



Department
of Industry
Resources & Energy

New South Wales

2014-15 Gas Networks

Performance Report

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Abbreviations

O & P	Operations & Programs Branch (within Resources and Energy Division of the Department of Industry, Skills and Regional Development)
OFT	Office of Fair Trading
GJ	Gigajoule
IPART	Independent Pricing and Regulatory Tribunal
kPa	Kilopascal: pressure units
KPI	Key Performance Indicator
LGA	Local Government Area
LPG	Liquefied Petroleum Gas
MAOP	Maximum Allowable Operating Pressure
MJ	Megajoule
PJ	Petajoule
SNG	Simulated Natural Gas
TJ	Terajoule
TLPG	Tempered Liquefied Petroleum Gas
UAFG	Unaccounted-for-Gas (difference between gas entering and leaving the system)

**Table 1 :- Gas units of measurement.
(a Joule is the international unit for measuring energy content)**

1,000 Joules	1 Kilo Joules
1,000 Kilo Joules	1 Mega Joule
1,000 Mega Joules	1 Giga Joule
1,000 Giga Joules	1 Tera Joule
1,000 Tera Joules	1 Peta Joule

Note:- One standard cubic metre of natural gas is approximately 38 MJ. This figure can vary as it relates to the heating value of a particular sample of gas.

Executive Summary

This 2014-15 Gas Networks Performance Report has been prepared by the Department of Industry, Division of Resources and Energy, Operations and Programs (O&P) branch, on the operations of natural gas and liquefied petroleum gas (LPG) distribution networks in NSW. These networks are regulated under the *NSW Gas Supply Act 1996* (the Act) and the *Gas Supply (Safety and Network Management) Regulation 2013* (the Regulation). The report consolidates and comments on performance data and information provided by the Gas Network Operators.

Under the Regulation, Network Operators are also required to prepare a Safety and Operating Plan (SAOP) which is lodged with O&P and which governs their operations. The SAOP is then audited annually by an independent auditor to assess performance against the Plan. This process is proving effective in providing safe and reliable networks, with no public or worker fatalities involved on networks since the requirement was instituted.

Many factors influence network performance including network scale, age, construction materials and operating regimes. Comparisons in performance across networks and between jurisdictions, must consider the factors that differentiate the networks and influence their performance.

Key Performance Indicators (KPI) have been developed by O&P to monitor and analyse the Network Operators' performances against network integrity, reliability, and safety parameters.

Much of the data reported are presented on a year-to-year basis to identify trends and changes in performance.

Natural Gas Networks

The Network Operators have demonstrated a high level of performance in the areas of network integrity, reliability, and safety.

We acknowledge that the Network Operators are constantly looking at ways to improve their performance, in accordance with the Regulation, and the O&P is working with the Network Operators to achieve the best possible results. It must be noted, however, that some of the figures are different from earlier reports. This is a result of the Network Operators revising or improving the way in which information is being recorded and collated.

High-Pressure Pipelines (Unlicensed)

Jemena Gas Networks (NSW) Ltd, ActewAGL and Australian Gas Networks (Albury) have high-pressure pipelines (operating pressure > 1,050 kPa) as part of their networks. The reporting requirements for the high-pressure assets changed in the 2006 reporting period. This report contains data on these (unlicensed) pipelines.

Liquefied Petroleum Gas (LPG) Networks

Due to the size and complexity of LPG networks, comparison of these to natural gas networks is not appropriate. The LPG network information received by the O&P is shown in Appendix A and it provides a significant input to the compliance regime in this particular field of operation.

Generally speaking LPG networks are performing well. However due to their small sizes, incidents that do occur appear significant with respect to their customer numbers and the size of network.

NB: Given the significant differences between LPG and larger natural gas networks, the O&P continues to consult with LPG Network Operators to improve the LPG reporting regimes and to take into account the unique characteristics of the LPG networks.

Conclusions

The state averages for the KPIs indicate that all assets are being maintained to a very high standard.

Summary of KPIs

- The NSW gas network increased by 1.4% to 28,591 km in 2014-15 with respect to previous year.
- The number of consumers connected to Natural Gas in NSW is now over 1.32 million.
- The number of new consumers has grown at a record level of 43,663 in 2014-15. This figure is well above the average of 30,772 per annum during last ten years from 2004-05 to 2013-14.
- Public awareness has contributed to large increases in “Dial Before You Dig” (1100) enquiries. In 2014-15 there were approximately 309,151 calls pertaining to gas network assets. This is an increase of 58,506 calls from last year’s total.
- The number of consumer hours off supply per 1,000 consumers were at its lowest level of 5.53.

These results remain strong and indicate that the Network Operators continue to manage their assets in a safe and reliable manner.

The O&P continually reviews all annual reports received and has a policy to consult closely with the Network Operators in the ongoing evaluation of the reporting requirements.

1. Introduction

This report consolidates performance information and data provided by each of the gas distribution network operators for the 2014/15 financial year in accordance with the requirements of the Annual Reporting Template for Network Operators.

This report:

- presents the O&P's interpretation and commentary on the information and data provided by the operators and compares overall performance; and
- identifies areas of achievement and opportunities for improvement for the NSW gas industry as a whole.

1.1 Report Structure

This report summarizes data provided by the distribution network operators in accordance with the annual reporting requirements prepared by the O&P and has the following structure:

- **Chapter 1** *Introduction*
- **Chapter 2** *Network Asset Information*
- **Chapter 3** *Network Integrity and Safety Information*. This chapter also presents KPIs, derived from the data provided
- **Chapter 4** *Network Reliability and Consumer Related information*. This chapter also presents KPIs, derived from the data provided
- **Chapter 5** *High-Pressure (Unlicensed) Pipeline data*
- **Appendix A** LPG Industry and LPG networks reported data
- **Appendix B** Natural Gas Industry within NSW

1.2 Limitations of This Report

There are currently six licensed gas network operators in NSW. Four of these reticulate natural gas while the remaining two operate distribution systems that reticulate LPG. These are all regulated by the Department of Industry in similar fashion under the *Gas Supply Act 1996*. The annual reporting is carried out in accordance with the requirements of the *Gas Supply (Safety and Network Management) Regulation 2013*.

The scope of this report relates primarily to the natural gas networks. The LPG distribution network operators have the same reporting requirements as natural gas network operators. However the analysis of this data is detailed later in this report (see Appendix A) due to the small sizes and complexities of these particular networks. Licensed high-pressure transmission pipeline systems are not addressed in this report (*please refer to the Licensed Pipeline Performance Report*).

The O&P recognises the efforts made by the Network Operators on improving the quality of information, data and reporting. Where possible, the O&P has identified the limitations of the information and data provided in this report.

There are many factors that can influence network performance including network size, age, construction materials and operating regimes. Therefore, in attempting to draw comparisons of performance across networks, consideration must be given to the factors which may influence the overall performance and the manner in which information is gathered and reported.

2. Network Asset Information

2.1 Annual Reporting Requirements

This chapter presents information on the gas network's size and capacity. To access the overall performance of the gas network a number of factors must be taken into account including:

- network pipe length (less than 1,050 kPa¹);
- quantity of gas entering the network;
- quantity of gas delivered to custody transfer points; and
- new regions connected to gas supply.

The Network Operators are required to report network details by district or groups of districts. For network safety and reliability reasons, it is important that any trends occurring in a localised area are identified and reported, rather than being potentially lost in aggregated data. Aggregated data can average out to show good or poor results that can misrepresent localised information which is particularly important for the larger networks.

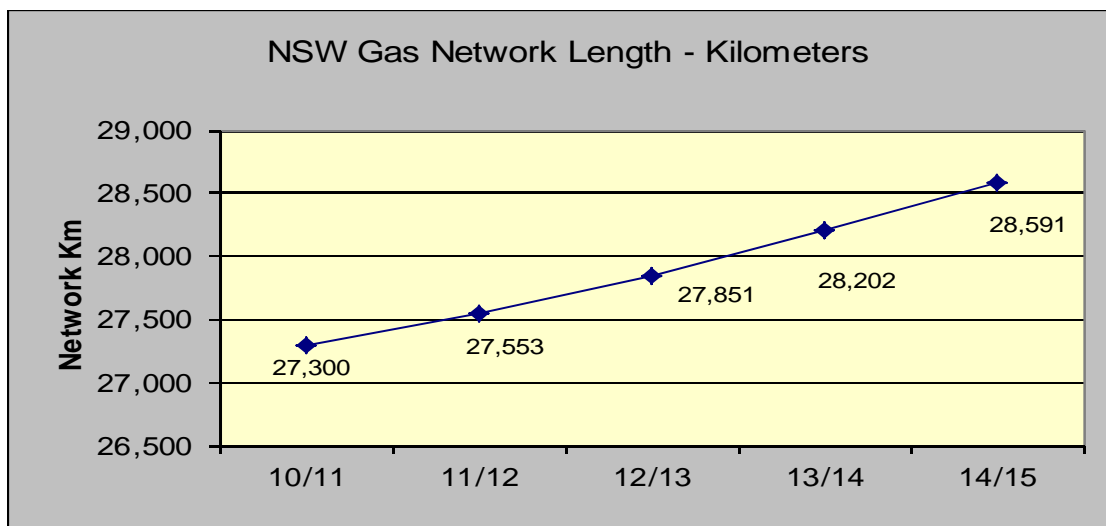
Where a method of gathering information has changed, immediate comparisons may not be an accurate way of accessing the performance of the asset owner or assets, in which case this data has been removed from the tables or graphs.

2.2 Key Performance Indicator

- Unaccounted for Gas (UAFG) – see Table 2.1 and Chart on page 11

2.3 Natural Gas Networks – Asset Information

In 2014/15 the length of the natural gas network grew by 1.4%, reaching 28,591 km, delivering approximately 109 PJ or about 2.9 billion standard cubic metres of gas to consumers in NSW.



¹. Operating pressure classes are: (1) Pressure less than or equal to 1,050 kPa and (2) Pressure greater than 1,050 kPa.

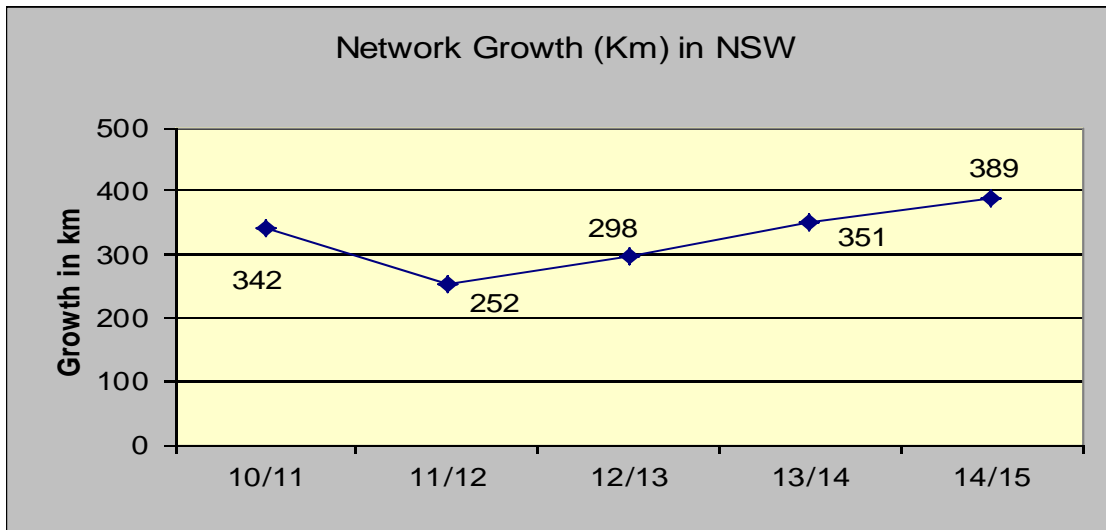
Table 2.1 Natural Gas Networks in NSW – Summary Statistics

Reporting Period	Network Growth in NSW in km	Gas entering the Network in PJ	Gas Delivered in PJ	Percent Unaccounted for Gas (UAFG) %
2010/11	342	112.9	110.2	2.45
2011/12	252	111.5	108.5	2.66
2012/13	298	114.6	112.0	2.16
2013/14	351	109.2	107.4	1.67
2014/15	389	113.0	109.1	3.50

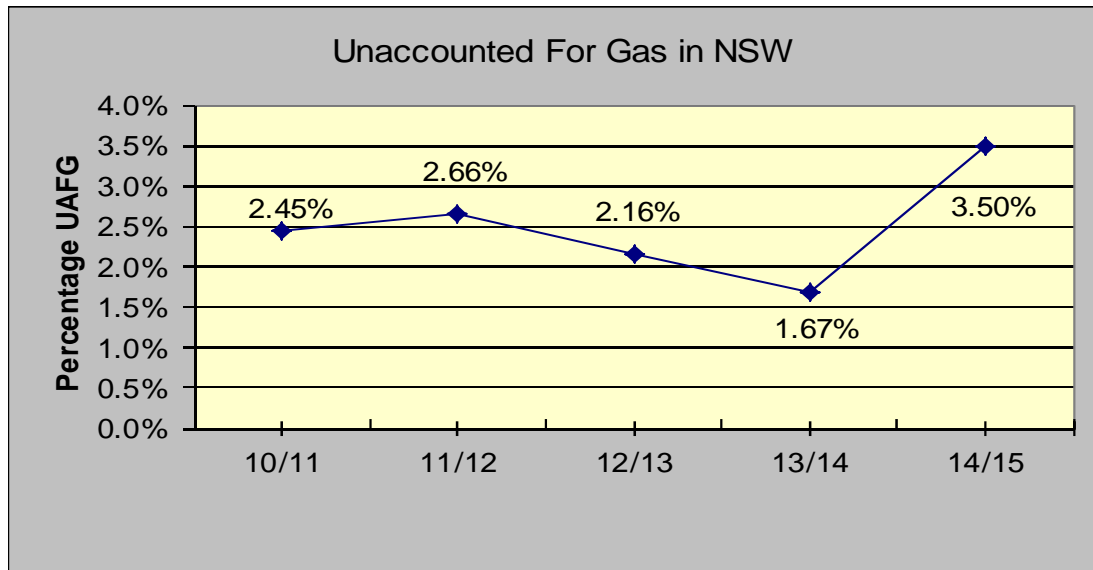
In 2014/15, NSW gas network experienced increase in gas demand compared to last year. Total gas delivered by NSW network was 109.1 PJ which was 1.7 PJ more than the last year’s demand.

The data for gas entering the networks is obtained from custody transfer meters which measure the data on hourly basis. Hence the gas received within a financial year is accurately reported. However the data for gas delivered is subject to billing issues having bills read on a three monthly billing cycle thus may not represent a true reflection of actual gas delivered for the same period. As a result, the UAFG data could not be accurately estimated.

Network Growth (Km)



- **KPI – Unaccounted For Gas**



2.3.1 New regions

No new regions have been reticulated in this reporting period, therefore consumer growth is within the existing networks areas. However, it includes new residential and commercial/industrial growth within these network areas.

2.4 Conclusion

Since the previous reporting period the total length of the gas networks in NSW has increased by approximately 389 km. The overall length of the NSW gas networks is currently 28,591 km.

Total gas delivered by NSW network was 109.1 PJ which was 1.7 PJ more than the last year's demand.

3. Network Integrity and Safety Information

3.1 Annual Reporting Requirements

This chapter deals with product loss through escapes and from third party activity. It indicates how secure the assets are and how activity around the assets affect the performance. It also deals with the preventative measures associated with leak surveys:

- Number of gas leaks reported to network operator by third parties, by pressure class;
- Kilometres of pipe subjected to leak surveys;
- Number of leaks found during leak surveys;
- Number of recorded mechanical damage incidents to gas networks, by type and source – by pressure class and location;
- Number of emergency exercises or simulations conducted; and
- Number of calls to a “One-Call” system (*Dial Before You Dig*) received about work near the networks.

3.2 Key Performance Indicators

The key performance indicators adopted by the O&P for monitoring network integrity and safety include:

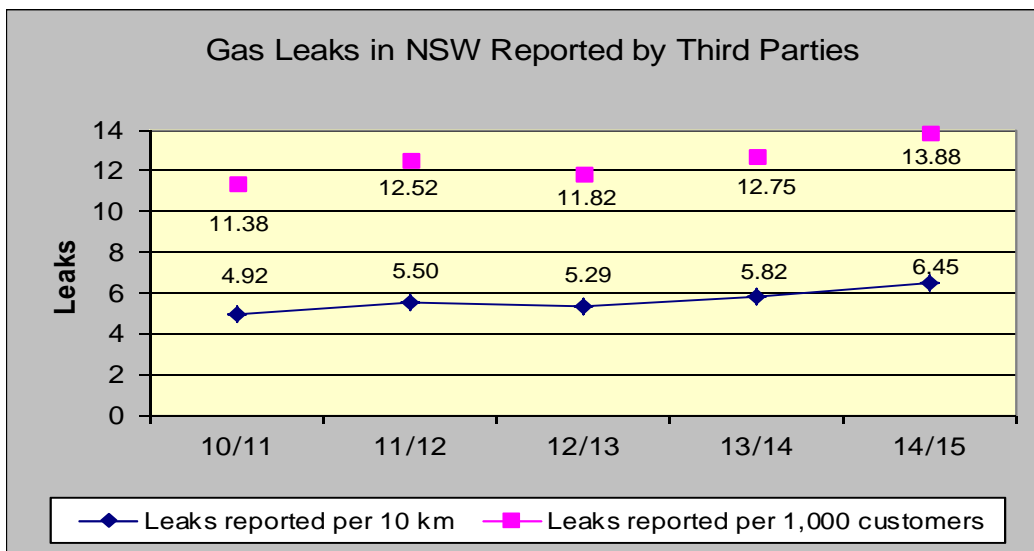
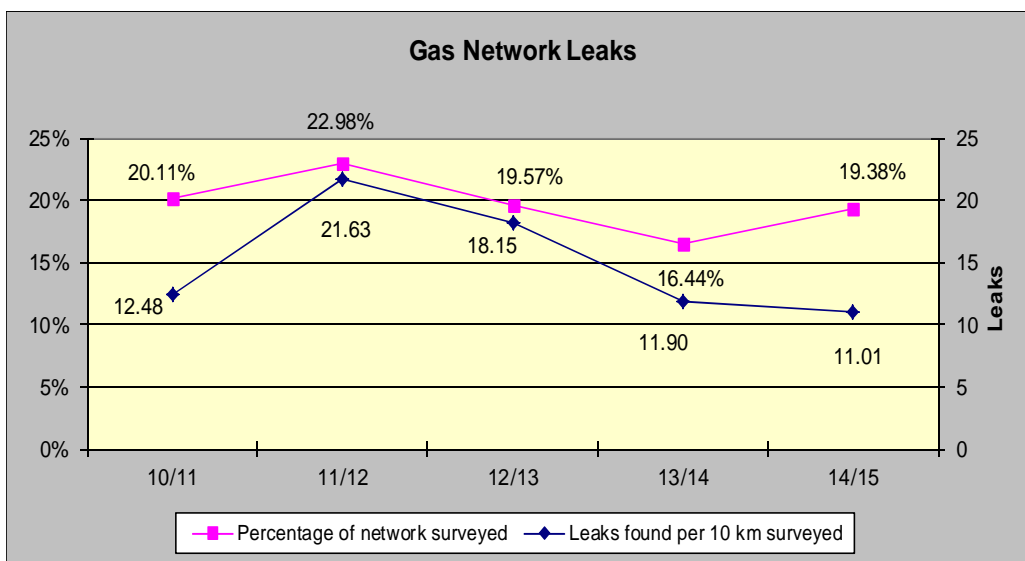
- Gas leaks per 10 km of pipe reported by third parties;
- Gas leaks per 1,000 customers as reported by third parties;
- Leak surveys as a Percentage of total pipe length;
- Leaks found per 10 kilometres of pipe surveyed;
- Mechanical damage incidents per 10 km of pipe;
- Mechanical damage incidents per 1,000 consumers; and
- Number of Emergency Exercises

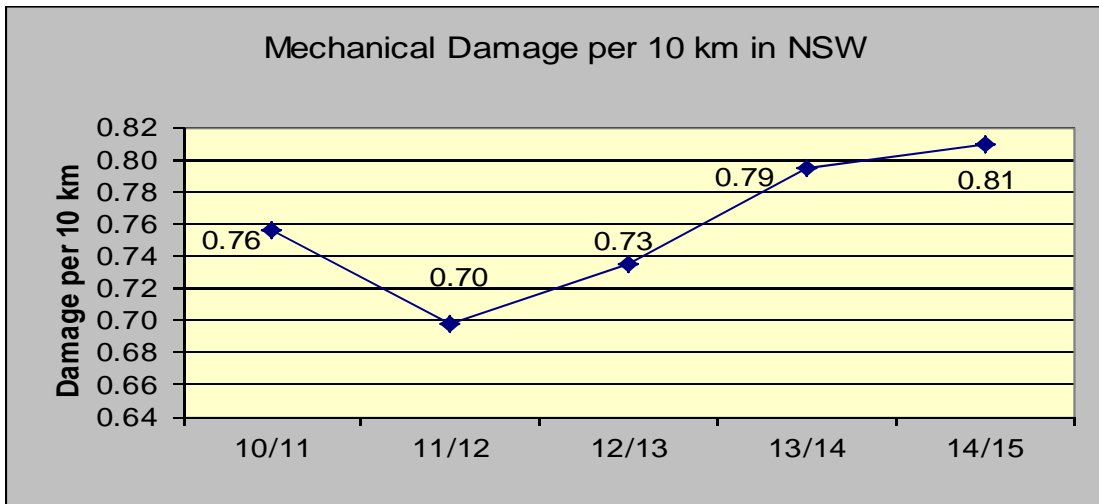
These data are presented in Table 3.1 and in the accompanying graphs.

Table 3.1 Network Integrity and Safety for NSW

Reporting Period	Percentage of Network Leak Surveyed	Leaks found per 10 km	Mechanical Damage per 10 km	Mechanical Damage per 1,000 consumers	Emergency Exercises
2010/11	20.11	12.48	0.76	1.75	10
2011/12	22.98	21.63	0.70	1.63	8
2012/13	19.57	18.15	0.73	1.73	6
2013/14	16.44	11.90	0.79	1.90	3
2014/15	19.38	11.01	0.81	1.96	4

Blue columns also in graphs below.





3.2.1 Natural gas - networks surveys

It is not a requirement for operators to survey their entire gas networks each year but they must survey 100% of their network within a span of 5 years. The amount of network surveyed in 2014/15 was 19.38% which is about in line with past years trend.

Mechanical damage per 10 km was slightly greater than last years figure.

3.3 Conclusion

The Network Operators have been working with third party contractors to reduce impacts over the reporting periods.

Both the number of gas leaks reported per 10 km and per 1,000 customers remain at low levels.

NB: The *Amendments to the Energy Legislation (Infrastructure Protection) Act 2009 and Regulations*, were passed in June 2009 and came into force on 1 July, 2010. The NSW Gas Network Operators were involved in the drafting of these legislative amendments which were aimed at reducing the frequency of damage to gas network assets by requiring third parties to contact a one-call system prior to working near gas assets. Recent publicity about these legislative changes and an increase in public awareness has contributed to large increases in "Dial Before You Dig" (1100) enquiries during the past two years. In 2014-15 there were approximately 309,151 calls to "Dial Before You Dig" pertaining to gas network assets. This is an increase of 58,506 calls from last year's total.

4. Network Reliability and Consumer Related Matters

4.1 Annual Reporting Requirements

This section reports on the ability of Network Operators to detect incidents that have occurred and the time taken to rectify these events. The consumer related numbers are used to assist in the KPI analysis in relation to how many consumers are affected by these events:

- Number of consumers connected to the network (total number);
- Number of new consumers connected to the network (total number);
- Loss of supply (duration, total unplanned consumer hours lost - 5 or more customers);
- Loss of supply (number, total unplanned numbers of loss of supply instances - 5 or more customers);
- Poor supply pressure (total number of instances);
- Odorant levels not to specification (total number of instances);
- Number of incidents or emergencies responded to; and
- Incidents or emergency responses not within 60 minutes of notification (total number).

4.2 Key Performance Indicators

The KPIs adopted by the O&P for monitoring network reliability and safety are:

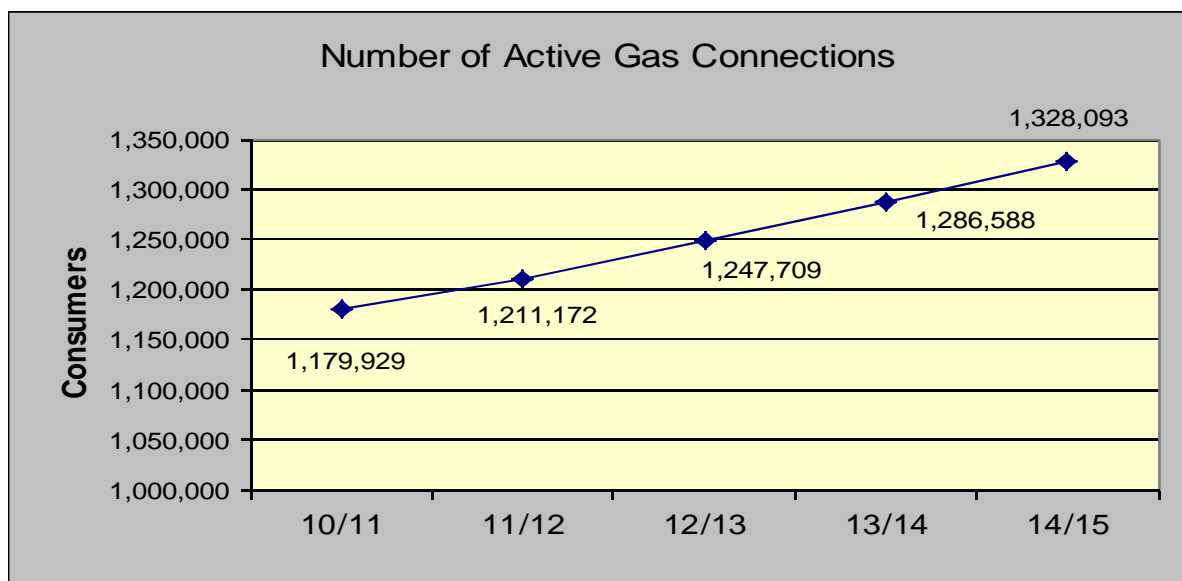
- Loss of Supply (Total unplanned consumer hours lost 5 or more customers) per 1,000 customers); and
- Percentage of calls responded to within 60 min.

Notes relating to network reliability and consumer statistics

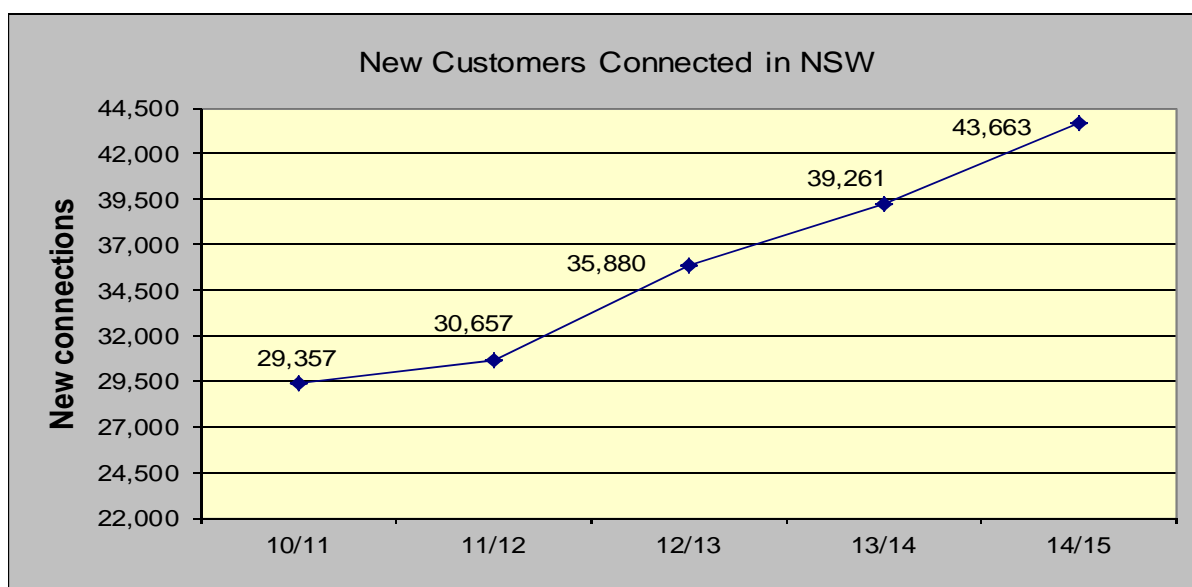
Consumers numbers connected to gas networks is the sum of all connection points that are active and consuming gas.

New Customers connected to the networks relates to new installations. These figures may not necessarily be included in the consumer numbers because at the time of calculation the new connection point may not be active (taking gas). This is one reason why the consumer number growth does not equal the new customers connected. Another reason for the difference in numbers is the reconnection or disconnection of consumers to and from the network.

Total NSW natural gas consumers

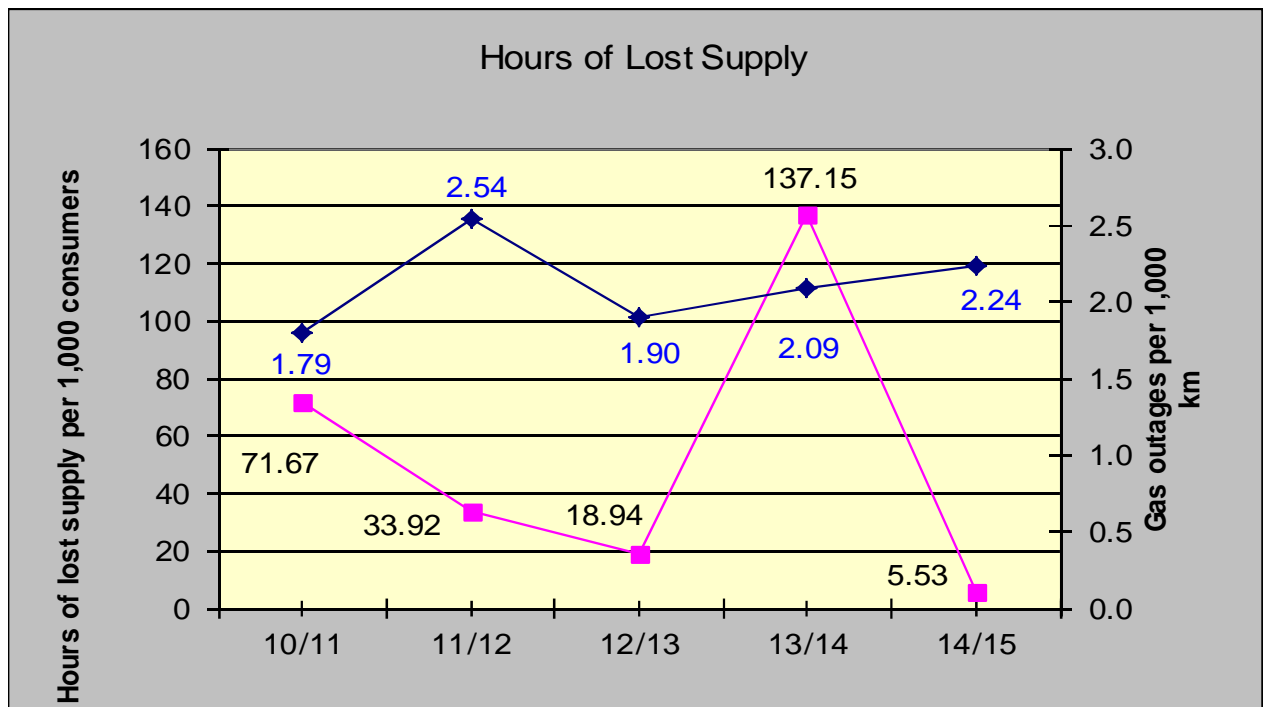


New natural gas network connections



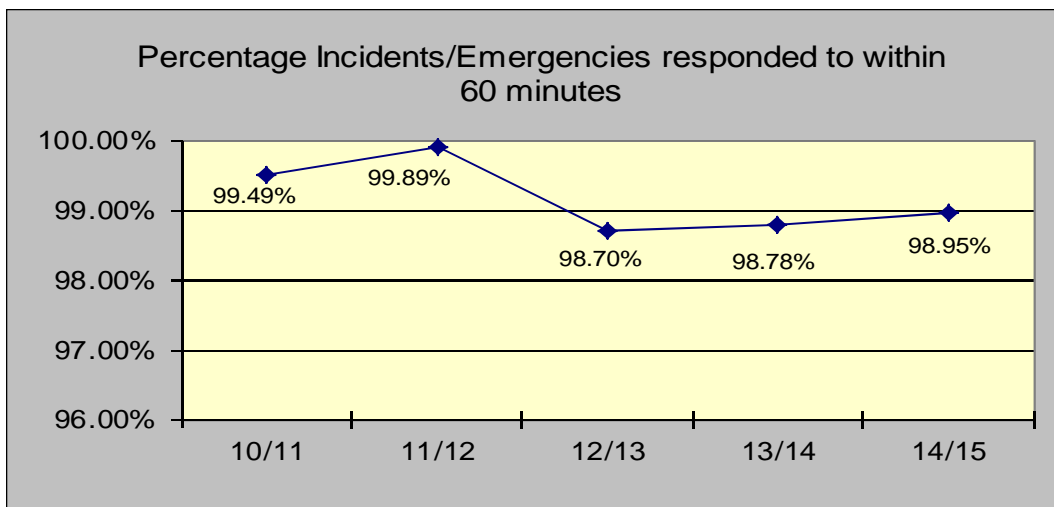
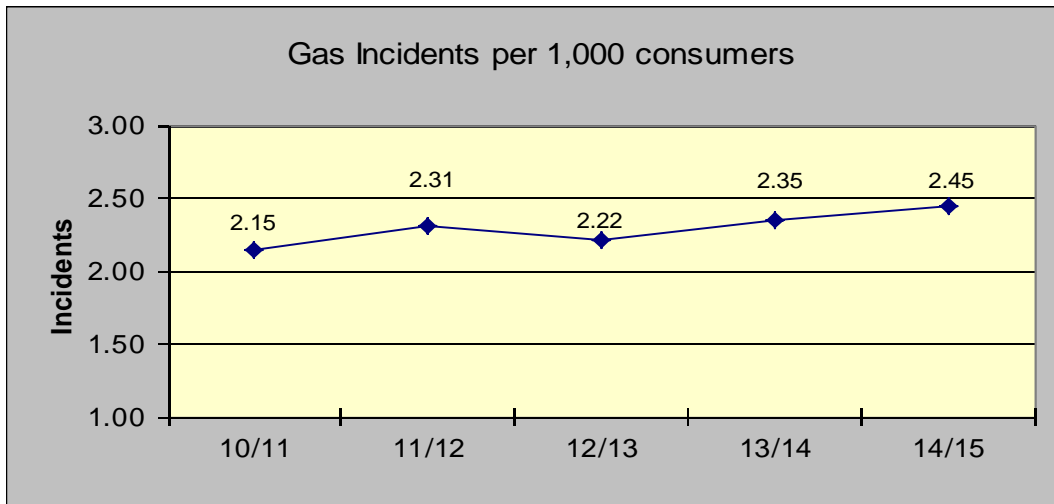
Reporting Period	Unplanned Consumer hours lost per 1,000 consumers	Unplanned loss of supply incidents per 1,000 km	Number of out of spec gas or odorant levels reports	Number of Incidents/emergencies per 1,000 consumers	% Incidents/emergencies responded to within 60 min.
2010/11	71.67	1.79	50	2.15	99.49
2011/12	33.92	2.54	14	2.31	99.89
2012/13	18.94	1.90	14	2.22	98.70
2013/14	137.15 *	2.09	14	2.35	98.78
2014/15	5.53	2.24	14	2.45	98.95

* Bushfire in the Blue Mountains on 17-10-2013 affected 760 customers caused significant increase in hours of lost supply.



Note: An outage in Cooma in March 2011, impacting more than 1,700 consumers, was largely responsible for the high hours of lost supply per 1,000 consumers (71.67) in 2010/11.

The Hours of lost supply per 1,000 consumers in 2013/14 without bushfire incident in the Blue Mountains was 12.23 hours.



4.3 Conclusion

The number of consumers connected to gas networks has increased by over 43,000 to a total of over 1.3 million.

There have been only two significant incidents during last five years which affected the gas networks:

- An outage in Cooma in March 2011, and
- Bushfire in Blue Mountains in October 2013.

Apart from the above incidents, the reliability indicators show that the Network Operators continue to provide a reliable supply of gas to consumers. There were only 2.45 incidents per 1,000 gas consumers in 2014-15.

The response times to emergencies and incidents declined slightly during last three years, but still remains strong, with more than 98% being responded to within 60 minutes.

5. High pressure (unlicensed) pipeline activities

5.1 General

Jemena (Sydney), Jemena (Coastal), ActewAGL and Australian Gas Networks (Albury) operate high pressure pipelines (>1050 kPa) as part of their network activities. Network operators are required to review matters such as pressure, location, land use, security and risk assessments on a periodic basis as defined under Australian Standard AS 2885: Pipelines - Gas and liquid petroleum.

The Department's annual reporting requirements requested the following information:

- Accidents, Escapes and Ignitions;
- Integrity Assessment / Monitoring; and
- Operational Performance.

NSW has approximately 179 km of mains operating in the network that are running at a pressure above 1,050 kPa. These distribution mains contain a larger amount of energy and are important feeders to the distribution network. This is why they require a more in-depth review of the operation and safety aspects to the public, personnel and environment.

5.2 Accidents, Escapes and Ignitions

The following issues are covered within this section:

- Incidents;
- Loss of Containment (LOC);
- Ignitions;
- Injuries involving the pipeline; and
- Damage involving the pipeline.

Reporting Period	Incidents	Loss of Containment	Ignitions	Injuries	Damage
2010/11	0	0	0	0	0
2011/12	0	0	0	0	0
2012/13	0	0	0	0	0
2013/14	0	0	0	0	0
2014/15	0	0	0	0	0

5.3 Integrity Assessment / Monitoring

The following issues are covered within this section:

- Integrity Assessment;
- Pipeline Patrols;
- Supervised activity around the Pipeline;
- Field Inspections;
- Cathodic Protection (CP); and Coating Defects.

Reporting Period	Supervised activities per km	Activities that contacted Operator (%)	Defects requiring repair per 1,000 km	CP units operating correctly (%)	Pipeline covered by CP systems (%)
2010/11	30.51	97.32	0	100	100
2011/12	30.10	96.11	0	100	100
2012/13	30.06	100	0	100	100
2013/14	41.38	95.86	0	100	100
2014/15	41.15	95.71	0	100	100

***Note:** A higher percentage of the network was subject to surveys resulting in an increase in defects found.

5.4 Operational Performance

The following issues are covered within this section:

- Loss of Operation; and
- Details of any unplanned or abnormal incidents that could have a long term effect on the safety of the pipeline.

Reporting Period	Hours pipeline not operational	Number of unplanned or abnormal incidents /km
2010/11	0	0
2011/12	0	0
2012/13	0	0
2013/14	0	0
2014/15	0	0

5.5 Conclusions

The High pressure (>1,050 kPa) gas network pipelines continue to be managed well with no losses of containment or serious incidents reported in the 2014/15 reporting period.

Appendix A: LPG Networks in NSW and networks performance data

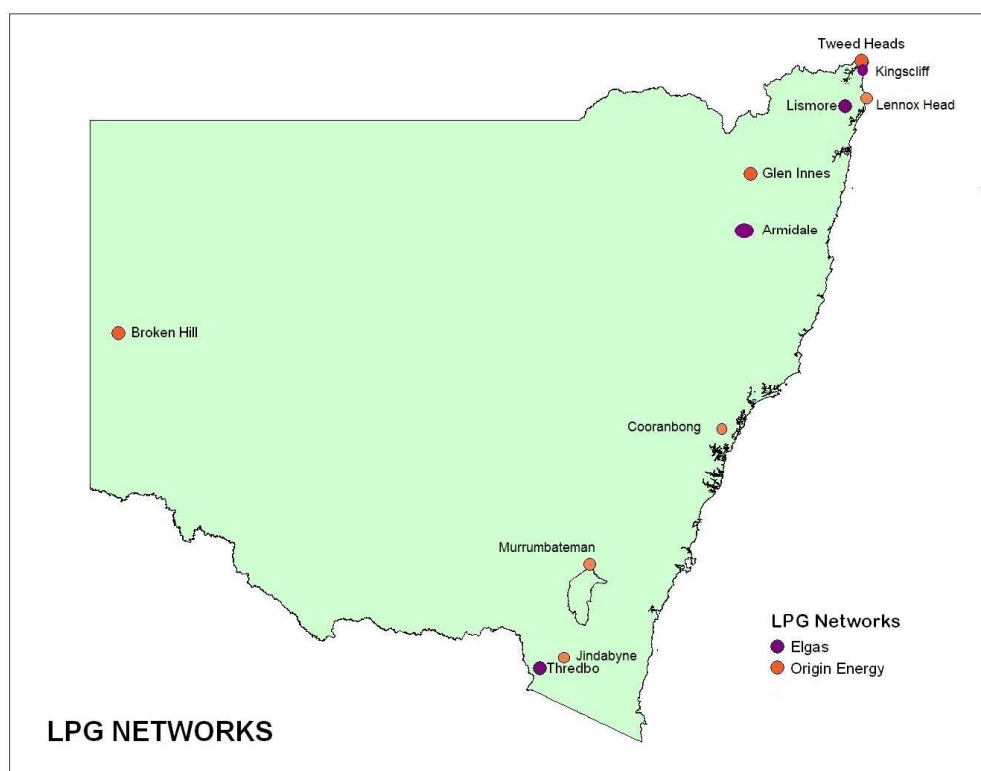
In addition to the natural gas distribution network in NSW, there are also a number of LPG distribution systems supplying gas to consumers within the State where natural gas is not available. LPG is transported to these sites by road and is therefore favoured for small stand-alone distribution systems.

LPG may be reticulated in several forms, such as TLPG, SNG, Butane or as direct LPG. The significance of this however is that gas appliances must be approved for use with the particular type of gas being reticulated within a network.

The scope of this section of the report is limited to the LPG and TLPG distribution networks only.

There were two licensed distributors of LPG in NSW who reported to the O&P. The locations of these networks are illustrated in Figure A.1. The networks are briefly described below and network data provided by the operators is presented in this section.

Figure A.1 Location of LPG Networks in NSW



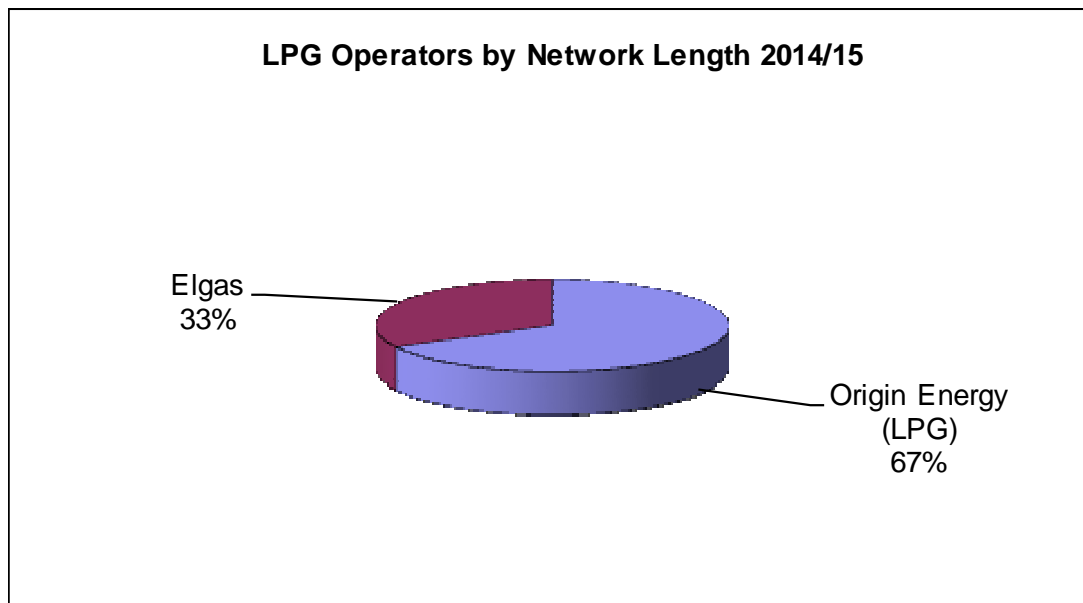
Origin Energy LPG Ltd

Origin Energy has distribution districts in Glen Innes, Broken Hill, Tweed Heads (Banora Pt.), Jindabyne, Cooranbong, Lennox Head and Murrumbateman. It's LPG network at Glen Innes is now the largest in NSW.

Elgas Reticulation Ltd

Elgas has two small LPG distribution networks located in Lismore and Thredbo. Recently it has taken over Wesfarmers Kleenheat Ltd having networks in Armidale and Kingscliff with a total of about 22 km of SNG and LPG networks.

Figure A.2 Relative Sizes of LPG Networks



LPG networks – Asset Information

NSW LPG distribution networks delivered 273 TJ of gas through approximately 105 kilometres of pipes in 2014/15. The closure of Kleenheat's TLPG network in Armidale was responsible for the significant decrease in network length in 2011/12.

Chart A.1 LPG Networks Length

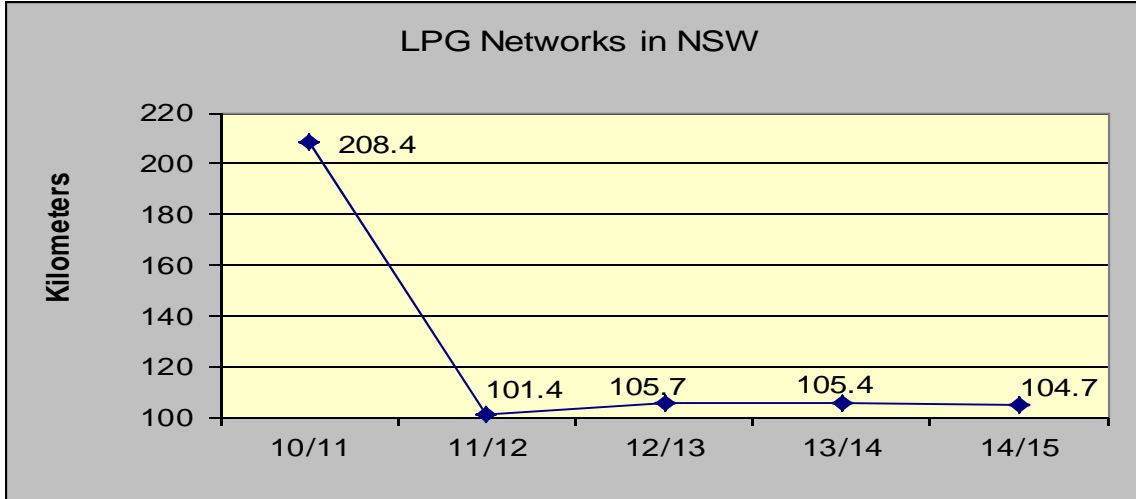


Table A.1 Consumption information for LPG Networks

	Quantity Gas Entering Network (TJ)	Quantity Gas Delivered (TJ)	UAFG (%)
2010/11	159	148	7.15
2011/12	167	158	5.66
2012/13	171	166	2.81
2013/14	130	129	0.64
2014/15	277	273	1.45

Chart A.2 Unaccounted for gas (UAFG) in NSW LPG Networks

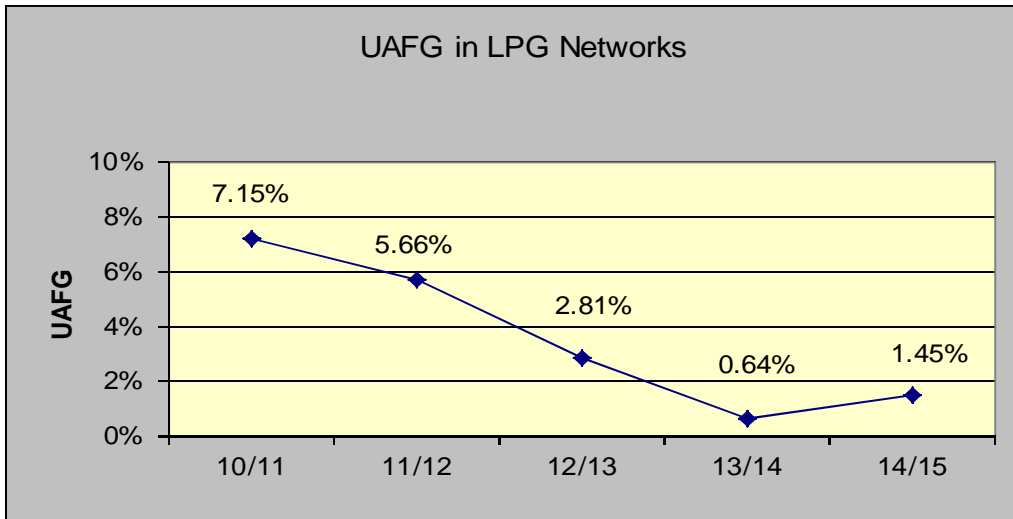


Table A.2 Customer Information for LPG Networks

	New consumers connected to the network	Total consumers connected to the network
2010/11	46	2,436
2011/12	52	1,863
2012/13	37	1,861
2013/14	181	1,831
2014/15	142	1,790

Blue column is also in graph of LPG consumers below.

Chart A.3 LPG Networks Consumer Numbers

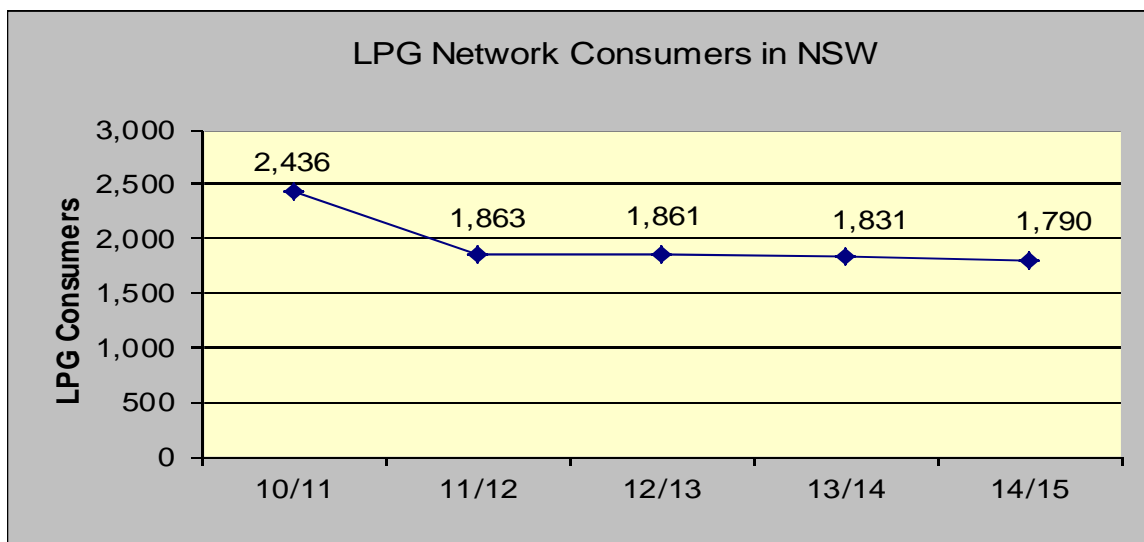
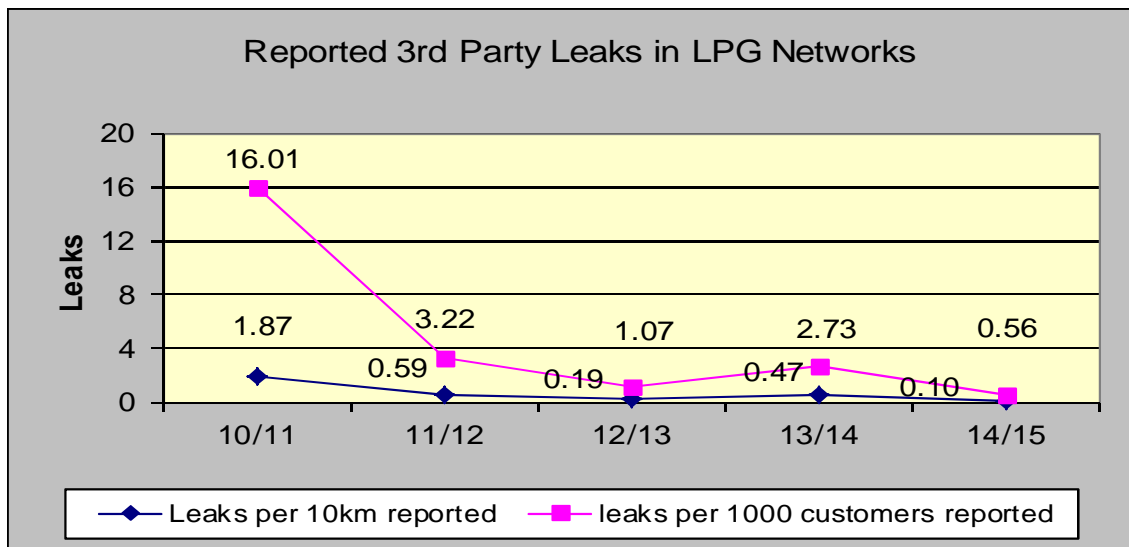


Table A.3 Network Integrity and Safety Information: LPG Networks

	Leaks per 10km Reported by third Parties	Leaks per 1,000 Customers Reported by third Parties	Percent of Network subject to Leak Surveys (%)	Leaks Found per 10km of Pipe Surveyed	Mechanical Damage Incidents per 10km by third Party	Emergency Exercises Conducted
2010/11	1.87	16.01	16.27	1.87	0.19	5
2011/12	0.59	3.22	33.04	0.59	0.10	7
2012/13	0.19	1.07	46.93	0.19	0.28	2
2013/14	0.47	2.73	41.94	0.47	0.28	4
2014/15	0.10	0.56	74.40	0.10	0.19	4

Blue columns also in graph below.

Chart A.4 Leaks reported by Third Party



Conclusion

The permanent closure of Kleenheat's TLPG network in Armidale in 2011/12 was responsible for a significant fall in both the total number of LPG consumers as well as the LPG network length. In past two years the LPG networks across NSW comprised of over 105 km of pipelines and 1,800 consumers. In general the LPG network operators continue to operate their networks in a safe and reliable manner.

Due to their smaller sizes, small fluctuations in the LPG networks figures can have a significant impact on their KPI's. Hence the need to record the LPG network figures as a separate category.

Appendix B: Natural Gas Industry in NSW

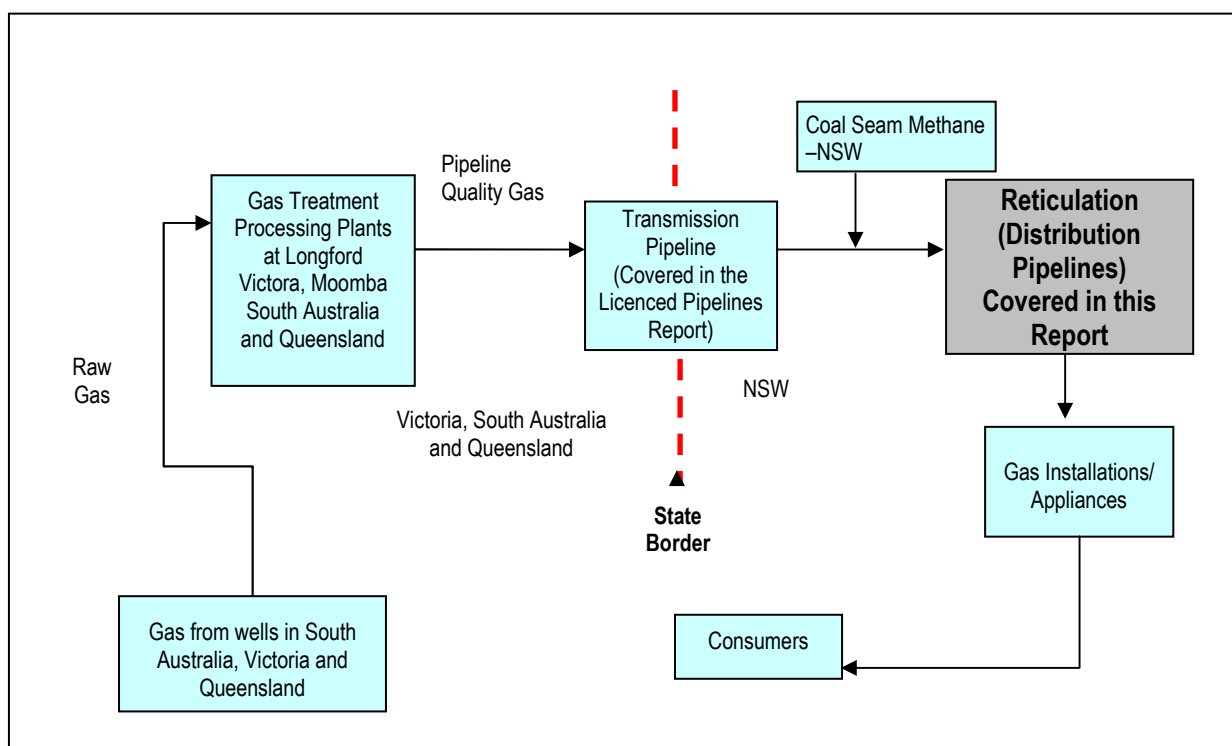
The gas distribution industry in NSW is made up of authorised reticulators of natural gas and to a considerably lesser extent, licensed distributors of LPG. The NSW gas transmission system and NSW gas retailers are not addressed in this report. It is worth noting however that the latest available figures from Office of the Chief Economist of the Department of Industry and Science reveals that the consumption of LPG in NSW for 2013-14 was 27.2 PJ or 1,026 MI [assuming 26.5 MegaJoules per litre].

Natural Gas Networks

The natural gas supply chain, shown **Figure B.1**, consists of four main discrete entities:

- Gas Production (covered in NSW by the Resources and Energy Division of the Department of Industry);
- Transmission system (Covered in the Licensed Pipelines Report);
- Distribution networks (Covered in this Report); and
- Retailers (Covered by IPART).

Figure B.1 The NSW Natural Gas Supply Chain



Although NSW has a significant amount of proven and unproven reserves of Coal Seam Methane gas, it is unique among the mainland states of Australia with no commercially viable reserves of natural gas within its borders or in adjacent waters at this time. NSW imports 95% of its natural gas needs from interstate. Moomba Sydney Pipeline (MSP) and laterals link NSW with the Cooper Basin (South Australia), most of which are owned and operated by the APA Group.

Eastern Gas Pipeline (EGP), owned and operated by Jemena, links NSW with Victoria from Longford in Victoria to Sydney along the eastern seaboard. There is a third, but smaller, inter-connect between NSW and Victoria at Albury. Australian Gas Networks (Albury) supplies gas to a number of towns north of the Murray River in extension to networks in Victorian towns. Similarly Allgas provides gas to Tweed Heads in extension to gas networks in QLD. Around 5% gas is sourced within NSW from coal seam resources at Camden. Santos Pty Ltd is currently in the process of developing the coal seam gas fields near the township of Narrabri, in northwest NSW. AGL is also working on a coal seam gas project at Gloucester.

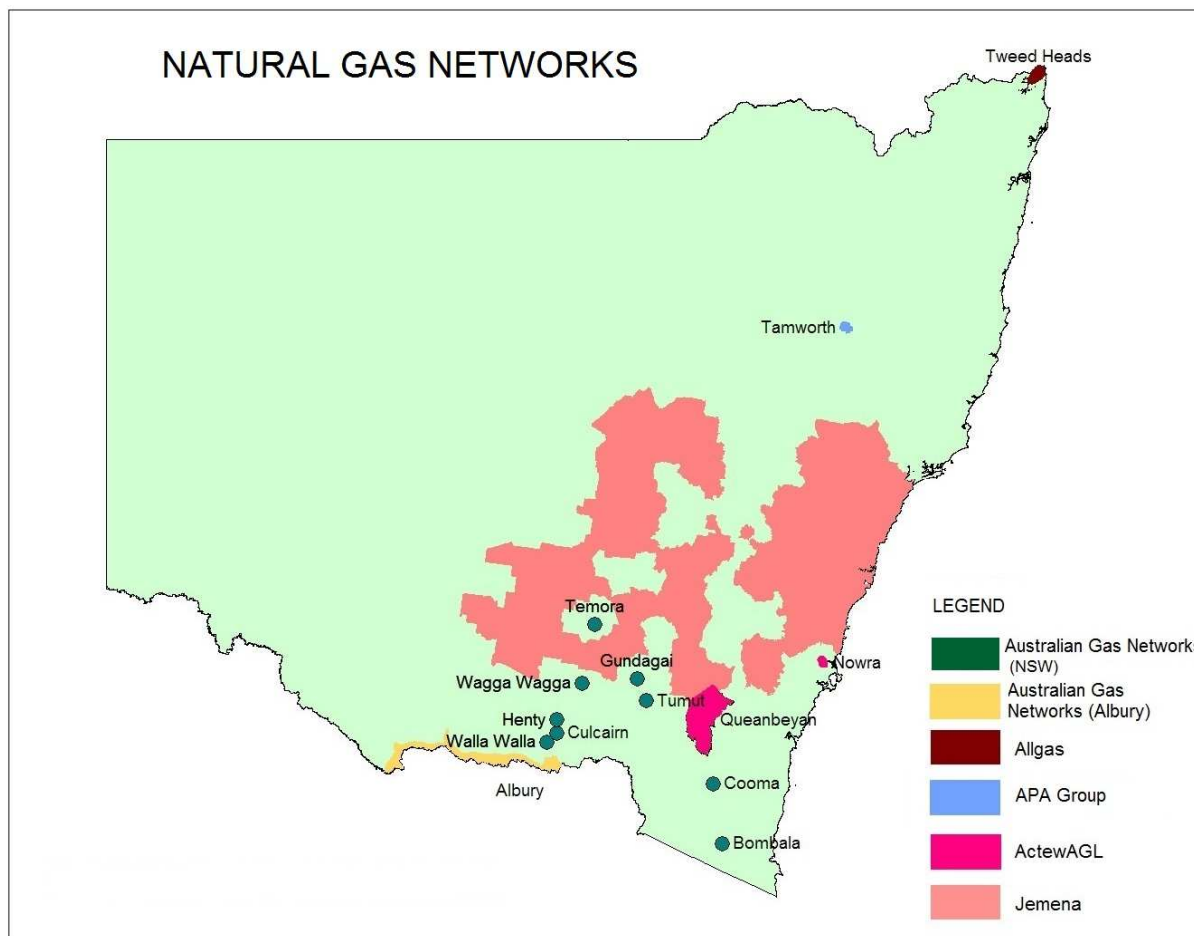
AGL has developed Newcastle Gas Storage Facility at Hexham. The facility has a storage capacity of 1.5 PJ. It enhances the gas supply in the Greater Newcastle region.

The NSW retail gas market has been progressively opened up to competition since 1996 giving consumers the choice of gas supplier. The market has been fully contestable since January 2002.

The scope of this report is limited to the distribution networks. The natural gas distribution network in NSW is the conduit for the reticulation of natural gas and supply to consumers in the State. The greater NSW network is divided into smaller distribution networks and operated by authorised operators.

There were six authorised natural gas network operators in NSW during the reporting period. The locations of these networks are illustrated in **Figure B 2**. The networks are briefly described below.

Figure B.2 Location of Natural Gas Networks in NSW.



Jemena Gas Networks (NSW) Ltd

The principal reticulator of natural gas in NSW is Jemena Gas Networks (operated for and on behalf of Jemena Gas Networks by Jemena Asset Management). The Jemena Gas Network in NSW is divided into five large natural gas distribution networks:

- Jemena (Sydney North);
- Jemena (Sydney West)
- Jemena (Country).
- Jemena (Sydney South);
- Jemena (Coastal); and

Jemena (Sydney) Network broadly services the area bounded by Palm Beach and Hornsby to the North of Sydney, Sutherland Shire and Bankstown to the South and West to Lithgow. This network is large and complex. The Jemena (Coastal) Network broadly services the Hunter and Newcastle, the Central Coast and Illawarra Regions and the Jemena (Country) Network covers a large area in central NSW and services the Southern Highlands, Central Tablelands, Central West, Riverina and South-West Slopes Regions.

Jemena Gas Networks also owns natural gas transmission assets in NSW.

ActewAGL Distribution (ActewAGL)

ActewAGL gas distribution network is also operated by Jemena Asset Management (on behalf of the ActewAGL Distribution Partnership). The ActewAGL gas distribution network is owned by ActewAGL Distribution, a joint venture between Jemena Networks (ACT) Pty Ltd and Icon Distribution Investments Limited. ActewAGL has two networks in NSW: one located at Queanbeyan/ Bungendore and the other network at Nowra. ActewAGL also has a substantial network in the ACT.

Australian Gas Networks Ltd

Australian Gas Networks Ltd holds two Natural Gas Reticulator Authorisations in NSW, one for The Australian Gas Networks (Albury) Ltd and one for Australian Gas Networks (NSW) Pty Ltd.

- Australian Gas Networks (Albury) Ltd network supplies Albury, Thurgoona, Lavington, Jindera, Howlong, Moama, Tocumwal, Finley, Barooga, Mulwala and Corowa.
- Australian Gas Networks (NSW) Pty Ltd network supplies Wagga Wagga, Culcairn, Tamara, Walla Walla, Cooma, Tumut, Henty, Bombala and Gundagat

APA Group

The APA Group holds two distribution systems in NSW: the Central Ranges Pipeline Pty Ltd (APA Group); and APT Allgas Energy Pty Ltd.

- Central Ranges Pipeline Pty Ltd owns a gas network in the Tamworth distribution district area.
- APT Allgas Energy Pty Ltd is owned by APA. Allgas has one distribution district in NSW, which includes the local government area of Tweed Heads and also has significant Queensland gas operations.