The following sections explain in more detail the likely costs incurred in arranging supply to small customers.

Wholesale gas prices

The wholesale price component of the retail supply cost represents the upstream segment of the gas supply chain that encompasses both the exploration and production phases. The commodity price of wholesale gas is generally determined by long term supply contracts that in some cases establish minimum quantities that must be taken or paid for in each year by retailers. The “take-or-pay” provisions provide greater investment certainty for producers but create a minimum bill which must be met by a retailer even if actual demand is below the take-or-pay quantity. Viewed in this way, the minimum bill operates as a fixed cost for retailers. In addition to paying the ex-plant commodity price of gas, retailers also incur negotiation and contracting costs.

In addition to traditional natural gas production, Coal Seam Methane (CSM) is gaining an increasing prominence as an alternative method for extracting natural gas, particularly in the Queensland gas market.

CSM production differs from conventional gas production in a number of ways which affects the cost of gas from this source. Firstly, coal seam methane sources are generally closer to the surface than natural gas deposits. This requires less capital cost compared to conventional techniques to extract the same quantity of methane⁴⁸.

⁴⁸ NERA Economic Consulting, *The gas supply chain in Eastern Australia*, June 2007, p14

Secondly, gas extracted from coal seams is generally of a higher quality. On average, coal seam methane contains 95% methane⁴⁹, whereas natural gas contains 90% on average. The lower levels of impurities for coal seam methane enable less complex processing techniques to be used, lowering the cost of gas produced from this method.

A third difference is the pressure at which methane is extracted. As natural gas is generally extracted further underground, the pressure is higher than sources closer to the surface such as coal seam methane. Natural gas reserves therefore require fewer wells and compression to produce a given amount of methane, so production from coal seams will incur higher costs of extraction.

Queensland's CSM industry has supplied an increasing proportion of gas demand in recent years and production levels are forecast to continue to increase in the future.⁵⁰ In its advice to the Authority, MMA has taken into account the impact of the increasing use of CSM on a retailer's terms and cost of securing supply.

MMA consulted widely with industry participants in forming its advice and found that there is considerable uncertainty and a divergence of views on current and future pricing.⁵¹ The reasons for this are due to the future introduction of the Carbon Pollution Reduction Scheme (CPRS)⁵² and the potential impact of new Liquefied Natural Gas (LNG) projects targeting export markets. The resulting modelling by MMA was based on the requirements and contracting position of a second tier retailer and reflected, in particular, that a second tier retailer requires smaller contracts and greater flexibility in contracts, which affects the final price able to be negotiated.

MMA's advice to the Authority indicates that ex-plant prices for relatively large, flat contracts at Wallumbilla are currently "of the order of \$3/GJ and are expected to increase by about \$2/GJ by 2012/13".⁵³ MMA estimated the specific requirements of a second tier retailer would increase negotiated gas prices to \$4/GJ, rising in real terms to \$6 GJ in 2012/13⁵⁴.

Transmission

The transmission cost component of the gas supply cost relates to the pipeline systems used to transport gas from production facilities to the distribution systems that supply users.

Generally, gas retailers are able to negotiate transmission charges that vary with the retailer's capacity and load characteristics. While reference charges for a gas transmission pipeline may be set under an access arrangement approved by the AER, a retailer can still negotiate different price outcomes by managing its suppliers and demand load.

Since transportation charges are predominantly capacity based, the transportation costs incurred by a retailer will be largely fixed. In addition to paying these transportation charges, retailers will also incur negotiation and contracting costs.

Until recently, the Roma to Brisbane Pipeline (RBP) and the South West Queensland Pipeline (SWQP) were unregulated. However, the AER has now reviewed the RBP access arrangements

⁴⁹ NERA Economic Consulting, *The gas supply chain in Eastern Australia*, June 2007

⁵⁰ Department of Mines and Energy, *Queensland's coal seam gas – 2006-07 update*, available at: http://www.dme.qld.gov.au/zone_files/coal_pdf/new_csg_cc.pdf

⁵¹ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 26

⁵² Federal Department of Climate Change, *Carbon pollution reduction scheme, Green Paper*, July 2008

⁵³ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 26

⁵⁴ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 28

including the tariffs charged.⁵⁵ The SWQP will continue to be unregulated until 30 June 2016.⁵⁶ The published RBP tariffs for 2008/09 as outlined in table 5.1 below were used in formulating MMA's advice to the Authority, and current tariffs for the SWQP are based on advice from Alinta. Estimated tariffs for 2012/13 include the assumption that transmission will utilise new capacity on both pipelines at a higher cost.

Table 5.1: Current and assumed RBP transmission charges for 2008/09 and 2012/13

<i>Tariff, excluding GST</i>	<i>Unit</i>	<i>Roma to Brisbane</i>	<i>Wallumbilla to Gladstone and Rockhampton</i>
Fixed 2008/09 Price Component	\$/GJ MDQ	0.4459	0.795
Fixed 2012/13 Price Component Assumption	\$/GJ MDQ	0.6818	1.00
Variable Price Component	\$/GJ	0.0298	0

Origin commented that this approach was reasonable for the purposes of modelling but noted that retailers would have to negotiate with pipeline operators for actual transmission prices⁵⁷.

Distribution

A distribution network transports the gas from large scale transmission pipelines to end use customers. The distribution networks in Queensland are owned by Envestra and APT Allgas. The distribution network access regime pricing is currently administered by the Authority⁵⁸. MMA determined these charges based on current regulatory decisions by the Authority as shown in table 5.2.

⁵⁵ AER, *Revised access arrangement by APT Petroleum Pipelines Ltd for the Roma to Brisbane Pipeline*, March 2007

⁵⁶ AER, *Revised access arrangement by Epic Energy Queensland Pty Ltd for the Ballera to Wallumbilla Natural Gas Pipeline (South West Queensland Pipeline)*, November 2006

⁵⁷ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p4

⁵⁸ Responsibility for distribution access regimes transfers to the AER at the expiry of the current access regime.

Table 5.2: Distribution tariffs for 2008/09 for Allgas and Envestra Distribution Networks

	<i>Unit</i>	<i>Rate Inc GST</i>	<i>Rate Exc GST</i>
APT Allgas			
Base charge	\$/day	\$0.429	\$0.390
Provisional FRC charge	\$/day	\$0.099	\$0.090
Up to 1.7 GJ/day	\$/GJ	\$8.525	\$7.750
Next 8.3 GJ/day	\$/GJ	\$6.303	\$5.730
> 10 GJ/d	\$/GJ	\$4.279	\$3.890
Envestra Brisbane and Dinmore			
Base charge	\$/day	\$0.230	\$0.209
Provisional FRC supply charge	\$/day	\$0.070	\$0.064
Provisional FRC usage charge	\$/GJ	\$0.270	\$0.245
Up to 0.2 GJ/day	\$/GJ	\$15.170	\$13.791
Next 0.3 GJ/day	\$/GJ	\$14.600	\$13.273
Next 0.5 GJ/day	\$/GJ	\$14.230	\$12.936
Next 1 GJ/day	\$/GJ	\$13.550	\$12.318
Next 5 GJ/day	\$/GJ	\$11.880	\$10.800
>7 GJ/day	\$/GJ	\$8.890	\$8.082
Envestra Northern			
Base charge	\$/day	\$0.230	\$0.209
Provisional FRC supply charge	\$/day	\$0.070	\$0.064
Provisional FRC usage charge	\$/GJ	\$0.270	\$0.245
Up to 0.2 GJ/day	\$/GJ	\$16.690	\$15.173
Next 0.3 GJ/day	\$/GJ	\$16.060	\$14.600
Next 0.5 GJ/day	\$/GJ	\$15.660	\$14.236
Next 1 GJ/day	\$/GJ	\$14.900	\$13.545
Next 5 GJ/day	\$/GJ	\$13.070	\$11.882
>7 GJ/day	\$/GJ	\$9.780	\$8.891

Retail Operating Costs

Retail operating costs are costs that retailers incur in acquiring and serving their customers. Typically, these include costs such as those associated with retailer billing and revenue collection systems, marketing costs, call centres and related corporate functions. Factors that influence these costs include customer type and location, regulatory obligations and other market administration costs.

Retail operating costs are categorised into variable costs (which vary with customer numbers or gas consumption levels) and fixed costs (which do not vary with customer numbers or gas consumption levels). The categorisation of retail operating costs is relevant to the allocation of these costs to a particular class of customer.

A large proportion of retail operating costs are likely to consist of wage payments to employees. Another significant cost is customer billing systems. The complexity and cost of these systems depend on a number of factors, including reporting requirements, the types of products offered to customers and regulatory requirements. How these systems affect the retail operating costs for gas customers are affected by the other markets a retailer is operating in, as systems used in

other jurisdictions or in other energy markets can be adapted, resulting in lower development costs.

In its advice to the Authority, MMA estimate that wholesale gas costs for a second tier retailer would be:

- (a) \$4/GJ for supply in 2008/09 under a contract which allows some ramp-up, has a swing of 110% and a take-or-pay level of 80%⁵⁹ and a term of some 3-5 years.
- (b) \$6/GJ in real terms if negotiating for a similar contract in the year 2012/13. While prices in the year 2013 may well remain relatively low, MMA assumed that the retailer would be contracting for supply into the period when prices move towards LNG export parity pricing.

Retail Margin

The retail margin is the increment above a retailer's actual costs to cover return on capital, depreciation, amortisation, taxes and profit. The margin is a vital aspect of pricing, as an adequate margin is required to compensate and reward retailers for their investment in the business and provide incentives for new retailers to enter the market and increase competitive forces in the market.

The retail margin is not only important for maintaining the financial viability of the retailer, but it is also important for the development of competition in the gas retail market. A retail margin that is too low will fail to attract new market participants. In a market with low barriers to entry, a retail margin that is too high will attract new retailers, with the increase in competition eventually acting to reduce margins.

In its advice to the Authority, MMA reported that retailers aim for a minimum retail margin of 5% to 8% of sales. Overall MMA considered 6.5% an appropriate margin for a customer consuming up to 100GJ, 4.5%, for a customer using between 100GJ and 500GJ and 3% for a customer consuming over 500GJ/year⁶⁰.

⁵⁹ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 28

⁶⁰ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 45

5.3 Overall Costs

Origin stated that a meaningful competitive threat to the conduct of incumbents was the “presence of a threat of potential entry”⁶¹. This type of approach was supported by AGL⁶². However, APG, a recently active retailer in Queensland, declared that “a new entrant retailer is not in a position to recover their costs under the current pricing regime”⁶³. APG’s statement suggests there is little threat of potential entry. Therefore, in order to assess the effect of potential competition in the Queensland small customer gas market, it is necessary to estimate the likely costs faced by a second-tier retailer wishing to enter the market. Comparing this cost structure against prevailing tariffs will give a clear indication of the financial situation for potential competitors.

In its advice to the Authority, MMA modelled the fully allocated and marginal costs of supply for a second tier retailer of natural gas. The fully allocated cost is defined by MMA as the total average cost incurred in supplying gas to a small customer in Queensland. A potential second tier retailer would be expected to enter the Queensland market only if, over the longer term, it expected to achieve this fully allocated (or long-run average) cost.

MMA recognised that an existing second tier retailer, or one with other strategic objectives, may accept pricing at a lower level for a period. In the short to medium term, a potential second tier retailer might consider pricing where the marginal revenue of retail customers exceeds the marginal cost, including cost of funding over the longer-term. This may be the case where the retailer already has a retail presence in other states, enabling it to utilise existing systems and potentially reduce its cost structure due to the fixed retail costs having already been largely incurred in other markets. MMA defined the marginal cost as the fully allocated cost less the fixed retail costs and retail margin.

Fully Allocated Costs

Figure 5.1⁶⁴ shows the breakdown of estimated costs in the retail areas studied. It shows that, with the exception of Wide Bay, distribution costs form more than 50% of the total costs. However, as distribution costs are currently regulated in order to ensure access to distribution networks on a fair and reasonable basis, retailers have limited ability to reduce this cost in response to competitive forces.

The next largest cost components are retail costs, which include the retail margin. Due to the regulated distribution costs, this is in effect the largest area with scope for efficiency gains. These results coincide with evidence in the market and submissions⁶⁵ that retailers seek to minimise their retail costs by offering ‘dual fuel’ contracts to customers, allowing them to share common costs across both markets.

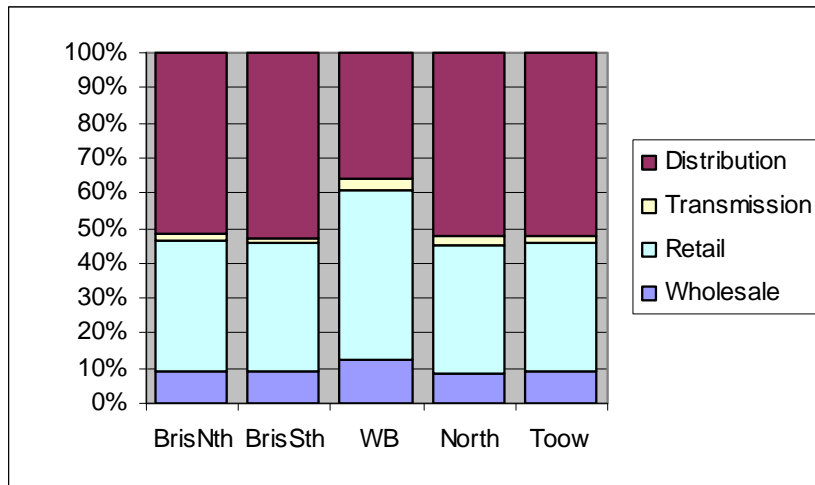
⁶¹ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p4

⁶² AGL, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 11

⁶³ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 1

⁶⁴ McLennan Magasanik Associates, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 53

⁶⁵ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 2

Figure 5.1 – Breakdown of Gas Supply Costs

Marginal Costs

APG stated that “gas only retailing is not a viable option”⁶⁶ and suggested that gas is only viable as part of a “dual fuel strategy”, which would allow fixed costs such as billing systems and call centres to be shared across electricity and gas revenue streams.

To examine this scenario, an estimate of marginal costs was also calculated by MMA. The marginal costs assume that all fixed retail costs, such as customer call centres, are established and in use in other jurisdictions or markets and can be leveraged to establish a retail presence in the gas market. To model this case, MMA included only the additional cost of servicing an additional natural gas customer, including acquisition, and has no retail margin or fixed retail costs included.

5.4 Current retail gas prices

Figures 5.2 and 5.3 show the movement of published natural gas tariffs in Queensland from July 2000 until Jul 2008. Upon the introduction of FRC, incumbent retailers began to address the balance between fixed and variable costs by increasing the fixed access charge and decreasing the variable gas usage charge. This move reduced cross subsidies between larger and smaller customers but at the same time represented a significant proportional cost increase for users who had very low consumption levels.

⁶⁶ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 2

Figure 5.2 – Changes in Fixed Supply Charge

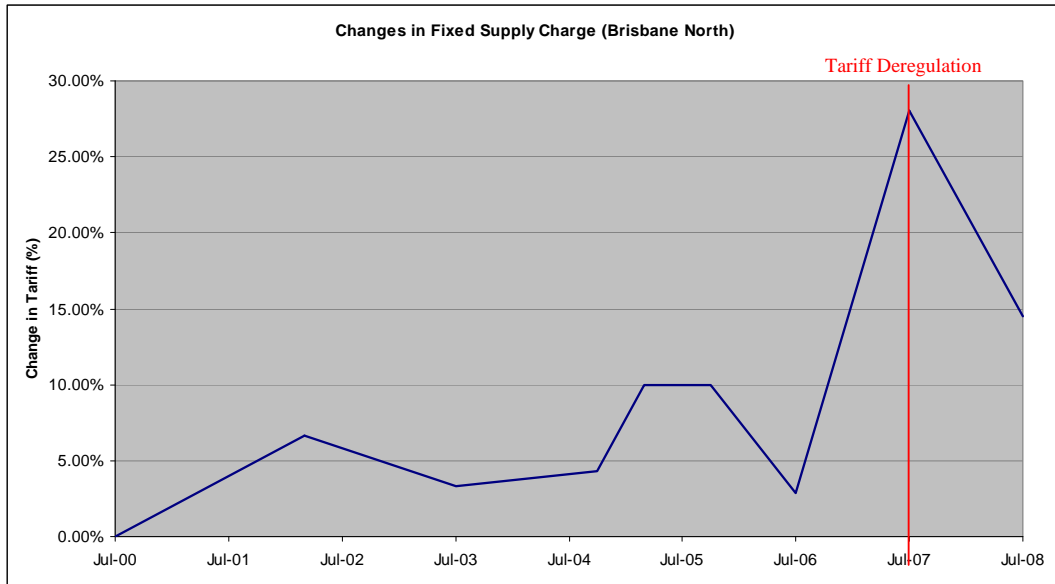
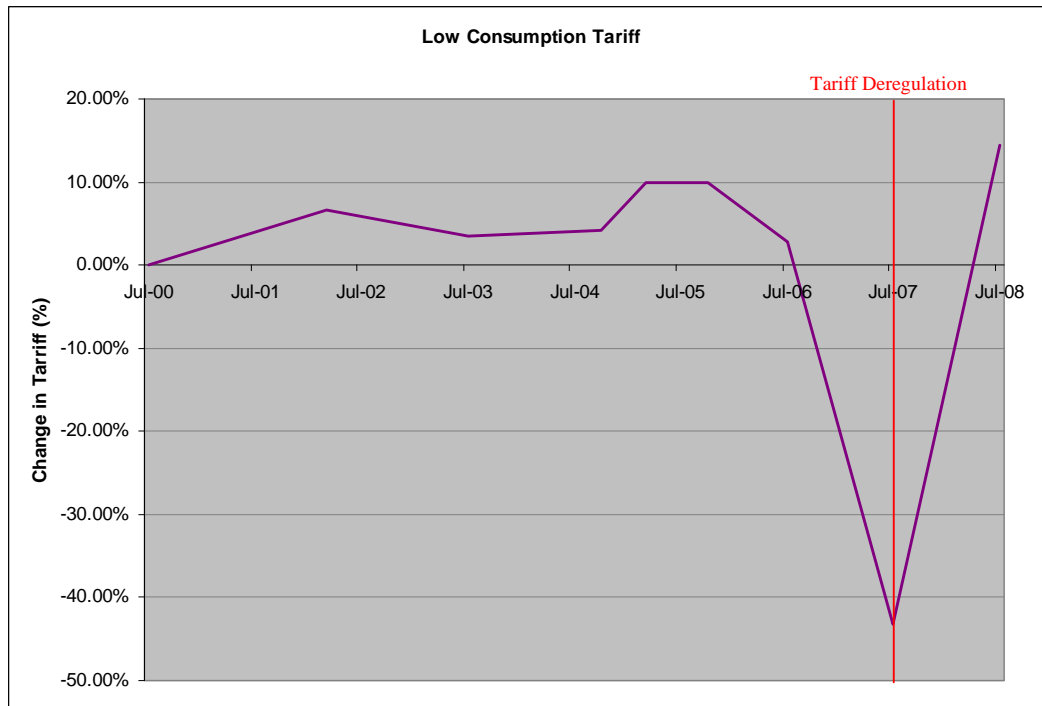


Figure 5.3 – Changes in Small Customer Consumption Tariff



5.5 Cost reflectivity for residential customers

Cost Reflectivity

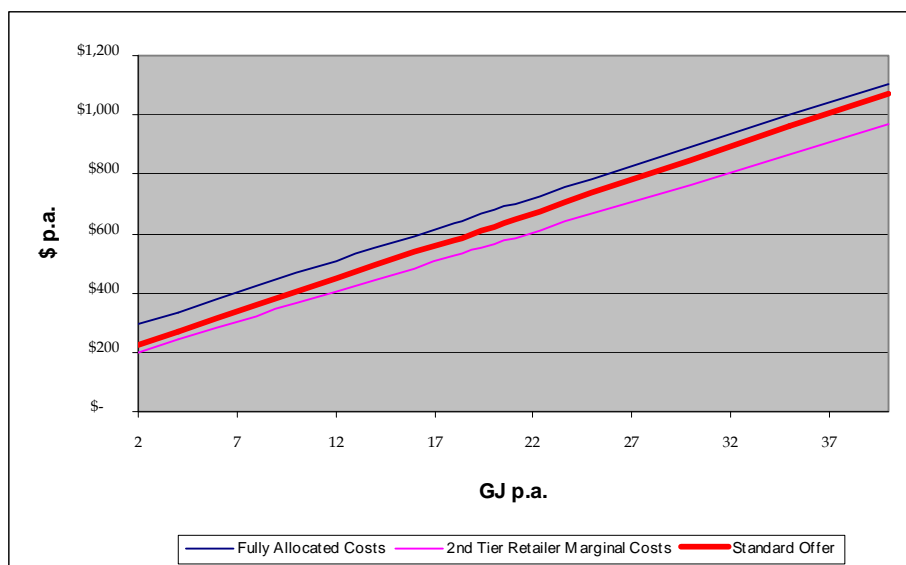
The incentive for a retailer to enter the Queensland gas market is to cover its costs of providing gas to customers and make a sufficient return on investment in the form of a retail margin. APG

stated⁶⁷ that current tariff levels charged in the Queensland market are not reflective of the cost of supplying gas to consumers, providing a disincentive for retailers to enter the market. The Authority engaged MMA to model costs and tariff levels to assess how cost reflective tariffs are at present in each Queensland distribution area.

Brisbane North

The Brisbane North area encompasses the northern suburbs of Brisbane and Ipswich. The results of the study show that, for the Brisbane North area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant. The results also show that, for low usage customers, revenue levels are close to marginal costs with revenue approaching fully allocated costs as usage rises.

Figure 5.4 – Cost Reflectivity for Brisbane North Residential Customers

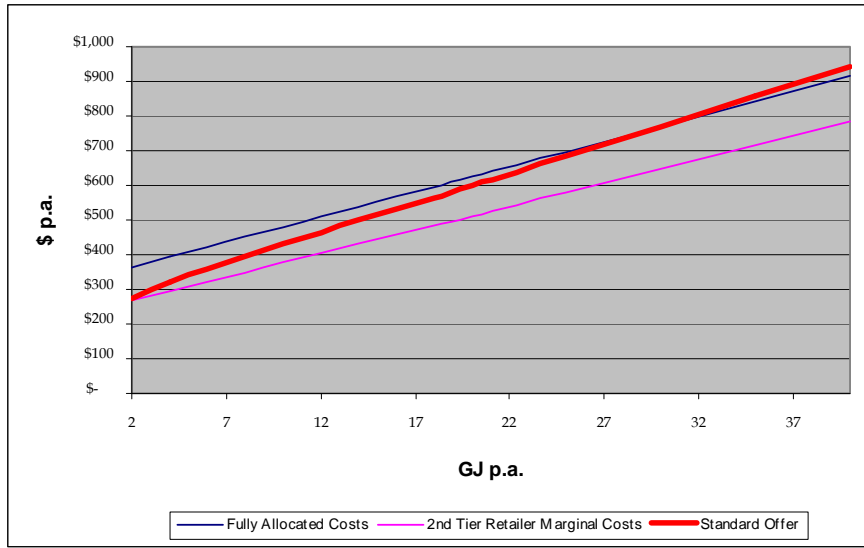


Brisbane South

The Brisbane South area encompasses the southern suburbs of Brisbane in addition to the Gold Coast and Oakey. The results of the study show that, for the Brisbane South area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 30GJ per annum. Above 30GJ per annum, revenue exceeds fully allocated costs.

⁶⁷ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 1

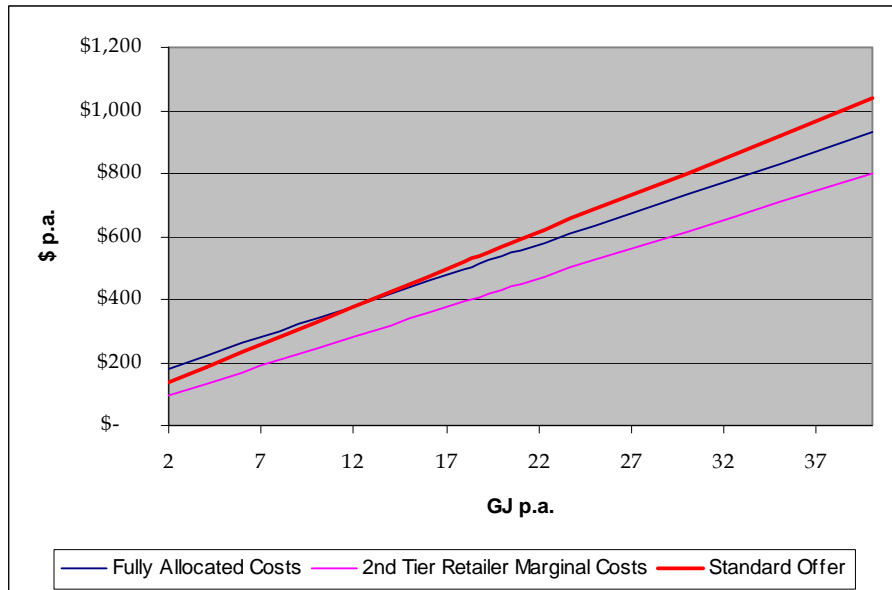
Figure 5.5 – Cost Reflectivity for Brisbane South Residential Customers



Wide Bay

The Wide Bay area encompasses Bundaberg, Maryborough and Hervey Bay. The results of the study show that, for the Wide Bay area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 12GJ per annum. Above 12GJ per annum, revenue exceeds fully allocated costs.

Figure 5.6 – Cost Reflectivity for Wide Bay Residential Customers



North Queensland

The North Queensland area encompasses the cities of Rockhampton and Gladstone. The results of the study show that, for the North Queensland area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market

entrant. The results also show that, for low usage customers, revenue levels are close to marginal costs with revenue approaching fully allocated costs as usage rises.

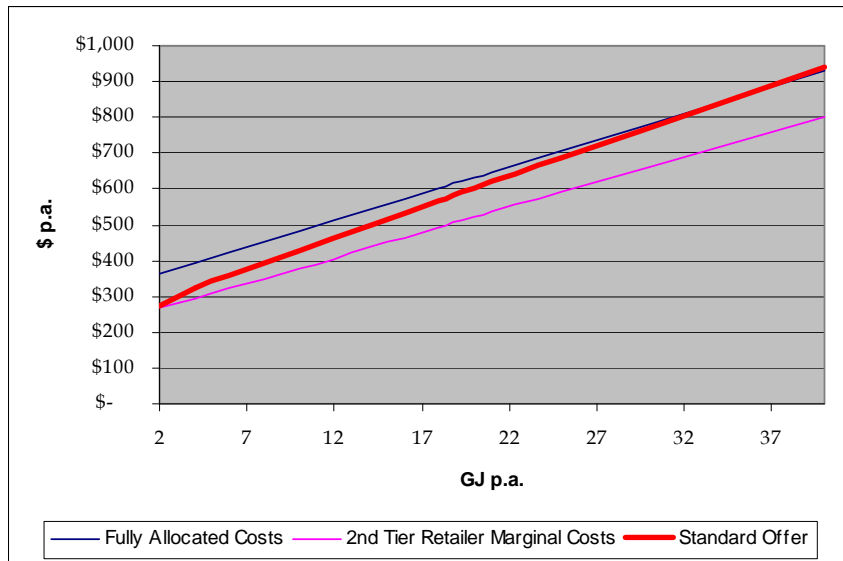
Figure 5.7 – Cost Reflectivity for North Queensland Residential Customers



Toowoomba

The Toowoomba area encompasses the city of Toowoomba. The results of the study show that, for the Toowoomba area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 40GJ per annum. Above 30GJ per annum, revenue exceeds fully allocated costs.

Figure 5.8 – Cost Reflectivity for Toowoomba Residential Customers

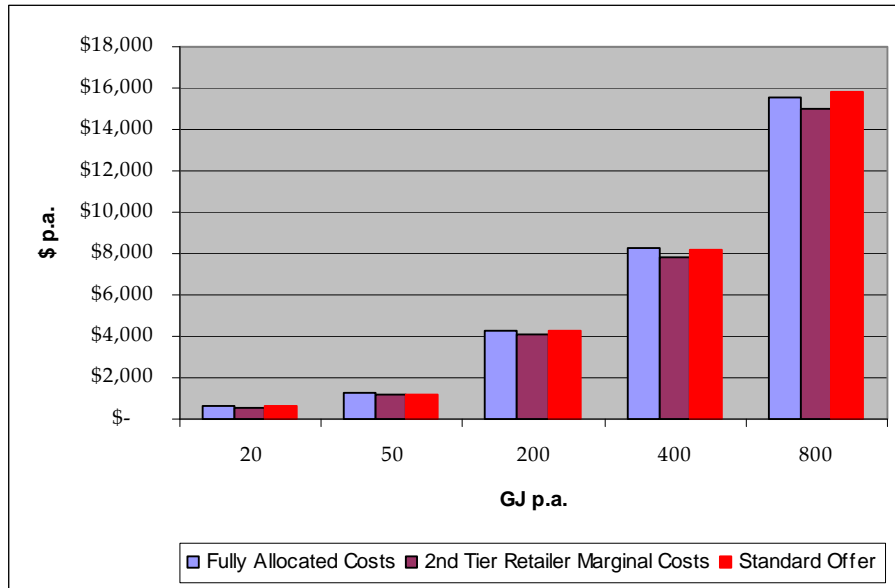


5.6 Cost reflectivity for business customers

Brisbane North

The Brisbane North area encompasses the northern suburbs of Brisbane and Ipswich. The results of the study show that, for the Brisbane North area, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 500GJ per annum. The results show that, for low usage customers, revenue levels are close to marginal costs with revenue exceeding fully allocated costs as usage rises beyond 500GJ per annum.

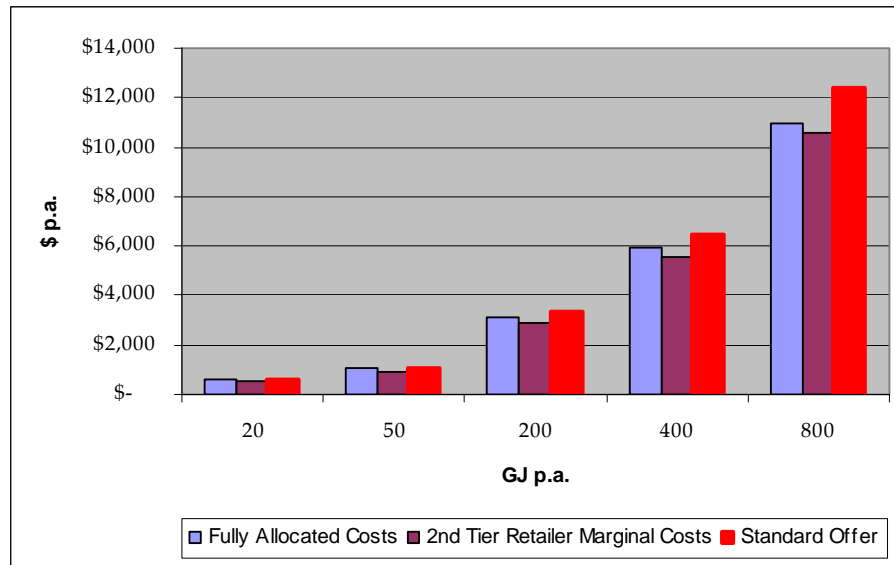
Figure 5.9 – Cost Reflectivity for Brisbane North Commercial Customers



Brisbane South

The Brisbane South area encompasses the southern suburbs of Brisbane in addition to the Gold Coast and Oakey. The results of the study show that for the Brisbane South area revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 50GJ per annum. The results follow a similar pattern to those from the Brisbane North area where, for low usage customers, revenue levels are close to marginal costs with revenue exceeding fully allocated costs as usage rises beyond 500GJ per annum.

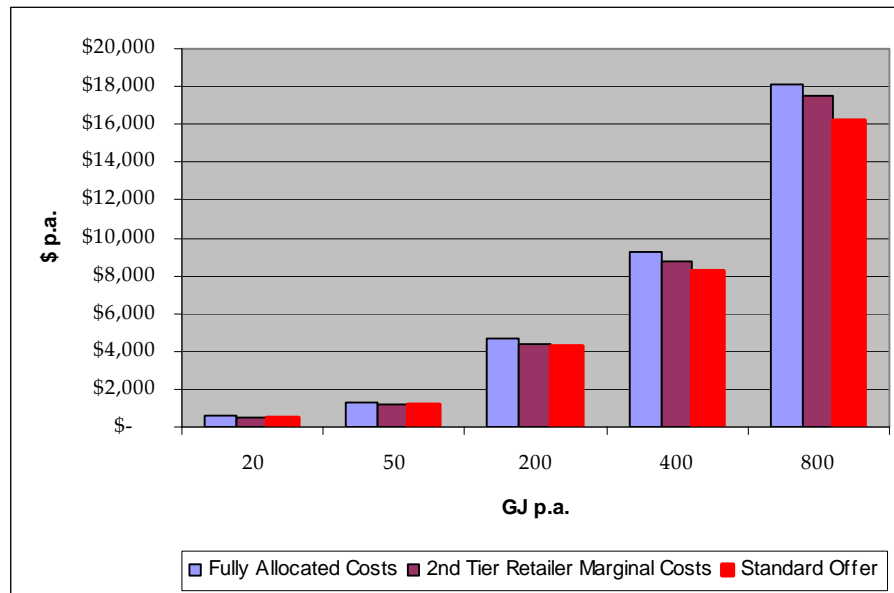
Figure 5.10 – Cost Reflectivity for Brisbane South Commercial Customers



Wide Bay

The Wide Bay area encompasses Bundaberg, Maryborough and Hervey Bay. The results of the study show that, for the Wide Bay area, revenue exceeds the marginal costs faced by a second-tier retailer for commercial customers using less than 50GJ per annum but is less than the fully allocated costs faced by a potential market entrant. At higher consumption levels, revenue is less than marginal cost (and fully allocated costs).

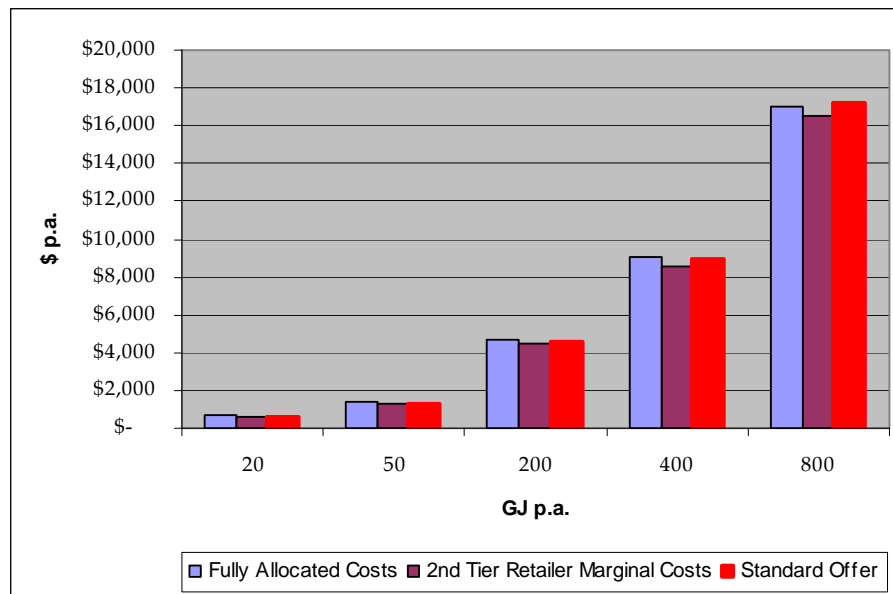
Figure 5.11 – Cost Reflectivity for Wide Bay Commercial Customers



North Queensland

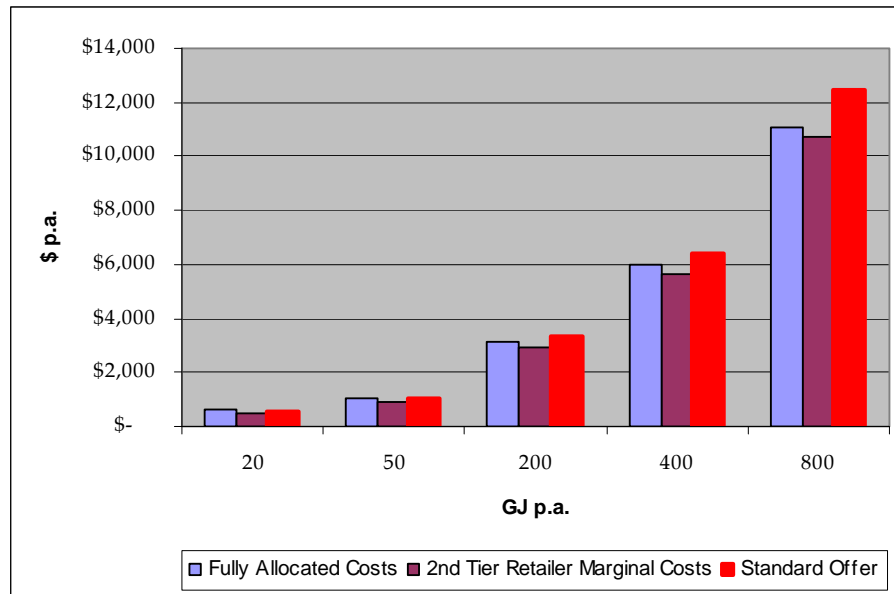
The North Queensland area encompasses the cities of Rockhampton and Gladstone. The results of the study show that, for the North Queensland area, revenue exceeds the marginal costs faced by a second-tier retailer for usage levels above 200GJ, but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 600GJ per annum. This is demonstrated further in Figure 5.12, which shows revenue exceeding marginal cost at a usage level of 200GJ, with revenue clearly exceeding fully allocated costs at the 800GJ level. The results follow a similar pattern to those from the Brisbane North area where, for low usage customers, revenue levels are close to marginal costs with revenue exceeding fully allocated costs as usage rises beyond 600GJ per annum.

Figure 5.12 – Cost Reflectivity for North Queensland Commercial Customers



Toowoomba

The results of the study show that, for Toowoomba, revenue exceeds the marginal costs faced by a second-tier retailer but is less than the fully allocated costs faced by a potential market entrant for customer usage levels below 200GJ per annum.

Figure 5.13 – Cost Reflectivity for Toowoomba Commercial Customers

5.7 Conclusion on current cost reflectivity

Residential Cost Reflectivity

The results of the modelling advice to the Authority broadly concur with statements by Origin⁶⁸, APG⁶⁹ and AGL⁷⁰ that tariff levels in the Queensland natural gas market are currently not cost reflective and that the lack of sufficient retail margin reduces the incentive for a second tier retailer to enter the market.

The overall question of cost reflectivity⁷¹ varies with the consumers' gas consumption level and improves as consumption levels increase. Table 5.3 below shows the increases required in each region for tariffs to be reflective of estimated fully allocated costs.

Table 5.3 – Residential Cost Reflectivity

<i>Residential Area</i>	<i>2GJ Cost Reflectivity Shortfall</i>	<i>25GJ Cost Reflectivity Shortfall</i>
Brisbane North	33%	7%
Brisbane South	33%	2%
North Queensland	32%	6%
Wide Bay	77%	-14%
Toowoomba	34%	4%

⁶⁸ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland*, June 2008, p 4

⁶⁹ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland*, June 2008, p 1

⁷⁰ AGL, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 10

⁷¹ Terms of Reference, item two

The analysis by MMA shows that, for small usage customers typically using natural gas for cooking only, prices are on average 33% below cost reflective levels, with the exception of Wide Bay. For higher usage customers using gas for cooking and hot water heating, the average shortfall is far lower, ranging between 2-7%.

Regional Residential Cost Reflectivity

The MMA analysis also shows that, in percentage terms, the cost reflective outcome is broadly independent of whether the customer resides in the Brisbane metropolitan area (Brisbane North or Brisbane South) or regional areas (Toowoomba and North Queensland). The exception is the Wide Bay region which has a significantly different outcome.

Small Commercial Cost Reflectivity

Table 5.4 shows the results of the MMA modelling for a 100GJ customer (such as a fish and chip shop) and a 500GJ customer (such as a bakery). The results show that, with the exception of Wide Bay, cost reflectivity shortfalls are minimal for small commercial users. Positive retail margins are indicated in Brisbane South and Toowoomba areas. As with the findings in the residential sector, higher consumption levels produce better cost reflectivity outcomes. Small commercial tariffs in the Wide Bay area are less cost reflective than other areas.

Table 5.4 – Small Commercial Cost Reflectivity

<i>Small Commercial Area</i>	<i>100GJ Cost Reflectivity Shortfall</i>	<i>500GJ Cost Reflectivity Shortfall</i>
Brisbane North	5%	0%
Brisbane South	-4%	-9%
North Queensland	5%	1%
Wide Bay	9%	13%
Toowoomba	-2%	-8%

Regional Small Commercial Cost Reflectivity

The MMA analysis also shows that, in percentage terms, the cost reflective outcome varies to a degree according to the distribution area, though the variations are not correlated with metropolitan or regional geographical areas. Wide Bay has quite a different profile to the other distribution areas.

6. SUBSTITUTES FOR NATURAL GAS

The Terms of Reference require the Authority to consider the level of competition in markets which may act as substitutes (or alternatives) for natural gas including the market for reticulated and bottled Liquefied Petroleum Gas (LPG). The Authority is also required to consider the perceptions of natural gas as a product of choice in the small customer market compared to other energy supply options.

There are a number of other factors in addition to the supply price that are likely to influence the level of substitution between the different energy sources. These include: the cost for consumers of converting from one source of energy to another; government policies aimed at encouraging the use of more greenhouse friendly (non-coal fired electricity) forms of energy and; in the case of LPG, whether consumers have access to a reticulated natural gas network.

This section considers those energy sources which may be considered as alternatives for natural gas, in particular, LPG and electricity. The alternatives are considered in turn including reviewing the characteristics of each market and those factors which may influence consumer decision-making.

In the residential sector, there are three main uses for natural gas – cooking, water heating and space heating. Each of these uses has a number of possible alternative sources of energy with the main two being LPG and electricity. Other potential sources of energy such as renewable energy (solar power) currently require very large up-front capital costs and in many cases utilise gas or electricity to meet shortfalls due to residential consumption patterns. In some regional areas, wood also provides a limited alternative to natural gas for some purposes. However, neither wood nor renewable sources are likely to be genuine alternatives for natural gas at the present time.

6.1 Liquid Petroleum Gas

LPG is the generic name for mixtures of hydrocarbons (mainly propane and butane). When these mixtures are lightly compressed (approx. 800 kPa or 120 psi) they change from a gaseous state to a liquid. LPG burns readily in air and has an energy content similar to petrol, which makes it a good fuel for heating, cooking and for automotive use.

In contrast, natural gas is predominately comprised of methane and is less dense. The different densities of the two forms of gas mean that appliances have to be specifically set up to use either natural gas or LPG.

Australia currently produces about 3,300 kilotonnes (kt) of LPG annually of which about 1,900 kt are used domestically with the remainder exported. The automotive industry accounts for nearly 65% of domestic consumption, with other uses including recreational (barbecues, caravans, marine), commercial/industrial (as a fuel) and residential (heating and cooking).

Given its characteristics (fast response time, greater control) as a source of cooking and heating compared to other energy sources like electricity, LPG is, in many respects, directly substitutable for natural gas. In addition, because LPG can use the same piping as reticulated natural gas, the two forms of gas appear to be interchangeable and therefore strong competitors. However, as both gases can not be co-mingled in the one pipe, LPG could only replace reticulated natural gas in the existing network in its entirety.

Characteristics of the LPG market in Queensland

In Queensland, there are an estimated 300,000 to 350,000 small LPG customers that consume approximately 165,000 tonnes (or 8.25 PJ) of LPG in 2007. This amount is growing at 4% per annum.⁷² These customers are supplied by three major retailers, Origin, Elgas and Kleenheat, and three regional operators, Super Gas, Smart Gas and Happy Gas.⁷³

Barriers to entry into the LPG retail market appear to be relatively low. This appears to be because, while a number of the LPG retailers are vertically integrated, there is an open wholesale market with potential market entrants readily able to access LPG supplies to commence a business. In addition, the infrastructure required to store LPG is relatively inexpensive and is readily available.

However, the method of delivery may be important in determining the number of customers that are available to each retailer. In that respect, LPG retailers deliver their product to small consumers through either bottle deliveries or dedicated reticulated LPG gas networks.

Bottled LPG delivery involves the physical transportation of bottles to individual dwellings. The most common domestic arrangement is to have two 45 kilogram bottles, with exhausted bottles replaced individually to ensure continuous supply. While this process can be costly, the transportability of LPG does provide it with an advantage over natural gas (which requires a fixed distribution network connected to a transmission pipeline) and provides access to consumers that are not connected to a distribution network and therefore not currently able to be serviced by natural gas retailers.

Reticulated LPG delivery involves networks delivering LPG to individual consumers from a central storage facility. According to industry sources, this method of delivery represents approximately 10% of LPG customers but is increasingly occurring on a small scale in development estates that have no natural gas mains connection. This is because, while it can involve significant capital costs to establish the distribution network, it can also provide economies in terms of delivery cost.

While the characteristics of the LPG market would appear to make LPG an obvious substitute for natural gas, there are a number of specific factors that are likely to influence whether a consumer chooses natural gas or LPG.

Access to reticulated gas network

A major factor in determining whether consumers will view LPG as a potential substitute for natural gas is whether or not those consumers actually have a choice. Due to the high capital cost of building distribution networks and generally low population density, much of regional and rural Queensland does not have access to a reticulated natural gas distribution system. Consumers in these areas wanting gas have no choice but to use LPG. Therefore, the option of substituting between LPG and natural gas is likely to be restricted to metropolitan areas and major regional centres.

Cost of converting (switching costs)

Another factor which is likely to affect consumer attitudes toward substituting between LPG and natural gas is the cost of converting from one to the other. Due to the different density in the two fuels, residential consumers wishing to utilise LPG as a substitute fuel for reticulated

⁷² Elgas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 1

⁷³ Happy Gas is owned by Origin Energy.

natural gas require existing natural gas appliances to be converted, or new appliances purchased, in order to use LPG.

The conversion process is relatively uncomplicated with conversion kits available for most natural gas appliances. However, the cost to have these kits and the required LPG cylinder fittings installed is approximately \$300. A consumer wishing to change to natural gas from LPG will face similar conversion costs.

Given that these conversion costs are significant relative to the current minimum cost of supply of approximately \$200 per annum, they may act as significant a barrier to switching between fuel types and may therefore reduce the likelihood of consumers substituting between LPG and natural gas.

Government policies

A further factor to consider when assessing whether consumers are likely to substitute LPG for natural gas is the effect of Government policies. If the Government has policies which promote or favour one form of energy over another, it is likely that those policies will affect consumer decisions. Currently, there are three Queensland government policies that are likely to affect the residential gas market in Queensland.

The Reticulated Natural Gas Rebate⁷⁴ began in October 2007 and provides a rebate of \$55 per year to Queensland pensioners using reticulated natural gas only. The purpose of the rebate is to assist pensioners meet the increasing supply costs of reticulated natural gas and, as such, is not available to LPG consumers. The rebate amount is due to increase from the current level of \$55 to \$57.65 a year from 1 July 2008.

The Residential Gas Installation Rebate Scheme⁷⁵ offers a rebate of up to \$500 to homeowners in Queensland that replace electricity (and some non-electric) appliances with gas appliances. The rebate is delivered by gas retailers as a credit on the homeowner's gas bill and can be used for either natural gas or LPG. Origin noted that LPG appliance installations have outnumbered those of natural gas⁷⁶.

The Phase out of Electric Hot Water Systems⁷⁷ works in conjunction with the Residential Gas Installation Rebate Scheme and requires that after 2010 any household replacing an existing electric hot water system does so with a non-electric system that is greenhouse-friendly. This initiative will be mandatory for all households within the reticulated gas network areas and will initially be voluntary for households not within the reticulated gas network area.

Price of LPG versus natural gas

Perhaps the most significant factor in assessing if consumers are likely to consider LPG and natural gas as being substitutes is the on-going cost of supply. Where consumers have access to both LPG and natural gas (and assuming they are prepared to meet the conversion costs), the on-going price to them of having the product supplied will be a significant decision-making factor.

⁷⁴ Department of Mines and Energy, *Reticulated Natural Gas Rebate*, available at: http://www.dme.qld.gov.au/Energy/gas_pensioner_rebate.cfm

⁷⁵ Department of Mines and Energy, *Residential Gas Installation Rebate Scheme*, available at: http://www.dme.qld.gov.au/Energy/gas_rebate.cfm

⁷⁶ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 11

⁷⁷ The State of Queensland, *ClimateSmart 2050*, June 2007, available at: <http://www.thepremier.qld.gov.au/library/pdf/climate/ElectricAugust07.pdf>

As noted above, Australia is a net exporter of LPG. However, because Australian producers compete internationally to both supply (export) LPG and acquire (import) propane, the price of LPG in Australia is linked to the Saudi Arabia Contract Price. As a result, domestic LPG prices are not determined locally but are linked to world LPG price movements. In addition to the commodity cost, the price of LPG for small customers consists of the of transportation, storage and administration costs.

While the price of LPG may be volatile in the short term (more so than the price of natural gas), it generally moves within a manageable range to allow a comparison. MMA advised that – assuming a 45 kg (90 litre cylinder) contains 2.2GJ and costs \$120 per tank – the following prices would result.

Figure 6.1: Natural Gas vs typical LPG costs

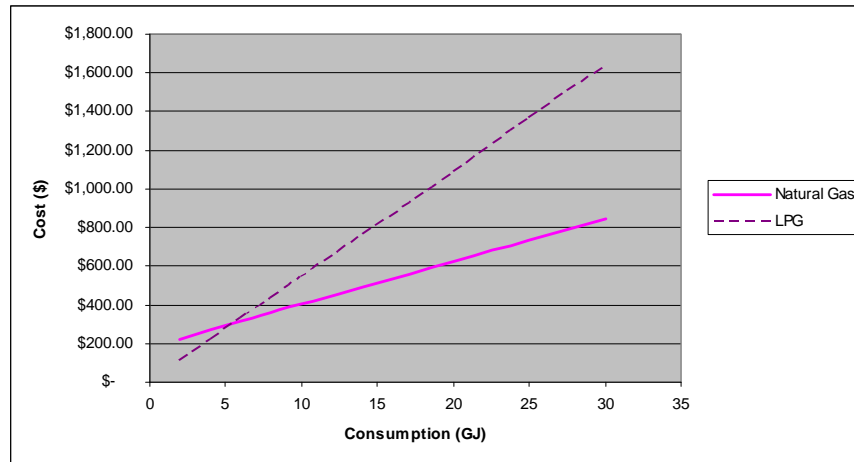


Figure 6.1 shows that natural gas is cheaper than LPG for all but the smallest gas consumers. While LPG may be a cheaper option for small consumers of gas (below about 5GJ per year) such as residential consumers that only use gas for cooking, it is likely to be more expensive for any other higher level of consumption.

Therefore, once conversion costs (from natural gas to LPG) are taken into account, there would appear to be little incentive for current natural gas customers to switch to LPG.

Conclusions on LPG

LPG is the only gas option available to most consumers in rural and regional Queensland. For those consumers that do have access to a reticulated gas network, LPG and natural gas would seem to be obvious substitutes. However, for a 10GJ small customer, the price of LPG supplied in Queensland is approximately \$54/GJ, significantly higher than natural gas with a delivered price of approximately \$40/GJ. Due to its predominate use in automotive fuel applications, the price of LPG is correlated with the world oil price.

Wholesale natural gas costs in Queensland are also likely to increase if/when planned Liquefied Natural Gas (LNG) projects commence exports. LNG projects are planned to commence in 2014 and MMA estimated that this would result in an increase in the cost of natural gas of approximately \$3/GJ. Another factor which will have a significant impact on fuel prices is the planned introduction of the Carbon Pollution Reduction Scheme. However, based on currently available information, the impact on LPG and natural gas prices are unlikely to be significantly different.

Given the significantly higher commodity price of LPG for all but the smallest users and the costs that those small users would face in switching from natural gas to LPG, it would appear unlikely that large numbers of consumers would consider LPG as a genuine alternative to natural gas.

6.2 Electricity

Electricity can (amongst many other things) be used for cooking, water and space heating and, given its ubiquity, is considered an obvious substitute for natural gas. However, as there is a significant amount of publicly available information about the electricity industry,⁷⁸ the Authority does not consider it necessary to conduct a detailed analysis of the electricity market except to say that:

- (a) nearly all users of reticulated natural gas also use electricity and;
- (b) the two retailers of natural gas in Queensland also retail electricity.

Level of competition from electricity

The Queensland Government has introduced a number of policies which are designed to change the source of energy used by residential consumers. These not only include the Phase out of Electric Hot Water Systems from 2010 but also a requirement that from 1 March 2006 that all new homes have greenhouse efficient water-heating systems, including either a gas hot water system, a solar hot water heater or an electric heat pump.

The implementation of these policies is likely to limit competition between natural gas and electricity in these areas. As with LPG, competition from electricity may also be limited by the cost of conversion of existing appliances such as cooking and hot water units.

However, as the impact of these initiatives is likely to take some time to work their way through, it is relevant to compare the price of electricity against natural gas for small consumers.

Price of electricity versus natural gas

In order to compare electricity prices with natural gas prices, MMA selected two sample electricity tariffs suitable for most domestic and light commercial applications (Table 6.1 and 6.2) along with a hot water tariff (Table 6.3) ('the Tariffs').

AGL, Origin and APG claimed that a lack of cost reflectivity in retail electricity tariffs was restricting competition in the small customer natural gas market. AGL was also concerned that the comparisons between electricity and natural gas were biased due to current electricity tariffs not being cost reflective⁷⁹. Origin was of the view that the off peak hot water tariff (tariff 31 in Table 6.3) in particular was artificially low limiting the ability for natural gas to compete with electricity for storage hot water purposes⁸⁰.

While these comments may be correct, an investigation of the cost reflectivity of current electricity tariffs is beyond the scope of this report. However, for the purposes of the comparisons made here, electricity and natural gas prices as they currently stand are the only

⁷⁸ <http://www.qca.org.au/electricity-retail/> and

⁷⁹ <http://www.aer.gov.au/content/index.phtml/tag/AERElectricitySection/>

⁷⁹ AGL, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 2

⁸⁰ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 5

feasible basis for comparison and it is these prices that will determine current market characteristics.

Table 6.1 Tariff 11 – Domestic (Lighting, Power and continuous water heating)

<i>This tariff is applicable to electricity supplied to domestic premises primarily for the personal use of the resident/s of those premises. Where premises are primarily operated as a business, including the provision of short stay accommodation of a holiday nature, Tariff 11 is not applicable. This tariff is also applicable to electricity used in separately metered common sections of domestic premises consisting of more than one flat or home unit.</i>	
All consumption	14.81 c/kWh
Plus a service fee per metering point per month of	\$5.69

Source: Queensland Government Gazette No 30 (30 May 2008)

Table 6.2 Tariff 20 – General Supply for Domestic, Commercial and Rural Applications

All consumption	16.59 c/kWh
Plus a service fee per metering point per month of	\$10.33

Source: Queensland Government Gazette No 30 (30 May 2008)

Table 6.3 Tariff 31 – Night Rate (Super Economy)

<i>Applicable when electricity supply is permanently connected to apparatus or to specified parts of apparatus as set out below:-</i>	
<ul style="list-style-type: none"> a) <i>Electric storage water heaters with thermostatically controlled or continuously operating heating units;</i> b) <i>Solar-heated water heaters;</i> c) <i>One shot boost for solar heated water heaters with electric heating units</i> d) <i>Heat pump water heaters;</i> e) <i>Heatbanks;</i> f) <i>Loads other than water heaters and heatbanks, but is not applicable to arc or resistance welding plant or where the apparatus is duplicated in order that supply may be obtained on a different tariff for the same purpose during the restricted period.</i> 	
<i>Supply will be available for a minimum of 8 hours per day but the times when supply is available is subject to variation at the absolute discretion of the distribution entity. In general, this supply will be between the hours of 10pm and 7am. The distribution entity will supply and maintain load control equipment at its own cost.⁸¹</i>	
All consumption	6.04 c/kWh
Plus a service fee per metering point per month of	\$3.96

Source: Queensland Government Gazette No 30 (30 May 2008).

To make comparisons, MMA used the Tariffs as a benchmark and (excluding the cost of appliance replacement) calculated the marginal cost of running replaced gas appliances with their electric equivalent.

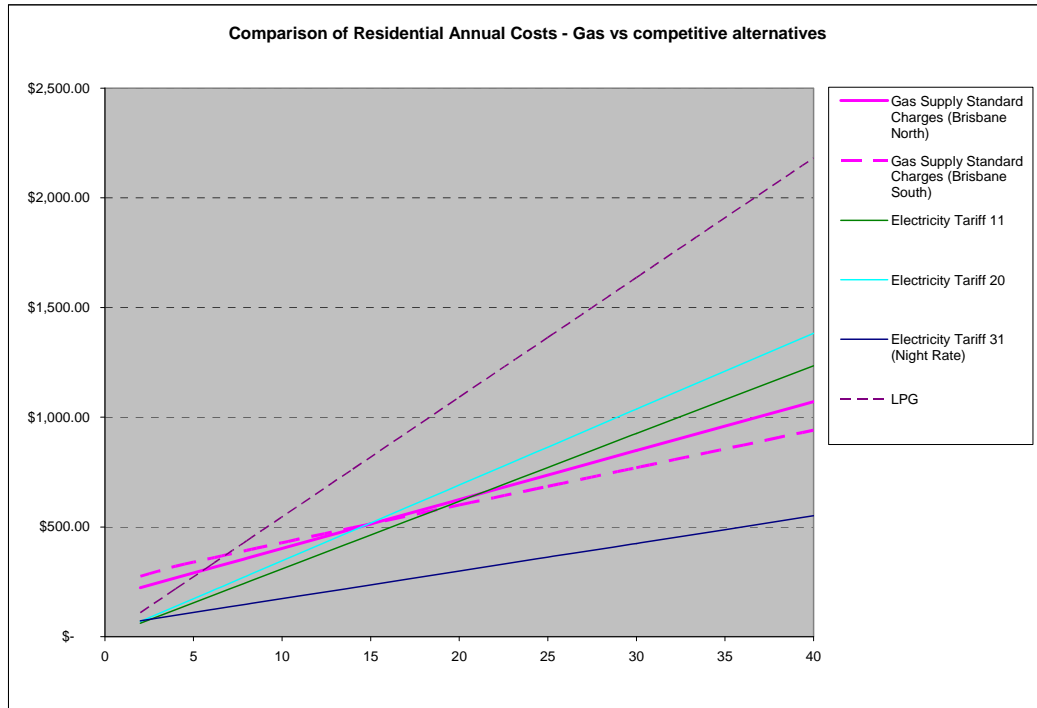
⁸¹ The description of this tariff below has been summarised for brevity. For a full description please consult the Queensland Government Gazette.

MMA advised that, for comparative purposes, the supply charge from the standard offer electricity tariffs were excluded due to most customers already paying the electricity supply charge to run other appliances.

However, MMA advised that the supply charge for the night rate Tariff 31 (used mainly to service water heating appliances) was included since this charge is paid in addition to supply charges from existing electricity tariffs used to service non water heating appliances.

The results of MMA's cost comparisons are shown in Figure 6.2.

Figure 6.2 Gas Tariff vs Electricity Tariff (Brisbane North and South)



The MMA cost comparisons show that natural gas is the more expensive fuel for average Queensland consumers (using 12GJ for cooking and continuous water heating, but not storage water heating) when compared to standard electricity prices (Tariffs 11 and 20). In addition, MMA advised that natural gas is likely to be the more expensive fuel for all consumers when looking at storage hot water usage⁸² due to electric storage systems being able to utilise the cheaper off peak (tariff 31) electricity rate.

In summary, MMA advised that:

- (a) gas is likely to be a substantially more expensive fuel choice for running storage water heating appliances when a choice of off-peak electricity tariffs is available (existing off-peak electricity homes) and;
- (b) gas is also likely to be the more expensive fuel choice for those consuming less than about 15 GJ/year, regardless of the currently available electricity tariff chosen.

⁸² McLennan Magasanik Associates advice that, on the basis of their experience, the cost comparisons assumed that gas appliances were 75% as efficient as electrical appliances.

MMA concluded that electricity is likely to be cheaper than gas for most Queensland domestic customers in existing homes. These cheaper electricity prices are likely to result in an erosion of the already small domestic gas market although such an outcome may be mitigated by further policy or price movements related to greenhouse gas reductions.

6.3 Conclusion on substitute fuels

In relation to the price of supplied energy, it is apparent from the above analysis that both LPG and electricity are cheaper options than natural gas for the smallest consumers such as residential homes that only use a gas cooker. However, while electricity continues to be a cheaper option for larger residential users (those using it for water heating), LPG becomes a more expensive alternative than natural gas as consumption levels increase. To the extent they are predictable, future price movements are unlikely to significantly change this outcome.

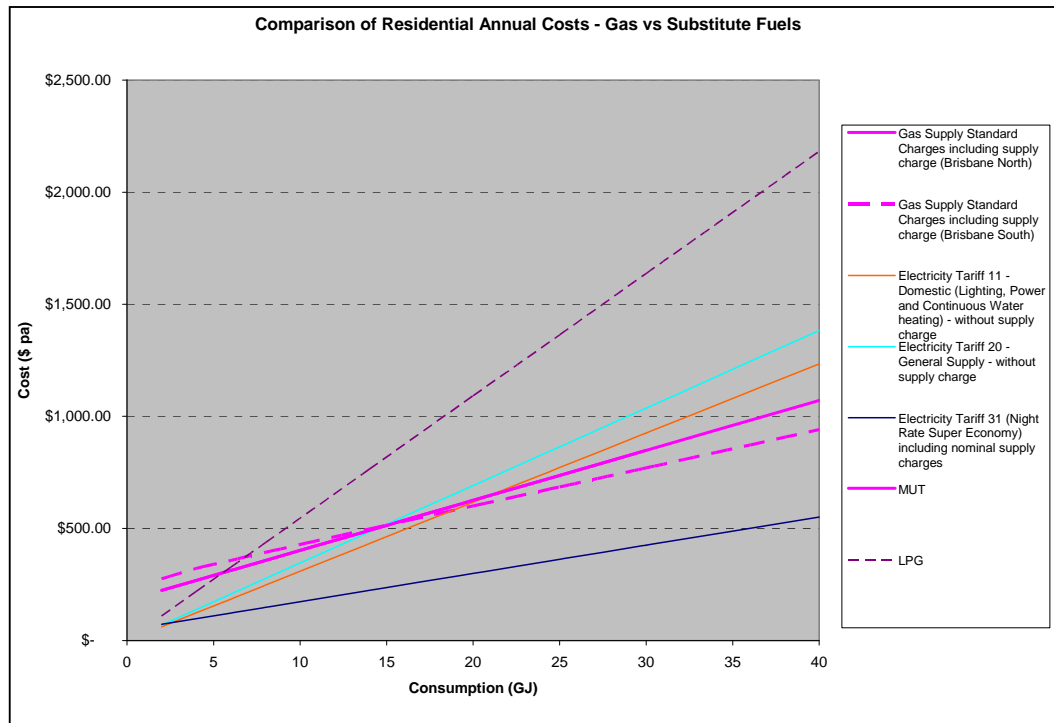
However, there are a number of other factors, in addition to the supply price, that are likely to influence the level of substitution between the different energy sources. These include: the cost for consumers to convert from one source of energy to another; government policies aimed at encouraging the use of more greenhouse friendly (non-electric) forms of energy and; in the case of LPG, whether consumers have access to a reticulated natural gas network.

Figure 6.3 shows that for consumption levels up to 5GJ per annum both electricity and LPG have lower annual costs than natural gas. Electricity is also more cost effective for consumption levels up to 15GJ per year. Currently Queensland gas consumers average 12GJ per annum.⁸³ This, combined with the almost ubiquitous connection of electricity, provides another possible reason for the relatively low market penetration for natural gas in Queensland. According to MMA estimates, the phase out of electric hot water⁸⁴ in areas with natural gas networks should see a declining proportion of customers on below average gas consumption levels.

⁸³ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008

⁸⁴ The State of Queensland, *ClimateSmart 2050*, June 2007, available at: <http://www.thepremier.qld.gov.au/library/pdf/climate/ElectricAugust07.pdf>

Figure 6.3 Cost comparison - gas vs substitute fuels



7. RETAIL CONTESTABILITY OUTCOMES IN OTHER JURISDICTIONS

The Terms of Reference require the Authority to provide an analysis of the differences in market competition and cost reflectivity of retail prices between Queensland and other Australian jurisdictions. The Authority is also required to consider other recent reviews of gas pricing and competition reviews.

This section begins by considering the current status of competition in other jurisdictions and then applies the competition assessment framework established in chapter 3 to gain a comparison with the level of competition currently prevalent in Queensland. The framework established in chapter 3 is:

- (a) number of retailers competing in the market;
- (b) change in market share and market concentration since the introduction of FRC;
- (c) the level of customer participation; and
- (d) emergence of differentiated products and services within the market..

This section of the report concludes by comparing the relative cost reflectivity of retail prices between Queensland and other Australian jurisdictions.

7.1 Competition in other jurisdictions

All state and territory governments have introduced FRC for gas customers in their respective jurisdictions. In most cases, FRC in the gas retail market was implemented along with FRC in the electricity retail market. Governments generally phased in retail competition in tranches by first introducing contestability for industrial customers with large annual consumption, followed by smaller industrial customers and, finally, residential and small business customers.

Queensland was the last jurisdiction to implement FRC in its energy market. The timetable for the introduction of energy retail competition, together with relevant regulatory oversight applicable to each jurisdiction is provided in Table 7.1 below.

Table 7.1: Natural gas market retail contestability in Australia

<i>Jurisdiction</i>	<i>Introduction of FRC</i>	<i>Status of retail price regulation</i>
Queensland	1 July 2007	Deregulated
New South Wales	1 January 2002	Retained for customers not supplied under market contracts
Victoria	1 October 2002	Retail price monitoring
South Australia	28 July 2004	Retained for to customers not supplied under market contracts
Western Australia	31 May 2004	Retained for customers not supplied under market contracts
Tasmania		Unregulated*
Australian Capital Territory	1 January 2002	Deregulated
Northern Territory	FRC not considered feasible at present	Full price regulation

*Note: * The supply of natural gas to Tasmania has only recently begun. It has been deemed not to be an essential service and its pricing has been allowed to develop in competition with electricity in order to attract customers. While the Tasmanian Energy Regulator has certain statutory responsibilities, a major share of the responsibility for implementation and further development of the regulatory scheme rests with the gas business entities. The approach taken in all retail licences has been "light handed".*

Table 7.1 illustrates that, with the exception of Queensland, Tasmania, the ACT and recently Victoria, all jurisdictions that have implemented FRC have continued to regulate the retail prices in applicable to consumers which have not accepted a market contract. The regulated price acts as a pricing benchmark for retailers offering market contracts.

In addition to maintaining price regulation, none of these jurisdictions have removed the requirement for a regulated default or standing offer contract to be offered to residential customers. The standing offer contracts cover minimum terms and conditions and include a regulated tariff that is subject to either a price cap or other oversight. This provides a 'default' option for customers who remain with their incumbent service provider and have not moved to a market contract. These contracts were intended as a transitional measure in some jurisdictions (New South Wales, Victoria, South Australia and Western Australia) but still existed at 1 July 2008.

Under the Australian Energy Market Agreement (AEMA), state governments have committed to review the use of retail price caps and remove them where competition can be demonstrated to be effective⁸⁵. The Ministerial Council on Energy formally requested the AEMC assess the effectiveness of energy retail competition as part of this process. The AEMC is conducting assessments on a jurisdiction-by-jurisdiction basis. It has completed its review of the Victorian energy market⁸⁶ and has released its first draft report on the South Australian market.⁸⁷

⁸⁵ Australian Energy Market Agreement 2004 (as amended 2006), p 28

⁸⁶ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, December 2007

⁸⁷ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008

The recent AEMC (2007)⁸⁸ assessment of the Victorian market concluded that energy retail competition was effective in the current market and recommended the Victorian Government phase out price regulation. In response, the Victorian Government has decided to replace current pricing regulation with a price monitoring regime⁸⁹. The preliminary findings from the draft report⁹⁰ on competition in South Australia were that there are sufficient competitive market outcomes to warrant the removal of retail price regulation in the South Australian electricity and gas markets.

7.2 Assessment of the level of retail competition in other jurisdictions

This section applies the competition assessment framework established in chapter 3 to current market outcomes in other jurisdictions. It considers the level of retail competition in jurisdictions outside of Queensland, using the same indicators that were used in section 3.3.

Number of retailers competing in the market

Gas retailers in most jurisdictions include one or more ‘host’ retailers that are subject to various regulatory obligations. The introduction of FRC allowed the licensing of new retailers in the markets. These new entrants fall into three broad categories, new competitors in the gas retail sector, established interstate organisations and electricity retailers expanding into gas retailing.

Table 7.2 lists the number of host retailers that were present at the commencement of FRC in each jurisdiction. It also lists the number of licensed gas retailers that are currently active in the market for residential and small business customers in each jurisdiction.

⁸⁸ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria*, December 2007

⁸⁹ http://www.esaa.com.au/media_releases/2008_media_releases/victoria_leads_the_way_on_energy_price_deregulation.html

⁹⁰ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008

Table 7.2 Number of gas retailers active in the small customer market in each jurisdiction as at June 2008

<i>Jurisdiction</i>	<i>No. of host gas retailers at FRC</i> (1)	<i>No. of licensed gas retailers</i> (2)	<i>No. of active new entrant retailers</i> (3)	<i>Total no. of active gas retailers</i> (1) + (3)
Queensland	2	7	0	2
New South Wales	3	13	3	6
Australian Capital Territory	1	7	3	4
Victoria	3	12	4	7
South Australia	1	12	3	4
Tasmania	1	4	1	2
Western Australia*	1	2	0	1
Northern Territory	1	1	0	1

Source: Jurisdictional regulator websites; ESAA Electricity Gas Australia 2008; updated by information on retailer websites and other public sources.

*Note: Some retailers hold licenses under a variety of different trading names in each jurisdiction. Number of licensed gas retailers includes both active and inactive gas retailers who hold current licenses to retail gas to residential and small business customers. Only active gas retailers included in column (3) some of whom only offer gas as part of a gas and electricity dual fuel contract. The number of licensed retailers in Queensland excludes Dalby Town Council and Roma Town Council. * Although the Western Australian retail market is open to retail competition, there is only one active retailer for customers using less than 0.18TJ of gas per year. The Western Australian Government imposed on a moratorium on Synergy from supplying gas to customers using less than 0.18TJ per year.*

Changes in market share

There is evidence to suggest that new entrants into the small customer gas market have, in some jurisdictions, been increasing their market share at the expense of host retailers. For example:

- (a) South Australia: In 2007, new entrants had captured approximately 40 % of the small customer market, up from 30% in 2006 and 20% in 2005.⁹¹
- (b) Victoria: In 2007, new entrants had captured 11% of the small customer market, up from 6% in 2006.⁹²
- (c) New South Wales: In 2007, new entrants had captured approximately 5% of the small customer market.⁹³

Emergence of price and product diversity

As noted in chapter 3, the emergence of various forms of price and non-price incentives is likely to occur in a competitive market. Price incentives may take the form of discounts or rebates whereas non-price incentives may include bundling and product offerings.

⁹¹ Essential Services Commission of South Australia, *2006/07 Annual Performance Report: Performance of the South Australian energy retail market*, November 2007 p 66

⁹² Essential Services Commission of Victoria, *Energy Retail Businesses Comparative Performance Report for the 2006-07 Financial Year*, December 2007 p 2 table 2; and Essential Services Commission of Victoria, *Energy Retail Business Comparative Performance Report for the 2005-06 Financial Year*, November 2006 p 2 table 2

⁹³ NERA Economic Consulting, *The gas supply chain in eastern Australia - A report to the Australian Energy Market Commission*, March 2008 p 89

Recent competition reviews in jurisdictions outside of Queensland have found that there is some evidence of price and product diversity in gas retail markets in Australia. For example, in assessing the effectiveness of competition in gas retail markets in South Australia, the AEMC reported that four South Australian gas retailers surveyed had offered at least one in-kind incentive in conjunction with their market offers in 2007.⁹⁴ The most common forms of in-kind incentives offered to South Australian customers included magazine subscriptions, DVDs, sporting club membership and voucher/loyalty rewards.

The AEMC had also reached a similar conclusion in its earlier assessment of competition in gas retail markets in Victoria.⁹⁵

Under market contracts, retailers in other jurisdictions compete on price and offer rebates and/or discounts from the terms of a 'default' contract. These discounts may be offered to customers on the basis of signing longer term contracts, accepting direct debit bill payment or for paying accounts promptly.

Customer switching rates

As noted in chapter 3, the rate at which customers switch retailers (or churn) may be an indicator of customer participation in the market and may also indicate competitive activity.

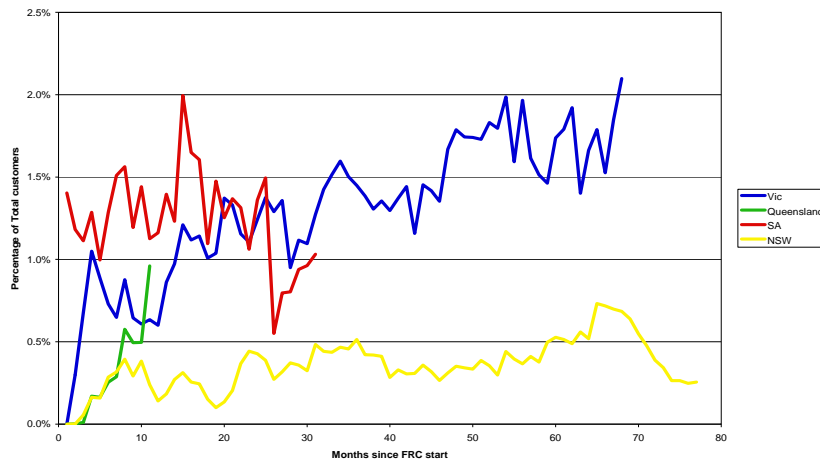
Customer switching is measured as the number of switches by gas customers from one retailer to another in a period, including switches from a host retailer to a new entrant, switches from new entrants back to a host retailer, plus switches from one new entrant to another.⁹⁶ High customer switching rates can reflect the availability of cheaper and/or better offers from competing retailers and successful retailer marketing as well as the level of customer participation in the market.

The Gas Market Company publishes gas churn data for New South Wales and the ACT with VENCORP reporting data for Victoria and Queensland and REMCO for South Australia. The annualised customer switching rate for each of these jurisdictions (to 30 May 2008) is presented in Figure 7.1.

⁹⁴ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008, p 88

⁹⁵ AEMC, *Review of the effectiveness of competition in electricity and gas retail markets in Victoria*, December 2007, p 60-62

⁹⁶ The New South Wales, ACT and the Victorian data is based on transfers at delivery points. As most residential customers receive gas from only one delivery point, the data approximates the number of customers transferring to another retailer.

Figure 7.1: Monthly customer switching rates in Australian retail gas markets

Source: Data provided by VENCORP, June 2008.

Figure 7.1 illustrates customer switching activity across all jurisdictions in Australia from the commencement of retail competition in each jurisdiction. For the 2007/08 financial year, switching activity was the highest in South Australia (15.3%) and Victoria (7.7%) and has continued to remain high. It can be seen that the switching rates in Queensland was 5.8% which is higher than that of New South Wales (2.4%) in their respective first 12 months of FRC.⁹⁷

The data reported in Figure 7.1 shows distinct differences in how customer switching rates have progressed since the introduction of FRC in each jurisdiction. In the first few months of FRC, South Australia and Victoria customer switching rates started at higher levels than those experienced in other jurisdictions. NSW by contrast started with relatively low switching rates, which have remained relatively constant. The varying outcomes show customer switching rates should be interpreted with care.

Numerous factors will influence switching behaviour. Where retailers are delivering quality service and/or competitive price offerings, customers may have less incentive to switch. The level of incentive for consumers to switch retailer may also be affected if the cost of energy represents a relatively high proportion of their household budget.

It should also be noted that customer switching is also likely to be affected by factors such as the number of retailers competing in the market, previous customer experience with competition, demographics, demand and the regulation of retail prices in other jurisdictions where some form of price regulation was retained following the introduction of FRC.

In New South Wales, Western Australia and South Australia, small retail natural gas customers are currently able to remain on price regulated contracts for an indefinite period of time. Until recently, this was the case in Victoria as well. However, Victoria recently decided (September 2008) to change to price monitoring in lieu of price regulation. Small retail gas customers in South Australia are also able to revert to a price regulated contract after negotiating a market contract. The regulated price option aims to encourage customers to seek out more competitive offers by providing them with a “safety net” in the sense that if they come to the view that they

⁹⁷

It is important to note the underlying aggregate data provided to the Authority by VENCORP only captures gross switching rates as it does not include customers who have switched from a 'default' arrangement to a market contract with their existing retailer (the internal switching rate). This exclusion may understate the true extent of competitive activity as it does not account for the efforts of host retailers to maintain market share by moving existing customers from standard offers to market contracts.

prefer a price regulated contract they can return to it any time (although they may incur switching costs to do so depending on market contract exit conditions). Retail gas prices on the other hand are not regulated in Queensland, Tasmania, the Australian Capital Territory and the Northern Territory.

As noted earlier, the AEMC is reviewing the effectiveness of competition in electricity and gas retail markets to determine if there is effective competition in those markets. Where competition is found to be effective, jurisdictions have agreed to phase out retail price regulation⁹⁸.

In setting default tariffs, jurisdictions take into consideration gas purchase costs, transmission and distribution charges (network charges), retailer operating costs and a retail margin. Whilst the cost components are similar, the approach does vary between jurisdictions.

In New South Wales, the Independent Pricing and Regulatory Tribunal (IPART) regulates “default” retail prices for small gas customers (those consuming less than 1TJ per year) where they have not chosen to enter into a negotiated customer supply contract through Voluntary Transitional Pricing Arrangements (VTPAs) with host retailers that limit annual tariff increases.

In Victoria, since 2003, the Victorian government has entered into agreements with host retailers on a pricing structure for default retail tariffs for households and small businesses.

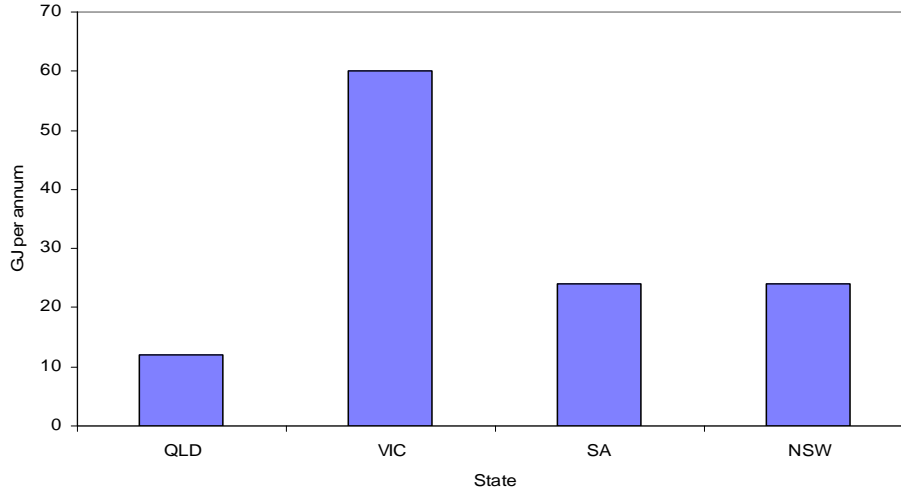
In South Australia, the Essential Services Commission of South Australia (ESCOSA) sets default tariffs for the host retailer by considering the costs that a prudent retailer would incur in delivering the same service. In Western Australia, gas retail tariffs are regulated under a combination of statutory instruments and regulations. The Western Australian Government has been reviewing the level and structure of regulated retail tariffs in 2008.

Comparison of Retail Gas Prices

MMA provided comparative estimates of the composition of small customer gas retail prices in Queensland with other Australian jurisdictions.

MMA commented that residential gas consumption is generally much higher in the southern states than in Queensland due to the cooler climatic conditions, leading to higher levels of demand for gas for space heating purposes. As illustrated in Figure 7.2 below, MMA estimated that average residential consumption in Queensland is approximately 12GJ of gas per annum, (a usage level corresponding to gas use for cooking and continuous water heating) as compared to 60GJ per annum by Victorian residential customers and approximately 24GJ per annum by both the South Australian and New South Wales residential customers where requirements for space heating make a significant impact on average consumption levels.

⁹⁸ *Australian Energy Market Agreement 2004* (as amended 2006), Clause 14.13

Figure 7.2: Residential gas consumption between Australian jurisdictions

Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority*, 3 November 2008

As a result, MMA reported that, due to the lower levels of gas consumption evident in Queensland, retailers would need to spread their highly fixed distribution costs over a significantly smaller load compared to other states, causing the average distribution cost per customer in Queensland to be higher, as shown in Table 7.3.

Table 7.3: Comparison of typical cost of gas to residential consumers

		<i>Queensland</i>		<i>Victoria</i>	<i>New South Wales</i>	<i>South Australia</i>
		<i>Brisbane North</i>	<i>Brisbane South</i>			
Typical Residential Consumption	GJ/year	10	10	60	24	24
Typical total gas cost	\$ pa	402.06	429.06	813.65	549.71	597.76
Typical delivered average gas cost	\$/GJ	40.21	42.91	13.56	22.90	24.91
Typical distribution cost	\$ pa	239.91	252.70	273.44	237.28	308.67
% distribution of annual gas cost	%	60%	59%	34%	43%	52%
Comparable consumption of 10 GJ pa						
Comparable gas cost	\$ pa	402.06	429.06	360.74	273.21	373.60
Comparable delivered gas cost	\$/GJ	40.21	42.91	36.07	27.32	37.36

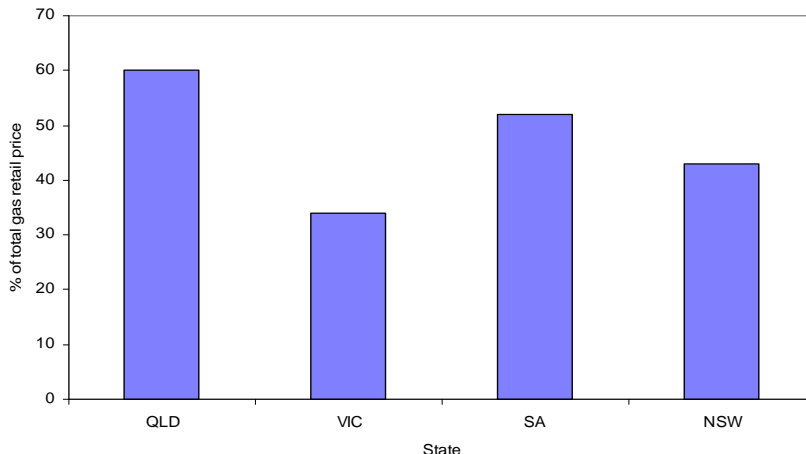
Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority*, 3 November 2008

Distribution Costs

MMA noted that distribution costs are the most significant component of the total gas retail price for all small customers in Queensland. In 2008, distribution costs accounted for approximately 60% of the total annual gas retail price for a typical Queensland residential customer. This compares with 52% for a typical residential customer in South Australia, 43% in New South Wales and 34% in Victoria. The proportionate distribution cost is lowest in

Victoria because it has the highest average gas consumption among all Australian states. These comparisons are depicted in Figure 7.3.

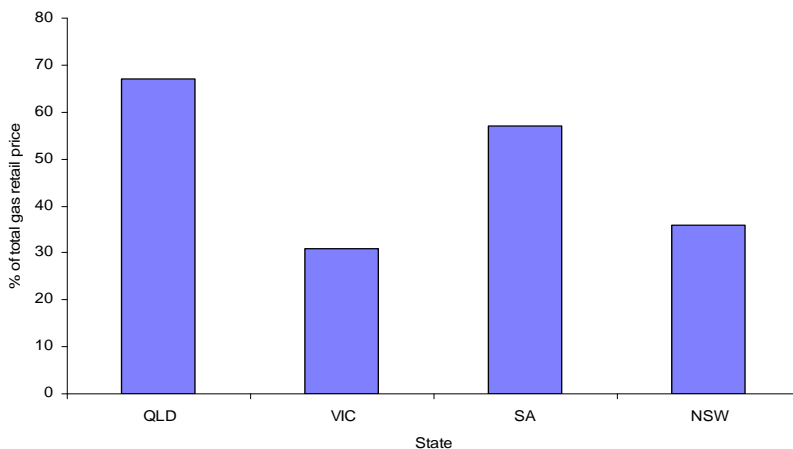
Figure 7.3: Distribution costs as a proportion of total gas retail price for small customers across all jurisdictions.



Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority, 3 November 2008*

MMA estimated that, in 2008, distribution costs accounted for approximately 51% to 67% of total gas retail cost for a typical small business customer in Queensland, which is a significant proportion compared to 31% in Victoria, 36% in New South Wales and 57% in South Australia. These proportional differences are depicted in Figure 7.4. Once again, the cost differential between states was due to the substantially higher distribution cost (proportionally) paid by small business customers in Queensland.

Figure 7.4: Distribution cost as a proportion of total gas retail price for small business customers across all jurisdictions



Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority, 3 November 2008*

Note: The Authority has depicted the highest level of proportional distribution cost for Queensland in the figure.

Wholesale gas cost

MMA estimated wholesale gas cost differentials to be minor between jurisdictions, as depicted in Table 7.4 below.

Table 7.4: Comparative wholesale gas cost for small residential customers

	<i>Queensland</i>	<i>Victoria</i>	<i>New South Wales</i>	<i>South Australia</i>
Wholesale cost (\$ p.a)	40.00 ⁹⁹	35.00	36.50	37.80
% of delivered gas cost	9.9	4.3	6.6	6.3

Source: Costs for Queensland, NSW and Victoria were based on MMA's estimates. Costs for South Australia was based on MMA's analysis of the recent regulatory decision in South Australia

Gas commodity/wholesale costs account for a relatively small proportion of total gas retail costs for small residential customers – approximately 10% of total gas retail costs in Queensland, 4.3% in Victoria, 6.6% in New South Wales and 6.3% in South Australia. Wholesale costs are a larger component of cost for a typical small business customer, accounting for approximately 18% to 28% of costs in 2008.

Transmission cost

The cost of gas transmission in Queensland is not substantially different to the other states, accounting for approximately 2% to 3% of total gas retail cost for small residential customers and approximately 3% to 5% of total costs for small business customers.

While MMA estimated that, while Queensland's proportion is higher than in Victoria, it is nonetheless lower than the transmission cost in NSW and South Australia.

Retail costs and retail margin

Retail costs incorporate customer acquisition costs and retail operating costs. Customer acquisition costs are the initial costs incurred by a retailer in acquiring customers. Operating costs are the recurrent costs incurred by the retailer in providing their retail function. It includes the cost of operating a customer service centre, costs of revenue collection including billing and credit management, and an allocation of corporate overhead costs including costs associated with management and its supporting services. Retail margin is the return or profit margin retailers earn above their costs of participating in the market.

In establishing the retail allowance for Queensland retailers, MMA established benchmarks based on:

- (a) recent regulatory decisions made in the other Australian states;
- (b) gas and electricity retail margin allowances of other jurisdictions;
- (c) views of stakeholders with whom discussions were held, including incumbent gas retailers, second tier retailers and potential retailers,

⁹⁹ McLennan Magasanik Associates estimate of \$4/GJ for supply in 2008/09 under a contract which allows some ramp-up, has a swing of 110% and a take or pay level of 80% and a term of 3-5 years.

- (d) scale and conditions of supply in different Australian states, particularly with regard to gas availability, load factors and transmission costs; and
- (e) distribution costs.

Customer acquisition costs.

In its advice to the Authority, MMA has estimated customer acquisition costs to be approximately \$30 per customer per annum. This estimate is similar to the publicly available estimates summarised in Table 7.5.

Table 7.5: Regulatory decisions on customer acquisition cost across different jurisdictions

Decision date	Regulator	Decision	Sector
4 July 2008	AEMC	\$80 to \$150/customer	Electricity
4 July 2008	AEMC	Additional \$30/customer	Gas
June 2007	IPART	\$34/customer/year	Electricity
June 2007	IPART	\$42/customer/year	Electricity
May 2008	QCA	\$18/customer/year	Electricity

Source: MMA, Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority, 3 November 2008

Retail Operating Costs

Recent regulatory decisions in different jurisdictions on the quantum of retail operating costs ranged from \$75 per customer to \$96 per customer (excluding the cost of customer acquisition). From discussions held with retailers (incumbent, second tier and potential retailers), the quantum of retail operating costs in Queensland was said to range from \$90 to \$115 per customer per year (excluding acquisition costs and discounts offered to customers as an inducement to switch retailers). However, MMA estimated that a new entrant to the Queensland market that has yet to achieve economies of scale would encounter retail-operating costs in the order of \$115 to \$155 per customer per annum.

Based on its benchmarking exercise, MMA estimated that retail operating costs of \$100 a year were reasonable. While this figure is higher than most other regulatory decisions, it takes into account differing FRC costs, inflationary pressure, market costs payable to VENCORP and Queensland specific costs concerning the retailing of gas (for example, the costs to retailers associated with administering the Pensioner Concession Rebate for gas customers).

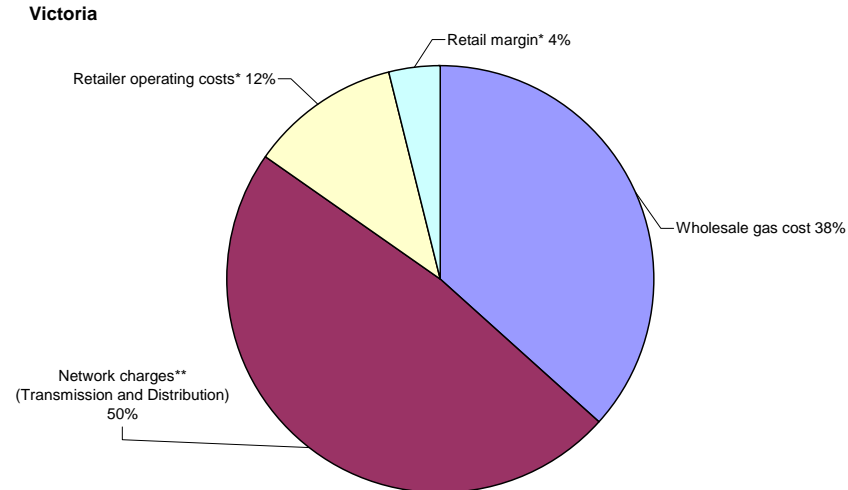
MMA further suggested that total retail costs were 75% fixed and 25% variable (with customer numbers). This estimate was accepted as reasonable by incumbent, second tier and potential retailers.

Retail Margin

Retail margin is the return required to attract capital needed to provide retail services. Figures 7.5 and 7.6 provide an indication of the typical composition of a residential gas bill in Victoria and South Australia in 2007. As can be seen, the retailers' margin makes up

approximately 4% in Victoria and 10% in South Australia. Total retail costs including margin account for around 16% of retail prices in Victoria and 19% in South Australia

Figure 7.5: Composition of a residential gas bill in Victoria¹⁰⁰

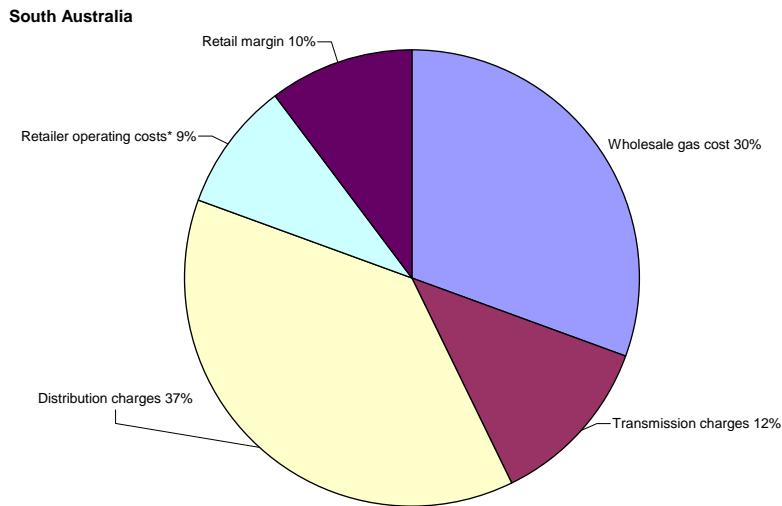


Note: Based on 2007 prices and average annual residential consumption of 60GJ.

** Retail margin based on standing offer contracts.*

***Network charges are an average for the three Victorian host retailers—Origin, AGL and TRUenergy.*

¹⁰⁰ CRA International, *Final Report: Impact of Prices and Profit Margins on Energy Retail Competition in Victoria*, November 2007

Figure 7.6: Composition of a residential gas bill in South Australia¹⁰¹

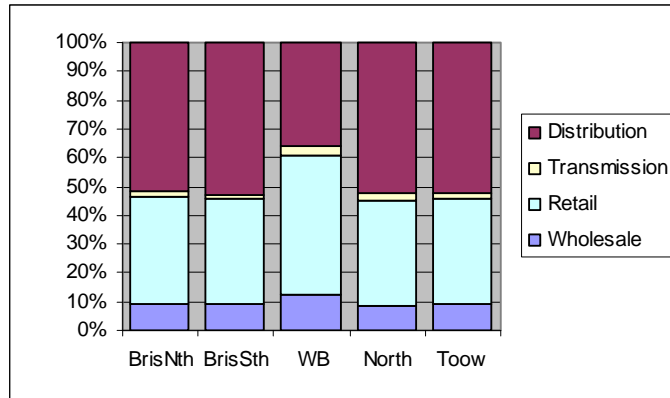
Notes: Based on 2007-08 prices and average annual residential consumption of 60GJ. * Retailer operating costs are exclusive of full retail competition (FRC) costs.

In modelling the Queensland market, MMA considered that retail margins of 6.5% for customers consuming less than 100GJ/year (residential customers), 4.5% for consumption between 100GJ and 500GJ per annum (small business customers) and 3% for consumption between 500GJ and 1,000GJ per annum (very large customers) were reasonable. This compares with a retail margin of around 5% of sales in most regulatory decisions in other jurisdictions.

In total, for a typical residential customer, retail costs generally account for approximately 36% to 48% of total costs and is relatively uniform across regions - see Figure 7.7 For a typical small business customer, retailing generally accounts for approximately 11% to 13% of their total costs - see Figure 7.8.

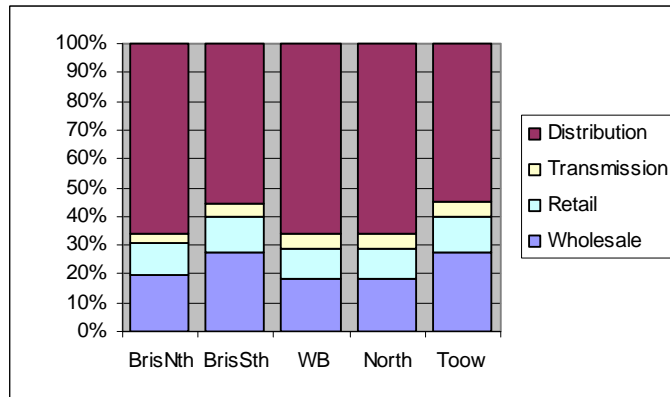
¹⁰¹ Essential Services Commission of South Australia, *Gas Standing Contract Price Path Inquiry Draft Inquiry Report and Draft Price Determination*, April 2008;
 Essential Services Commission of South Australia, *Gas Standing Contract Price Path Final Inquiry report and Final Price Determination*, June 2005;
 Essential Services Commission of South Australia, *Annual distribution tariff adjustment, Commission's approval letter*, May 2007; and
 Essential Services Commission of South Australia, *Access arrangement for South Australian gas distribution system*, September 2007

Figure 7.7: Cost to serve a typical residential customer of 10GJ



Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority*, 3 November 2008

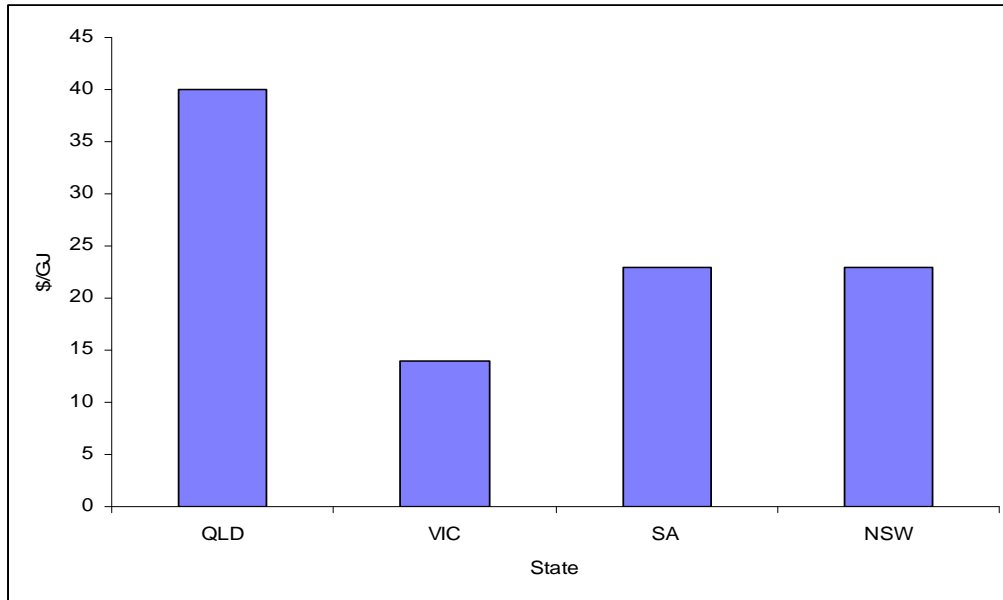
Figure 7.8: Cost to serve a typical business customer of 200GJ



Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority*, 3 November 2008

Retail pricing outcomes for residential customers

MMA noted that prices vary significantly for customers with different volume requirements and at different locations across Australia. MMA has identified that the retail price of gas in Queensland is significantly higher than prices in other jurisdictions. On a per GJ basis, based on the typical consumption level in each of these states, the retail price of gas in Brisbane is over \$40/GJ compared to \$14/GJ in Victoria and \$23/GJ in New South Wales and South Australia. These price comparisons are illustrated in the Figure 7.9. The main reason for the price differentials is the substantially lower rates of consumption of the Queensland gas customers and its impact on distribution costs. However, MMA further noted that, while Brisbane gas retail prices are higher than for the other states, when the retail gas prices for each state are compared based on the same consumption levels as Queensland, the price differential between states is minimal (\$37/GJ in Victoria and South Australia and \$27/GJ in New South Wales).

Figure 7.9: Gas retail prices across jurisdictions

Source: MMA, *Costs of gas supply for a second tier retailer supplying small customers in Queensland, Final Report to Queensland Competition Authority, 3 November 2008*

Note: The retail price for Queensland represents the city of Brisbane. \$40/GJ presented in the figure is only the base figure. MMA estimated that the Brisbane's gas retail prices are over \$40/GJ per annum.

Summary of the indicative costs of gas delivered per GJ for a residential customer

Table 7.6: Indicative cost of gas delivered per GJ for a 10 GJ residential customer

	<i>QLD Assumed</i>	<i>VIC</i>	<i>NSW</i>	<i>SA</i>
Wholesale gas cost (\$ per annum)	40.00	35.00	36.50	37.80
Indicative load factor	1.7	3.0	2.5	2.5
MDQ and Swing (\$ per annum)	3.50	10.00	7.50	6.40
Transmission cost (\$ per annum)	8.40	5.00	18.60	16.40
Distribution cost (\$ per annum)	415.00	186.40	133.10	201.40
Retail cost (\$ per customer per annum)	100.00	100.00	100.00	100.00

Table 7.6 provides an overall summary of the components of gas costs per delivered GJ for a residential customer. Small residential customers account for the majority of small gas customers in Queensland. Small business customers account for a small proportion of the gas customer base. Distribution costs are the most significant contributor to total gas retail costs for residential customers. This is followed by retail costs, wholesale costs and transmission costs. The higher distribution cost faced by this customer group is due to its lower load factor and the

much lower levels of gas consumption in Queensland in comparison to other states which limits opportunities to access economies of scale and scope in its operations.

Caution should be exercised when comparing retail prices between jurisdictions. Price variations between the states and territories reflect a variety of factors, including variations in the wholesale price of gas and the distances over which gas must be transported as well as differences in regulatory arrangements. Consumption patterns and industry scale also play a role. For example:

- (a) Queensland retail gas prices are likely to reflect a small residential customer base and low rates of residential consumption because of the state's warm climate;
- (b) retail gas prices in Victoria are likely to be influenced by the relatively large residential consumer base and higher average consumption;
- (c) Western Australian retailers generally incur a relatively low wholesale gas price but they face high network transportation costs due the long distance from gas supplies in the north and residential customers primarily located in southern metropolitan areas; and
- (d) the maximum prices charged by gas retailers in most jurisdictions continues to be subject to price cap regulation. This price cap sets an effective ceiling on prices and therefore may not be indicative of an efficient competitive outcome. There is also separate regulation of some components of the retail price, specifically the network charges that are levied by distribution and transmission businesses.

8. FUTURE OF GAS RETAIL COMPETITION DEVELOPMENT IN QUEENSLAND

The Queensland gas market has a number of characteristics that impact on the potential for retail competition, including:

- (a) low market penetration of gas resulting in low customer numbers;
- (b) low customer consumption profiles; and
- (c) current tariff levels below cost reflective levels, providing little incentive for new retailers to enter the market.

In order to provide an outline of likely market conditions in the future, the Authority has examined conditions and experiences in other jurisdictions, submissions, modelling by MMA and consulted with industry. In addition, the Authority examined the likely effect of Government policies such as the gas installation rebate, electric hot water phase out and sustainable housing scheme, which should increase customer numbers and consumption profiles of Queensland consumers.

8.1 Barriers to entry, expansion and exit

One of the factors that can facilitate competition is the ease of entry into, expansion within, and exit from, gas retailing. In markets where the conditions for entry, expansion and exit are relatively easy and can occur within a reasonable period of time and on a sufficient scale, the threat of entry or expansion can impose a credible competitive constraint on retailers operating within the market. Entry conditions allow new retailers to participate freely in the market, thereby increasing competitive pressures on competitors. Origin, when describing competitive threats, was of the view that “entry itself presents no more substance than the presence of a threat of potential entry”¹⁰². However, this contestable markets theory¹⁰³ view of the current Queensland gas market is only valid where there is an imminent and credible threat of entry from potential competitors. Accurate assessment of existing and future barriers to entry, expansion and exit is essential to identify the strength of the competitive constraints on retailer behaviour.

Barriers to entry and expansion

The Authority has identified two primary barriers to entry and/or expansion into gas retailing in the Queensland market:

- (a) capacity constraints of the Roma to Brisbane Pipeline (RBP); and
- (b) below cost reflective pricing leading to low profit margins.

Capacity constraints on the Roma to Brisbane Transmission Pipeline (RBP)

The Authority identified that there are structural impediments for retailers to enter or for current retailers to expand their retailing operations in the Queensland market due to the capacity

¹⁰² Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 4

¹⁰³ Baumol, William J. “*Contestable markets: an uprising in the theory of industry structure*,” *American Economic Review* 72(1) March 1982, p 1-15; and
Baumol, William J. and Willig, Robert D., “*Contestability: developments since the book*,” *Oxford Economic Papers* 38 Supplement November 1986, p 9-36

constraints on the RBP. NERA¹⁰⁴ reported that the capacity of the RBP is fully contracted until 2012. The observation by NERA was contradicted to a degree by MMA in its advice to the Authority stating that the APA group “is currently offering short term firm contracts to new entrant retailers for up to three years supply into existing brownfield sites”¹⁰⁵. This advice is consistent with the fact that APG was able to secure gas supply for their entry into the market, notwithstanding issues of the scale and duration of contracts offered by the APA group noted as being a barrier to a new entrant to the market¹⁰⁶. APA advised of future plans to expand the capacity of the RBP by 10%. MMA advised that the increased capacity is likely to come at a higher cost than current transmission, due to the increased capital outlay.

Low Profit Margins

Origin expressed the view that historical low gas retail prices had created an expectation of relatively low, subsidised gas prices in Queensland¹⁰⁷. This perception has led Origin to raise prices to cost reflective levels in stages to minimise price shocks to consumers. Current low profit margins for gas retailing have limited the incentives for new entrant retailers to enter the market and/or expand scale to compete for Queensland gas customers. APG, the only new gas retailer to have been active in the market, stated that it had temporarily ceased acquiring customers after only a few months in the market due to the low profit margins¹⁰⁸. APG also indicated that existing and expected future profit margins were not sufficient to motivate future investments and new market entry in Queensland. As discussed in chapter 5, two¹⁰⁹ further natural gas retail licenses have been issued to retailers who are not currently active in the market. If tariff levels provided sufficient profit margins, it would be expected that more license holders would be active in the market.

The fixed cost nature of selling and supplying gas and the small number of regional customers has limited the economic viability of retailing gas in these regions. Retailers wishing to expand operations to supply to these areas are unable to take advantage of the economies of scale and scope, due to the much smaller gas customer base in regional areas. The expected future profit margins based on current tariff levels and customer numbers are not sufficient to encourage entry into the gas retail market.

AGL¹¹⁰, APG¹¹¹ and Origin¹¹² all highlighted what they considered to be reduced profitability in the electricity market due to price regulation as a significant factor restricting competition in the gas market, by amongst other things limiting retailer ability to make dual fuel offers to gas customers. Origin noted that this was a particular concern in regional areas where gas

¹⁰⁴ NERA Economic Consulting, *The gas supply chain in eastern Australia – A report to the Australian Energy Market Commission*, March 2008, p 46 Table 4.2

¹⁰⁵ McLennan Magasanik Associates 2008, *Costs of gas supply for a second tier retailer supplying small customers in Queensland*, November 2008, p 33

¹⁰⁶ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 1

¹⁰⁷ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 9

¹⁰⁸ Australian Power & Gas, *Submission re: Review of Small Customer Gas Pricing and Competition Issues Paper*, June 2008, p 4

¹⁰⁹ Two of the four licences issued were to subsidiaries of the incumbent retailers, Origin and AGL

¹¹⁰ AGL Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland Draft Report*, October 2008, p 1

¹¹¹ Australian Power and Gas, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 3

¹¹² Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 3

marketing must be pursued individually for regional customers and that marketing in this manner was not cost effective¹¹³.

If electricity prices are less than cost reflective, which is a matter beyond the scope of this review, correcting for this would improve the economies of scope available to retailers also prepared to participate in the small retail gas market via dual fuel contracts. However, for the small customer gas market alone, less than cost reflective gas prices is the key issue to be addressed in order to stimulate greater competition.

As Origin and APG noted, these barriers are more pronounced in regional areas of Queensland where fixed costs are spread across fewer customer numbers and limited consumption, making gas retailing in those areas an unviable option at current tariff levels. In regional areas, the uniform tariff policies relating to electricity act to limit the competitiveness of natural gas.

In summary, the Authority has identified that there are barriers to entry and/or expansion into the Queensland small customer gas market. While there has been an increase in the number of retailers in the market (three new licenses to entities not related to incumbent retailers) since FRC, two of them have not commenced trading and, while one retailer continues to service existing customers, it is no longer offering new market contracts to Queensland customers.

Exit Costs

Barriers to exit may occur where entry requires substantial capital investment which cannot be recovered on exit (there are sunk costs) and, in some cases, exit itself may involve additional sunk costs.¹¹⁴

The Authority notes that there are some costs associated with exiting from gas retailing, such as costs involved in negotiating for the sale of its customer base. However, the Authority does not consider that exit costs constitute a material barrier to retail competition.

8.2 Provision of information for small gas customers

The Terms of Reference for this review require the Authority to assess whether small gas customers are able to exercise informed choices regarding their retailer of choice and whether there are any technical barriers to customers exercising that choice.

Access to accurate and relevant information about tariffs, terms and conditions of retail contracts are necessary for the development of effective competition in small gas customer market. Without access to such information, customers are unable to make an informed choice in relation to their gas supply options. Where this is the case, market outcomes may be sub-optimal and retailers will be better able to maintain and exercise some degree of market power.

In Queensland, the *Gas Supply Act 2003* and the Gas Industry Code prescribe the type and form of certain information that gas retailers must provide to small customers about their standard and negotiated market offers. These requirements were developed to ensure consumers have access to sufficient information to make an informed choice of energy supplier.

As discussed in chapter 5, gas retail prices for small customers consist of a combination of fixed and variable charges with the overall proportion of each component differing based on level of

¹¹³ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 3

¹¹⁴ AEMC, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia*, July 2008, p 152

consumption. In order to determine which retailer offers the best value, customers require access to information that allows them to compare offers across retailers and information in regard to their own energy consumption.

Mandatory information disclosure

Gas retailers are required to disclose information to small customers about their standard and market offers in accordance with the *Gas Supply Act 2003* and Gas Industry Code. For example:

- (a) the host area retailer must publish its standard terms for those customers who do not enter into negotiated market contracts on its website;
- (b) for each negotiated retail market offer, a retailer must provide a Written Disclosure Statement setting out all applicable tariffs and other relevant fees and charges to the customer and to publish a pricing fact sheet for each negotiated market contract on its website; and
- (c) in the case of signed negotiated market contract, the customer be given a reasonable opportunity to consider the offer and have the option to rescind the contract by way of a 10 day cooling off period.

Failure to provide this information is enforceable under the *Gas Supply Act 2003*.

Other information sources

In addition to evaluating the information provided by retailers, small gas customers can compare market offers with their current arrangements (either their standard contract offer or a negotiated market contract) through the Authority's online price comparator.

At the commencement of FRC, the Authority established the online price comparator on its website which allows residential gas customers to make pricing comparisons of various retailer energy offers based on their consumption. This tool estimates the annual charge that would be payable under a each type of retail offer available on the basis of the customers' consumption profile and compares this with the amount the customer currently pays under their existing arrangement.

While the Authority's price comparator allows gas customers to compare contract prices and assess how different market offers are likely to affect their annual bill and provides all available information on any non-price incentives that apply to a particular offer, it still requires the customer to research terms and conditions applicable to one or more of the available market contracts.

Online price comparison services have been a longstanding feature of the energy markets in other Australian jurisdictions as part of their FRC operating environments. For example, the state energy regulators in Victoria and South Australia have been operating online energy price comparator services for a number of years.

In addition to the Authority's price comparator, the Queensland Government maintains an information website called "The Power to Choose" on energy FRC for customers. "The Power to Choose" website does not directly provide customers with any up to date pricing information on the available market offers but rather provides information of a more general nature that

helps customers understand what it means to be an energy customer in an FRC environment and other issues related to the new energy market.¹¹⁵

A further source of information for small gas customers is the Energy Ombudsman Queensland (EOQ). EOQ provides fact sheets, price comparators and energy calculators in addition to providing dispute resolution services for energy consumers.

Impediments to small gas customers exercising informed choices

None of the submissions highlighted any concerns about Queensland small gas customers not being able to exercise informed choice in choosing their gas retailer.

The current information requirements imposed on retailers appear sufficient to ensure that those customers who wish to investigate their supply options and compare offers are able to do so. Given the high level of compliance with these requirements and the availability of the Authority's online price comparator, the Authority considers there to be sufficient information available to small gas customers to enable them to make an informed choice in relation to their gas supply. However, it is incumbent upon retailers to ensure that employees and agents undertaking direct marketing activities on behalf of the retailer are providing information to customers in accordance with their licence obligations.

8.3 Conclusion on Future Competition

While current market competition is in its infancy, there is reason to believe that competition will increase in future. There are current issues in relation to cost reflectivity and securing long term gas transmission capacity but future developments have the potential to ease these issues in the medium term.

The phase out of electric hot water systems in areas served by natural gas networks should lead to an increase in both market penetration and average usage by customers. This should allow distribution and other fixed costs to be spread across a larger base of consumers and reduce average costs. The MMA advice demonstrated that cost reflective outcomes improved as customer usage levels increased. This implies that the policy, in combination with retailers making further adjustments to tariff levels, will help to alleviate current cost reflective pricing issues. Increasing the number of profitable customers provides incentive for new retailers to enter the market and increase competition.

As incumbent retailers move towards cost reflective pricing, there should be more second-tier retailer activity. However, in the short term, small gas customers are most likely to benefit from dual fuel offers as competition in the electricity market intensifies.

Short term transmission capacity is available on the RBP, as evidenced by the entry into the market by APG. Plans are in place to increase the capacity of the RBP by 10% albeit at a higher transmission cost. The establishment of the gas bulletin board may facilitate increased gas trading making it easier for market participants in other jurisdictions to enter the Queensland market.

In line with their comments noted above, AGL¹¹⁶, APGas¹¹⁷ and Origin¹¹⁸ were of the view that increasing competition in the electricity market through deregulation of prices would have a

¹¹⁵ See www.thepowertochoose.qld.gov.au

¹¹⁶ AGL Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland Draft Report*, October 2008, p 1

¹¹⁷ Australian Power and Gas, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 3

flow on benefit for the gas market. Whether this would be the case depends, amongst other things, on the extent to which electricity tariffs are not cost reflective, which is beyond the scope of this review.

Overall, there is evidence of emerging competitive behaviour consistent with a developing retail market. While there are also structural barriers to entry, in the form of the ability to secure gas supplies, there is the potential that these will be eased with planned increases to capacity on the RBP. Policy initiatives, such as the phase out of electric hot water systems where gas is an option, aim to increase usage levels and market penetration of gas. Combined with further tariff restructuring by retailers, it is also likely that current issues related to low profit margins will diminish, as fixed costs are able to be spread across more customers and greater overall usage, providing greater incentive for new retailers to enter the market. Looking further ahead, changes in relative prices for alternative energy sources due to events such as the introduction of emissions or carbon trading, which will most likely impact differentially on energy sources, may also result in increased competitiveness for natural gas.

¹¹⁸ Origin Energy, *Submission re: Review of Small Customer Gas Pricing and Competition in Queensland: Draft Report*, October 2008, p 3

APPENDIX A – TERMS OF REFERENCE

On 2 May 2008, the Minister for Mines and Energy directed the Authority pursuant to sections 227A and 270K of the *Gas Supply Act 2003* to conduct a review of small customer gas pricing and competition in Queensland. The terms of reference received by the Authority are set out below.

Background

Deregulation of natural gas tariffs coincided with the start of Full Retail Competition (FRC) in gas on 1 July 2007. Deregulation allowed gas retailers to further move towards cost-reflective pricing which had initially commenced in 2005 with a number of increases in gas tariffs higher than the consumer price index. The aim of these policies is to encourage further development of the State's natural gas market. Gas prices for small customers were cross-subsidised and generally well below cost prior to 1 July 2007.

The move to cost reflectivity affected individual consumers differently. Depending on location, some household consumers with a gas cook top and hot water system faced a cost increase, whilst other customers may have experienced reductions in their gas bills.

However, some smaller residential customers (for example, those with a cooktop only) experienced more significant price rises. The price changes had a greater impact on small gas users because fixed charges (including network and retail costs) now make up a larger proportion of their total gas bill, as retailers move to reflect the structure of the costs they face in retail pricing. Also, because of the high proportion of fixed charges in their bills, there is little scope for smaller customers to mitigate the increase by lowering consumption.

Looking forward, the gas retailers have not provided any firm indication of the likely increases still required to achieve cost-reflectivity in natural gas tariffs, or the price changes that may take place later in 2008 or later.

To help alleviate the difficulties faced by some smaller customers, on 16 October 2007 the Government announced a \$55 per year rebate for eligible seniors and pensioners who have reticulated natural gas. This rebate was targeted at meeting a substantial part of the increase in fixed charges borne by those affected small customers least likely to be able to absorb the increase.

A number of additional Queensland Government initiatives have been implemented to assist residential gas customers and grow the residential gas market. These include the Sustainable Housing Code, Queensland Residential Gas Installation Rebate Scheme and the phase-out of electric hot water systems.

These initiatives have the potential to reduce gas prices to customers by spreading distribution costs over a growing customer base. The Queensland Government anticipates that, as customer numbers grow and the utilisation of the system improves, the average cost to the consumer will reduce over time. In addition, growth in the residential market may attract additional retailers into Queensland, increasing competition and potentially lowering prices.

Significant residential areas in Queensland do not have access to reticulated natural gas and many current gas customers use Liquefied Petroleum Gas (LPG), either through a reticulated network, or more commonly bottles. The price of LPG is set at world prices. Given the growing demand for LPG internationally, it is understood that the price of LPG is also increasing beyond the consumer price index annually.

In this context, it is timely for the Queensland Competition Authority (QCA) to undertake a Review of Small Customer Gas Pricing and Competition in Queensland.

The Queensland Government is currently developing a Queensland Residential Gas Market Strategy. The objective is that the outcomes of this Review will determine whether any additional measures need to be combined with existing initiatives, to improve competitive market outcomes for gas customers, incumbent retail market participants and new entrants.

Head of Power

The *Gas Supply Act 2003* includes the provision to enable Direction by the Minister to investigate a number of areas in relation to pricing and retail competition within the gas industry in Queensland.

Under Chapter 3, Part 4, Division 1, Section 227A the Minister may, by gazette notice, give the Queensland Competition Authority (QCA) a written direction to:

- (a) investigate the effectiveness of retail competition in the Queensland retail gas market; and
- (b) give the Minister a report on the pricing investigation within a stated period.

Under Chapter 5, Part 3, Section 270K, the Minister may, by gazette notice, give the QCA a written direction to conduct a review into:

- (a) any matter relating to the Queensland reticulated processed natural gas markets.

Objectives

As Minister, I wish to ensure that consumers of gas in Queensland benefit from competition and efficiency in the market place. This includes reticulated natural gas and its alternatives, reticulated and bottled Liquefied Petroleum Gas (LPG).

Accordingly, I direct the QCA to undertake a Review of Small Customer Gas Pricing and Competition in Queensland.

This review should examine current market issues in the interests of gas customers, incumbent retail market participants and new entrants.

Matters to be Considered

In undertaking the Review of Small Customer Gas Pricing and Competition in Queensland, the QCA is to consider and report on the following issues:

1. The level of competition in the reticulated natural gas market, and as a comparison, other substitute fuels including reticulated and bottled LPG in Queensland. This should include an assessment of the following components:
 - Current competition within the small customer gas market (Refer to point 3);
 - Changes in market competitiveness over time, and the potential for future competition within the small customer gas market;
 - Ability of retailers to enter the market, including barriers to entry across the gas market supply chain, and expansion of the gas retail market;
 - Relevant gas market supply constraints; and
 - The impact of competition in the small customer gas market on the profitability of the reticulated natural gas distribution areas.

2. The impact of movements in upstream gas costs on the current prices paid by small customers including an assessment of:
 - Wholesale gas prices;
 - Transmission costs;
 - Distribution costs;
 - Retail operating costs; and
 - Retail margin.

The QCA should consider movement of these costs over time, and the potential for future changes in costs.

Based on the above outcomes, the QCA should provide comment on whether current Queensland small customer prices are reflective of the actual costs incurred in the upstream gas supply chain. If the QCA considers that prices are not cost reflective, the QCA should comment on the price adjustments necessary to achieve cost reflectivity.

3. Current small customer gas market activity, including:
 - The exercise of market choice and switching behaviour by consumers and any technical or other barriers to this;
 - Any impediments to small customers being able to exercise informed choices regarding their retailer of choice; and
 - The perceptions of natural gas as a product of choice in the small customer market compared to other energy supply options.
4. The QCA should consider how each of these issues affects different categories of small gas customer, for example, small commercial customers, domestic customers with a gas cooker only and domestic customers with a gas cooker and gas hot water system.
5. Where relevant, the QCA should comment on differences in market competitiveness and cost reflectivity between regions within Queensland.
6. The QCA should provide analysis of differences in market competitiveness and cost reflectivity between Queensland and other Australian States or Territories. This should include consideration of other recent reviews of gas pricing and competition in other jurisdictions or nationally, where relevant to this Review.

Any other issues not explicitly mentioned here which arise during the course of the Review, and which impact on the Review's objectives or matters being considered, should, where relevant, be included in the report to the Minister.

Definitions

For the purpose of this Review, a “small customer” is consistent with that defined in the *Gas Supply Regulation 2007* as one consuming less than 1 terajoule of gas per annum per connection.

Consultation

In conducting this review, the QCA is requested to invite submissions from stakeholders to the extent to which it considers necessary or desirable.

Reporting Period

The QCA must submit its report on its Review of Small Customer Gas Pricing and Competition in Queensland in its final form to the Minister no later than 1 December 2008.

APPENDIX B – TERMS OF REFERENCE CHECKLIST

In undertaking the Review of Small Customer Gas Pricing and Competition in Queensland, the Authority has considered and reported on the following issues in accordance with the terms of reference:

1. The level of competition in the reticulated natural gas market, and as a comparison, other substitute fuels including reticulated and bottled LGP in Queensland. This includes an assessment of the following components:
 - Current competition within the small customer gas market; Chapter 4
 - Changes in market competitiveness over time, and the potential for future competition within the small customer gas market; Chapter 4
Chapter 8
 - Ability of retailers to enter the market, including barriers to entry across the gas market supply chain, and expansion of the gas retail market; Chapter 4
Chapter 8
 - Relevant gas market supply constraints; and Chapter 4
Chapter 8
 - The impact of competition in the small customer gas market on the profitability of the reticulated natural gas distribution areas. Chapter 5

2. The impact of movements in upstream gas costs on the current prices paid by small customers including assessment of:
 - Wholesale gas prices; Chapter 5
 - Transmission costs; Chapter 5
 - Distribution costs; Chapter 5
 - Retail operating costs; and Chapter 5
 - Retail margin. Chapter 5

Movement in these costs over time, and the potential for future changes in these costs. Chapter 5
Chapter 8

QCA comment on whether current Queensland small customer prices are reflective of the actual costs incurred in the upstream gas supply chain. Chapter 5

QCA comment on the price adjustments necessary to achieve cost reflectivity. Chapter 5

3. Current small customer gas market activity, including:
 - Exercise of market choice and switching behaviour by consumers and any technical or other barriers to this; Chapter 4
 - Any impediments to small customers being able to exercise informed choices regarding their retailer of choice; Chapter 8
 - The perceptions of natural gas as a product of choice in the small customer market compared to other energy supply options; Chapter 4
 - Retail operating costs; and Chapter 5
 - Retail margin. Chapter 5

4. The QCA consideration of how each of these issues affects different categories of small gas customer, for example, small commercial customers, domestic customers with a gas cooker only and domestic customers with a gas cooker and gas hot water system. Chapter 5

5. QCA comment on differences in market competitiveness and cost reflectivity between regions within Queensland. Chapter 5

6. QCA analysis of differences in market competitiveness and cost reflectivity between Queensland and other Australian States or Territories. This includes consideration of other recent reviews of gas pricing and competition in other jurisdictions or nationally, where relevant to this Review.

Chapter 7

APPENDIX C – LIST OF SUBMISSIONS RECEIVED

In undertaking the Review of Small Customer Gas Pricing and Competition in Queensland, the Authority received written submissions from the organisations listed below.

Submissions on the Issues Paper

AGL Energy

Australian Power & Gas

Elgas

Origin Energy

Queensland Consumer Association

Queensland Council of Social Services

Saint Vincent de Paul Society

Submissions on the Draft Report

AGL Energy

Australian Power & Gas

Mr K McMahon

Origin Energy